

CMMHILL

Proj. No.: 113630.01.ZZ

SOIL BORING LOG

Project: DDMT GW Investigation

Drilling Contractor: Boart Longyear/Minnesota

Drilling Method & Equipment: Rotasonic

Logger: S. Bruer/MGM

Depth Below Surface (FT)	Sample			Standard Penetration Test Results 6"-6'-6" (N)	Soil Description	Comments
	Interval	Number and Type	Recovery (FT)		Soil name, uscs group symbol, color, moisture content, relative density or consistency, soil structure, mineralogy	Depth of casing, drilling rate, drilling fluid loss, tests and instrumentation
Elevation:				Location: Memphis, TN		Boring No. MW-50(F)
Start: 1045 1/26/88				Finish: 2018 1/26/96		Water Level: 82.72 ft bgs
Sheet 1 of 4						
0					3 inches ASPHALT	Start Drilling at 1045 <u>fill</u> <u>modified loess</u> - gradational contact
5	5		5		6 inches BASE COURSE <u>SILTY CLAY</u> , light gray and light brown, moist, medium stiff, with sub-rounded, medium, chert gravel (FILL) /	
10			10		<u>CLAYEY SILT</u> (ML), light brown with light gray and black mottling, moist, very soft, low plasticity - medium stiff below 10 ft	
15	15				<u>SILTY CLAY</u> (CL), light brown with light gray mottling, moist, medium stiff, medium plasticity	
20			10		- with orange and black mottling and stiff below 18 ft - with black mottling and medium stiff below 20 ft	
25	25					- gradational contact <u>Fluvial Deposits</u> - gradational contact
30			10		<u>SANDY CLAY</u> (CL), orangish-brown, moist, medium stiff, medium plasticity, with trace fine to medium, quartz sand and fine, chert gravel	
35	35				<u>SILTY FINE SAND</u> (SM), brownish-orange, moist, loose, quartz - tan below 33 ft	

NOTES:

- groundwater level measurement made 1/27/96



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Depth Below Surface (FT)	Sample			Standard Penetration Test Results	Soil Description	Comments
	Interval	Number and Type	Recovery (FT)			
				5'-5'-5" (N)	Soil name, uscs group symbol, color, moisture content, relative density or consistency, soil structure, mineralogy	Depth of casing, drilling rate, drilling fluid loss, tests and instrumentation
Elevation:					Location: Memphis, TN	Boring No. MW-50(F)
Start: 1045 1/26/96					Finish: 2018 1/26/96	Water Level: 82.72 ft bgs
Sheet 2 of 4						
40	35		10		<u>WELL GRADED GRAVELLY SAND (SW)</u> , tan, moist, loose, fine to coarse, quartz, with fine to medium, subrounded, chert gravel	- gradational contact
45	45				43.5 ft to 44 ft: <u>CLAYEY SILT (ML)</u> , light gray, moist, soft	
			4		<u>POORLY GRADED SAND (SP)</u> , brownish-orange, moist, loose, fine to medium, quartz	- abrupt contact
50	50				<u>WELL GRADED GRAVELLY SAND (SW)</u> , tan, moist, loose, fine to coarse, quartz, with fine to coarse, subrounded to rounded, chert gravel	- gradational contact
55	55		5		- orangish-brown below 49 ft	
60			9		<u>POORLY GRADED SAND (SP)</u> , brownish-orange, moist, loose, fine to medium, quartz, trace fine, subrounded, chert gravel	- gradational contact - gradational contact
65	64				<u>WELL GRADED GRAVELLY SAND (SW)</u> , orangish-brown, moist, loose, fine to coarse, quartz with fine to coarse, subrounded, chert gravel	
			6		<u>POORLY GRADED SAND (SP)</u> , tan, moist loose, fine to medium, quartz	- gradational contact
70	70				<u>WELL GRADED GRAVELLY SAND (SW)</u> , orangish-brown, moist, loose, fine to	- 67 ft to 67.5 ft: Clayey, silty, sand and gravel

NOTES:

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CHM HILL

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Sheet 3 of 4						
70			5		coarse, quartz. with fine to coarse, sub-rounded, chert gravel - brownish-orange below 72 ft - tan below 73.5 ft	
75	75					- gradational contact
			7		<u>SILTY FINE SAND (SM)</u> , light gray, moist, loose, quartz <u>CLAYEY SILT (ML)</u> , yellowish-brown, moist, soft, with fine sand and light gray silt laminations, and olive green intermixing	- gradational contact
80	82					
			3		<u>SILTY FINE SAND (SM)</u> , brownish-orange, moist, loose, quartz <u>POORLY GRADED SAND (SP)</u> , tan, moist loose, fine to medium, quartz, trace fine to medium, subangular to subrounded, chert gravel	- light gray below 80 ft - tan below 81 ft - gradational contact
85	85					- gradational contact
			10		<u>WELL GRADED GRAVELLY SAND (SW)</u> , brownish-orange, moist, loose, fine to coarse, quartz, with fine to medium, subangular to subrounded, chert gravel - wet below 87 ft - yellowish-brown GW-SW below 90 ft	- iron-stained, cemented, sandstone fragments at 93 ft
90						
95	95					
			8		<u>WELL GRADED SANDY GRAVEL (GW)</u> , orangish-brown, wet, loose, fine to coarse, subrounded to rounded, chert, with fine to coarse, quartz sand	- gradational contact
100						
105	105					

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Sheet 4 of 4						
105						
110			10		- 109 ft to 110 ft: dark brown SW-GW - 110.5 ft to 114 ft: clayey	
115	115					
120			10			- geotechnical sample collected from 120 ft to 125 ft
125	125				<u>SILTY FINE SAND (SM)</u> , yellowish-brown, moist, loose, quartz	- gradational contact
130			11		<u>SILTY CLAY (CL)</u> , light gray with black mottling, moist, very stiff to hard, low to medium plasticity	- erosional contact <u>Jackson Fm/Upper Claiborne</u>
135						
136	136					1830 Stopped Drilling
					Boring Terminated at 136 Feet	2018 MW-50 installed; see attached construction diagram
140						

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