CH2MHILL

PROJECT NUMBER	BORING NUMBER
160492.SA.03	MW-101B (Replaced SB-101)

SOIL BORING LOG

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

ELEVATION : 291.70 feet MSL (TOC); 291.99 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 : 93.32 feet BTOC (11/2001) START : 10/19/2001 END: 10/19/2001 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):
				Used hollow-stem auger drilling method no penetration test results	6" asphalt	***(Soil headspace)***
					Clayey SILT, brown, soft, damp, med plastic	
		100				
5						**0.0**
					Same as above, reddish brown, med stiff to stiff, damp, med plastic	
10						**0.0**
		100				
15						**0.0**
					CLAYEY SILT	
					Slowly grades to a CLAYEY SAND, brownish red, very fine, med stiff, slightly plastic to med plastic	
20						**0.2**
		100				
						Sample collected for VOCs (MW-101)
					Grading to a SILTY SAND with clay	
25						**0.0**
					SAND, red, very fine to fine, stiff, some clay in matrix, grading coarser with depth, damp, trace gravel at 27 feet becoming more gravelly to 37 feet	
					SAND, reddish brown, fine to medium, loose, damp	
30						**0.0**
		100				
35						**0.0**
					6" of Clay at 35 feet	
					Color starts turning more yellow at 35 feet after the clay seam. Gravel up to 2.5 inches at 35 feet. ~5 to 10% of the matrix is gravel @ 36 feet	

PROJECT NUMBER	BORING NUMBER
160492.SA.03	MW-101B (Replaced SB-101)

SOIL BORING LOG

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

ELEVATION : 291.70 feet MSL (TOC); 291.99 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 : 93.32 feet BTOC (11/2001) START : 10/19/2001 END: 10/19/2001 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):
40				Used hollow-stem auger drilling method no penetration test results	Gravelly SAND, reddish yellow to pale yellow, fine, loose, damp, gravelly in zones from fine, pebbles to 1 inch, subrounded to subangular	**0.8**
		100				
45						**0.0**
					Same as above	
50						**0.5**
		100				
55						**0.0**
					Same as above, damp to moist, gravel up to 2.5 inches	
60						**0.0**
		100				
65						**0.0**
					Same as above	
70						**0.9**
		100				

CH2MHILL

PROJECT NUMBER	BORING NUMBER
160492.SA.03	MW-101B (Replaced SB-101)

SOIL BORING LOG

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

ELEVATION : 291.70 feet MSL (TOC); 291.99 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 : 93.32 feet BTOC (11/2001) START : 10/19/2001 END: 10/19/2001 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):
75				Used hollow-stem auger drilling method no penetration test results		1.8
					Same as above. Gravel zone from 77 to 77.5. Becoming a sandy gravel with depth then back to gravelly SAND by 86 feet	
80						0.0
		100				
85						0.0
						Sample collected for VOCs
					Gravelly SAND, pale yellow to light grey, fine, loose	
					Gravelly zone at 88 feet	
90						1.2
		100				
						Water Table Sample collected for VOCs (MW-101)
95						
					Wet @ 96 to 100 feet Gravelly zone at 96 feet	Hard to identify water table as most water runs out of sample before reaching the surface.
100						
		100				
105					Gravelly zone at 105 feet	Sample collected for TOC
					SAND and gravelly SAND, pale yellow, fine ro med, loose, saturated Gravel zones at 107 to 108 feet	
110						

CH2MHILL

PROJECT NUMBER	BORING NUMBER
160492.SA.03	MW-101B (Replaced SB-101)

SOIL BORING LOG

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

ELEVATION : 291.70 feet MSL (TOC); 291.99 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 : 93.32 feet BTOC (11/2001) START : 10/19/2001 END: 10/19/2001 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):
115		100		Used hollow-stem auger drilling method no penetration test results	Gravelly SAND	
120		100			Above the gravel zone, SAND yellowish red, coarse, loose, saturated, trace gravel Gravel zone at 123 to 124 feet.	
125					Gravelly SAND	
130					Same as above	
135		100			CLAY, yellowish grey, dense, damp, plastic	
140						

PROJECT NUMBER	BORING NUMBER
160492.SA.03	MW-101B (Replaced SB-101)

SOIL BORING LOG

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

ELEVATION : 291.70 feet MSL (TOC); 291.99 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 : 93.32 feet BTOC (11/2001) START : 10/19/2001 END: 10/19/2001 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):
				Used hollow-stem auger drilling method no penetration test results	CLAY	
					BORING TERMINATED @ 142 FEET BGS.	
145						
150						
155						
160				Used hollow-stem auger drilling method no penetration test results		
165						