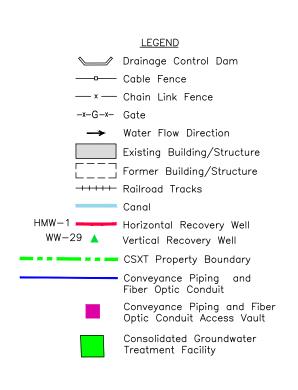
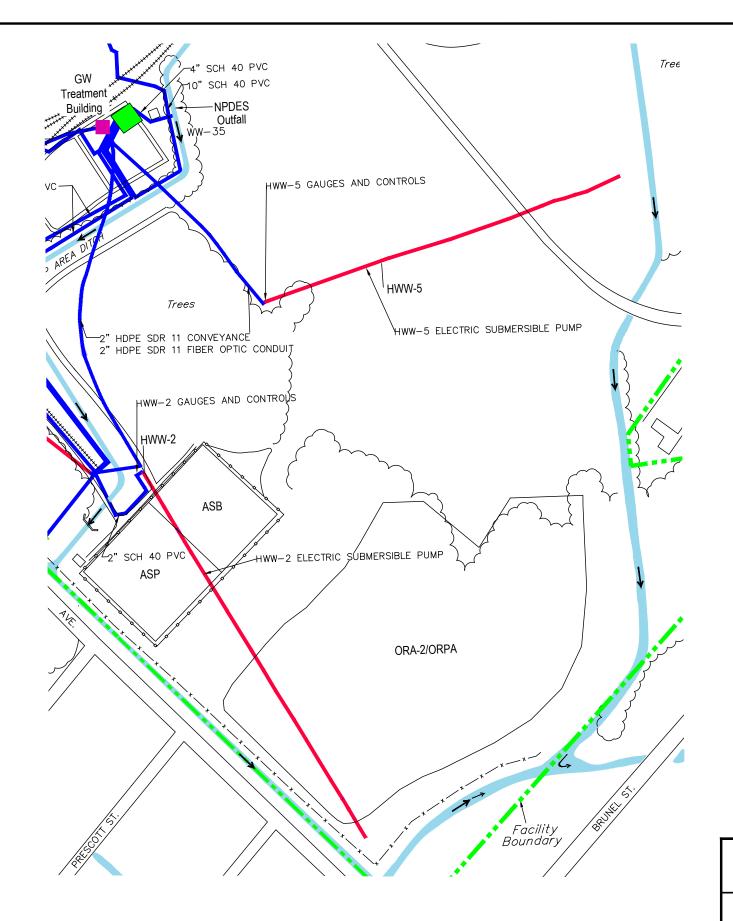
APPENDIX E Groundwater Recovery and Treatment System Drawings



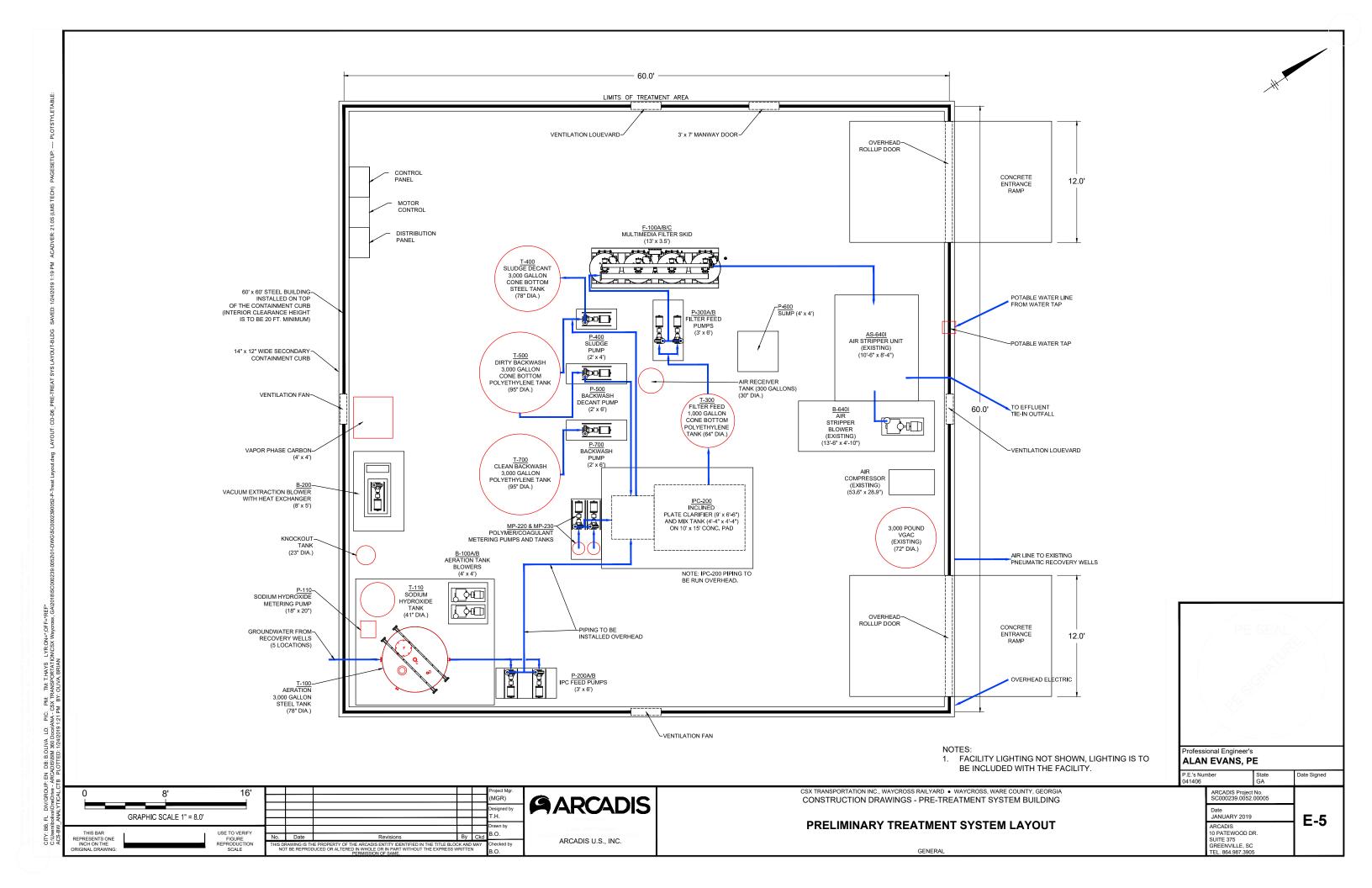


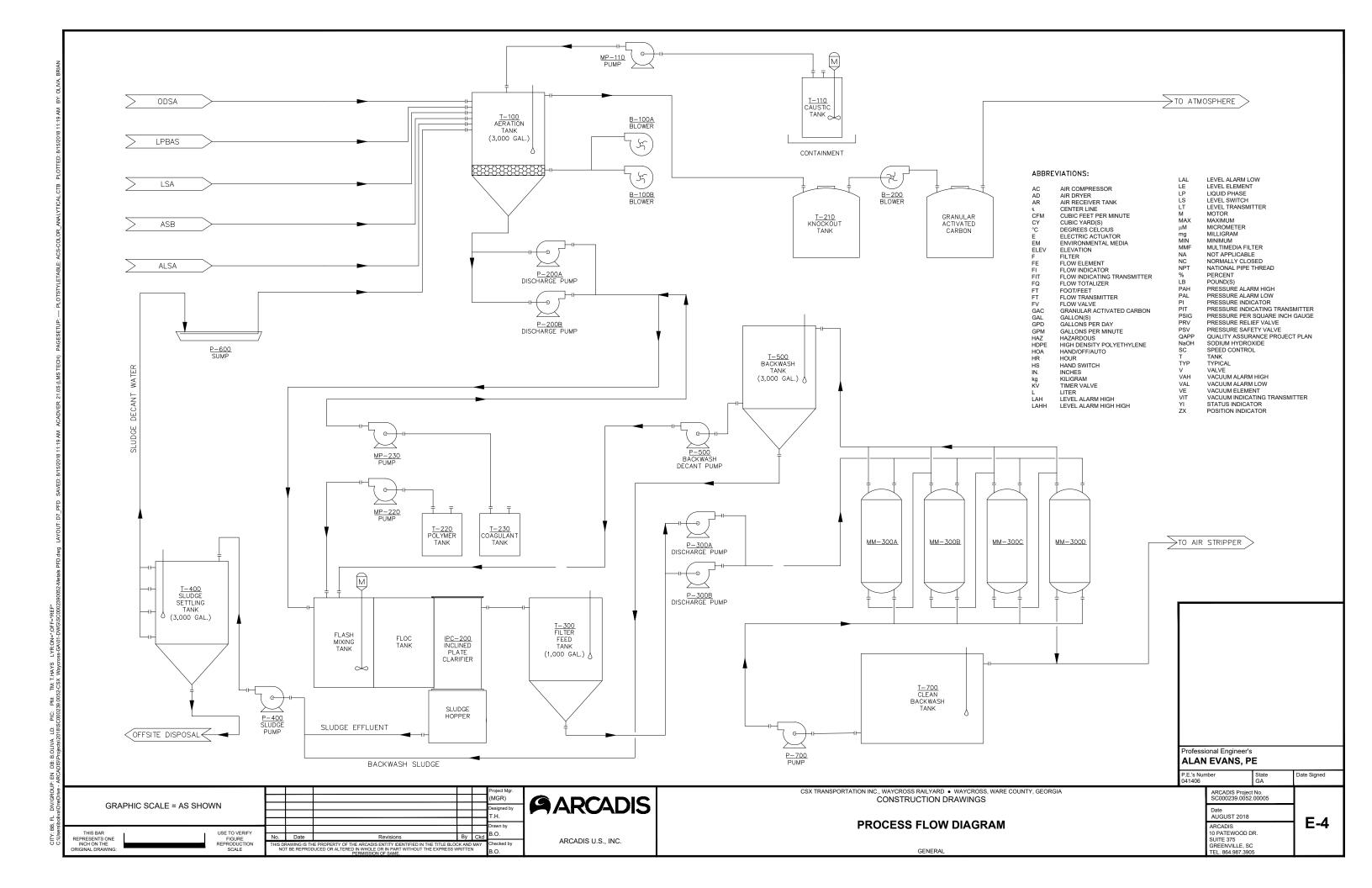


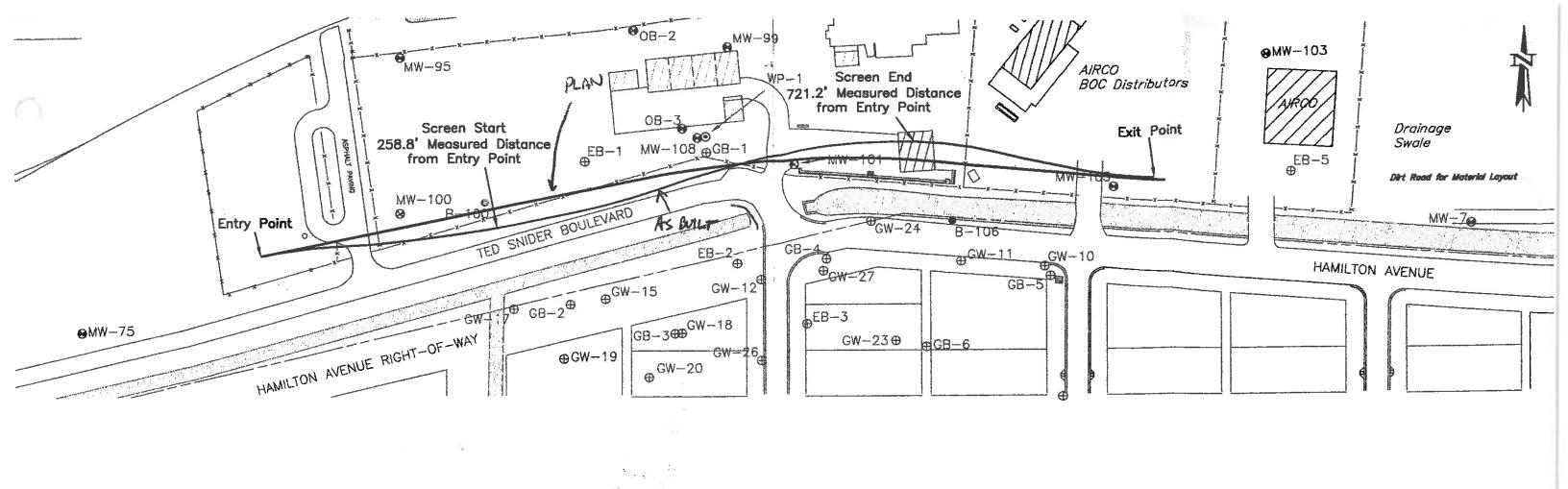
CSX TRANSPORTATION, INC.
WAYCROSS YARD
WAYCROSS, GEORGIA
PART B POST CLOSURE PERMIT RENEWAL

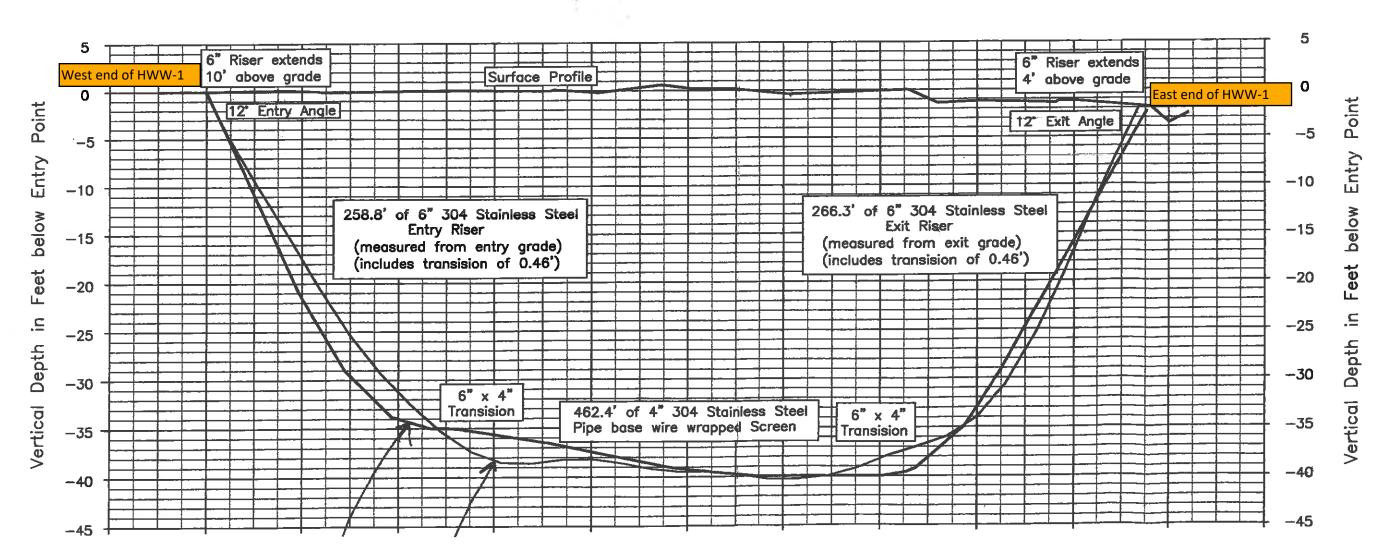
ASB AND ALSA GROUNDWATER RECOVERY/CONVEYANCE SYSTEMS

