



PROJECT NUMBER

113630.01.22

BORING NUMBER

MW-40 (0)

SHEET 1 OF 4

SOIL BORING LOG

PROJECT DDMT Groundwater Investigation

LOCATION Memphis, TN

ELEVATION

DRILLING CONTRACTOR Boart Longyear

DRILLING METHOD AND EQUIPMENT Rotasonic

WATER LEVELS 80.80 ft. BTOC 1/14/96

START 1025, 1/10/96

FINISH 1805, 1/10/96

LOGGER S. Bruer

| DEPTH BELOW SURFACE (FT) | SAMPLE | | | 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 |
|--------------------------|----------|-----------------|----------|---|---|---|
| | INTERVAL | NUMBER AND TYPE | RECOVERY | | | |
| 0 | | | | | 1-inch TOPSOIL SILTY CLAY (CL), light brown, moist, with quartz sand and chert gravel (FILL) | Start drilling at 1025 |
| 5.0 | 5 | | 5 | | Black, moist, with broken glass shards, metal pieces, and organics | Strong organic decay odor in FILL HNU = 2 to 5 ppm at 5 ft. to 10 ft. |
| 10.0 | 10 | | 5 | | CLAYEY SILT (ML), greenish-gray, moist, soft, low plasticity with brown mottling below 11 ft. | Modified loess |
| 15.0 | 15 | | 5 | | Light brown and gray below 14 ft. | |
| 20.0 | 20 | | 5 | | SILTY CLAY (CL), light brown, moist, medium stiff, low to medium plasticity, with quartz sand and chert gravel | Fluvial Deposits |
| | 22.5 | | 2.5 | | CLAYEY SAND (SC), brownish orange, moist, medium dense, trace subrounded, fine to medium chert, occasional layer of lightly cemented sand | |
| 25.0 | | | 6 | | POORLY-GRADED SAND (SP), brownish-orange, moist, loose to medium dense, medium, quartz, trace fine, chert gravel | |
| | 28.5 | | | | | |



PROJECT NUMBER

113630.01.ZZ

BORING NUMBER

MW-40 (0)

SHEET 2 OF 4

SOIL BORING LOG

PROJECT DDMT Groundwater InvestigationLOCATION Memphis, TN

ELEVATION _____

DRILLING CONTRACTOR Boart LongyearDRILLING METHOD AND EQUIPMENT RotasonicWATER LEVELS 80.80 ft. BTOC 1/14/96START 1025, 1/10/96FINISH 1805, 1/10/96LOGGER S. Bruer

| DEPTH BELOW SURFACE (FT) | SAMPLE | | | 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 |
|-----------------------------|----------|--------------------|----------|---|--|--|
| | INTERVAL | NUMBER AND TYPE | RECOVERY | | | |
| | | | | | | |
| | 30 | | 6.5 | | <u>WELL-GRADED GRAVELLY SAND (SW)</u> , brownish-orange, moist, loose, fine to coarse, quartz, with subrounded to rounded fine to medium, chert gravel | Gradational contact |
| 35.0 | 35 | | 5 | | 36.5 ft.: 3-inch layer of <u>CLAY (CH)</u> , light gray and lavender, moist, soft, medium to high plasticity 37.5 ft.: 3-inch layer of <u>CLAY (CH)</u> , as above at 36.5 ft. | <i>base of fluid</i> Gradational contact |
| 40.0 | 40 | | 7 | | <u>POORLY-GRADED SAND (SP)</u> , brownish-orange, moist, loose, fine to medium, quartz | |
| 45.0 | 47.5 | | 4 | | | |
| 50.0 | 52 | | 8 | | 52.5 ft.: 3-inch layer of <u>SILTY SAND (SM)</u> , greenish-gray, moist, loose, fine, quartz | Slight organic odor in silty sand layer HNU = 0.0 ppm |
| 55.0 | | | | | | |
| 60 | | | | | | |



PROJECT NUMBER
113630.01.ZZ

BORING NUMBER
MW-40 (0)

SHEET 3 OF 4

SOIL BORING LOG

PROJECT DDMT Groundwater Investigation

LOCATION Memphis, TN

ELEVATION _____

DRILLING CONTRACTOR Boart Longyear

DRILLING METHOD AND EQUIPMENT Rotasonic

WATER LEVELS 80.80 ft. BTOC 1/14/96

START 1025, 1/10/96

FINISH 1805, 1/10/96

LOGGER S. Bruer

| DEPTH BELOW SURFACE (FT) | SAMPLE | | | STANDARD PENETRATION TEST RESULTS 6" - 6" - 6" (N) | SOIL DESCRIPTION | COMMENTS |
|-----------------------------|----------|--------------------|----------|---|---|---|
| | INTERVAL | NUMBER AND TYPE | RECOVERY | | 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 |
| | 60 | | 5 | | | |
| 65.0 | 65 | | | | <u>SILTY SAND (SM)</u> , light gray, moist, loose to medium dense, fine, quartz | Gradational contact with chert gravel and cobbles at 62 feet with free water |
| 70.0 | | | 7 | | | |
| | | | | | Light brown to brownish-orange below 73 ft. | |
| 75.0 | 75 | | | | | |
| | | | 9 | | | |
| | | | | | Light gray and occasional clay below 76 ft. | |
| 80.0 | | | | | | |
| | | | | | | |
| 85.0 | 85 | | | | | |
| | | | | | Light brown below 85 ft. | |
| | | | 10 | | | |



PROJECT NUMBER
113830.01.ZZ

BORING NUMBER
MW-40 (0)

SHEET 4 OF 4

SOIL BORING LOG

PROJECT DDMT Groundwater Investigation

LOCATION Memphis, TN

ELEVATION _____

DRILLING CONTRACTOR Boart Longyear

DRILLING METHOD AND EQUIPMENT Rotasonic

WATER LEVELS 80.80 ft. BTOC 1/14/96

START 1025, 1/10/96

FINISH 1805, 1/10/96

LOGGER S. Bruer

| DEPTH BELOW SURFACE (FT) | SAMPLE | | | 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 |
|-----------------------------|----------|--------------------|----------|---|---|--|
| | INTERVAL | NUMBER AND TYPE | RECOVERY | | | |
| 95.0 | 95 | | | | Light gray below 92 ft. 93.5 ft.: 3-inch layer of <u>CLAY</u> (CH), light gray, moist, soft | Jackson Formation/Upper Claiborne Group 1530 Installing MW-40 |
| | 96 | | 1 | | <u>SILT</u> (ML), light gray, moist, soft | |
| | 98.5 | | 2.5 | | <u>SILTY CLAY</u> (CL), light gray, moist, soft, low to medium plasticity | |
| 100.0 | | | | | Boring terminated at 98.5 ft. | 1805 MW-40 installed (see attached construction log) |
| 105.0 | | | | | | |
| 110.0 | | | | | | |
| 115.0 | | | | | | |