

PROJECT

Williams SSE Project – MP 1394.69

ELEVATION 686ft

Lat/Long (36°37'47", -79°32'50")

BORING NO. TP-1

ELEVATION

GW

Dry

PROJECT NO. R210356.01

DATE 09/10/24

CLASSIFIED BY KK

PAGE 1 OF 1

DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	DESCRIPTION			REMARKS*
		PROFILE	COLOR	MATERIAL CLASSIFICATION	
	1.0	1.0	Yellow orange	Sand, some Gravel, little Silt, trace Clay, Cobbles encountered, blocky, heterogeneous	
1.0	100%	6.0	10YR 7/8	dry, stiff,non to low plastic fines, colluvium, a-1-b/sp (0.0' - 6.0')	
	1.0			Roots from 0.0' - 1.0'	
	100%			Leachate zone present at 1.0'	
2.0					
	1.0				No presence of seasonal high
	100%				groundwater table within
3.0					
	1.0				the test pit.
	100%				
4.0					
	1.0				
	100%				
5.0					
	1.0				
	100%				
6.0				Pit terminated at 6.0 ft	
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/10/24.					

PROJECT

Williams SSE Project – MP 1394.69

ELEVATION 681ft

Lat/Long (36°37'47". -79°32'50")

BORING NO. TP-2

ELEVATION

GW

Dry

PROJECT NO. R210356.01

DATE 09/10/24

CLASSIFIED BY KK

PAGE 1 OF 1

DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	DESCRIPTION			REMARKS*
		PROFILE	COLOR	MATERIAL CLASSIFICATION	
	1.0		Light yellowish	Sand, some Silt, litte Clay, dry to damp, blocky, flat to elongated, heterogeneous	
1.0	100%		2.5YR 7/6	low to non-plastic fines, collivium, a-1-b/sp, (0.0' - 6.1')	No presence of seasonal high
	1.0				groundwater table
2.0	100%				present.
	1.0				
3.0	100%				
	1.0				
4.0	100%				
	1.0				
5.0	100%				
	1.0				
6.0	100%			Pit terminated at 6.1 ft	
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/10/24.					

PROJECT

Williams SSE Project – MP 1394.69

ELEVATION 686ft

Lat/Long (36°37'47". -79°32'49")

BORING NO. TP-3

ELEVATION

GW

Dry

PROJECT NO. R210356.01

DATE 09/10/24

CLASSIFIED BY KK

PAGE 1 OF 1

DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	DESCRIPTION			REMARKS*
		PROFILE	COLOR	MATERIAL CLASSIFICATION	
	1.0	6.2	Dull orange	Sand, some Gravel, trace Silt, blocky, dry, heterogeneous, non-plastic fines,	
1.0	100%		7.5YR 4/7	colluvium, a-1-b/sm (0.0' - 2.5')	
	1.0			0.0' - 3.0' Roots present	
2.0	100%			2.5' Leachate zone present	
	1.0				Potential presence of seasonal
3.0	100%				high groundwater table within
	1.0		10YR 6/6	Sand, some Silt, trace Clay, dry to damp, homogeneous, rounded, colluvium,	the test pit.
4.0	100%		Bright brown	low plastic fines, a-2-4/sm, leachate zone present throughout	
	1.0			a-1-b/sm (2.5' - 6.2') with light gray	
5.0	100%		5R 7/1		
	1.0				
6.0	100%			Pit terminated at 6.2 ft	
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/10/24.					

PROJECT

Williams SSE Project – MP 1394.69

ELEVATION 686ft

Lat/Long (36°37'48". -79°32'49")

BORING NO. TP-4

ELEVATION

GW

Dry

PROJECT NO. R210356.01

DATE 09/10/24

CLASSIFIED BY

KK

PAGE 1 OF 1

DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	DESCRIPTION			REMARKS*
		PROFILE	COLOR	MATERIAL CLASSIFICATION	
	1.0	1.0	Dull orange	Sand, some Gravel, trace Silt, blocky, heterogeneous, dry, angular to sub-angular	
1.0	100%		7.5 YR 4/7	non-plastic fines, colluvium, a-1-b/sp (0.0' - 3.0')	
	1.0	6.0			
	100%				
2.0					
	1.0				Potential presence of seasonal
	100%				high groundwater table within
3.0					
	1.0		10 YR 6/6	Sand, some Silt, little Clay, rounded, dry to damp, rounded, low plastic fines,	the test pit.
	100%		Bright brown	residuum, a-1-b/sm (3.0' - 6.0')	
4.0					
	1.0		with	Leachate zone present (2.5' - 6.0')	
	100%	Light Red Gray			
5.0					
	1.0	5R 7/1			
	100%		Pit terminated at 6.0 ft		
6.0					
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/10/24.					