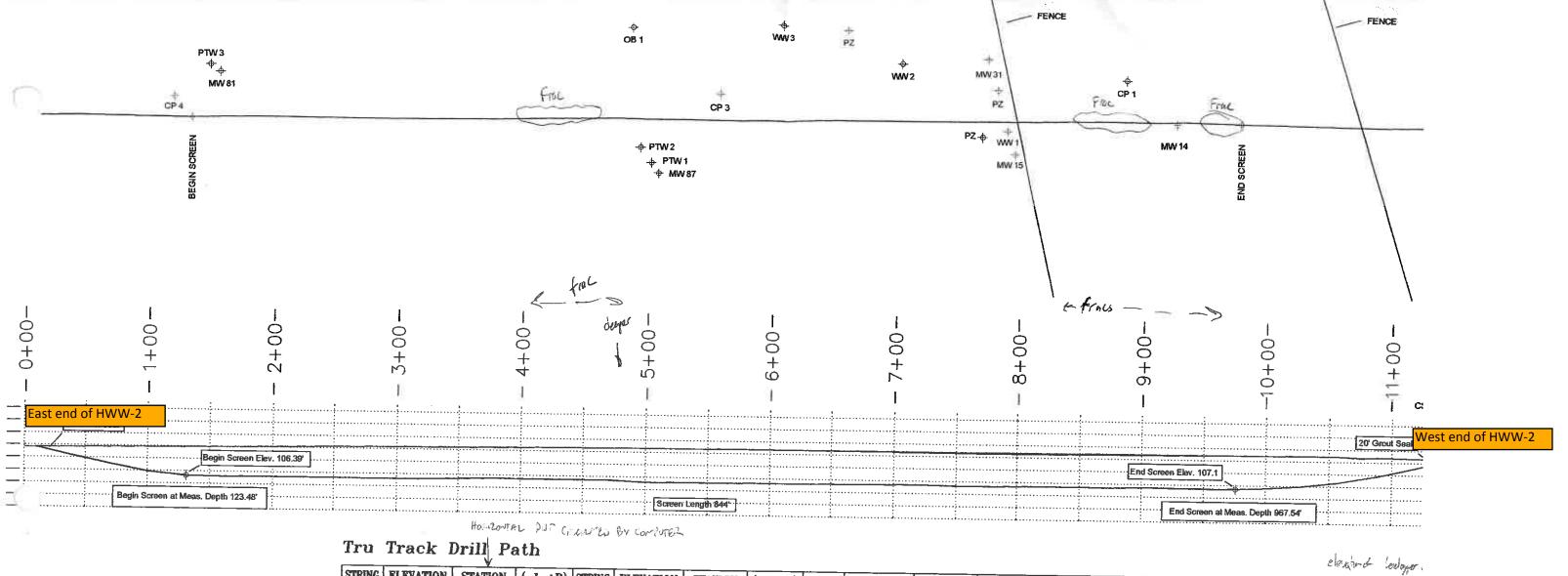












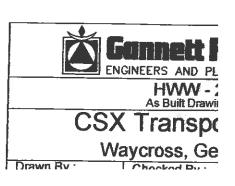
		72 224 2 1	LI CII												
STRING	ELEVATION	STATION	(-L +R)	STRING	ELEVATION	STATION	(-L +R)	STRING	ELEVATION	STATION	(-L +R)	STRING	ELEVATION	STATION	(-L +R)
0	128.22	9.40	4.50	11	106.74	345.75	3.60	22	106.67	686.92	1.04				
_ 1	121.99	37.76	4.41	12	107.38	376:85	3.59	23	106.99	717.92		33	109.74	1026.24	.47
2	115.52	68.19	4.79					40	100.99	111.92	1.03	34	113.26	1056.65	.78 .
				13_	107.33	407.85	3.01	24	106.47	748.82	1.22	35	119.00	1087.63	.78
3	109.54	99.27	5.10	14	107.21	439.05	2.40	25	106.59	779.51	.77		125.72		
4	106.53	129.20	5.36	15	107.20	470.14	1.80					36		1118.22	.47
E	106.01	450.07					1.00	26	107.03	810.51	.65	37	132.81	1146.5	.50
9		158.97	4.65	16	105.80	501.13	2.23	27	107.00	841.51	02	38	133.25	1151.02	
6	106.18	189.87	4.40	17	105,94	532.13	2.29		400.00			. 30	100.20	1151.02	.50
77	106.29	221.47	4.37					28	106.86	872.01	30		ŀ		1
├			4.37	_18	106.12	563.03	2.20	29	107.35	902.71	45				
8	106.24	252.16	4.03	19	106.35	594.52	2.14		107.13			-			
9	105.94	283.96	4.12					_30	107.13	933.71	43		ı		
			4.13	20	106.35	625.52	1.59	31	107.09	964.21	.03				
10	106.11	314.76	4.02	21	106.63	655.92	1.20	32	107.93	995.50					
								96	107,00	993.30	.09		i		

Scale 1" = 70' Horizontal & Vertical

TOPOGRAPHY

4" STAINLESS STEEL SCREEN





134.

27

Environmental Protection Department of Natural Hesources

Georgia Department of Natural Resources Environmental Protection Division

2 Martin Luther King Jr. Drive SE, Suite 1152 East Tower, Atlanta, Georgia 30334 PHONE: (404) 656-4713

Well Completion Data Form

			Report Com	pletion Date: 1/15/2015
For Mew Construction Under Repair/Modification	on 🔲 C	completed Abando	ned Wells	
Property Owner Information				
Property Owner Name: CSX Transportation		Phone:		Email:
Company / Farm / Municipality / Water System Name: CSX	Rice	e Yard		
Address: 601 Haines Ave.		Waycross	GA	31501
(No. and Street)		(City)	(Stat	
Well Contractor Information				
Onsite Well Driller Name: Roy Rushing		License No.		Phone: 407.426.9806
Well Contractor Company Name: Trenchless Cro	ossir	igs, Inc		
Address: 6363 Edgewater Dr.		rlando	FI	32810
(No. and Street)		(City)	(Stat	te) (Zip)
Drilling under direction of Professional Geologist or Engineer Name	e: Jeff	Beckner		License No. 744
Well Information	UR-	No. of the last of	VI BUTTO	
☐ Public Drinking ☐ Municipal ☐ Industrial ☐ Agricultural / I☐ Individual Drinking ☐ Geothermal ☐ Test / Monitoring ☐ I	irrigation	Well Bore/core hole	Dewatering	
Well Application or Permit Number: NA		or Public Water System ID	CSY Rice	Vard
Permit/Concurrence Letter On-site			West of the second second	
County where well is located: Ware	Latitud	e: 593791.344 Long	itude: 435116	.689 Elevation: 132
Well Construction Description			1000	V THE TANK OF THE PARTY
Well Drilling Information		Rotary	Percussion	☐ Bored
Total depth of well: 27 ft. BLS		☐ Jetted	☐ Auger	Cable Tool
Static water level: 5 ft. BLS Date SWL measured:		M Horizontal	☐ Hand-Driven	☐ Hydraulic Pt.
Date Drilled: 12-9-2014-12-12-2014 Drilling Start Time: 8 a	m	Drilling Fluid Used	Type Fluid: ber	ntonite drilling mud
Drill Hole Diameter		Grouting (☑ as ap	plicable)	
Size 10 in., from 0 ft. to 900	ft.			☐ Halliburton ☐ Under Pressure
Size in., from ft. to	ft.	Type: Bentonite 🗷 N		her:
Size in., from ft. to	ft.		ft. to 50 ft. F	
Casing Record (☑ as applicable)		Permanent Pump	Data (as a	pplicable)
Primary: Black Steel Galvanized Stainless PVC-NSF	Rated		indfos	7.88
PVC Not Cased M Other: 6 inch FRE		Pump Diameter: 4 if	Out	let size: 1.25 "
Secondary: Telescope Liner Surface Casing Wall Thickness 0.83" in.		Motor HP: 0.7	IMOU	or RPM:
		Pump Capacity: 12		al Dynamic Head:ft.
Weight per foot 7.40 SDR		Pump Set at: 27		np Disinfected: Yes X No
Size: in., from 0 ft. to Size: in., from ft. to	ft.			er Size & Rating:
	ft.	Casing Vent: Yes		nple Tap: X Yes No
Size: in., from ft. to Size: in., from ft. to	ft.	Air Line: Yes No		Diameter in.
Well Screen and Filter Pack (if installed)	ft.	Chemigation check valve		
Type material FRE		Test Pump Data (I		ic water level: ft. BLS
Size: 6" in., from 180 ft. to 780 ft.		Test Pump Rated:	GPM	HP
Size: ft. to ft.		Total Continuous Hours T		_ 1117
Size: ft. toft.		Water Level Stabilized:		
Size: ft. toft.		Hours before Stabilization		tained Yield: GPM
Type Filter (Gravel) Pack <u>natural</u> Disinfected: ☐ Yes	No No			cific Capacity: GPM/ft.
Filter Pack from ft. to ft.		Pumping Water Level:	ft.	arry arry
Filter Pack fromft. toft.		Number of Minutes to Re		
Filter Pack to Formation Ratio: Uniformity Coeff:		Well Developed: X Yes	☐ No Well	Disinfected: Yes No

Well Application or Permit Number: NA



Well Construction Description (continued)	
Protection from Pollutants (☑ if done)	Construction Techniques (☑ if done)
Upgradient from pollutant sources	☑ Drill cuttings, materials removed ☐ Well disinfected
☐ >10 ft. sewer line ☐ > 50 ft. septic tank	☑ Casing, liner pipe joints watertight ☐ Sanitary seal
☐ >150 ft. seep pit ☐ > 100 ft. septic drain field	Grouted to 10 ft. (Individual) 20-50 ft. (Irrigation, Nonpublic)
☐ > 100 ft. animal enclosure ☐ protected from runoff	Concrete Curbed/Pad > 4 in. thick, extend > 2 ft., sloped
casing > 2 ft. above floodplain or highest known flood	☐ Gravel/Filter pack washed, disinfected
☐ Water-bearing formations sealed if likely to be polluted	Casing material new or meets national standards
☐ Health Dept. notified ☐ Health Dept. variance	₩ Well screen – optimal development, low head loss & clog
	☑ Drilling equipment steam cleaned

Driller's Well Log (lithologic stratigraphy)

Feet from	t (BLS)	Type Material Encountered	Remarks	Indicate Water Bearing Zones
0	27	clayey silts with sands		
	-			
		-		
				-
				1

(If more space is required, use additional sheets. If available, submit any additional pump test data or geophysical logs.)

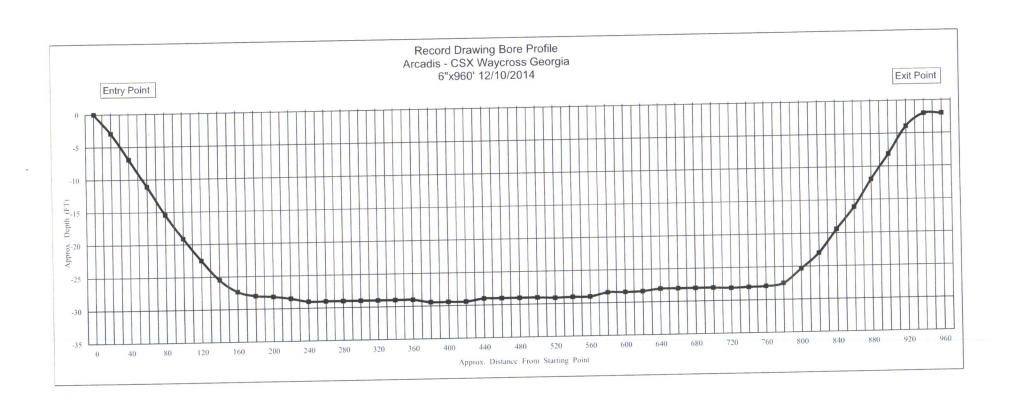
This well was drilled and constructed (or plugged/abandoned, if applicable) in accordance with the Georgia Water Well Standards Act, O.C.G.A. 12-5-120 et seq., Georgia Groundwater Use Act, O.C.G.A. 12-5-90 et seq. and 12-5-105 et seq., Georgia Safe Drinking Water Act, O.C.G.A. 12-5-170 et seq., and applicable Georgia Department of Natural Resources' rules, regulations and guidance documents.

certify that this well was drilled to ANSI	/ AWWA Standard A100-06	(Water Wells): ☐ Yes	■ No ■ Not Applicable
--	-------------------------	----------------------	-----------------------

I certify that the information on this form (Pages 1 and 2) is correct and true to the best of my knowledge.

1	/Roy Rushing	GA Bond 58715399	1/15/15
Signature of Licensed Well	Contractor's Name	License Number	Date
V1631-	/Jeff Beckner	PG #744	1/15/15
Signature of Licensed Geo	ogist/Engineer's Name	License Number	Date

Trenchless Crossings, Inc. Horizontal Directional Drilling For Infrastructure and Environmental Applications



The above information is correct based on electronic information received during the pilot bore.

TI RENCHLESS	Proceinge -
INEURUTEGA	ALABOTTIAD
Horizontel Di	rectional Brilling

BORE DOCUMENTATION

Job#:	Bore Size:	Bore Length: 940
Job Location: Wayeross GA	Material Size:	
Client: Arcadia	Angle of Entry: 2	2
Client Contact:	Rig Used: <u>9019</u>	
Date:/2/G/Y	Length of Rods:2.0	•

ROD			DISTANCE		
#	ANGLE	DEPTH	OUT	COMME	NTS
	-22	2'//			
2	-20	611			
3	-22	111/			
4	-24	15-15			
5	-20	191			
6	-15	226			
7	-/3	256			· .
8	-7	27.4		surren	
9	-2	281			
10	0	28'2			
	0	286			
12	0	29'		FENCE	
13	0	291			
14	0	29'			
15	0	291		Edge of Water	
16	0	29'		•	
17	+1	29'		End of Water	
18	+3	29'		Fence	
19	+5	29'5			
20	+5	29'5			
21	+2	295	<u> </u>		
27	+3	29'	ļ	concede pad	
22	+2	29'		-	
24	0	291	}		

Client Acceptance of Piping Material Installed and Bore Length and Depth

Name:	Date:	
-------	-------	--

TRENCHLESS	Crossinus //
Horizontal Di	rectional Drilling

BORE DOCUMENTATION

Horizontal Directional Drilling	
Job#:	Bore Size: Bore Length: 940 '
Job Location: Way Comst G. A	Material Size: (/) 6 /
Client: Arcadiu	Angle of Entry: - 2 2
Client Contact:	Rig Used: 9019
Date: 12-10-14	Length of Rods: 20'
'	·

ROD #	ANGLE	DEPTH	DISTANCE OUT	COMMENTS
25	0	29'		
26	0	291		end of concrete pad
27	0	29'		emende pad
28	0	29'		
29	0	28'5		
30	0	28'5		
31	0	28'4		
32	0	281		
33	-1	28'		
34	-2	28'		
35	-3	28'		
36	0	28'1		
37	0	28'		
38	0	27'11		
39	<u>72</u>	276		end of screen
40	+8	25'4		
4/	+/4	23'		
42	+18	195		
43	+20	16'1		
44	+20	11'11	<u> </u>	
45	1/6	8'/		
46	H9	3'11		
47	+19	2'		
78	P	<i>'+</i>		

Client Acceptance of Piping Material Installed and Bore Length and Depth

Name:	Date:	



