



CH2MHILL

PROJECT NUMBER

177556.SA.FE

BORING NUMBER

MW-180

SHEET 1 of 3

## SOIL BORING LOG

PROJECT : Memphis Depot Remedial Investigation Plan LOCATION : Memphis, TN

ELEVATION:

DRILLING CONTRACTOR : Prosonic Corporation

NAME OF DRILLER : Adam Marshall

DRILLING METHOD/EQUIPMENT: Rotasonic Drilling

SIZE/TYPE OF BIT : 4 X 6"

OVERBURDEN THICKNESS : DEPTH DRILLED INTO ROCK : N/A

TOTAL DEPTH OF BORING : 96 ft-bgs

WATER LEVELS : START : 10/20/2005 END : 10/20/2005

LOGGER : Mike Karafa/ATL

| DEPTH BELOW SURFACE (FT) |      |     |     | STANDARD     | SOIL DESCRIPTION                                                                                                     | COMMENTS                                                                                   |
|--------------------------|------|-----|-----|--------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| SAMPLE INTERVAL (FT)     |      |     |     | PENETRATION  | 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. FID (ppm) |
| RECOVERY (FT)            |      |     |     | TEST RESULTS |                                                                                                                      |                                                                                            |
| #/TYPE                   |      |     |     | 6"-6"-6" (N) |                                                                                                                      |                                                                                            |
| 0-6                      | 100% | N/A | N/A | N/A          | 0-1: SILTY SAND, grass roots<br>1-8: SILT, brown, dry, loose                                                         | 0.0<br>0.0                                                                                 |
| 6-16                     | 100% | N/A | N/A | N/A          | 8-13: SILT, dark gray, loose<br>13-31: SILT, brown, stiff, loose                                                     | 5.6<br>21.8<br>23.7                                                                        |
| 16-26                    | 100% | N/A | N/A | N/A          |                                                                                                                      | 2.8<br>3.2                                                                                 |
| 26-36                    | 100% | N/A | N/A | N/A          |                                                                                                                      | 3.2<br>4.1<br>2.2                                                                          |
|                          |      |     |     |              | 31-31.5: SANDY CLAY, red to gray, stiff<br>31.5-33: SILT, brown, stiff, damp, loess                                  | 0.0<br>0.0                                                                                 |



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LOGGER : Mike Karafa/ATL

| DEPTH BELOW SURFACE (FT) | DEPTH BELOW SURFACE (FT) |      |        | STANDARD PENETRATION TEST RESULTS<br>6"-6"-6" (N) | SOIL DESCRIPTION<br>SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.                                                                                                                                                    | COMMENTS<br>DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. FID (ppm) |
|--------------------------|--------------------------|------|--------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
|                          | SAMPLE INTERVAL (FT)     |      | #/TYPE |                                                   |                                                                                                                                                                                                                                                                                             |                                                                                                        |
|                          | RECOVERY (FT)            |      |        |                                                   |                                                                                                                                                                                                                                                                                             |                                                                                                        |
|                          |                          |      |        |                                                   |                                                                                                                                                                                                                                                                                             |                                                                                                        |
| 35                       | 26-36                    | 100% | N/A    | N/A                                               | 33-40: SILTY SAND, reddish orange to red, fine to course grain, pea-size gravel, wet                                                                                                                                                                                                        | 0.0                                                                                                    |
| 40                       | 36-46                    | 100% | N/A    | N/A                                               | 40-42: SAND, reddish orange, loose, damp, fine to medium grain<br>42-51: SAND, orange, fine to course grain, loose, damp, gravel up to 2", chert, subangular to subrounded                                                                                                                  | 0.0<br>0.0                                                                                             |
| 45                       | 46-56                    | 100% | N/A    | N/A                                               | 51-57: SAND, orangish tan, fine grain, loose, dry                                                                                                                                                                                                                                           | 0.0                                                                                                    |
| 55                       | 56-66                    | 100% | N/A    | N/A                                               | 57-62: GRAVELLY SAND, orange, fine to course grain, loose, damp, grave pea-sized to 2", subrounded, chert<br>62-62.5: CLAYEY TO GRAVELLY SAND, orange, course grain, wet, loose, gravel up to 1.5", subrounded, pea-sized<br>62.5-67: SAND, orangish tan, fine to medium grain, loose, damp | 0.0<br>0.0<br>0.0                                                                                      |
| 60                       |                          |      |        |                                                   |                                                                                                                                                                                                                                                                                             |                                                                                                        |
| 65                       |                          |      |        |                                                   |                                                                                                                                                                                                                                                                                             |                                                                                                        |



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| RECOVERY (FT)            |      |     |     | TEST RESULTS |                                                                                                                                                                                                     |                                                                                            |
| #/TYPE                   |      |     |     | 6"-6"-6" (N) |                                                                                                                                                                                                     |                                                                                            |
| 66-76                    | 100% | N/A | N/A | N/A          | 67-73: SAND, tan, loose, fine to medium grain, pea-sized gravel, damp                                                                                                                               | 0.0                                                                                        |
| 73-78                    |      |     |     |              | 73-78: SAND, tan, loose, fine to coarse grain, wet, gravel up to 1/2"                                                                                                                               | 0.0                                                                                        |
| 76-86                    | 100% | N/A | N/A | N/A          | 78-80: SAND, orangish dark gray, loose, coarse grain, saturated<br>80-82: SAND W/ SOME CLAY, orange, v. coarse grain, loose, saturated, gravel up to 1/2"<br>82-87: SILTY CLAY, orange, stiff, damp | 0.0<br>0.0<br>0.0                                                                          |
| 86-96                    | 100% | N/A | N/A | N/A          | 87-96: SILTY CLAY, gray, stiff, damp                                                                                                                                                                | 0.0                                                                                        |

TD @ 96' BGS