СКМНШ

Proj. No.: 113630.01.ZZ

SOIL BORING LOG

Project: DDMT GW Investigation

Drilling Contractor:

Boart Longyear\Minnesota

| Drilling Method & Equipment: Rotasonic Boart Longyear Minnesota Logger: S. Bruer MGM | | | | | | | | | | |
|--|----------|--------------------|------------------|-----------------|---|---------------------------------|--|--|--|--|
| טווונוס | y Metr | | | ent: Rota | | Logger: S. Bruer\MGM | | | | |
| 1 | | Sample | | | Soil Description | Comments | | | | |
| ≥ ~ | | | | Standard | | | | | | |
| Depth Below Surface (FT) | | |] | Penetration | Soil name, uscs group symbol, color, | Depth of casing, drilling rate, | | | | |
| B E | | _ 9 | ~ | Test Results | moisture content, relative density or | drilling fluid loss, tests and | | | | |
| E 2 | \ a | ₹ ₹ | 8 | Results | consistency, soil structure, mineralogy | instrumentation | | | | |
| E E | Interval | E | 8 C | 6-6-6 | , constant, con on contains, minoralogy | mon amoritation | | | | |
| N D | 三 | Number and Type | Recovery (FT) | (N) | | | | | | |
| Elevat | | | | | Location: Memphis, TN | Boring No. MW-53(E) | | | | |
| Start: 0955 / 07 FEB 96 | | | | | Finish: 1245 / 08 FEB 96 | Water Level: 78 ft bgs | | | | |
| | | | | ···· | 1 11131. 1243 7 00 1 LB 30 | Sheet 1 of 3 | | | | |
| — | 0 | 1 | T | *** | 2 inches CONCRETE | | | | | |
| - | ∤ | 1 1 | } | | | Start Drilling at 0955 (2/7/96) | | | | |
| - | - | | _ | | 1 inch BASE COURSE - chert gravel | | | | | |
| - | 4 | | 5 | | SILTY CLAY (CL), light brown with light | | | | | |
| | - | | | | gray and black mottling, moist, medium | _ | | | | |
| 5 _ | 5 | ļ | | | stiff, low to medium plasticity | _] | | | | |
| _ | 1 | | | | CLAYEY SILT (ML), light brown, moist, | gradational contact | | | | |
| l - | | | 5 | | soft, low plasticity | 1 | | | | |
| <u> </u> |] | | | | | 1 1 | | | | |
| |] | | | | - | 1 1 | | | | |
| 10 | 10 | | - | | - | 1 1 | | | | |
| _ | | | | | | † - | | | | |
|] - | 1 | | 5 | İ | SILTY CLAY (CL), light brown, moist, | - gradational contact | | | | |
| i - | 1 | | | | soft, low to medium plasticity | | | | | |
| - | 1 | | | | soit, low to medium plasticity | 4 4 | | | | |
| 15 | 15 | j | 1 | | - | 4 4 | | | | |
| '3 - | 13 | | | | | - ↓ | | | | |
| | 1 | | 1 | | , • | | | | | |
| _ | ļ | | | | _ | <u>.</u> | | | | |
| _ | | | i | | - with black and orange iron nodules | | | | | |
| | | | - | | maximum 1/8-inch diameter below |] | | | | |
| 20 | İ i | | 10 | İ | 17 ft | i 1 | | | | |
| | | | . | | - stiff with orange and light gray mottling | 1 7 | | | | |
| | | 1 | | | below 19 ft | 1 1 | | | | |
| 1 | | | l | l | - stiff with black and light gray mottling | 1 1 | | | | |
| | | j | Ì | - | below 21 ft | - | | | | |
| 25 | 25 | 1 | - 1 | | | - | | | | |
| | | | | | SANDY CLAY (CL), light brown, moist, | - gradational contact | | | | |
| - | | ł | | | stiff, medium plasticity, fine to medium, | | | | | |
| - | | - | | | • | - increasing sand content | | | | |
| │ | | | - | | quartz sand, silty | with depth | | | | |
| 30 | ĺ | | 10 | ļ | | Fluvial Deposits | | | | |
| 30 | | | 10 | | | | | | | |
| 4 | İ | | l | | | <u>,</u> | | | | |
| 4 |] | | 1 | | - with light gray and brownish-red | | | | | |
| 4 | | 1 | | | intermixing below 32 ft | 1 | | | | |
| | | | | | | , 1 | | | | |
| 35 | 35 | | | | CLAYEY SAND (SC), brownish-orange, | - gradational contact | | | | |
| <u>NOTES</u> | <u>:</u> | | | | | | | | | |