Georgia Department of Natural Resources Environmental Protection Division

2 Martin Luther King Jr. Drive SE, Suite 1152 East Tower, Atlanta, Georgia 30334 PHONE: (404) 656-4713

Well Completion Data Form

			Report Co	mpletion	Date: 10/16/2017
For New Construction Under Repair/Modification	n C	ompleted Aba	andoned Wells		
Property Owner Information					
Property Owner Name: CSX Transportation		Phone	2:	Email:	7
Company / Farm / Municipality / Water System Name: CSX Ri	ice Ya	rd			
Address: 601 Haines Ave.		Waycross	G	SA .	31501
(No. and Street)		(City)	(9	itate)	(Zip)
Well Contractor Information					
Onsite Well Driller Name: James Doesburg		Licens	se No. 620	Phone:	(253) 405-0364
Well Contractor Company Name: Directed Technologies	s Drilli	ng			(9)
Address: 100 Rolling Ridge Drive	E	Bellefonte	PA		16823
(No. and Street)		(City)	(9	itate)	(Zip)
Drilling under direction of Professional Geologist or Engineer Name	e: Jeff E	Beckner		License	No. 744
Well Information				TANK T	
☐ Public Drinking ☐ Municipal ☐ Industrial ☐ Agricultural / I					
☐ Individual Drinking ☐ Geothermal ☐ Test / Monitoring ☐ I Well Application or Permit Number: N/A				ard	HWW.4
Permit/Concurrence Letter On-site	Facility	or Public Water Syst	em ID: CSX Rice Y		_Well Number: Hww-4
County where well is located: Ware	Latitude	e: 31.19545 N	Longitude: 82.3706	WE	evation: 138
Well Construction Description	100	R. S. W. (10)			
Well Drilling Information		Rotary	☐ Percussion		☐ Bored
Total depth of well: 23 ft. BLS		☐ Jetted	☐ Auger		☐ Cable Tool
Static water level: 5 ft. BLS Date SWL measured: 9/29/		☑ Horizontal			
Date Drilled: 9/18/2017 - 9/21/2017 Drilling Start Time: 3 pm	<u> </u>	Drilling Fluid Used Type Fluid: biodegradable polymer			polymer
Drill Hole Diameter		Grouting (☑ a	as applicable)		
Size <u>10</u> in., from 0 ft. to <u>700.5</u>	ft.	Method: Casing	Tremie 🗌 Packe	er 🗌 Hallibu	rton 🔲 Under Pressure
Size in., from ft. to	ft.		e 🗷 Neat Cement 🗌		_
Size ft. to	ft.	▼ Present From			
Casing Record (☑ as applicable)		Permanent P	ump Data (🗹 as	applical	ole)
Primary: Black Steel Galvanized Stainless PVC-NSF	Rated	Pump Type:	Grundfos		
☐ PVC ☐ Not Cased ☑ Other: HDPE SDR11		Pump Diameter:		Outlet size:	1.25"
Secondary: Telescope Liner Surface Casing		Motor HP:		lotor RPM:	
Wall Thickness 0.280 in.		Pump Capacity:		Total Dynam	ic Head: <u>175</u> ft.
Weight per foot 18.97 SDR 11		Pump Set at:		Pump Disinfe	ected: Yes 🗷 No
Size: 6 in., from 0 ft. to 170.5	ft.	Meter Installed:		4eter Size &	
Size: <u>6</u> in., from <u>520.5</u> ft. to <u>700.5</u>	ft.	Casing Vent: Y			Yes □ No
Size: in., from ft. to	ft.	Air Line: Yes		t. Diamete	<u>r in.</u>
Size: in., from ft. to	ft.		valve installed: Y		
Well Screen and Filter Pack (if installed)			ata (as applic		A DIG
Type material Stainless steel wire-wrap screen		Date Tested:		Static water	level: ft. BLS
Size: 4 in., from 170.5 ft. to 520.5 ft.		Test Pump Rated:		HP	
Size: in., from ft. to ft. Size: in., from ft. to ft.	111	Total Continuous F	zed: Yes No		
				Cuctoined Vie	eld: GPM
Size: in., fromft. toft. Type Filter (Gravel) Pack N/A Disinfected: \[\sqrt{Yes}	MA NA	Hours before Stabi Total Drawdown: _		Sustained Yie Specific Capa	
	NO INO	Pumping Water Le		респіс Сара	idiy GPM/II.
Filter Pack from ft. to ft. Filter Pack from ft. to ft.		Number of Minutes			
Filter Pack to Formation Ratio: Uniformity Coeff:		Well Developed:		Well Disinfer	ted: Yes 🗷 No
		E			

Well Application or Permit Number:	
Well Application of Termit Namber.	



Well Construction Description (continued)	
Protection from Pollutants (☑ if done)	Construction Techniques (☑ if done)
Upgradient from pollutant sources	☑ Drill cuttings, materials removed ☐ Well disinfected
\square >10 ft. sewer line \square > 50 ft. septic tank	
☐ >150 ft. seep pit ☐ > 100 ft. septic drain field	☑ Grouted to 10 ft. (Individual) 20-50 ft. (Irrigation, Nonpublic)
☐ > 100 ft. animal enclosure ☐ protected from runoff	Concrete Curbed/Pad > 4 in. thick, extend > 2 ft., sloped
casing > 2 ft. above floodplain or highest known flood	☐ Gravel/Filter pack washed, disinfected
☐ Water-bearing formations sealed if likely to be polluted	
☐ Health Dept. notified ☐ Health Dept. variance	■ Well screen – optimal development, low head loss & clog
	☑ Drilling equipment steam cleaned

Driller's Well Log (lithologic stratigraphy)

Feet from	(BLS)	Type Material Encountered Remarks Indicate S				
0	23	Clayey slits and sands		Ground water at 5 vertical ft. below surface		
			040			
-						
		-				

(If more space is required, use additional sheets. If available, submit any additional pump test data or geophysical logs.)

This well was drilled and constructed (or plugged/abandoned, if applicable) in accordance with the Georgia Water Well Standards Act, O.C.G.A. 12-5-120 et seq., Georgia Groundwater Use Act, O.C.G.A. 12-5-90 et seq. and 12-5-105 et seq., Georgia Safe Drinking Water Act, O.C.G.A. 12-5-170 et seq., and applicable Georgia Department of Natural Resources' rules, regulations and guidance documents.

I certify that this well was drilled to ANSI / AW\	VA Standard A100-06 (Wate	r Wells): 🗌 Yes 🗍	No. 🔀 Not Applicable
--	---------------------------	-------------------	----------------------

I certify	that	the	info	rmation on this form (Pages 1 and 2) is correct and true to the best of my know	<i>ı</i> ledge.
1	44	1	1	Digitally signed by Jim Doesburg	

DN: cn=Jim Doesburg, o, ou, email=jim@horizontaldrill.com, c=US Date: 2017.10.16 14:05:32 -04'00'	GA620	10/16/2017	
Signature of Licensed Well Contractor's Name	License Number	Date	
Du Bell	0744	11/17/17	
Signature of Licensed Geologist/Engineer's Name	License Number	Date	

Client Name: Job Name: Pipeline Name: Arcadis CSX - Rice Yard N/A

Location: Drill Rig: Drill bit: Well Screen:
Well Casing:
Length of Drill Rods:
Length of Borehole:

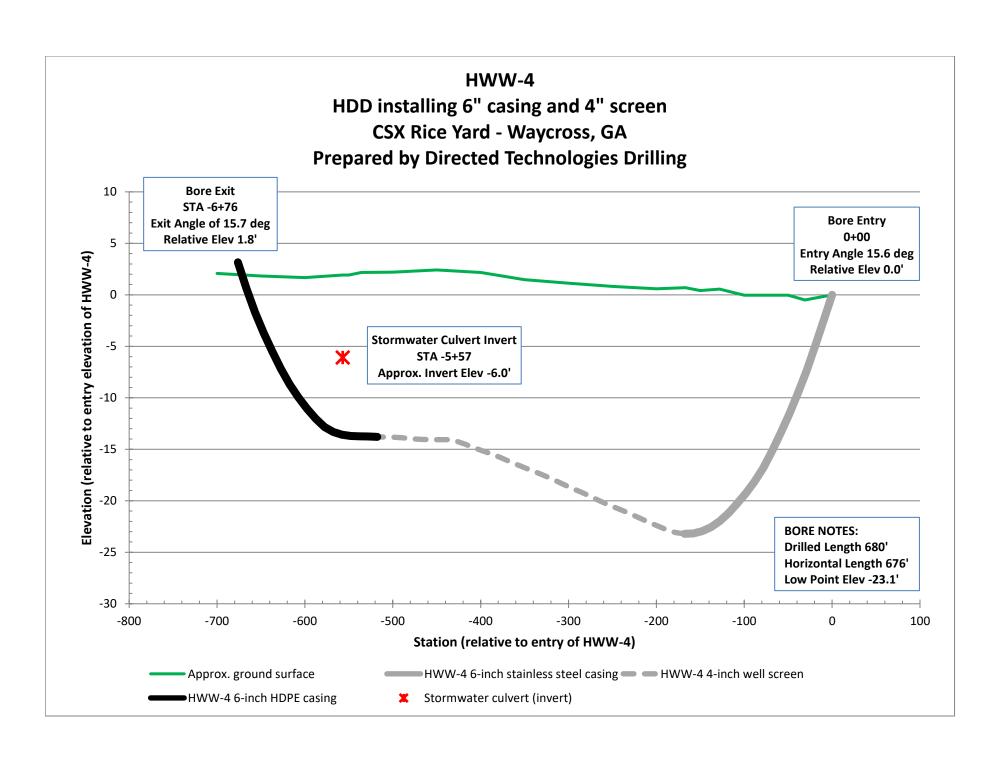




degrees ft station ft ft

N/A
Waycross, GA
24x40
6.5" duckbill
4" Stainless and HDPE
10 ft
676 ft (Horiz
700.0 ft
170.5 ft
350.0 ft Rig Entry Angle Elevation at Point of Entry Station at Point of Entry Horz distance from Transmitter to Point of Entry Height of Transmitter above Point of Entry ft (Horizontal Distance) Length of Well: Entry Casing Length: Screen Length: Exit Casing Length ft ft ft ft 180

Rod	Rod Distance from Vices	Station	Description	Bore Elevation	Percent Slope		Horizontal Distance		Calculated Depth (ft below entry)	Bend Radius
Point of Entry	(ft) 0	(# + ##) +	ENTRY AT 00+00	(ft amsl) 0.0	(%) -27.9 %	(degrees) -15.6	(cumulative ft) 0.0	(ft) -274.6	0.0	(ft) NA
1	10	-+10	LIVIKI AI 00+00	-2.5	-24.0 %	-13.5	9.7	-264.9	2.5	273
2	20	-+19		-5.0	-27.0 %	-15.1	19.4	-255.2	5.0	358
3	30	-+29		-7.4	-22.4 %	-12.6	29.1	-245.5	7.4	229
4	40	-+39		-9.5	-21.8 %	-12.3	38.8	-235.8	9.5	1910
5	50	-+49		-11.6	-19.6 %	-11.1	48.6	-226.0	11.6	477
6	60	-+58		-13.4	-18.2 %	-10.3	58.5	-216.1	13.4	716
7	70	-+68		-15.2	-17.5 %	-9.9	68.3	-206.3	15.2	1432
8	80 90	-+78 -+88		-16.8 -18.1	-15.1 % -12.1 %	-8.6 -6.9	78.2 88.1	-196.4 -186.5	16.8 18.1	441 337
10	100	-+00		-19.3	-12.1 %	-6.1	98.0	-176.6	19.3	716
11	110	-1+08		-20.3	-9.6 %	-5.5	108.0	-166.6	20.3	955
12	120	-1+18		-21.2	-8.9 %	-5.1	117.9	-156.7	21.2	1432
13	130	-1+28		-22.0	-6.8 %	-3.9	127.9	-146.7	22.0	477
14	140	-1+38		-22.6	-4.9 %	-2.8	137.9	-136.7	22.6	521
15	150	-1+48		-23.0	-3.0 %	-1.7	147.9	-126.7	23.0	521
16	160	-1+58		-23.2	-1.2 %	-0.7	157.9	-116.7	23.2	573
17	170	-1+68		-23.2	0.3 %	0.2	167.9	-106.7	23.2	637
18	180	-1+78		-23.1	1.9 %	1.1	177.9	-96.7	23.1	637
19 20	190 200	-1+88 -1+98		-22.8 -22.5	3.5 %	2.0	187.9	-86.7 -76.7	22.8 22.5	637 5730
20	200	-1+98 -2+08		-22.5	3.7 % 3.5 %	2.1	197.9 207.9	-76.7	22.5	5730
22	220	-2+08 -2+18		-22.1	4.0 %	2.3	217.8	-56.8	21.7	1910
23	230	-2+28		-21.3	4.0 %	2.3	227.8	-46.8	21.3	Infinite
24	240	-2+38		-21.0	3.3 %	1.9	237.8	-36.8	21.0	1432
25	250	-2+48		-20.6	3.5 %	2.0	247.8	-26.8	20.6	5730
26	260	-2+58		-20.3	3.7 %	2.1	257.8	-16.8	20.3	5730
27	270	-2+68		-19.9	4.0 %	2.3	267.8	-6.8	19.9	2865
28	280	-2+78		-19.5	4.4 %	2.5	277.8	3.2	19.5	2865
29	290	-2+88		-19.1	3.3 %	1.9	287.8	13.2	19.1	955
30	300	-2+98		-18.7	3.7 %	2.1	297.8	23.2	18.7	2865
31 32	310 320	-3+08 -3+18		-18.3 -17.9	4.5 % 3.5 %	2.6	307.8 317.8	33.2 43.2	18.3 17.9	1146 955
33	330	-3+16		-17.6	3.8 %	2.2	327.8	53.2	17.6	2865
34	340	-3+38		-17.2	3.3 %	1.9	337.8	63.2	17.0	1910
35	350	-3+48		-16.9	3.5 %	2.0	347.8	73.2	16.9	5730
36	360	-3+58		-16.5	3.3 %	1.9	357.7	83.1	16.5	5730
37	370	-3+68		-16.2	3.8 %	2.2	367.7	93.1	16.2	1910
38	380	-3+78		-15.8	3.7 %	2.1	377.7	103.1	15.8	5730
39	390	-3+88		-15.4	3.1 %	1.8	387.7	113.1	15.4	1910
40	400	-3+98		-15.2	2.6 %	1.5	397.7	123.1	15.2	1910
41	410	-4+08		-14.8	3.5 %	2.0	407.7	133.1	14.8	1146
42	420	-4+18		-14.5	3.6 %	2.1	417.7	143.1	14.5	11459
43 44	430 440	-4+28 -4+38		-14.2 -14.1	2.3 % 0.3 %	1.3 0.2	427.7 437.7	153.1 163.1	14.2 14.1	764 521
45	450	-4+36		-14.1	-0.3 %	-0.2	447.7	173.1	14.1	1432
46	460	-4+46		-14.1	0.5 %	0.3	457.7	183.1	14.1	1146
47	470	-4+68		-14.0	0.0 %	0.0	467.7	193.1	14.0	1910
48	480	-4+78		-14.0	0.9 %	0.5	477.7	203.1	14.0	1146
49	490	-4+88		-13.9	1.0 %	0.6	487.7	213.1	13.9	5730
50	500	-4+98		-13.8	0.3 %	0.2	497.7	223.1	13.8	1432
51	510	-5+08		-13.8	0.0 %	0.0	507.7	233.1	13.8	2865
52	520	-5+18		-13.8	0.3 %	0.2	517.7	243.1	13.8	2865
53	530	-5+28		-13.7	0.5 %	0.3	527.7	253.1	13.7	5730
54 55	540 550	-5+38		-13.7	-0.2 %	-0.1	537.7	263.1	13.7	1432
55 56	550 560	-5+48 -5+58		-13.7 -13.6	0.5 % 2.1 %	0.3 1.2	547.7 557.7	273.1 283.1	13.7 13.6	1432 637
57	570	-5+68		-13.6	3.1 %	1.8	567.7	293.1	13.3	955
58	580	-5+78		-12.8	6.6 %	3.8	577.7	303.1	12.8	286
59	590	-5+88		-12.0	9.5 %	5.4	587.7	313.1	12.0	358
60	600	-5+98		-11.1	10.2 %	5.8	597.6	323.0	11.1	1432
61	610	-6+08		-9.9	12.1 %	6.9	607.5	332.9	9.9	521
62	620	-6+17		-8.7	13.7 %	7.8	617.5	342.9	8.7	637
63	630	-6+27		-7.2	16.4 %	9.3	627.4	352.8	7.2	382
64	640	-6+37		-5.5	18.0 %	10.2	637.2	362.6	5.5	637
65	650	-6+47		-3.7	18.7 %	10.6	647.0	372.4	3.7	1432
66	660	-6+57		-1.7	22.2 %	12.5	656.8	382.2	1.7	302
67	670	-6+67		0.6	24.7 %	13.9	666.6	392.0	-0.6	409
68	680	-6+76	l	3.2	28.1 %	15.7	676.2	401.6	-3.2	318



