



**Stantec Consulting Services Inc.**  
10200 Alliance Road, Suite 300  
Cincinnati OH 45242-4754

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December 13, 2024

Project/File: 175578434

**Andy Moreland, PE**

Ohio Department of Transportation - District 10  
338 Muskingum Drive  
Marietta, Ohio 45750

**Reference: Geotechnical Data Report  
MEG-33-13.96 PID 119143  
Meigs County, Ohio**

Dear Mr. Moreland,

Stantec Consulting Services Inc. (Stantec) has completed boring logs and laboratory work for the MEG-33-13.96 project. Enclosed with this report are the boring logs and rock core photographs for the project. Please contact us if you have any questions.

Regards,

**STANTEC CONSULTING SERVICES INC.**

A handwritten signature in blue ink that reads "James A. Samples".

**James Samples** EI  
Geotechnical Engineer in Training  
Phone: (513) 842-8204  
James.Samples@stantec.com

A handwritten signature in blue ink that reads "Eric M. Kistner".

**Eric Kistner** PE  
Geotechnical Project Manager  
Phone: (513) 842-8213  
Eric.Kistner@stantec.com

Attachment: MEG-33-13.96 Boring Logs, MEG-33-13.96 Rock Core Photo Log

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT GDT - 12/12/24 15:43 - U\175578434\TECHNICAL\_PRODUCTION\FIELD\_DATA\10L - MEG-33-13.96\LOGSIGINT\_LOGS.GPJ

PROJECT: MEG-33-13.96		DRILLING FIRM / OPERATOR: STANTEC / ZB		DRILL RIG: CME 45#3T (815)		STATION / OFFSET: 794+20, 170' LT.		EXPLORATION ID											
TYPE: STRUCTURE FOUNDATION		SAMPLING FIRM / LOGGER: STANTEC / JAS		HAMMER: CME AUTOMATIC		ALIGNMENT: US 33		B-006-0-24											
PID: 119143 SFN: NA		DRILLING METHOD: 3.25" HSA / NQ2		CALIBRATION DATE: 6/27/23		ELEVATION: 659.2 (MSL) EOB: 47.0 ft.		PAGE											
START: 10/29/24 END: 10/29/24		SAMPLING METHOD: SPT / NQ2		ENERGY RATIO (%): 90*		LAT / LONG: 39.029750, -81.940017		1 OF 2											
MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTH	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL	
								GR	CS	FS	SI	CL	LL	PL	PI				
DARK BROWN, TOPSOIL, DAMP STIFF TO VERY STIFF, REDDISH BROWN, SILT AND CLAY, SOME GRAVEL, SOME SAND, DAMP TO MOIST	659.2		2																
	659.0	1	3	9	87	SS-1	2.50	27	9	14	29	21	35	22	13	15	A-6a (4)	<<<<<<	
		2	6	21	47	SS-2	2.50	-	-	-	-	-	-	-	-	15	A-6a (V)	<<<<<<	
		3	4	5	15	80	SS-3	2.00	33	10	12	21	24	38	23	15	A-6a (4)	<<<<<<	
		4	5	3	11	47	SS-4	3.00	-	-	-	-	-	-	-	11	A-6a (V)	<<<<<<	
		5	2	3	4														<<<<<<
MEDIUM STIFF, REDDISH BROWN, SILT AND CLAY, SOME GRAVEL, LITTLE SAND, DAMP TO MOIST	653.2	6	3	2	6	67	SS-5	1.00	-	-	-	-	-	-	-	18	A-6a (V)	<<<<<<	
		7	2	3	8	47	SS-6	2.25	26	7	10	32	25	35	22	13	10	A-6a (6)	<<<<<<
		8	3	2	6	27	SS-7	-	-	-	-	-	-	-	-	12	A-6a (V)	<<<<<<	
		9	2	2	6	27	SS-7	-	-	-	-	-	-	-	-	12	A-6a (V)	<<<<<<	
		10	2	2	6	27	SS-7	-	-	-	-	-	-	-	-	12	A-6a (V)	<<<<<<	
		11	2	1	5	27	SS-8	-	-	-	-	-	-	-	-	13	A-6a (V)	<<<<<<	
SS-6 & 7 COMBINED FOR CLASSIFICATION		12	1	2	8	20	SS-9	-	-	-	-	-	-	-	-	9	A-6a (V)	<<<<<<	
	645.7	13	2	3	8	20	SS-9	-	-	-	-	-	-	-	-	9	A-6a (V)	<<<<<<	
		14	3	7	21	60	SS-10	-	-	-	-	-	-	-	-	17	A-6a (V)	<<<<<<	
STIFF TO VERY STIFF, REDDISH BROWN, SILT AND CLAY, SOME GRAVEL, TRACE TO LITTLE SAND, MOIST		15	7	4	12	13	SS-11	-	-	-	-	-	-	-	-	18	A-6a (V)	<<<<<<	
	642.7	16	4	4	12	13	SS-11	-	-	-	-	-	-	-	-	18	A-6a (V)	<<<<<<	
MEDIUM STIFF TO STIFF, GRAY, SANDY SILT, LITTLE CLAY, MOIST		17	2	3	9	100	SS-12	-	0	3	36	42	19	26	18	8	24	A-4a (5)	<<<<<<
		18	3	3	9	80	SS-13	-	-	-	-	-	-	-	-	17	A-4a (V)	<<<<<<	
		19	4	3	9	80	SS-13	-	-	-	-	-	-	-	-	17	A-4a (V)	<<<<<<	
		20	1	1	8	53	SS-14	-	-	-	-	-	-	-	-	20	A-4a (V)	<<<<<<	
LOOSE TO MEDIUM DENSE, GRAY, GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST TO WET	638.2	21	2	3	14	33	SS-15	-	32	8	35	21	4	NP	NP	NP	19	A-2-4 (0)	<<<<<<
		22	3	6	14	33	SS-15	-	32	8	35	21	4	NP	NP	NP	19	A-2-4 (0)	<<<<<<
		23	2	5	17	47	SS-16	-	-	-	-	-	-	-	-	16	A-2-4 (V)	<<<<<<	
SS-15 & 16 COMBINED FOR CLASSIFICATION		23	6	17	47	SS-16	-	-	-	-	-	-	-	-	16	A-2-4 (V)	<<<<<<		
																			<<<<<<