PROJECT

Williams SSE Project – MP 1394.69

ELEVATION 689ft

Lat/Long (36°37'46". -79°32'50")

BORING NO. TP-5

ELEVATION

GW

Dry

PROJECT NO. R210356.01

DATE 09/10/24

CLASSIFIED BY KK

PAGE 1 OF 1

DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	DESCRIPTION			REMARKS*
		PROFILE	COLOR	MATERIAL CLASSIFICATION	
	1.0	6.0	Dull orange	Sand, some Clay, some Silt, trace Gravel, blocky, heterogeneous, dry	
1.0	100%		7.5YR 4/7	low to non-plastic fines, sub-rounded to angular, colluvium, a-2-6/sc (0.0' - 6.0')	
	1.0			Roots to 3.5'	
	100%				
2.0					
	1.0				No presence of seasonal high
	100%				groundwater table
3.0					
	1.0				present.
	100%				
4.0					
	1.0				
	100%				
5.0					
	1.0				
	100%				
6.0				Pit terminated at 6.0 ft	
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/10/24.					

PROJECT

Williams SSE Project – MP 1394.69

ELEVATION 688ft

Lat/Long (36°37'46". -79°32'49")

BORING NO. TP-6

ELEVATION

GW

Dry

PROJECT NO. R210356.01

DATE 09/10/24

CLASSIFIED BY KK

PAGE 1 OF 1

DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	DESCRIPTION			REMARKS*
		PROFILE	COLOR	MATERIAL CLASSIFICATION	
	1.0	6.8	Brown yellow	Sand, some Silt, little Clay, trace Gravel, blocky, heterogeneous, dry	
1.0	100%		2.5YR 7/4	low to non-plastic fines, angular, colluvium, a-1-b/sm (0.0' - 6.8')	
	1.0				
	100%				
2.0					
	1.0				
	100%				No presence of seasonal high
3.0					
	1.0				groundwater table
	100%				present.
4.0					
	1.0				
	100%				
5.0					
	1.0				
	100%				
6.0					
				Pit terminated at 6.8 ft	
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/10/24.					

PROJECT

Williams SSE Project – MP 1394.69

ELEVATION 688ft

Lat/Long (36°37'46", -79°32'49")

BORING NO.

TP-7

ELEVATION

GW

Dry

PROJECT NO. B210356.01

DATE 09/10/24

CLASSIFIED BY

KK

PAGE 1 OF 1

DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	DESCRIPTION			REMARKS*	
		PROFILE	COLOR	MATERIAL CLASSIFICATION		
	1.0	7.6	Brown yellow	Sand, some Silt, little Clay, little Gravel, blocky, heterogeneous, dry		
1.0	100%		2.5YR 7/4	low to non-plastic fines, angular, colluvium, a-1-b/sm (0.0' - 7.6')		
	1.0					
	100%					
2.0						
	1.0					
	100%				No presence of seasonal high	
3.0						
	1.0				groundwater table	
	100%				present.	
4.0						
	1.0					
	100%					
5.0						
	1.0					
	100%					
6.0						
	1.0					
	100%					
7.0						
					Pit terminated at 7.6 ft	
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/10/24.						