Environmental Protection Department of Natural Resources

Georgia Department of Natural Resources Environmental Protection Division

2 Martin Luther King Jr. Drive SE, Suite 1152 East Tower, Atlanta, Georgia 30334 PHONE: (404) 656-4713

Well Completion Data Form

Report Completion Date: 6-17-2019 For New Construction Under Repair/Modification Completed Abandoned Wells **Property Owner Information** Property Owner Name: CSX Transportation Phone: Email: Company / Farm / Municipality / Water System Name: GA 31501 Address: 601 Haines Avenue Waycross (No. and Street) (City) (State) (Zip) **Well Contractor Information** Onsite Well Driller Name: Mike Sequino License No. Phone: 877-788-4479 Well Contractor Company Name: Directional Technologies, Inc. Address: 130 S. Geronimo Street, Suite 1 32550 Miramar Beach FL (State) (No. and Street) (Zip) Drilling under direction of Professional Geologist or Engineer Name: Jeff Beckner License No. 744 Well Information ☐ Public Drinking ☐ Municipal ☐ Industrial ☐ Agricultural / Irrigation Well ☐ Bore/core hole ☑ Dewatering ☐ Individual Drinking ☐ Geothermal ☐ Test / Monitoring ☐ Injection ☐ Other Well Type: Well Application or Permit Number: NA Facility or Public Water System ID: CSX Rice Yard Well Number: Permit/Concurrence Letter On-site Latitude: 31.198479 N County where well is located: Ware Longitude: 82.361893 W Elevation: 139 **Well Construction Description Well Drilling Information** ☐ Bored ☐ Percussion Rotary ☐ Jetted Total depth of well: 45 ft. BLS □ Auger Cable Tool Static water level: Date SWL measured: ★ Horizontal ☐ Hand-Driven ☐ Hydraulic Pt. Type Fluid: biodegradable polymer & bentonite **Date Drilled: Drilling Start Time:** Drilling Fluid Used **Drill Hole Diameter** Grouting (as applicable) nt. to 1,020 Size 10 Method: Casing I Tremie Packer Halliburton Under Pressure in., from ft. ft. to in., from Type: Bentonite K Neat Cement D Other: Size Size in., from ft. to Present From ft. to ft. From Casing Record (as applicable) Permanent Pump Data (as applicable) ☐ Black Steel ☐ Galvanized 🗷 Stainless ☐ PVC-NSF Rated Pump Type: Grundfoa 1.25 ☐ PVC ☐ Not Cased ☐ Other: Pump Diameter: Outlet size: 0.75 Secondary: Telescope Liner Surface Casing Motor HP: Motor RPM: Wall Thickness Pump Capacity: Total Dynamic Head: 45 Weight per foot Pump Set at: Pump Disinfected: Yes X No ft. to 260 Size: 6 in., from ft. Meter Installed: Yes K No Meter Size & Rating: ft. to 1020 Size: 6 Sample Tap: X Yes No Casing Vent: Yes X No in., from ft. ft. Diameter_ Air Line: Yes X No Depth Size: in., from ft. to ft. Size: in., from ft. to Chemigation check valve installed: Yes No Well Screen and Filter Pack (if installed) Test Pump Data (2 as applicable) Type material Stainless Steel - Pipe Base with Stainless Jacket Date Tested: Static water level: A RIS in., from 260 760 Size: 4 ft to Test Pump Rated: HP Size: in., from ft. Total Continuous Hours Tested: to Water Level Stabilized: Yes No Size: in., from ft. to_ ft. in., from ft. to_ ft. Hours before Stabilization: Sustained Yield: **GPM** Type Filter (Gravel) Pack N/A Disinfected: Yes K No Total Drawdown: Specific Capacity: GPM/ft. Filter Pack from ft. Pumping Water Level: to Filter Pack from Number of Minutes to Recover:

Filter Pack to Formation Ratio:

Well Developed: X Yes No

Uniformity Coeff:

Well Disinfected: Yes X No

	ition or Permi				TO THE REAL PROPERTY OF THE PERTY OF THE PER		
		cription (continued)	Conclusion	n Tachniause (Clif d			
	from pollutant so	ants (☑ if done)		on Techniques (if described in the state of	ell disinfected		
	er line > 50			r pipe joints watertight Sa			
		ft. septic drain field	 ☑ Grouted to 10 ft. (Individual) 20-50 ft. (Irrigation, Nonpublic) ☑ Concrete Curbed/Pad > 4 in. thick, extend > 2 ft., sloped ☐ Gravel/Filter pack washed, disinfected 				
		protected from runoff					
casing > 2 i	ft. above floodpla	ain or highest known flood					
□ Water-beari	ing formations se	aled if likely to be polluted	Casing mate	erial new or meets national sta	ndards		
☐ Health Dept	t. notified 🔲 He	alth Dept. variance		 optimal development, low h 	ead loss & dog		
			☑ Drilling equi	pment steam cleaned			
Feet (B	LS)	Type Material Encounter	red	Remarks	Indicate Water Bearing Zones		
0 25	5 Cla	yey silts and hard sands					
25 45	5 Fine	e sands (flowing sands)					

6/17/2019

Date

Date

72151596 (GA Bond Number)

License Number

744 License Number

Signature of Usensed Well Contractor's Name

Signature of Licensed Geologist/Engineer's Name



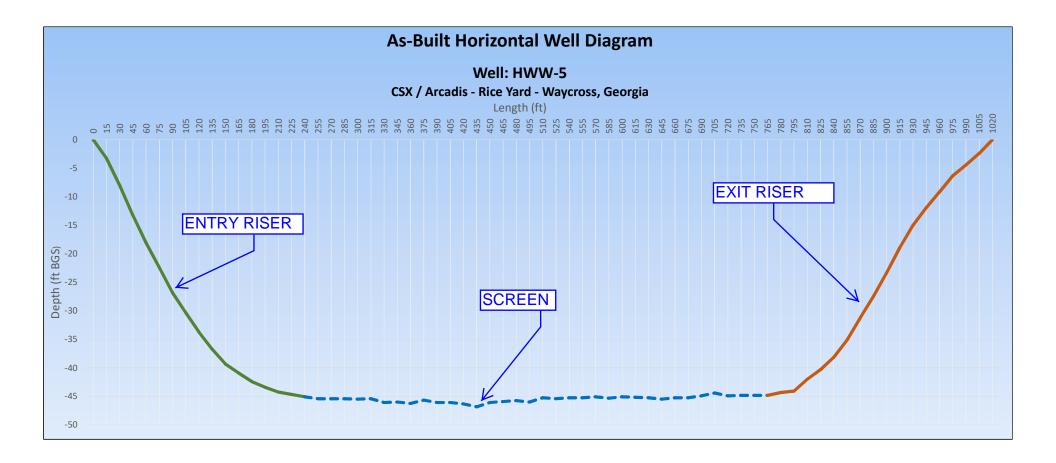




Table 1 As-Built Horizontal Well Navigation Data Well: HWW-5

CSX / Arcadis - Rice Yard - Waycross, Georgia

Driller:	Brandon Geoffroy	Length of Borehole (Horizontal):	1,020 ft
Rig:	DW JT 100	Entry Riser Lenth:	260 ft
Rod Length:	15 ft	Screen Length:	500 ft
Well Screen Material:	4-inch Stainless Steel	Exit Riser Length:	260 ft

	Rod#	Length of Borehole (ft)	Depth (ft BGS)	Pitch (percent)
	0	0	0	-30
	1	15	-3.25	-30
	2	30	-8.00	-30
_	3	45	-13.25	-30
tee	4	60	-18.08	-30
Entry Riser - 6-inch stainless steel (0 ft to 260 ft)	5	75	-22.42	-28
inle t)	6	90	-26.83	-27
er - 6-inch stain (0 ft to 260 ft)	7	105	-30.33	-25
ոգի 5.26	8	120	-33.75	-22
ĨŢ.	9	135	-36.75	-19
er -	10	150	-39.33	-16
Ris	11	165	-40.92	-13
tr	12	180	-42.42	-10
En	13	195	-43.42	-7.0
	14	210	-44.25	-4.4
	15	225	-44.67	-3.2
	16	240	-45.08	-2.9
	17	255	-45.42	-0.4
	18	270	-45.42	-1.2
	19	285	-45.42	-0.6
	20	300	-45.50	-1.2
	21	315	-45.42	-1.1
	22	330	-46.08	-2.0
	23	345	-46.00	-1.4
_	24	360	-46.25	+0.1
tee	25	375	-45.67	0.0
S SS	26	390	-46.08	-0.2
inle	27	405	-46.08	+0.1
sta O fi	28	420	-46.33	-0.7
nch 5 76	29	435	-46.83	-0.3
oreen Section - 4-inch stainless steel (260 ft to 760 ft)	30	450	-46.08	+1.1
on -	31	465	-45.92	+0.5
ecti	32	480	-45.75	-0.2
n Se	33	495	-46.00	+0.1
ree	34	510	-45.25	+1.5
Sc	35	525	-45.42	-0.7
	36	540	-45.25	+0.1
	37	555	-45.25	+0.3
	38	570	-45.08	-0.6
	39	585	-45.33	-1.5
	40	600	-45.08	+0.3
	41	615	-45.17	-2.7
	42	630	-45.25	-1.8



Table 1 As-Built Horizontal Well Navigation Data

Well: HWW-5

CSX / Arcadis - Rice Yard - Waycross, Georgia

Driller:	Brandon Geoffroy	Length of Borehole (Horizontal):	1,020 ft
Rig:	DW JT 100	Entry Riser Lenth:	260 ft
Rod Length:	15 ft	Screen Length:	500 ft
Well Screen Material:	4-inch Stainless Steel	Exit Riser Length:	260 ft

	Rod#	Length of Borehole (ft)	Depth (ft BGS)	Pitch (percent)
	43	645	-45.50	-0.1
Screen Section - 44nch stainless steel (260 ft to 760 ft)	44	660	-45.25	+0.5
- 4 ti o ft	45	675	-45.25	+0.3
on s st s 76	46	690	-44.92	+0.2
een Section - 4-in stainless steel (260 ft to 760 ft)	47	705	-44.42	-0.7
in S tair 60 f	48	720	-44.92	+0.4
s (2)	49	735	-44.83	+1.6
δ	50	750	-44.83	+0.7
	51	765	-44.83	+1.8
	52	780	-44.33	+2.6
	53	795	-44.08	+6.8
	54	810	-42.00	+8.4
	55	825	-40.33	+13
E.	56	840	-38.17	+17
£ E	57	855	-35.17	+20
20 1	58	870	-31.25	+24
inc- 1,0	59	885	-27.50	+25
- 6 to	60	900	-23.33	+26
Riser - 6-inch HD (760 ft to 1,020 ft)	61	915	-18.92	+25
Ri (76	62	930	-15.00	+22
Exit Riser - 6-inch HDPE (760 ft to 1,020 ft)	63	945	-11.92	+18
_	64	960	-9.17	+16
	65	975	-6.33	+15
	66	990	-4.42	+14
	67	1005	-2.42	+14
	68	1020	0.00	+14

C	9	Locust	Valley,	NY; A	\nn Ai	bor,	ngineers MI; Madiso enton, NJ	on Wi, Stone	Augusta, GA; ham, MA	Date(s): 04/02/96 - 04/02/96 Well ID: 11 11 - 13
Client/	/Projec	t Number:	CSXT\5	60-5	8					Surface Elevation: 136.50' Datum: Mean Sea Level
Project	t Nam	e & Locatio	n: CSX	T Way	ycross	, Geo	orgia	•		Total Borehole Depth: 35.00' Well Completion Depth: 35.00'
Logged	d By:	G. Bonn			Ap	orove	d By: C.	Mattair		Depth to Water: Borehole Dia.: 10.00in
Contra	ctor/i	riller: GW P	rotectio	on						Conductor Casing: dia: .00in fm: .00' to: .00'
		od & Rig: I			Auge	r				type: did: 150ml miles
		n: Adjacent								Solid Pipe type: PVC dia: 4.00in fm: .5' to: 20.00'
		raction Well								Screens: type: Wire-wrap size: .020in dia: 4.00in fm: 20.00' to: 30.00'
		e: Split Spo	on, 2"	diam	eter,	2' lo	ng			туре. ние-жюр загеогол с.с. лосы
	_	Measured (Annular Fill: type: Grout type: Grout fm: 1.00' to: 16.00' to: 18.00'
Remai	rks:	Well develop	ed by	swabt	oing v	ith a	surge b	lock fo	r	type: Sand Filter fm: 18.00' to: 35.00'
		1 hr. and to purged for	reatina	with	baras	hos.	Well was			type: fm: to: type: fm: to:
$\overline{}$		parged 101				T				Material Description Well Construction
Elevation (ft)	(E)	/ <u>a</u>		ęs S	يخ	Count	Graphic Log	Code		Trace = 0-10% Little = 10-20%
vatio	Depth	Sample Interval	Vapor	Moisture	Recovery	Blow	raphi	nscs		Some = 20 = 30% And = 35-50% MP. EL. 136.00 D - dry, M - moist, S - saturated
	<u>~</u>	స్	۸	=	<u>6</u> 2		0.	GW/GC		
	_			м			o 🗖		U-2 I	imestone gravel and sand fill. Dark brown, homogeneous. F-F sand with 20% sitly clay. Brown, homogeneous, soft.
	-							SC		
						,				F-F sand with 30% silty clay. Gray, orange, mattled,
	5-	4-6		м		2 3 6 7				nomogeneous with a few 3-in. dia. iron concretions,
- 13Q						'				no odor.
						6				-M sand with 40% silty clay. Red, yellow, white,
	10-	9-11		М		11 9 10		SC/CL		homogeneous, becomes laminated at 10.8', grain size
				"	7	10		CL	i .	decreasing with depth, semi-dense, no odor.
-								1	i	Ity clay with 30% VF-F sand. Light gray, white, weakty kaminated, semi-dense.
								1		C sand with 25% sitly clay. Red, homogeneous,
	15-	14-16		М		3223		SC		semi-dense, abrupt contact at 14.8'.
		<u>.</u> 1		M		3			1	F-F sand with 35% sitty clay. Pink, weak interloyered
- 120								1	í	bedding, soft.
	,									F-VC sand with a trace of granular sand and 20% silty clay. Pink, homogeneous, solt.
		10-21			78.	2234				I mile initinguitations and
	20-	19-21		s		3				
-								1	l .	C sand with 30% sity clay. Red, weakly bedded,
		4								semi-dense.
						4		1		illy clay with 30% F-C sand. Pink, gray, contains a few thin beds of sand, semi-dense, no odor.
	25-	24-26		М		4 7 9		CL	i	F-M sand with 20% sity clay. Orange, yellow, weak
- 110	']]	E	interlayered bedding, serni-dense.
]				,			2	ity clay with 10% VF-C sand. Gray, homogeneous, semi-dense.
		28-30		S		3500 100		SC	29.7-30' F	-C sand with 20% sitty clay. Gray, weakly bedded, semi-dense.
	l					10	1112	<u> 1 SC</u>	L	ary Between Soil Types Page 1 of 2