W 636.2

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT GDT - 12/12/24 15:43 - U:\175578434\TECHNICAL\_PRODUCTION\FIELD\_DATA\10L - MEG-33-13.96\LOGSIGINT.LOGS.GPJ

PID: 119143		SFN: NA		PROJECT: MEG-33-13.96		STATION / OFFSET: 794+20, 170' LT.		START: 10/29/24		END: 10/29/24		PG 2 OF 2		B-006-0-24											
MATERIAL DESCRIPTION AND NOTES				ELEV. 635.2	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			ODOT CLASS (GI)	BACK FILL					
											GR	CS	FS	SI	CL	LL	PL	PI			WC				
<b>LOOSE TO MEDIUM DENSE, GRAY, GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST TO WET (continued)</b>				632.7	TR	4																			
						25	3	3	9	27	SS-17	-	-	-	-	-	-	-	-	-	-	-	12	A-2-4 (V)	<><>
<b>SHALE, GRAY, HIGHLY WEATHERED, WEAK TO MODERATELY STRONG, FINE GRAINED, LAMINATED TO VERY THIN BEDDED, ARGILLACEOUS, HIGHLY TO MODERATELY FRACTURED; RQD 28%, REC 87%.</b>				625.7	TR	6																			
						26	10	50/3"	-	80	SS-18A	-	-	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)	<><>
<b>CLAYSTONE, REDDISH BROWN TO GRAY, SEVERELY TO HIGHLY WEATHERED, WEAK, VERY FINE GRAINED, LAMINATED, ARGILLACEOUS, HIGHLY TO MODERATELY FRACTURED; RQD 18%, REC 71%.</b>				612.2	EOB	27																			
						28																			
				612.2	EOB	29	8			80	NQ2-1											CORE	<><>		
						30																			
				612.2	EOB	31																			
						32																			
				612.2	EOB	33	28			96	NQ2-2												CORE	<><>	
						34																			
				612.2	EOB	35																			
						36																			
				612.2	EOB	37																			
						38																			
				612.2	EOB	39	42			96	NQ2-3													CORE	<><>
						40																			
				612.2	EOB	41																			
						42																			
				612.2	EOB	43	8			64	NQ2-4													CORE	<><>
						44																			
				612.2	EOB	45																			
						46																			
				612.2	EOB	47	0			10	NQ2-5													CORE	<><>

NOTES: NONE

ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT GDT - 12/12/24 15:43 - U:\17557843\TECHNICAL\_PRODUCTION\FIELD\_DATA\10L - MEG-33-13.96\LOGSIGINT\_LOGS.GPJ

PROJECT: <u>MEG-33-13.96</u>	DRILLING FIRM / OPERATOR: <u>STANTEC / ZB</u>	DRILL RIG: <u>CME 45#3T (815)</u>	STATION / OFFSET: <u>795+68, 175' LT.</u>	EXPLORATION ID: <u>B-007-0-24</u>
TYPE: <u>STRUCTURE FOUNDATION</u>	SAMPLING FIRM / LOGGER: <u>STANTEC / JAS</u>	HAMMER: <u>CME AUTOMATIC</u>	ALIGNMENT: <u>US 33</u>	
PID: <u>119143</u> SFN: <u>NA</u>	DRILLING METHOD: <u>3.25" HSA / NQ2</u>	CALIBRATION DATE: <u>6/27/23</u>	ELEVATION: <u>663.9 (MSL)</u> EOB: <u>37.0 ft.</u>	PAGE: <u>1 OF 2</u>
START: <u>10/30/24</u> END: <u>10/30/24</u>	SAMPLING METHOD: <u>SPT / NQ2</u>	ENERGY RATIO (%): <u>90*</u>	LAT / LONG: <u>39.029526, -81.939584</u>	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTH	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL	
								GR	CS	FS	SI	CL	LL	PL	PI				
STIFF, BROWNISH GRAY, <b>SILT AND CLAY</b> , TRACE GRAVEL, SOME SAND, MOIST	663.9	1	3 4 5	14	80	SS-1	3.50	10	8	22	32	28	33	21	12	16	A-6a (6)	<<<<<<	
		2	3 5 5	15	53	SS-2	1.25	-	-	-	-	-	-	-	-	19	A-6a (V)	<<<<<<	
		3	2 2 4	9	67	SS-3	0.50	17	6	10	37	30	41	22	19	23	A-7-6 (10)	<<<<<<	
MEDIUM STIFF TO STIFF, GRAY, <b>CLAY</b> , LITTLE GRAVEL, LITTLE SAND, "AND" SILT, DAMP TO MOIST	660.9	4	2 3 2	8	0	SS-4	-	-	-	-	-	-	-	-	-	25	A-7-6 (V)	<<<<<<	
		5	0 0 4	6	20	SS-5	0.50	-	-	-	-	-	-	-	-	22	A-7-6 (V)	<<<<<<	
		6	1 1 2	5	53	SS-6	0.50	-	-	-	-	-	-	-	-	19	A-7-6 (V)	<<<<<<	
		7	3 8 7	23	47	SS-7	-	33	6	23	23	15	29	18	11	21	A-6a (1)	<<<<<<	
		8	3 10 8	27	53	SS-8	-	-	-	-	-	-	-	-	-	12	A-6a (V)	<<<<<<	
STIFF TO VERY STIFF, GRAY, <b>SILT AND CLAY</b> , TRACE TO SOME GRAVEL, SOME SAND, DAMP TO MOIST  SS-7 & 8 COMBINED FOR CLASSIFICATION	654.9	9	2 3 4	11	80	SS-9	0.50	3	7	24	47	19	31	18	13	15	A-6a (7)	<<<<<<	
		10	6 10 19	44	100	SS-10A	-	-	-	-	-	-	-	-	-	-	A-6a (V)	<<<<<<	
		11	5 8 9	26	100	SS-10B	3.50	-	-	-	-	-	-	-	-	14	A-6b (V)	<<<<<<	
VERY STIFF TO HARD, GRAY, <b>SILTY CLAY</b> , "AND" GRAVEL, SOME SAND, DAMP	649.9	12	8 9	26	100	SS-11	4.00	40	13	8	30	9	39	22	17	14	A-6b (2)	<<<<<<	
		13	20 50/3"	-	93	SS-12	-	-	-	-	-	-	-	-	-	6	Rock (V)	<<<<<<	
SANDSTONE, LIGHT GRAY, MODERATELY TO HIGHLY WEATHERED, MODERATELY STRONG, COARSE GRAINED, MEDIUM BEDDED, ARENACEOUS, HIGHLY FRACTURED; RQD 0%, REC 88%.	647.4	14	0		88	NQ2-1											CORE	<<<<<<	
		15																CORE	<<<<<<
		16																CORE	<<<<<<
CLAYSTONE, REDDISH BROWN TO GRAY, HIGHLY WEATHERED, WEAK, VERY FINE GRAINED, LAMINATED, ARGILLACEOUS, HIGHLY TO MODERATELY FRACTURED; RQD 21%, REC 84%.	642.9	17																CORE	<<<<<<
		18																	CORE