PROJECT

Williams SSE Project – MP 1394.69

ELEVATION 690ft

Lat/Long (36°37'46". -79°32'50")

BORING NO. TP-8

ELEVATION

GW

Dry

PROJECT NO. R210356.01

DATE 09/10/24

CLASSIFIED BY KK

PAGE 1 OF 1

DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	DESCRIPTION			REMARKS*
		PROFILE	COLOR	MATERIAL CLASSIFICATION	
	1.0		Brown yellow	Sand, some Silt, little Clay, little Gravel, blocky, heterogeneous, dry	
1.0	100%		7.5YR 4/7	low to non-plastic fines, flat to angular, colluvium, a-1-b/sm (0.0' - 6.0')	
	1.0			Roots from 1' - 2'	
2.0	100%				
	1.0				No presence of seasonal high
3.0	100%				groundwater table
	1.0				present.
4.0	100%				
	1.0				
5.0	100%				
	1.0				
6.0	100%			Pit terminated at 6.0 ft	
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/10/24.					

DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	DESCRIPTION		REMARKS*
		PROFILE	MATERIAL CLASSIFICATION	
	1.0	1.0	Dull yellow orange Sand, some Gravel, some Silt, cobbles and boulders encountered, heterogeneous	
1.0	100%	10YR 6/4	non-plastic fines, flat to angular, colluvium, roots 0.0' - 1.5' a-1-b/sp, (0.0' - 2.0')	No presence of seasonal high
	1.0	2.0		groundwater table within
2.0	100%		Pit terminated at 2.0 ft	the test pit.
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/9/24.				

DEPTH (FEET)	RECOVERY IN FEET / % RECOVERY	DESCRIPTION			REMARKS*
		PROFILE	COLOR	MATERIAL CLASSIFICATION	
	1.0	1.0	Dull orange	Sand, some Gravel, litte Silt, dry,	
	100%		7.5YR 6/4	homogeneous, flat to angular, non-plastic fines, residuum, a-1-b/sp, (0.0' - 2.0')	No presence of seasonal high
1.0		2.0		Roots 0.0' - 2.0'	groundwater table
	1.0			Pit terminated at 2.0 ft	present.
2.0	100%				
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/9/24.					

		DESCRIPTION			
DEPTH (FEET)	RECOVERY IN FEET / % RECOVERY	PROFILE	COLOR	MATERIAL CLASSIFICATION	REMARKS*
	1.0	6.0	Orange	Sand, some Gravel, trace Silt, trace Clay, blocky, heterogeneous, dry, angular to flat,	
1.0	100%		5YR 6/8	non plastic fines, colluvium, a-1-b/sm (0.0' - 3.0')	
	1.0				
	100%				
2.0					
	1.0				No presence of seasonal high
	100%				groundwater table within
3.0					
	1.0		5YR 6/8	Sand, some Silt, some Clay, dry to damp, homogeneous, rounded, residuum,	the test pit.
	100%		Orange	low plastic fines, a-2-4/sm (3.0' - 6.0')	
4.0					
	1.0				
	100%				
5.0					
	1.0				
	100%				
6.0				Pit terminated at 6.0 ft	
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/9/24.					

PROJECT

Williams SSE Project – MP 1405.25

ELEVATION 736ft

Lat/Long (36°44'52". -79°25'44")

BORING NO.

