CH2MHILL

PROJECT NUMBER	BORING NUMBER
160492.SA.03	MW-98

SOIL BORING LOG

PROJECT : Long Term Operational Areas - Memphis Depot LOCATION : Memphis, Tennessee

ELEVATION : 294.43 feet MSL (TOC); 294.93 feet MSL (ground) DRILLING CONTRACTOR : Tri-State Testing Services, Inc.

DRILLING METHOD AND EQUIPMENT USED : Hollow Stem Auger 4.25 inch ID with CME Sampler

WATER LEVELS : 102.00 feet BTOC (11/2001) START : 10/01/2001 END: 10/05/2001 LOGGER : Jay Parker (Jacobs)

DEPTH BELOW SURFACE (FT)	INTERVAL (FT)	RECOVERY (%)	#/TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. Corrected FID (ppm):
					6" concrete	***(Soil headspace)***
		100		Used hollow-stem auger drilling method no penetration test results	Clayey SILT, dark reddish brown, 5YR 4/2, med stiff, damp	**0.0**
					Same as above, brown, 7.5YR 4/4	
5		100				**0.5**
					Same as above, moist, slightly higher clay content	
10		100				**0.0**
					Same as above, most to wet, soft, slightly plastic	Wet/saturated soil may be due to open fire hydrants last week
15		100				**0.0**
					Same as above, wet to saturated, becomes less wet by 20.5	
20		100			More silty at 20.5, firm	**0.0**
					Clayey silt, strong brown 7.5YR 5/6, firm, damp, nonplastic	Water appears to be running down hole, outside is wet, but actual sample is not.
25		100				**0.0**
					Silty SAND, strong brown 7.5YR 5/8, very fine to fine, loose to firm, damp.	
30		100				**0.0**
					SAND, yellowish red, 5YR, 5/8, fine to very fine, loose, moist, gray mottles	
					Less mottled w/light gray @ 33 feet	
35		100				**0.0**

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40		75		Used hollow-stem auger drilling method no penetration test results	Same as above, more gray mottles, grading coarser with depth	**0.5**
					At 43, SAND red, 25YR 4/8, fine to med, loose to firm, damp	
45		55			Gravelly SAND, red 2.5YR 4/8, firm to loose, med gravel up to 2", subrounded, damp, pebbles	**1.6**
					SAND with pebbles, reddish yellow 7.5YR 6/6, med, loose, moist	
50		50				**1.0**
					Pebbly SAND, reddish yellow, 7.5YR 6/8, loose, med to fine, moist. Pebbles are subangular	Sand is wet at top, but believe it's still running down hole from above
55		70				**1.1**
					Same as above, trace small gravel, damp, med, subrounded	
60		65				**0.0**
					SAND, strong brown 7.5YR 5/6 coarse, some pebbles, loose, moist, subangular pebbles, trace rounded gravel	
65		80				**0.2**
					SAND, strong brown 7.5YR 5/6, very coarse to fine gravel, pebbles, loose, moist, 40% fine gravel/pebbles.	
70		90			SAND goes to med to coarse, yellowish brown, with pebbles, loose, damp	**0.6**
					SAND, strong brown 7.5YR 5/8, fine to med, few pebbles, loose, damp to moist.	

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75		90		Used hollow-stem auger drilling method no penetration test results	SAND, strong brown 7.5YR 5/8, fine to med, few pebbles, loose, damp to moist.	**0.6**
					SAND, pale yellow 2.5Y 8/2, very fine to fine, very loose, damp Same as above, but strong brown.	
					CLAY layer - 6"	
80					Gravelly SAND, light brown 7.5YR 6/4, sand is med, gravel is fine to rounded.	**0.0**
		90			Gravel zone is wet at 80.5 to 81.5	
					pebbly SAND	
					SAND white 5Y 9/1, very fine to fine, very loose, dry	
85						**0.5**
		100			Gravelly SAND at 87 to 88 feet	
					SAND Same as above at 83 and dark to gravelly SAND at 90.5 feet.	
90					2" of clay at 90 feet	**0.8**
		100			Pebbly SAND as above down to 93 feet	
					Pebbly SAND, as above, med to coarse, damp.	
95						**0.3**
		100			As above, with some gravel up to 1", becoming most to wet at 103 feet	
100		90				**0.2**
					Becoming moist to wet at 103 feet Samples lost, probably saturated	Water Table
105		0				Sample collected for VOCs
					Samples lost, probably saturated SAND, med to coarse, saturated	
110		45				Sample collected for TOC

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				Used hollow-stem auger drilling method no penetration test results	SAND, med to coarse, saturated	
115		50			Pebbly SAND, as above, olive yellow 2.5Y 6/6, med to coarse, with fine gravel/pebbles, very loose, saturated	
					Same as above, pebbly SAND	
120		45				
					Same as above, pebbly SAND	
125		45				
					Same as above, pebbly SAND	
130		45				
					Same as above, broken ironstone and gravel at 132.5 to 133 feet	
					SAND, no gravel, saturated, fine to coarse	
135		45				
					SAND, olive yellow 2.5Y 6/6, fine, loose, saturated	
140		45				

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145		50		Used hollow-stem auger drilling method no penetration test results	Same as above with gravel Gravelly SAND, approximately 4 to 6" CLAY, dense gray BORING TERMINATED @ 148 FEET BGS.	
150						
155						
160						
165						