⁻ groundwater level estimated during drilling

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SOIL BORING LOG

Project: DDMT GW Investigation Drilling Contractor:

Boart Longyear\Minnesota **Drilling Method & Equipment:** Rotasonic Logger: S. Bruer\MGM Sample Soil Description Comments Standard **Depth Below** Penetration Soil name, uscs group symbol, color, Depth of casing, drilling rate, Test moisture content, relative density or drilling fluid loss, tests and Results Interval consistency, soil structure, mineralogy instrumentation 6"-6"-6" (N) Elevation: Boring No. MW-53(E) Location: Memphis, TN Start: 0955 / 07 FEB 96 Finish: 1245 / 08 FEB 96 Water Level: 78 ft bgs Sheet 2 of 3 35 moist, medium dense, fine to medium, quartz, silty 40 9 POORLY GRADED SAND (SP), brownish- - gradational contact orange, moist, medium dense, fine to medium, quartz 44 45 - yellowish-brown with trace fine, subrounded, chert gravel, silty 46 ft to 47 ft 50 11 WELL GRADED SAND (SW), orangish-- gradational contact brown, moist, loose, fine to coarse, quartz, with some fine to medium. - gradational contact subrounded to rounded, chert gravel 55 55 POORLY GRADED SAND (SP), yellowishbrown, moist, loose, fine to medium. quartz, trace fine to coarse, subrounded, 5 chert gravel 60 60 - brownish-orange below 61 ft 3 63 65 5 yellowish-brown below 66 ft 68 WELL GRADED GRAVELLY SAND (SW), - gradational contact

yellowish-brown to orangish-brown, moist,

NOTES:

70

groundwater level estimated during drilling

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SOIL BORING LOG

Project: DDMT GW Investigation
Drilling Method & Equipment: Project: Project: DDMT GW Investigation

Drilling Contractor:

Boart Longyear Minnesota

| Drilling | Meth | od & E | quipm | ent: Rota | sonic | Logger: S. Bruer\MGM | | | | | |
|-----------------------------|----------|--------------------|------------------|--|--|--|--|--|--|--|--|
| | | Sampl | е | } | Soil Description | Comments | | | | | |
| Depth Below Surface (FT) | Interval | Number and Type | Recovery (FT) | Standard Penetration Test Results 6"-6"-6" (N) | 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 | | | | | |
| Elevati | on: | | | | Location: Memphis, TN | Boring No. MW-53(E) | | | | | |
| Start: 0955 / 07 FEB 96 | | | | | Finish: 1245 / 08 FEB 96 | Water Level: 78 ft bgs | | | | | |
| | | | | | | Sheet 3 of 3 | | | | | |
| - | | | 3 | | loose, fine to coarse, quartz, with fine to coarse, subrounded, chert gravel | | | | | | |
| 75 _ | 75 | | | | - orangish-brown below 74 ft | - - - - | | | | | |
| - | | | 5 | | - clayey from 76 ft to 76.5 ft - trace subrounded, chert cobbles below 77 ft | | | | | | |
| 80 | 80 | | - | | - wet below 78 ft | Fluvial Aquifer | | | | | |
| 85 | 85 | | 5 | | SILTY CLAY (CL), light brown and light gray (marbled), moist, stiff, medium | - erosional contact at 83 ft Jackson Fm/Upper Claibome 2/8/96 - 1010: stopped drilling 2/8/96 - : MW-53 installed | | | | | |
| 4 | | | | | plasticity Boring Terminated at 85 Feet | see attached construction log | | | | | |
| 90 | | | | | - | | | | | | |
| | | | | | - | | | | | | |
| 95 | | | | | <u>-</u> | _ | | | | | |
| 4 | | | | | - | 4 | | | | | |
| Ⅎ | | 1 | | | - | | | | | | |
| 100 _ | | | | | - | | | | | | |
| 4 | | | | | - - | | | | | | |
| 7 | | | | | - | | | | | | |
|] | | | | | |] | | | | | |
| 105 | | | | | | | | | | | |
| IOTES: | | | | | | | | | | | |
| | - grou | ındwat | er leve | el estimated | during drilling | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |