DLZ Ohio, Inc. * 6121 Huntley Road, Columbus, Ohio 43229 * (614) 888-0040

Client: ms consultants | *Project:* FRA-70-8.93 | *Job No.* 0221-1004.01

LOG OF: Boring B-041-0-08 | *Location:* | *Date Drilled:* 6/23/2008 to 6/25/2008

WATER OBSERVATIONS:
Water seepage at: 13.0'-15.5', 52.0'-92.0'
Water level at completion: 37.1' (includes drilling water)

FIELD NOTES:
Advanced boring using 4.0" diameter flush joint casing.

Depth (ft)	Elev. (ft)	Blows per 6"	Recovery	Sample No. Drive	Sample No. Press / Core	Hand Penetrometer (tsf)	DESCRIPTION	Graphic Log	GRADATION % Aggregate	% C. Sand	% M. Sand	% F. Sand	% Silt	% Clay	STANDARD PENETRATION (N60) Natural Moisture Content, % - ● PL ⊢ LL Blows per foot - ○ / Non-Plastic - NP
	659.7						Very dense brownish gray SANDY SILT (A-4a), some gravel; damp.								
		40 50/5	5	28											50+
105															
		50/5	5	29					21	17	---	21	27	14	50+
110															
112.0	647.7														
							Stiff to very stiff brown and gray SILTY CLAY (A-6b), trace fine to coarse sand, trace gravel; moist.								
		17 27 34	3	30					2	3	---	2	55	38	64
115.0 115	644.7														
		Core 60"	Rec 60"	RQD 80%	R1		Shale, blue-gray, weak, highly weathered, thinly laminated, slightly calcareous, jointed, moderately to highly fractured, tight, with typical narrow fractures, slightly rough; RQD 42%, Loss 0%. Contains dark gray, well cemented shale zones [thin, dark bands]. Dark shale zones are typically 1-2 inches thick, spaced at intervals of 12 to 18 inches.								
120															
		Core 60"	Rec 60"	RQD 25%	R2										
125	634.7														