P		environ		scier	itists		engineers MI: Madis	on Wl.	Augusta, GA;	BORING & WELL CO				
							renton, NJ			Date(s): 04/02/96 - 04/02/96	Well ID:	WW-19)	
Client/F	Proje	ct Number:	CSXT\	560-	58					Surface Elevation: 136.50'	Datum:	Mean Sea L	evel	
Project	Nan	ne & Locatio	on: CS)	XT Wo	ycros	s, G	eorgia			Total Borehole Depth: 35.00'	Well Co	ompletion Depth: 35.00'		
Logged	Ву:	G. Bonn			Aç	prove	ed By: C.	Mattai	r	Depth to Water:	Borehol	e Dia.: 10.00	in	
Contrac	ctor/	Driller: GW F	rotecti	on						Conductor Casing: type: dia: .00i	in fm:	00'	to: .00'	
Drilling	Meth	nod & Rig:	Hollow	Stem	Auge	er				Solid Pipe			101.00	
Well Lo	catio	n: Adjacent	to MW	-63.			·		<u> </u>	type: PVC dia: 4.0	Oin fm:	.5'	to: 20.00'	
Purpose	e: Ext	traction Well								Screens: lype: Wire-wrap size: .020in dia: 4	4 NOin	fm: 20.00'	to: 30 00'	
		oe: Split Spo				2' 10	ong			Annular Fill:		20.00		
Water I Remark	ks:	Measured (Well develop 1 hr. and t purged for	ed by reating	swabl with	oing bara	phos.	Well was	ock fo	ir	type: Grout type: Bentonite type: Sand Filter type: type:	fm:		to: 16.00° to: 18.00° to: 35.00° to: to:	
Elevation (ft)	Depth (ft)	Sample 1D/ Interval	Vapor	Moisture	Recovery	Blow Count	Graphic Log	USCS Code		Material Description Trace = 0−10% Little = 10−20% Some = 20±−30% And = 35−50% O − dry, M − moist, S − saturated		Well Cor	struction	
- 100	35-	32-34			_	5 10 14 14				S sand with 35% silly clay. Gray, orange, homogener y dense.	ous,			
90	45-													
80	55-		Cir						anda Daniel	Between Soil Types	Page 2			

20-21' VF-F sand with 15% silty clay. Light gray, soft. 22-24 25-24-26 SSW/SC SSW/SC SSW/SC 26-28 SSW/SC SSW/SC SSW/SC 26-27' F-M sand with 10% silty clay. Light gray, orange, weakly kaminated, clay content increasing with depth. SC 26-27' F-M sand with 20% silty clay. Light gray, cream, soft. 27-28' M-C sand with 20% silty clay. Light gray, cream. 28-29' VF-F sand with a little silty clay. Light gray, soft. 29-30' F-C sand with a little pea gravel and silty clay. Light gray, soft.								· · · · · · · · · · · · · · · · · · ·				
Decision Decision Pir Tompo, Pi; Trenton, NJ; Stonehom, MA Decision			envir	onmento	ol sc	ientist:	s an			i, Augusta,	GA;	BORING & WELL CONSTRUCTION LOG
Project Name & Location: CSNT Waycross, Georgia Total Borehole Depth: 37.00" Wall Completion Depth: 37.00" Depth to Water: Borehole Dia: 10.00" Depth to Water: Borehole Dia: 10.00" Depth to Water: Borehole Dia: 10.00" Depth to Water: Depth to		_	Jacks	sonville	FL;	Tampa	, FL;	Trenton, N	IJ; Sto	neham, MA	۸.	Date(s): 04/02/96 - 04/02/96 Well ID: WW-20
Logged By: T. Fuller	Clie	nt/Pro	oject Number	: CSXT	\560	-58						Surface Elevation: 139.00' Datum: Mean Sea Level
Conductor / Driller: GW Protection Conductor Casings dia: DCIn fm: DO' to: DO'	Pro	ject N	lame & Loca	tion: C	SXT	Wayer	oss,	Georgia		•		Total Borehole Depth: 37.00' Well Completion Depth: 37.00'
Drilling Method & Rig: Hollow Stern Auger Special Color of the Col	Log	ged B	y: T. Fuller			1	Appro	ved By: C.	Matte	oir		Depth to Water: Borehole Dia.: 10.00in
Solid Pipe Well Location	Con	tracto	r/Driller: GW	Protect	tion							
Well Location: J9-sulfused of Wil-59. Special Extraction Well	Drill	ing M	ethod & Rig:	Hollow	Ste	m Aug	ger					
Purpose: Extraction Wall Screens: Scre	Well	Loca	tion: 30'sout	hwest o	of MY	V-59.				······································		
March Level Measured (Dote & Time): Marufar Fill: Marufa	Pur	pose: (Extraction We									
Moter Level Measured (Date & Time):	San	npler 1	Type: Split Sr	oon, 2	" dio	meter	. 2'	lona.			-,	type: Wire-wrop size: .020in dia: 4.00in fm: 22.00' to: 32.00'
Remorks: Well developed by swobbing with a surge block for hour and treating with borophos. Well was yee: Sand Filter fm: 12.00° to: 20.00° to: 37.00° yee: y							<u>• -</u>			··		· · · · · · · · · · · · · · · · · · ·
1 hour and treating with borophose. Well was purged for 1 hr. with a centrifugal pump. Second Part Fire Fir	Ren	norks:	Well develo	ped by	SWO	bbing	with	o surge b	lock f	or		type: Bentonite fm: 18.00' to: 20.00'
19-20 10-9-11 15-14-16 10-9-11 15-14-16 10-9-11 15-14-16 10-9-11 15-14-16 10-9-11 15-14-16 10-9-11 15-14-16 10-9-11 15-14-16 10-9-11 15-14-16 10-9-11 15-14-16			1 hour and	d treati	ng w	ith bo	raph	os. Well i	was .	,		
Troce = 0-10% Little = 10-20% Some = 2030% And = 35-50% MP. EL. 138.50	F	T	purged for	1 111.	WICH.	1	T.	gur punip.	Γ.	1		· · ·
120 20 19 21 22 24 25 24 26 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 28 28 28 28 28 2	E .	18		ł	,,		ğ	Log	ge			
120 20 19 21 22 24 25 24 26 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 38 26 28 28 28 28 28 28 2	vatio	뒱	erval	ğ	isture	cover	(3	phic	SS			Some = 20 30% And 3550%
120 10 12 13 14 16 16 17 18 18 19 19 19 19 19 19	ä	a	왕물	2	≗	8	Ĭä	<u>§</u>			i	O – dry, M – moist, S – saturated MP. EL. 138.50
5-4-6 M SC/CL 9-11' Fire sond with 25% sitly cloy. Rust cronge, ton, firm. SC/CL 9-11' Fire sond with 45% sitly cloy. Orange, motited, homogeneous. 15-14-16 M SC/CL 9-11' Fire sond with 30% sitly cloy. Light gray, orange, pink, motited, homogeneous, firm. 12-20-19-21 SSW/SC 14-16' VF-F send with 30% sitly cloy. Light gray, orange, pink, motited, homogeneous, firm. 19-20' Same as 14-16'. 20-21' VF-F sond with 15% sitly cloy. Light gray, soit. 22-24' F-M sond with 10% sitly cloy. Light gray, tan, cream, white, grain size increases with depth. SC 24-26 SSW/SC S		·	4					• • •	GP	0-2'	Gran	ile balast fill. Dark brown, black.
12C 20 19 - 21			-		D			1/2	SP/SC	2-4'	F-N	send with 10% sitty clay. Tan, brown.
12C 20 19 - 21			1									
12C 20 19 - 21		5	4-6		١		2 2			5.6-6'	Fine	sond with 25% silly clay. Rust example too firm
10-9-11 D SC/CL SC 14-16' VF-F sand with 30% sity clay. Light gray, orange, pink, mottled, homogeneous, firm. 19-20' Same as 14-16'. 20-21' VF-F sand with 15% sity clay. Light gray, soit. 22-24 SS SW/SC SS SS SS SS SS SS SS SS SS		ľ			M		3		SC			
10-9-11 D SC/CL SC 14-16' VF-F sand with 30% sity clay. Light gray, orange, pink, mottled, homogeneous, firm. 19-20' Same as 14-16'. 20-21' VF-F sand with 15% sity clay. Light gray, soit. 22-24 SS SW/SC SS SS SS SS SS SS SS SS SS	ĺ		-									
10-9-11 D SC/CL SC 14-16' VF-F sand with 30% sity clay. Light gray, orange, pink, mottled, homogeneous, firm. 19-20' Same as 14-16'. 20-21' VF-F sand with 15% sity clay. Light gray, soit. 22-24 SS SW/SC SS SS SS SS SS SS SS SS SS	İ		-								_	
15-14-16 M SC 14-16' VF-F sand with 30% sitly clay. Light gray, orange, pink, mottled, homogeneous, firm. 19-20' Same as 14-16'. 20-21' VF-F sand with 15% sitly clay. Light gray, solt. 22-24 25-24-26 SS SW/SC SC 26-28 SS SC 26-27' F-M sand with 10% sitly clay. Light gray, orange, weakly laminated, clay content increasing with depth. 26-28 SC 26-27' F-M sand with 20% sitly clay. Light gray, cream, solt. 27-28' M-C sand with 20% sitly clay. Light gray, cream, solt. 28-29' VF-F sand with a little sitly clay. Light gray, cream. 29-30' VF-F sand with a little sitly clay. Light gray, solt. 29-30' F-C sand with a little sitly clay. Light gray, cream. 29-30' F-C sand with a little sitly clay. Light gray, cream. 29-30' F-C sand with a little pea gravel and sitly clay. Light gray, solt.	- 130		9-11				4 6		SC/CL	9-11'	Fine	sand with 45% silly clay. Orange, mottled, homogeneous.
pink, mottled, homogeneous, firm. 12C 20 19 - 21		10·			D		10					
pink, mottled, homogeneous, firm. 12C 20 19 - 21			-									
pink, mottled, homogeneous, firm. 12C 20 19 - 21			4									I W VI
19-20' Same as 14-16'. 20-21' VF-F sand with 15% silty clay. Light gray, soft. 22-24 25-24-26 S SSW/SC 26-28 S SSW/SC 26-28 S SSW/SC 26-27' F-M sand with 10% silty clay. Light gray, orange, weakly larminoted, clay content increasing with depth. SC 26-27' F-M sand with 20% silty clay. Light gray, orange, weakly larminoted, clay content increasing with depth. SC 26-27' F-M sand with 20% silty clay. Light gray, cream, soft. 27-28' M-C sand with some pea gravel and clay. Light gray, cream. 28-29' VF-F sand with a little silty clay. Light gray, soft. 29-30' F-C sand with a little pea gravel and silty clay. Light gray, soft.	-						6		SC	14-16'		
20-21 S S S S S S S S S S S S S S S S S S S		15-	114-16		М		9 10				pink,	motlled, homogeneous, firm.
20-21 S S S S S S S S S S S S S S S S S S S												
20-21 S S S S S S S S S S S S S S S S S S S												
22-24 25-24 25-26 SW/SC SW/SC SC SC 22-24' F-M sand with 10% silty clay. Light gray, tan, cream, white, grain size increases with depth. 24-26' F-C sand with 10% silty clay. Light gray, orange, weakly laminated, clay content increasing with depth. 26-27' F-M sand with 20% silty clay. Light gray, cream, soft. 27-28' M-C sand with some pea gravel and clay. Light gray, cream. 28-29' VF-F sand with a little silty clay. Light gray, soft. 29-30' F-C sand with a little pea gravel and silty clay. Light gray, soft.	- 120	-					4			19-20°	Same	os 14-16'.
22-24 25-24 25-26 SW/SC SW/SC SC SC 22-24' F-M sand with 10% silty clay. Light gray, tan, cream, white, grain size increases with depth. 24-26' F-C sand with 10% silty clay. Light gray, orange, weakly laminated, clay content increasing with depth. 26-27' F-M sand with 20% silty clay. Light gray, cream, soft. 27-28' M-C sand with some pea gravel and clay. Light gray, cream. 28-29' VF-F sand with a little silty clay. Light gray, soft. 29-30' F-C sand with a little pea gravel and silty clay. Light gray, soft.		20-	19-21		S		3 6			20-21'	VF-F	sond with 15% silty clay. Light gray, soft.
while, grain size increases with depth. 24-26 SW/SC SW/		-					' [77_041	rv	201 - 201 - 100 - 21 - 1 - 1 - 1 - 1 - 1
SW/SC 24-26 F-C sand with 10% silty clay. Light gray, orange, weakly kaminated, clay content increasing with depth. 26-28 SC 26-27' F-M sand with 20% silty clay. Light gray, cream, soft. 27-28' M-C sand with some pea gravel and clay. Light gray, cream. 28-29' VF-F sand with a little silty clay. Light gray, soft. 29-30' F-C sand with a little pea gravel and silty clay. Light gray, soft.]	22-24				2 2					
25-24-26 SC	.				S		5		w /sa			
SC 26-27' F-M sand with 20% sitty clay. Light gray, cream, soft. 27-28' M-C sand with some pea gravel and clay. Light gray, cream. 28-29' VF-F sand with a little sitty clay. Light gray, soft. 29-30' F-C sand with a little pea gravel and silty clay. Light gray, soft.		25-	24-26		s				11/20			
27-28' M-C sand with some pea gravel and clay. Light gray, cream. 28-30 S 27-28' M-C sand with some pea gravel and clay. Light gray, soft. 28-29' VF-F sand with a little sitty clay. Light gray, soft. 29-30' F-C sand with a little pea gravel and sitty clay. Light gray, soft.		-			-		1 2		sc			
28-30 S 28-29 Vr-F sand with a little sitty clay. Light gray, soft. 29-30' F-C sand with a little pea gravel and silty clay. Light gray, soft.		1	26-28		s		4 5					
Light gray, soft.		1	28-30						- 1			
bw_tmp.dwg Stratification Lines Show the Approximate Boundary Between Soil Types Page 1 of 2	114		20 00				4 (نا	ight g	roy, soft.
ACCOUNT TRUBSHIONS ARE GENERALLY GROUNDS	bw_tr	np.dwg		Stroti	ificati	ion Lir	nes S Act	how the Audio Transiti	pproxir ons A	nate Bound re Generally	dary Gra	Between Soil Types Page 1 of 2

•	À	enviror Locust	Valley,	scie	ntists Ann	Arbor			Augusta, GA;	BORING & WELL CONSTRUCTION LOG Date(s): 04/02/96 - 04/02/96 Well ID: WW-20
Cita	1 /D*	Jockso				FL;	Trenton, N.	i; Ston	eham, MA	
	<u> </u>		<u>`</u>							
-		ne & Locati	on: Co	A1 W	i-		red By: C.	Ualla:	•	Total Borehole Depth: 37.00' Well Completion Depth: 37.00' Depth to Water: Borehole Dia:: 10.00in
		T. Fuller 'Driller: GW I	Drotooti	^^	^	pprov	rea by: c.	MULLOI		Depth to Water: Borehole Dia.: 10.00in Conductor Casing:
		hod & Rig:			Aug	or.				type: dia: .00in fm: .00' to: .00'
		on: 30'south								Solid Pipe type: PVC dio: 4.00in fm: .5' to: 22.00'
		traction Well		19411						Screens:
<u> </u>		pe: Split Sp		dion	neter.	2'	long.			type: Wire-wrap size: .020in dia: 4.00in fm: 22.00' to: 32.00'
Wate	r Level	Measured (Well develop 1 hour and purged for	Date & ned by treatin	: Time swabl	e): bing h ba	with rapho	a surge bl	ock fo	or	Annular Fill: type: Grout fm: 1.00' to: 18.00' type: Bentonite fm: 18.00' to: 20.00' type: Sand Filter fm: 20.00' to: 37.00' 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% O - dry, M - moist, S - saturated
		30-32 32-34		S		5 4 3 5 7 5 5 9		CL	cloy 31.5-32' Sîlly	sand with 20% sitty clay. Light gray, orange, lenses in sand. clay. Light gray. clay with 20% sand. Light gray, green, hard.
- 100	35- - - -								,	
•	40-				-					
	45~ - -									
- 90	50-		·							
	55-									
80										
bw_t	mp.dwg		Strat	ificali	ion L	ines Ac	Show the A tual Transit	oproxi	mate Boundary re Generally Gr	Between Soil Types Page 2 of 2 adual

•	7	enviror Locust	Volley,	scie	ntists Ann <i>l</i>	Arbor,			Augusta, G	A; -	BORING & WELL C		FRUCTION LOG
0''	L/D					rL;	irenton, N	ı; Ston	eham, MA	\dashv	Date(s): 04/02/96 - 04/03/96 Surface Elevation: 139.00'		Mean Sea Level
	<u> </u>	ect Number:				- 0				+			
<u>·</u>		ne & Locati	on: CS	XI W	<u> </u>			· ·		4	Total Borehole Depth: 38.00'		ompletion Depth: 38.00'
		G. Bonn			Aţ	prov	ed By: C.	Mattai	r 	4	Depth to Water:	Boreho	le Dia.: 10.00in
Conti	ractor/	Driller: GW	Protec	tion		· · · · ·				4	Conductor Casing: type: dia: .00	Din fm:	: .00' to: .00'
Drillir	ng Metl	hod & Rig:	Hollow	Stem	Auge	er 				╣	Solid Pipe		
Well	Locatio	on: 100' sou	ith of I	MW-6	57. ———		<u>-</u>			4	71	00in fm	: .5' to: 23.00'
		traction Well								4	Screens: type: Wire-wrap size: .020in dia:	4.00in	fm: 23.00° to: 33.00°
		pe: Split Spo				2' 10	ong.			ᅷ	Annular Fill:		2
	orks:	Measured (Well develop 1 hr. and t purged for	ed by reating	swabl with	bing to	phos.	Well was	lock fo	or		type: Grout type: Bentonite type: Sand Filter type: type:	fm	
E		×				돧	бо	e e			Material Description		Well Construction
Elevation (ft)	Depth (ft)	Sample 1D/ Interval	Vapor	Moisture	Recovery	Blow Count	Graphic Log	USCS Code			race = 0-10% Little = 10-20% frome = 20 -30% And = 35-50% from - dry, M - moist, S - saturated		MP. EL. 139.00
- - 130		4-6 9-11		M		4 3 7 20	000000	GW/GC SC	0-4° 5-5.8' 5.8-6'	Sand VF-F soft	d and gravel fill. Dark gray, homogeneous. d and gravel fill. Dark gray. F sand with 30% silty clay. Gray, brown, homoget, old cross tie ot 6'. F sand with 40% silty clay. Tan, beige, homoget		
-		14-16		S	_	3 10 14 16		SC/CL SC		solt VF-M			
- 120	20-	19–21		S	/	566					I sand with 30% silty clay. White, thick laminal clay in homogeneous sand, soft.	ions	
	25-	24-26		s		64710				Lighl	sand with a trace of C sand and 30% sitty clay it gray, a few thick laminations of clay in sand, sand with 15% sitty clay.	1	
110	4:	28-30		S		3325			- •		,		
h 1-	np.dwg		Strat				Show the A	oproxii	mate Bounda	arv	Between Soil Types adual	Page 1	of 2

•	7	enviro Locus	t Valley	l scie	ntists Ann	Arbo			, Augusta, GA;	BORING & WELL CONSTRUCTION LOG
						, FL;	Trenton, N.	J; Stor	neham, MA	Date(s): 04/02/96 - 04/03/96 Well ID: WW-21
├──		ect Number:								Surface Elevation: 139.00' Datum: Mean Sea Level
		me & Locat	ion: CS	XT W	-			•		Total Borehole Depth: 38.00' Well Completion Depth: 38.00'
<u> </u>		G. Bonn			A	ppro	ved By: C.	Mattai	ir	Depth to Water: Borehole Dia.: 10.00in
Con	tractor,	Driller: GW	Protec	tion						Conductor Casing: type: dia: .00in fm: .00' to: .00'
		hod & Rig:				jer				Solid Pipe
		on: 100' sou		MW-6	57.					type: PVC dia: 4.00in fm: .5' to: 23.00'
		traction Well								Screens: type: Wire-wrap size: .020in dia: 4.00in fm: 23.00' to: 33.00'
		pe: Split Sp				, 2'	long.		•	Annular Fill:
	er Leve	Measured (Well develop 1 hr. and I purged for	ed by	swab	bing	with iphos itrifu	a surge bl s. Well was gal pump.	lock fo	or	type: Grout fm: 1.00' to: 19.00' type: Bentonite fm: 19.00' to: 21.00' type: Sand Filter fm: 21.00' to: 38.00' type: fm: to: type: fm: to:
(3)		/01				펕	6o	용		Material Description Well Construction
Elevation (ft)	Depth (ft)	Sample I	Vapor	Moisture	Recovery	Blow Count	Graphic Log	USCS Code		Frace = 0-10% Little = 10-20% Some = 20 ₂ -30% And = 35-50% O - dry, M - moist, S - saturated
	35-	32-34		S		6234		CL	Liq	sand with a trace of C sand and 40% silty clay. ht gray, clay increasing with depth, soft. clay with 30% VF-F sand. Greenish gray, homogeneous.
- 100	40-									
	45- - -									
90	50-					,				
	55-									
80	-		1	.						
bw_tr	np.dwg		Strati	ification	on Li	nes	Show_the A	proxin	nate Boundary	Between Soil Types Page 2 of 2

	9	Locust	mental Valley,	NY;	itists Ann A	rbor,	engineers MI; Madiso renton, NJ		Augusta, GA; eham, MA	BORING & WELL C		UCTION LOG			
Client	/Proie	ct Number:								Surface Elevation: 138.00' Datum: Mean Sea Level					
		ne & Locatio				s, Ge	eorgia			Total Borehole Depth: 44.00' Well Completion Depth: 44.0					
		T. Fuller			$\overline{}$		ed By: C.	Mattoir	r	Depth to Water:	Borehole	Dia.: 10.00in			
		Driller: GW	Protect	tion	1					Conductor Casing:					
		nod & Rig:			Auge	er				7,р	0in fm: .0	0' to: .00'			
Well	Locatio	n: 240' wes	st of M	W-54						Solid Pipe type: PVC dia: 4.00in fm: .5' to: 29.00'					
Purp	ose: Ex	traction Well								Screens: type: Wire-wrap size: ,020in dia: 4.00in fm: 29.00' to: 39.00'					
Samj	oler Ty	pe: Split Spo	oon, 2"	diam	neter,	2' 10	ong.			type, this wise state to the tree to the t					
Water		Measured (Well develop 1 hr. and t for 1 hr. w	ed by	swabt with	oing v	phos.	Well was	ock fo	or d	Annular Fill: type: Grout type: Bentonite type: Sand Filter type: type:	fm: 1. fm: 25 fm: 27 fm: fm:	5.00' to: 27.00'			
Ξ	~	/OI				늍	[0]	Code		Material Description		Well Construction			
Elevation (ft)	Depth (ft)	Sample II Interval	Vapor	Moisture	Recovery	Blow Count	Graphic Lag	os sosn		Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50% D - dry, M *- moist, S - saturated		MP. EL. 137.50			
- 130		4-6 9-11		D D S		1 1 10 3 8 17 13		GP SP/SC SC	5-6' VF-F s slag fr	balast and F-C sand fill. Dark brown, black, and with 10% silly cky. Dark brown, black, cor agments up to 1-in. dia., solt.	tains .				
- 120	15	14–16		М		5990		SC/CL		and with 40% silty clay. Light gray, firm.					
	20- -	19–21		М		1236		SC	and le	and with 30% silty clay. Light gray, cream, into alicular bedding, soft, 1—in. thick clay lens at 20 and with 25% silty clay. Light gray, soft, 3—in. 1	r.				
-	-	22–24		м		12 859 6668			ckry le	na with 25% salty clay. Light gray, soft, 5-iii. I na with 25% salty clay. Light gray, soft.	AHGK.				
	25-	24-26		s		68			26-28' Same o	s 24-26'					
110		26-28		S		10 10 12 15 16 13		GP	28-30° Phospho	vile. Black, homogeneous, porous, fossiliferous ne replaced with phosphate, very hard, trace of	ovrile.				
		28-30		М		16 13 18 20	• • •			y Between Soil Types	Page 1 o				

Locust Valley, NY;	Ann Arbor, MI; Madison WI, August Ann Arbor, MI; Madison WI, August Anna, FL; Trenton, NJ; Stoneham, B8 ycross, Georgia Approved By: C. Mattair Auger eter, 2' long.	Date(s): 04/03/96 - 04/03/96 Surface Elevation: 138.00' Total Borehole Depth: 44.00' Depth to Water: Conductor Casing: type: dia: .0 Solid Pipe type: PVC dia: 4. Screens:	Well ID: WW - 22 Datum: Mean Sea Level Well Completion Depth: 44.00' Borehole Dia.: 10.00in Oin fm: .00' to: .00' 4.00in fm: 29.00' to: 39.00' fm: 1.00' to: 25.00'
Remarks: Well developed by swabb 1 hr. and treating with for 1 hr. with a centrifu	ing with a surge block for borophos. Well was purged Igal pump.	type: Bentonite type: Sand Filter type: type:	fm: 25.00' to: 27.00' fm: 27.00' to: 44.00' fm: to: fm: to:
Elevation (ft) Depth (ft) Sample ID/ Interval Vapor Moisture	Blow Count Graphic Log USCS Code	Material Description Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50% D - dry, M - moist, S - saturated	Well Construction
- 30-32 S - 32-34 S - 35-34-36 S - 36-38 S - 38-40 M - 40-42 M	32-34' 34-36' 36-38' 36-38' SC/CL 38-40'	F-C sand with a trace of pea gravel and 20% silty clay Light gray, homogeneous grading to interlayered bedding F-M sand with 20% silty clay. Orange, tan, light gray, in bedding, saft, contains a thin bed of black, hard, phosp F-M sand with 20% silty clay. Light gray, orange, interlabedding, contains several thin clay beds, soft. Same as 34-36°. F-C sand with 45% silty clay. Light gray, orange, interlabedding, firm. F-C sand with 35% silty clay. Light gray, firm.	n, soft.
90 - 50-			
55-			
bw_tmp.dwg Stratification	n Lines Show the Approximate Bo Actual Transitions Are Gener	indary Between Soil Types	Page 2 of 2

C	9	Locust	Valley, nville Fl	NY; /	\nn A npa∷ ¹	rbor, FL: Ti	MI; Madiso renton, NJ	on Wi, : Stone	Augusta, ham, MA	GA;	Date(s): 04/03/96 - 04/03/96	Well ID:	: WW-2	3
lient	/Proiec	ct Number:					,			\neg	Surface Elevation: 138.00'	Datum:	Mean Sea	Level
		ne & Locatio				s, Ge	orgia	•			Total Borehole Depth: 35.00'	Well Co	ompletion De	epth: 35.00'
		T. Fuller	JII. 00/				d By: C.	Mattair			Depth to Water:	Boreho	le Dia.: 10.0	00in
		Driller: GW	Protoct	ion	1,4	-					Conductor Casina:			
					4						type: dia: .	00in fm	: .00'	to: .00°
		nod & Rig:									Solid Pipe	.00in fm	. 5'	to: 20.00°
		n: 300' sou		AW-5	9.						урог то			
•		traction Well							 		Screens: type: Wire-wrop size: .020in die	: 4.00in	fm: 20.00	' to: 30.00'
		oe: Split Sp				2' lo	ong.				Annular Fill:	_	4.651	1 40 000
Water		Measured (type: Grout type: Bentonite		: 1.00' : 16.00'	to: 16.00' to: 18.00'
Remo	ırks:	Well develop	ed by	swabl	oing v	vith o	surge bl	lock fo	r		type: Sand Filter	fm	: 18.00'	to: 35.00°
		1 hr. and 1 purged for	ireating 1 hr. v	with a	cent	rifug	ol pump.	3			type:	fm fm		to: to:
اج											Material Description		Well C	onstruction
Elevation (ft)	E	Sample ID/ Interval		5	ڇ	Blow Count	Graphic Log	Code			Trace = 0-10% Little = 10-20%			
evotic	Depth	ample	Vapor	Moisture	Recovery	Mol	raph	nscs			Some = $20 \pm -30\%$ And = $35-50\%$ D - dry, M - moist, S - saturated		MP.	EL. 137.50
	۵	.v=	>	-	~	ш	_	GP/GC					 	7.45
	-			D					0-4'	F-M	sand with slag fragments, limestone fill, and cl	ty.		
	-						•							
	-													
		4-6				4554			5-6'	F-N	sand with 10% sitty clay. Dark brown, black, a	orange,	1 <i>Y</i>	
	5-	4-6		D	\angle	5 4		SP/SC			ogeneous, soft.	-		
													1 Y	
130	-													
	-					13							1 Y	
	10-	9-11		s	\Box	13 7 5 5			10.5-11'	F-M	sand with 10% silty clay. Gray, tan, homogene	ous, soil.		
	-				<u> </u>							•		
		-												1 /
•	-								14-16'	Fso	nd with 40% silly clay . Orange, light gray, inl	erlayered		
	45	14-16				4 5 7 10		SC/CL			fing, firm, 2-in. thick organic hardpan at 14.5°.			1 / [
	13-]		D		10		1						
								1						
120		-]				1 E . CM		
		-			1074)	4	1///	sc	19-21'		nd with 20% silly clay . Light gray, interlayered	bedding,] ::	
	20-	19-21		s		† † 10				soft,	, 1—in. thick dark brown hardpan at 19.5'.		:	
		1		ŀ		"								
		1						1	25-26'	£_ቦ	sand with 10% silly clay. Light gray, grain siz	e increasina	::	
•		1			1				2J-20		depth, soft, 2-in, thick beds of hordponand			
		24-26				5 5 4			26-27'		sand with 15% silly clay. Light gray, coarsen		. [-	
	25-	24-26		S		4		SW/SC	27-28		clay with 40% F-C sand. Light gray.	•		
	•	26-28				3 2 2 3		SC	28-29'	•	sand with 15% silly clay. Light gray, soft.		.	1-1-11.
110]		S				CL	29-30'		sand with 40% silty clay. Light gray, interloye	red with		
110		28-30		 		6335	////	SC		thin	beds of clay and sand.			
	l	1	1	M		ž	V.Z.Z.Z.	j	l				1 [24 L A

E		enviror Locust	Valley,	scier NY;	ntists Ann <i>i</i>	Arbor,			Augusta, GA;	BORING & WELL CONSTRUCTION LOG Date(s): 04/03/96 - 04/03/96 Well ID: WW-23
Olimai	/Denie	ct Number:				rL;	renton, NJ	; Ston	enom, MA	Surface Elevation: 138.00' Datum: Mean Sea Level
	<u> </u>	ne & Locati				ee G	eoraia			Total Borehole Depth: 35.00' Well Completion Depth: 35.00'
		T. Fuller	011. 03/		· · ·		ed By: C.	Mattair		Depth to Water: Borehole Dia.: 10.00in
		Driller: GW	Protec	tion	1 ''	- Provi	<u> </u>			Conductor Casing:
		nod & Rig:			Aura	er				type: dia: .00in fm: .00' to: .00'
		n: 300' sou								Solid Pipe type: PVC dia: 4.00in fm: .5' to: 20.00'
		traction Well						-		Screens:
		pe: Split Sp		dian	neter.	2' !	ong.			type: Wire-wrap size: .020in dia: 4.00in fm: 20.00' to: 30.00'
Wate	Level	Measured (Well develop 1 hr. and t purged for	(Date & bed by treating	: Time swabl with	e): bing bara	with	a surge bl Well was		r	Annular Fill: type: Grout fm: 1.00' to: 16.00' type: Bentonite fm: 16.00' to: 18.00' type: Sand Filter fm: 18.00' to: 35.00' type: fm: to: type: fm: to:
Elevation (ft)	Depth (ft)	Sample ID/ Interval	Vapor	Moisture	Recovery	Blow Count	Graphic Log	USCS Code		Material Description Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50% D - dry, M = moist, S - saturated
	-	30-32 32-34		D		6 4 6 3 6 8 11		CL	30.5-32" Silty (cand with 25% silty clay. Orange, soft, micaceous. lay with 20% M—C sand. Light gray, hard. clay with 35% M—C sand. Light gray, hard.
- 100	40 - -									
· 90	45- -									
	50-									
	55-									
80	1									
			Cien	tificat	ion	ines	Show the	Annravi	mote Roundan	/ Between Soil Types Page 2 of 2 radual

	•	Locust	Valley,	NY; A	∖nn Ai	bor,	ngineers MI; Madiso enton, NJ;		Augusta, GA; ham, MA	Date(s): 04/03/96 - 04/03/96	Well ID: WV	Y-26
Client	/Proiec	t Number:				-				Surface Elevation: 138.00'	Datum: Mean	Sea Level
		e & Locatio				, Ge	orgia			Total Borehole Depth: 42.00'	Well Comple	tion Depth: 42.00'
<u> </u>		T. Fuller			1		d By: C.	Mattair		Depth to Water:	Borehole Dic	ı.: 10.00in
		Oriller: GW P	rotection	on	ــــــــــــــــــــــــــــــــــــــ					Conductor Cosing:	Oin fm: .00°	to: .00'
		od & Rig: I			Auge	r				уро.	Jin 111100	(0.100
		n: 195' eas					***************************************			Solid Pipe type: PVC dio: 4.	00in fm: .5'	to: 27.00'
Purpo	se: Ext	raction Well								Screens: type: Wire-wrap size: .020in dia:	4.00in fm:	27.00' to: 37.00'
		e: Split Spo		diam	eter,	2' ic	ng.		•	Annular Fill:	7.0011 1111	27.00 (0.07.00
	Level	Measured (Well develop	Date & ed by	Time swabb with	e): ping v	rith c	surge bl Well was	ock for	r	type: Grout type: Bentonite type: Sand Filter type:	fm: 1.00 fm: 23.0 fm: 25.0 fm:	0' to: 25.00'
		purged for	1 hr. v	vith a	cent	rifugo	ol pump.	- T		type:	fm:	to:
Sevation (ft)	Depth (ft)	Sample ID/ Interval	Vapor	Moisture	Recovery	Blow Count	Graphic Log	USCS Code		Material Description Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50% D - dry, M - moist, S - saturated		Well Construction MP. EL. 137.50
•	5-	4-6		D		2222		GP/GW SC	5.5-6° Fs	and with brick, concrete, and metal debri. Dark to and with 25% silty clay. Dark brown, black, cont atal and concrete fragments.		
- 130		9-11		М		2335			l .	and with 15% silty clay. Dark brown, gray, gree	n, orange,	
	15-	1416		D		5 5 7 9		SC/CL CL SC	14.2-16' Silly	and with some silly clay. Light gray. clay with 25% F sand. gray, firm. ck silly sand with product odor on auger.		
-120	20-	19-21		M		3 7 6		SP/SC SC/CL	20-21' F-	M sand with 10% silty clay. Light gray, M sand with 45% silty clay. Light gray, interloyed ds of sand and clay.		
-		22-24		s		2 3 2 3		sc	į be	M sand with 20% silty clay. Light gray, interloyed ds of sand and clay, soft. ne as 22–24°.	red thin	
	25-	24-26		s		4 4 2			1	and with 10% silly clay. Light gray, soft.		
- 110		26-28		s		2224 1			28-29' So	I sand with 40% silty clay. Light gray, orange, is ne as 26.3-28'.		
	1	28-30	1	s		1 1	11/	1	29-30' M-	C sand with 15% silty clay. Light gray, very soft.		

40- 45- 90 50- 55-	0	5	environ		scien	itists		engineers			BORING & WELL CONSTRUCTION LOG
Client/Project Number: CSXT\Se0-58	U										Date(s): 04/03/96 - 04/03/96 Well ID: WW-26
Logged By: T. Fuller	Client/P	rojec							<u>`</u>		Surface Elevation: 138.00' Datum: Mean Sea Level
Conductor Cosing: Ordinated for Protection	Project	Nam	e & Locatio	on: CSX	(T Wo	ycros	s, G	eorgia			Total Borehole Depth: 42.00' Well Completion Depth: 42.00'
Drilling Method & Rig: Hollow Stem Auger Spid Drilling Method & Rig: Hollow Stem Auger Spid Pipe Spid Pipe Spid Rybon, 2" diameter, 2" long. Spid Pipe Spid Rybon, 2" diameter, 2" long. Spid Rybon, 2" long. Spid	Logged	Ву:	T. Fuller			Ap	prove	ed By: C.	Mattair		Depth to Water: Borehole Dia.: 10.00in
Drilling Method & Rig: Hollow Stem Auger Well Locotion: 195' east of NW-62. Purpose: Extraction Well Screens: type: Wife-wrop size: .020in dio: 4.00in fm: 27.00' to: 37.00' Screens: type: Wife-wrop size: .020in dio: 4.00in fm: 27.00' to: 37.00' Screens: type: Wife-wrop size: .020in dio: 4.00in fm: 27.00' to: 37.00' Screens: type: Wife-wrop size: .020in dio: 4.00in fm: 27.00' to: 37.00' Screens: type: Wife-wrop size: .020in dio: 4.00in fm: 27.00' to: 37.00' Screens: type: Wife-wrop size: .020in dio: 4.00in fm: 27.00' to: 37.00' Screens: type: Wife-wrop size: .020in dio: 4.00in fm: 27.00' to: 37.00' Screens: type: Wife-wrop size: .020in fm: 28.00' to: 27.00' to: 37.00' Screens: type: Wife-wrop size: .020in fm: 28.00' to: 27.00' to: 37.00' Screens: type: Screen	Contract	tor/D	Oriller: GW F	rotection	on						
Well Location: 195' east of MW-62. Type: PyliC dia: 4.00in fm: 27.00' to: 27.00'	Drilling	Meth	od & Rig:	Hollow	Stem	Auge	er				ypo.
Sampler Type: Spit Spoon, 2' diameter, 2' long. Synchrifer wrop size: .020'n dia: 4.00'n fm: 27.00' to: 37.00'	Well Loc	cation	n: 195' eas	t of M	W-62	•					
Sompler Type: Spilt Spoon, 2" diameter, 2' long. Annulor Filk: type: Grout type: Sond Filter through developed by subbling with a surge block for 1 hr. will a centrifugal pump. Moleral Description Fin: 25.00' to:	Purpose	e: Exti	raction Well								
Water Level Measured (Dote & Time):							2'	ong.			ypo mo
Moterial Description Well Construction Well Construction Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50% D - dry, M + moist, S - soturated Mark M + moist, S - soturated M + moist, S -		s: \	Well develop	ed by reating	swabl with	oing v	phos.	Well was	ock fo	r	type: Bentonite fm: 23.00' to: 25.00' type: Sand Filter fm: 25.00' to: 42.00' type: fm:
32-34 35-34-36 M 36-38 M M 40- 36-38 M M M 45- 90 50- 50-	E		>					Ď,	<u>e</u>		
32-34 35-34-36 M 36-38 M M 40- 36-38 M M M 45- 90 50- 50-	tion		ele Val	¥	ture	very	Cour	hic L	S Cod		Trace = 0-10% Little = 10-20%
32-34 35-34-36 36-38 M M M M M M M M M M M M M M M M M M	Elevo	Dept	Sam	Λαро	Mois	Reco	Blow	Grap	nsc		
50-	- 10C	35	34–36		M				CL SP/SC	34–35' F–M 35–36' Silty 36–37' M so 37–38' Silty	sand with 10% silty clay. Tan, orange, soft. clay with 40% F-M sand. Light gray, orange, soft. nd with 10% silty clay. Tan, soft. clay with 30% F-M sand. Light gray, firm.
55-	-90]									
55-		1									
	5	50-									
	_						-				
	-80	55-									
bw_tmp.dwg Stratification Lines Show the Approximate Boundary Between Soil Types Page 2 of 2 Actual Transitions Are Generally Gradual	<u> </u>			Stra	tificat	ion L	ines	Show_the	Approx	mate Boundar	/ Between Soil Types Page 2 of 2

	9	Locust Jackso	Valley, nville Fl	NY; / L: Tan	Ann A npa, I	rbor. FL; Tı	MI; Madiso renton, NJ;	on WI, : Stone	Augusta, ham, MA	GA;	Date(s): 04/05/96 - 04/05/96	Well ID:	WW-28	3
Client	/Projec	ct Number:									Surface Elevation: 134.00'	Datum: N	dean Sea L	evel
		ne & Locatio				s, Ge	orgia				Total Borehole Depth: 30.00'	Well Cor	npletion Dep	oth: 30.00°
Logge	d By:	T. Fuller			Ap	prove	d By: C.	Mattair			Depth to Water:	Borehole	Dia.: 10.00	lin
Contro	ctor/l	Oriller: GW F	rotection	on							Conductor Casing:)in fm:	.00,	to: .00'
Drilling	Meth	od & Rig:	Hollow	Stem	Auge	r					type: dio: .00			
Well L	ocatio.	n: 190' nor	theast	of MV	V-45.						type: PVC dia: 4.0	00in fm:	.5'	to: 15.00'
Purpo	se: Ext	raction Well									Screens: type: Wire-wrap size: .020in dia:	4.00in	fm: 15.00'	to: 25.00'
Samp	ler Typ	e: Split Sp	oon, 2"	dian	neter,	2 '	long.			•	Annular Fill:			
Water		Measured (type: Grout type: Bentonite		1.00' 11.00'	to: 11.00' to: 13.00'
Remo	rks:	Well develop	ed by	swabl with	oing v barai	vith c	surge bl Well was	ock fo	r		type: Sand Filter	fm: fm:	13.00'	to: 30.00' to:
		purged for	1 hr. v	vith a	cent	rifugo	ol pump.				type: type:	fm:		to:
E	_	/0				Ħ	Log	Code			Material Description		Well Co	nstruction
Elevation (ft)	th (ft)	Sample II Interval	a	Moisture	Recovery	* Count	Graphic Log	S S			Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50%		uo i	EL. 133.50
Elev	Depth	Sam	Vapor	Mois	Rec	Blow	Gro	nscs			D - dry, M += moist, S - soturated		MP.	155.50
		0-2		D				SC	0-4'	VF-	F sand with 15% silty clay. Light gray, light b	own, soft.		
	-			-										
	-								4-6'	VF-	F sand with 20% silly clay. Light brown, rust,	lirm.		1 1/1
- 130	5-	4-6		М	Save 1	3 4 5 8			-					
	_			,,,,	-	8								1 //
	•											•		
						2		SC/CL	9-11'	VF-	F sond with 40% silty cloy. Light ton, interloye	red		
	10-	9-11		м		6		30,02		thin	beds of sand and clay, firm.			1 //
	-					,								
- 120						2		SC	14-16'		F sand with 30% silly clay. Light lan, light bro	wn,		
	15-	14-16		s		2233				a f	ew thick clay laminations in sond, soft.			
	•													
-		<u> </u>			10 T				19.5-21		sand with 20% silty clay. Light tan, orange, re		: :	
	20-	19-21		s		4 5 8					ik laminations of clay from 19–20°, grain size i a depth, very soft.	ncreosing		
	•					_			22.5-23'		sand with 30% clay. Orange, light gray,			
		22-24		S		3 3 4				-	lens present, soft.	<u></u>		H
- 110								CL	23-24'		I sand with 40% silty clay. Gray, blue, interlayed			
	25-	24-26		D		6 4 3 8			24-26'	•	clay with 20% F-M sand. Gray, blue, 3-in. tl s at 25', hard.	IICA SUNU		
	. •	26-28				5 6 7 7			26-28'		clay with 15% sand. Gray, green, hard.			
				D		7							:"	
		I		ı	1		I / I	I						4 1

•	•	enviror Locust	l Valley,	scie	ntists Ann <i>l</i>	Arbor,	engineers , Mi; Madis Trenton, N		Augusta, GA	BORING & WELL CONSTRUCTI Date(s): 04/04/96 - 04/04/96 Well ID: WW-2	
Clien	/Proie	ct Number:				· - 1		, 0.01		Surface Elevation: 130.00' Datum: Mean Sea	
		ne & Locati				ss, G	eorgia			Total Borehole Depth: 30.00' Well Completion De	epth: 30.00'
		T. Fuller					ed By: C.	Mattai	;	Depth to Water: Borehole Dia.: 10.0	0in
		Driller: GW	Protection	on	<u> </u>	<u>·</u>		· -		Conductor Casing:	
		nod & Rig:			1 Auge	 er				type: dia: .00in fm: .00*	to: .00'
		n: 40' nort								Solid Pipe type: PVC dia: 4.00in fm: .5'	to: 15.00'
		traction Well								Screens:	
		pe: Split Sp		dian	neter.	2' 1	ona.			type: Wire-wrop size: .020in dia: 4.00in fm: 15.00	to: 25.00'
		Measured		 				 -		Annular Fill: type: Grout fm: 1.00'	to: 11.00*
Remo		Well develop 1 hr. and purged for	treating	with	bara	phos.	. Well wa	S	or	type: Bentonite fm: 11.00' fm: 13.00' fm:	to: 13.00' to: 30.00' to:
		purged for	1.23 111	3. H	1	l cent	T	i.p.		type: fm:	to: onstruction
) u	Œ	/QI =		به	ح	Count	20 °	Code		Moterial Description Well Co	unstruction
Elevation (ft)	Depth	Sample Interval	Vapor	Moisture	Recovery	Blow	Graphic Log	nscs		O 00 70W A-J 76 50W	EL. 129.50
130				D				SP/SC	0-4' F	sand with 10% silly clay. Light brown.	
	-										
*					77 (d. 158) 18 (d. 158)	7 8		SC/CL	Ì	-F sand with 45% silty clay. Brown, rust orange, mottled, rd.	1 / I
-	5-	4-6		D		7 8 12 12			i ii	io.	
									240 5	d and the CEW alle sleep light grow coll	1 //
100	10	9-11				3		SC	9-11' F-	Il sand with 25% silty clay. Light gray, soft.	
120	ייי			S	340	4					
	-										
									14-16' F-	A sand with 20% silly clay. Light, gray, a few thin clay	:
	15-	14-16			\\\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	2232				ds, soft.	
				S		ž					
									-		
	1								19-21' Sa	ne as 14-16'.	
110	20-	19-21		s		6656					
				٦	H	ē					-
	-	22 24				4			23.5-24' San	e as 14-16'.	
]	22-24		S		6			24-24.3 Sar	ie as 14-16'.	
	25-	24-26		м		4 6 10 16		CL		clay with 35% sand. Gray, hard, micaceous.	-
				***		16 10				clay with 25% sand. Gray, green, hard, micaceous.	
	1	26–28		D		10 13 17 19			CO	tains a 3-in. thick bed of M-C sand.	
]										

