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| PROJECT NUMBER 148071.FI.SB | BORING NUMBER MW-79 |
| SOIL BORING LOG | |

PROJECT : Memphis Depot: Dunn Field Expanded RI LOCATION : Memphis, TN
 ELEVATION : 285.03 feet MSL (TOC); 285.4 feet MSL (ground) DRILLING CONTRACTOR : Tri-State Testing Services
 DRILLING METHOD AND EQUIPMENT USED : 4.25 ID Hollow-Stem Auger with 4 inch CME sampler
 WATER LEVELS : 72.38 feet BTOC (01/2001) START : 12/05/2000 END : 12/05/2000 LOGGER : Bryan Burkingstock

| DEPTH BELOW SURFACE (FT) | | | | STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N) | SOIL DESCRIPTION | COMMENTS |
|--------------------------|---------------|--|--|--|---|--|
| INTERVAL (FT) | RECOVERY (IN) | | | | | |
| | #/TYPE | | | | | |
| | | | | | | |
| 36 | | | | Used Continuous CME Sampler | SILT, brown, moist | DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. <div>FID (ppm): <i>(Soil headspace)</i> Not Sampled</div> |
| 5 | | | | | SILT, brown, moist | |
| 60 | | | | | SILT, brown, moist | |
| 10 | | | | | SILT, brown, moist | |
| 15 | | | | | SILT, brown, moist | |
| 20 | | | | | SILT, brown, moist | |
| 25 | | | | | SILT, transition beginning SANDY SILT, fine grained, brown to yellowish brown to tan | |
| 30 | | | | | SANDY SILT, tan to yellowish brown, dark red mottles SILTY SAND, fine to coarse grained, yellowish red to tan, poorly sorted, subangular pebbles | |
| 35 | | | | | SAND, fine to coarse grained yellowish red (tan), poorly sorted, 10-20% gravel (small to 1.5 inches wide), subangular | |
| 40 | | | | | | |
| 40 | | | | Used Continuous CME Sampler | SAND, medium to coarse grained, yellowish brown to tan | |



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| DEPTH BELOW SURFACE (FT) | INTERVAL (FT) | RECOVERY (IN) | #/TYPE | STANDARD PENETRATION TEST RESULTS 6"-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. FID (ppm): |
|--------------------------|---------------|---------------|--------|--|--|--|
| 45 | | | 36 | | SAND, some fine mostly coarse grained, yellow to yellowish tan, poorly sorted 20% pebbles(<1/2 inch wide), subangular, moist | |
| 50 | | | 36 | | SAND, coarse grained, yellow to yellowish tan, subangular wet (saturated interval) | |
| 55 | | | 40 | | SAND, with gravel to 56 feet, medium grained, tan, well sorted, moist | |
| | | | | | SAND, no gravel, tan to 57.5 feet brownish yellow >57.5 feet, moist | |
| | | | | | SAND, medium grained, yellow, well sorted | |
| 60 | | | 40 | | Two - 1 clay lenses at 59 feet separated by 3 inches of sand, moist | |
| | | | | | SAND, fine grained, white to yellowish white, moist | |
| 65 | | | 47 | | Subangular pebble traces | |
| | | | | | SAND, fine to medium grained, light yellow transitioning to brownish yellow to brownish light yellow, moist | |
| | | | | | Subangular pebble traces | |
| 70 | | | 49 | | SAND, fine to medium grained, yellow, well sorted, trace pebbles, subangular wet | |
| | | | | | SAND, fine grained, light yellow, well sorted, trace pebbles, subangular, wet | |
| | | | | | Water Table @ 72.5 feet | |
| 75 | | | | Used Continuous CME Sampler | SAND, fine to medium grained, light yellow to white, well sorted at >76 feet white medium grained, sand with trace pebbles, wet | |
| 80 | | | 21 | | SAND, medium grained, wet, brownish white, well sorted | |



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|--------------------------|---------------|---------------|--------|-----------------------------------|--|--|
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| | | | | | | FID (ppm): |
| 85 | | | | | No recovery, seems to have gone through a dense gravel layer | |
| 90 | | 24 | | | SAND, fine to coarse grained, brownish white, poorly sorted, trace pebbles subangular | |
| 95 | | 22 | | | SAND, fine to coarse grained, brownish white, poorly sorted, trace pebbles | |
| 100 | | | | | One to two inch layer of Iron Stone @ approximately 100 feet bgs | |
| | | | | | SAND to 101 feet | |
| | | | | | CLAY, brownish yellow, very stiff, hard iron stone on top of clay | |
| | | | | | 1 - 2 inch gravel in cuttings | |
| | | | | | Boring terminated at 103 feet | |
| | | | | | Well set at 102.5 feet with 20 feet of screen | |
| | | | | | Sand to 77 feet, Bentonite 72 feet | |