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH.DOT.GDT - 12/12/24 15:43 - U:\175578434\TECHNICAL\_PRODUCTION\FIELD\_DATA\10L - MEG-33-13.96\LOGSIGINT.LOGS.GPJ

PID: 119143		SFN: NA		PROJECT: MEG-33-13.96		STATION / OFFSET: 795+68, 175' LT.		START: 10/30/24		END: 10/30/24		PG 2 OF 2		B-007-0-24						
MATERIAL DESCRIPTION AND NOTES			ELEV.	DEPTH	SPT/RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL
										GR	CS	FS	SI	CL	LL	PL	PI			
<b>CLAYSTONE</b> , REDDISH BROWN TO GRAY, HIGHLY WEATHERED, WEAK, VERY FINE GRAINED, LAMINATED, ARGILLACEOUS, HIGHLY TO MODERATELY FRACTURED; RQD 21%, REC 84%. <i>(continued)</i>  FROM 31.0 FT. TO 31.4 FT., UCR = 239 PSI			639.9	25																
				26																
				27																
<b>SHALE</b> , GRAY, MODERATELY WEATHERED, WEAK TO MODERATELY STRONG, FINE GRAINED, LAMINATED TO THIN BEDDED, ARENACEOUS, MODERATELY TO SLIGHTLY FRACTURED; RQD 93%, REC 100%.  FROM 35.5 FT. TO 35.9 FT., UCR = 7,090 PSI			631.2	28	30		82	NQ2-3										CORE		
				29																
				30																
			626.9	31																
				32																
				33																
				34	60		100	NQ2-4												
				35																
				36																
				37	100		100	NQ2-5												
				EOB																
NOTES: NONE																				
ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS																				

**B-006-0-24**


Run #:	Depth		Recovery		RQD	
NQ2-1	27.0'	31.0'	38"/48"	80%	4"/48"	8%
NQ2-2	31.0'	36.0'	58"/60"	97%	17"/60"	28%
NQ2-3	36.0'	41.0'	58"/60"	97%	25"/60"	42%

MEG-33-13.96 PID: 119143



B-006-0-24



Run #:	Depth		Recovery		RQD	
NQ2-3	36.0'	41.0'	58"/60"	97%	25"/60"	42%
NQ2-4	41.0'	46.0'	38"/60"	64%	5"/60"	8%
NQ2-5	46.0'	47.0'	1"/12"	1%	0"/12"	0%

MEG-33-13.96 PID: 119143



**B-007-0-24**


Run #:	Depth		Recovery		RQD	
	NQ2-1	17.0'	21.0'	42"/48"	88%	0"/48"
NQ2-2	21.0'	26.0'	48"/60"	80%	12"/60"	20%

MEG-33-13.96 PID: 119143



B-007-0-24



Run #:	Depth		Recovery		RQD	
NQ2-3	26.0'	31.0'	49"/60"	82%	18"/60"	30%
NQ2-4	31.0'	36.0'	60"/60"	100%	36"/60"	60%

MEG-33-13.96 PID: 119143



B-007-0-24



Run #:	Depth		Recovery		RQD	
NQ2-5	36.0'	37.0'	12"/12"	100%	12"/12"	100%
MEG-33-13.96 PID: 119143						