7		eder environn Locust	nental s Valley, l	scienti NY; A	ists o .nn Ar	bor, 1	MI; Modiso	n WI, A	ugusta, G	BORING & WELL Co	Well ID:			_
						L; Tro	enton, NJ;	Stonet	iom, MA	Surface Elevation: 129.50'		ean Sea		
		t Number: (pletion D		2.00'
rojec	Name	e & Locatio	n: CSX	T Way	_					Total Borehole Depth: 32.00'		Dia.: 10.0		
.ogged	By:	f. Fuller			App	roved	By: C. N	Aattair		Depth to Water:	Dotellois	Dia To.		
Contra	ctor/D	riller: GW P	rotectio	n						Conductor Casing: type: dia: .00	Oin fm: .	00'	to: .	00'
Drilling	Meth	od & Rig: H	iollow S	Stem	Auger	·	·			Solid Pipe		C)	las 1	7.00'
Well L	ocation	n: 25' north	east of	MW-	-69.					урс. то	00in fm: .	o -	(0.	7.00
Purpos	se: Exti	raction Well								Screens: type: Wire-wrap size: .020in dia:	4.00in	fm: 17.00	to: 2	7.00'
Sampl	er Typ	e: Split Spo	on, 2"	diam	eter,	2' le	ngth.			Annular Fill:				7.001
Water Rema	rbe:	Measured (I Well develop 1 hr. and to purged for	ed by	swabb	oina w	rith a phos.	surge bl Well was I pump.	ock for		type: Grout type: Bentonite type: Sand Filter type: type:	fm:	1.00' 13.00' 15.00'	to:	13.00' 15.00' 32.00'
<u>⊋</u> T		· · · · · · · · · · · · · · · · · · ·								Material Description		Well (Construc	tion
Elevation (ft)	3	ele Ol	_	ıre	rery	Blow Count	Sraphic Log	Code		Trace = 0-10% Little = 10-20%				
Jevati	Depth	Somple Interval	Vapor	Moisture	Recovery	Blow	Graph	nscs		Some = $20 - 30\%$ And = $35 - 50\%$ D - dry, M - moist, S - soturated		MP.	EL. 1	29.00
	-			D				SC	0-4"	F-F sond with 15% silly clay. Light brown,				
•	5-	4-6		М		14 14 15 17		SC/CL	4-6*	F-F sand with 45% silly clay. Brown, rust, orange, mollled, hard.				
- 120	- 10- -	9–11		S		5 5 4 4		SC	9–11'	sand with 15% silly clay. Brown, light gray, soft.				
-	15-	14-16		s		6 6 6 6		SP/SC	15-16'	F sand with 10% silly clay. Light lan, hard.				
- 110	20-	19-21		s		3223		sc	19-21'	F sand with 20% silty ckay. Light tan, orange, interf thin beds of clay and sand, soft.	oyered			
		22-24		S		3 4 4 4 3			22.5-24'	Same as 19-21'. i-C sand with 30% silty clay. Orange, gray, grain s clay decreasing with depth, grades to sandy clay at				
-	25-	24-26		D		3 4 5 4 3		CL	24-25° 25-26°	Same as 22-24' Salty clay with 20% F-C sand. Gray, green, hard.				
		26-28		D		3 5 6 8 14 16 16 20			26-28° 28-29°	Same as 25–26'. Same as 25–26'. Sand with 35% silly clay. Gray, semi-firm.				
	1								29-30	o i hi ter alle alle. Pera somi liem				

Ø		eder	nental s	cienti	ists o	nd er	ngineers	. Wi A	ugusta, GA;	BORING & WELL CO	
	<u> </u>	Locust V	valley, i ville FL;	nt; A ; Tam	nn Ar Ipa, F	L: Tre	enton, NJ;	Stonen	iam, MA	Date(s): 04/04/96 - 04/04/96	Well ID: WW-30
lient/	Projec	t Number: (Surface Elevation: 129.50'	Datum: Mean Sea Level
		e & Location				, Geo	rgia	•		Total Barehole Depth: 32.00	Well Completion Depth: 32.00'
		T. Fuller			$\overline{}$		By: C. N	lattair		Depth to Water:	Borehole Dia.: 10.00in
		riller: GW P	rotectio	n	1					Conductor Casing: type: dia: .00	lin fm: .00° to: .00°
Orilling	Meth	od & Rig: H	lollow S	Stem	Auge	•				Solid Pine	4 51 An 17 001
Well L	ocatio	n: 25' north	east of	MW-	-69.					type: PVC dia: 4.0	00in fm: .5' to: 17.00'
Purpo	se: Ext	raction Well								Screens: type: Wire-wrap size: .020in dia:	4.00in fm: 17.00' to: 27.00'
Samp	ler Typ	e: Split Spo	on, 2"	diam	eter,	2' le	ngth.			Annular Fill:	42.00
Water Rema	-J	Measured (I Well develop 1 hr. and to purged for	ed hu	swahh	ina v	rith a phos. rifuga	surge blo Well was I pump.	ock for		type: Grout type: Bentonite type: Sand Filter type: type:	fm: 1.00' to: 13.00' fm: 13.00' to: 15.00' fm: 15.00' to: 32.00' fm: to: fm: to:
ह्य										Material Description	Well Construction
Elevation (ft)	Depth (ft)	Sample ID/ Interval	Vapor	Moisture	Recovery	Blow Count	Graphic Log	USCS Code		Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50% D - dry, M & moist, S - saturated	
음	De	양물	- ₽	¥	Re		- 5 - 7 /			D - dry, M - moist, 5 - saturated	
	-	30-32		D		15 15 18 24		CL			
•	35-										
-90	40-										
-	45-										·.
,		-									
- 80	50										
	50-	-									
_	55	1									
		-				,					
- 70			<u></u>		dian	liana	Show the	Appro	ximate Boun Are Generall	lary Between Soil Types	Page 2 of 2

	9						MI; Madiso renton, NJ		Augusta, GA; eham, MA	Date(s): 04/04/96 - 04/04/96	Well ID: WW-	-31
Client	/Proie	ct Number:		<u> </u>	<u> </u>					Surface Elevation: 129.00'	Datum: Mean S	ea Level
		ne & Locatio				s, Ge	orgia	•		Total Barehole Depth: 31.00'	Well Completion	n Depth: 31.00'
		G. Bonn			T -		d By: C.	Mattair	•	Depth to Water:	Borehole Dia.:	10.00in
		Driller: GW F	rotection	n	<u> </u>					Conductor Casing:	0°- 6 00°	to: .00'
		nod & Rig:			Auge					type: dio: .0	0in fm: .00°	(000
Well 1	Locatio	n: 60' norti	hwest o	f MW	-70.					Solid Pipe type: PVC dia: 4.	00in fm: .5'	to: 16.00'
Purpo	se: Ext	traction Well								Screens:	4.00in fm: 16	5.00' to: 26.00'
Samp	ler Typ	pe: Split Spo	oon, 2"	diarr	neter,	2' 10	ong.			type: Wire—wrap size: .020in dia: Annular Fill:	T.QUII III. 10	10. 20,00
		Measured (type: Grout	fm: 1.00' fm: 12.00'	to: 12.00' to: 14.00'
Remo	rks:	Well develop	ed by	swabl	oing v	vith (surge bl	lock fo	r	type: Bentonite type: Sand Filter	fm: 14.00'	to: 31.00'
		1 hr. and to purged for	i eaung 1 hr. v	vith a	ceu	rifug	of pump.			type:	fm: fm:	to: to:
E		/OI				달	po.	ę		Material Description	We	II Construction
Elevation (ft)	h (ft)	Pele II	<u>_</u>	Moisture ·	Recovery	Blow Count	Graphic Log	S Code		Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50%		D EI 166.55
Elevo	Depth	Sample Interval	Vápor	Mois	Recc	Blow	Grop	nscs		D - dry, M = moist, S - soturated	М	P. EL. 128.50
				D				SC	0-4' Vi	-F sand with a little silty clay. Light brown		
	_											ИИ
	-								4-6' VI	-F sand with 40% silty clay. Brown, light g	ray,	
	5-	4-6				10 15 12 19		SC/CL	· -	oltled, firm.		ri i j
			·	D		19			i			
	_							1				
120]	9.5-11° VF	-F sand with 20% silly clay. Light brown, to	on, soft.	
120	10-	9-11		М	4.	3 4 5		SC	,			ИИ
		-				3						
	•	<u> </u>										
						3			1	C sand with 20% silty clay. Tan, interloyered	d thin	
	15-	14-16		s		3 2 2 3			Ь	eds of sand and clay, soft.		
		-										
110						6				C sand with 25% silty clay. Tan, orange, in	terlayered	
	20-	19-21		s		6 2 4 4			l .	in beds of clay and sand, very soft. -VC sand with 30% silty clay. Orange, firm,	clay	
									l.	creases with depth, soft.		
		22-24		М	, t.	4 4		CL	1	ty clay with 40% sand. Gray, blue, firm.	,	
										ly clay with 30% sand. Gray, green, contain in hade of M cond. firm	s a few	
	25-	24-26		D		4 2 3 5			Ī.	in beds of N sand, firm. by clay with 30% sand. Gray, green, firm.		
		26-28		_		3 4 4 8						
				D		8 4 5 9 12			28-30' Sc	me os 26-28'.		
		28-30	i	I		l 5	/ /	l	l		1	

Ø		eder environr	nental :	scient	ists (and er	ngineers	w WI	Augusta, GA;	BORING & WELL C		
	<u> </u>	Jackson	valley, Iville FL	; Tarr	ini Ai ipa, i	L: Tre	enton, NJ;	Stone	ham, MA	Date(s): 04/04/96 - 04/04/96	Well ID: WW-3	
Client/	Projec	Number: (Surface Elevation: 129.00'	Datum: Mean Sea L	
		e & Locatio				s, Geo	rgia	•		Total Borehole Depth: 31.00'	Well Completion De	
<u>.</u> -		G. Bonn					By: C. 1	Mattair		Depth to Water:	Borehole Dia.: 10.00)in
		riller: GW P	rotectio	n						Conductor Casing:	0in fm: .00'	to: .00'
Drilling	Metho	od & Rig: 1	follow S	Stem	Auge	r				type: did: .C Solid Pipe		
Well L	ocation	: 60' north	west of	MW-	-70.					type: PVC dia: 4	.00in fm: .5'	to: 16.00'
urpo	se: Extr	raction Well			•					Screens: type: Wire-wrop size: .020in dia	: 4.00in fm: 16.00°	to: 26.00°
Sampl	er Typ	e: Split Spo	on, 2"	diam	eter,	2' lor	ng.		•	Annular Fill:		
Water Rema	rke: \	Measured (I Well develope 1 hr. and to purged for	ed by	swabb	ina v	vith a phos. rifuga	surge bl Well was I pump.	ock for	r	type: Grout type: Bentonite type: Sand Filter type: type:	fm: 1.00' fm: 12.00' fm: 14.00' fm: fm:	to: 12.00' to: 14.00' to: 31.00' to: to:
Elevation (ft)	Depth (ft)	Sample ID/ Interval	Vopor	Moisture	Recovery	Blow Count	Graphic Log	USCS Code		Material Description Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50% D - dry, M *- moist, S - saturated	Well Co	onstruction
	٥	N.E	>	7	œ		7/			D = diy, iii iiiooq D = ceta-ee-	<u>.</u>	
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	_	eder	assoc	ciate	es					BORING &	WEII C	ONSTI	RUCTIO	N LOG
		environi Locust	mental : Valley,	scient NY: A	tists o Inn Ar	bor,	ngineers MI; Madiso	on WI,	Augusta, GA;	Date(s): 04/05/96 -			WW-32	
	_					L; Tr	enton, NJ	Stone	ham, MA	Surface Elevation: 131			ean Sea Le	
		t Number:											pletion Dep	
Projec	t Nam	e & Locatio	on: CSX	T Way				•		Total Borehole Depth:	30.00		Dia.: 10.00	
Logge	d By:	T. Fuller			App	rove	d By: C.	Mattair		Depth to Water:		Borenoie	Did.: 10.00	
Contro	actor/D	riller: GW P	rotectio	ń						Conductor Casing: type:	dia: .0	0in fm: .(00'	to: .00'
Drilling	Meth.	od & Rig: 1	Hollow S	Stem	Augei	r				Solid Pipe				t 15 00l
Well L	ocation	n: 110' nort	theast o	of MW	/ −70.					type: PVC	dia: 4.	00in fm: .	<u> </u>	to: 15.00°
Purpo	se: Ext	raction Well	il .							Screens: type: Wire-wrop size:	.020in dia:	4.00in	fm: 15.00°	to: 25.00"
Samp	ler Typ	e: Split Spo	on, 2"	diam	eter,	2' lo	ng.			Annular Fill:				•
Water	Level	Meosured (Date &	Time	:):		 			type: Grout		fm: 1 fm: 1	1.00' 11.00'	to: 11.00' to: 13.00'
Remo	rks:	Well develop	ed by	swabb	oing w	ith o	surg blo	ck for		type: Bentonite type: Sand Filter		fm:	3.00	to: 30.00' to:
		1 hr. and t purged for	reating 1.5 hrs.	with	Darap 1 a C	mos. entrif	ugal pumi	p.		type:		fm: fm:		to:
्र						اي	ρ̈́ς	. 0		Material Descrip	tion	Į,	Well Co	nstruction
Elevation (ft)	3	le 10/		<u>a</u>	eg.	Count	Graphic Log	Code		Trace = 0-10% Little	= 10-20%			
Jevati	Depth	Sample Interval	Vapor	Moisture	Recovery	Blow	Graph	nscs		Some = $20 - 30\%$ And D - dry, M $\stackrel{\wedge}{=}$ moist, S	d = 35-50% - saturated		MP. E	L. 130.50
3		0)3		-		_		SC	0-4' V	F-F sand with 15% silty cl				
- 130	1			D					V-7 VI	i said with fore any a	-,-			1 1/1
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	-					5		SC/CL	ŀ	F-F sand with 40% silty of	ay. Brown, light	gray,		1 / I
	- 5-	4-6		D		5 9 11		1	r	nottled, hard.			. [111.
<u>.</u>	-	(a)										,		
			10.00		The second				e de la propiet		, Ç Î			A M
						3		sc	t	sand with 15% silty clay.		layered	Y	
	10-	9-11		М		4			. •	vith a few thin beds of cla	y, soft.			
- 120					2.76	4								
1	-													
	•				1977.	<i>i</i>		1	14-16' S	ame as 9–11' with clay la	minations at 15.	5-16'.		
1	15-	14-16		s		2222							1: :	
L				3		2				•				
]						
	-				-				 19-21' F	-VC sand with 15% silty c	lav. Tan. orange	e, red,		
		19-21				4223			1	aminaled, grain size increa			: :	
-110	l	13-21		S	more while	3				-				\vdash
'''	1.					3		1	1	-C sand with 35% silty cla				H:I
1	.	22-24		M		3 2 3 3			1	nterlayered thin beds of so	ind and clay, sol	t to firm.		
	.					2			1	ame as 22-24". sand with 30% silty clay.	Light gray, soft.			
	25-	24-26		М		2235 5790			1	ilty clay with 25% sand. (
	'	26-28			.32	5 7		CL		-yy	** * *			
	.		1	D.		10			28-30' S	ame as 26-28'.			· · ·	
I	1	28-30		1_	1.44	5 9 12 12	'//]		•			. :	
I	•	1		l D		! 4	V / /	า				1	, ,	·] [. ']