TP-4

ELEVATION

GW

Dry

PROJECT NO. R210356.01

DATE 09/09/24

CLASSIFIED BY Konstantin Kasamias

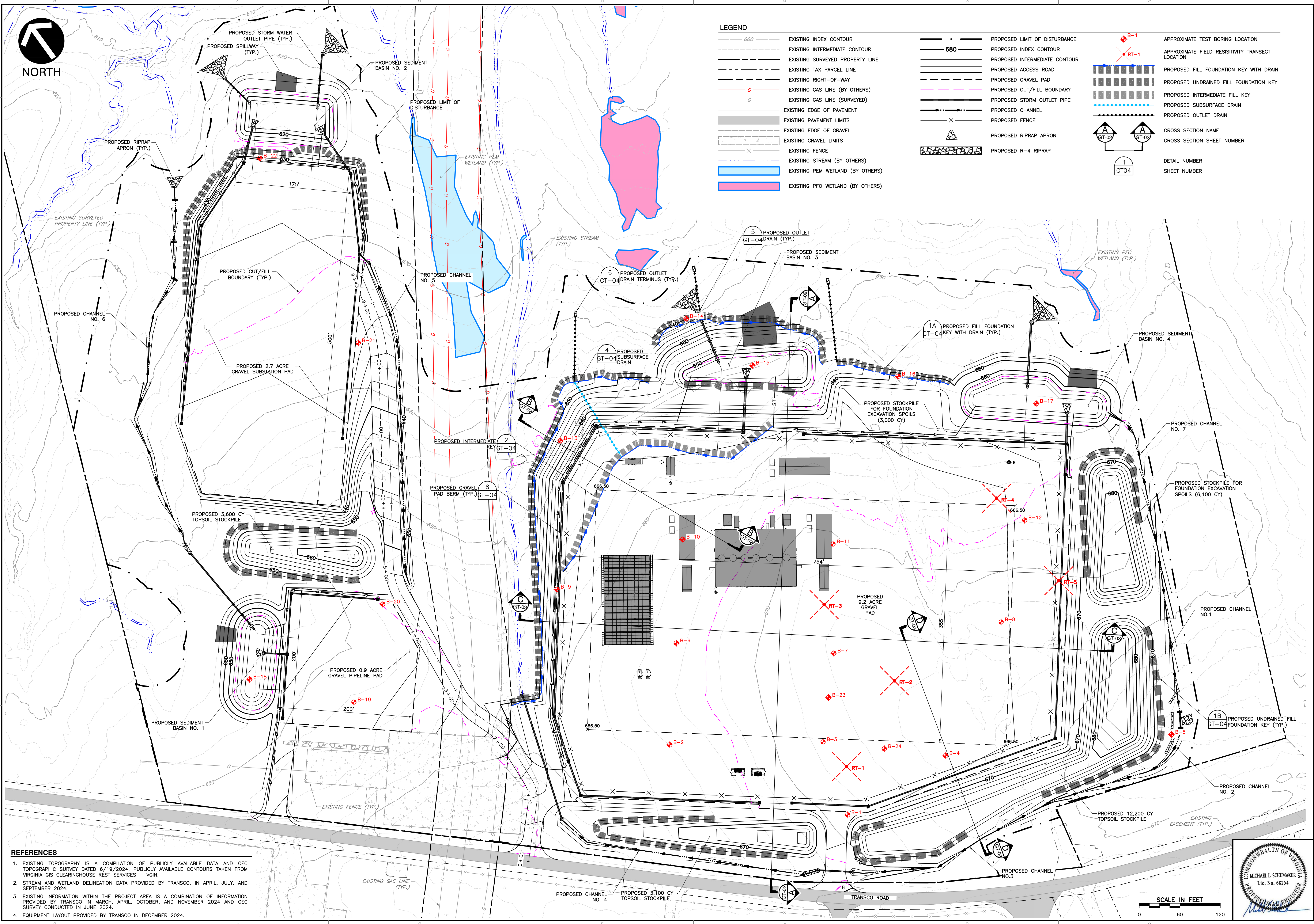
PAGE 1 OF 1

		DESCRIPTION			
DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	PROFILE	COLOR	MATERIAL CLASSIFICATION	REMARKS*
	1.0	1.0	Yellow brown	Sand, some Gravel, trace Silt, blocky, heterogeneous, dry,	
1.0	100%	6.0	10YR 7/6	non-plastic fines, colluvium, a-1-b/sp (0.0' - 3.0')	
	1.0				
	100%				
2.0					
	1.0				No presence of seasonal high
	100%				groundwater table within
3.0					
	1.0		5YR 6/8	Sand, some Silt, trace Gravel, homogeneous, dry to damp, rounded, low plastic fines,	the test pit.
	100%		Orange	residuum, a-1-b/sm (3.0' - 6.0')	
4.0					
	1.0				
	100%				
5.0					
	1.0				
	100%			Pit terminated at 6.0 ft	
6.0					
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/9/24.					

DEPTH (FEET)		RECOVERY IN FEET/ % RECOVERY	DESCRIPTION		REMARKS*
		PROFILE	COLOR	MATERIAL CLASSIFICATION	
	1.0	1.0	Yellow brown	Sand, some Gravel, some Silt, Boulders and Cobbles encountered, blocky,	
1.0	100%	6.0	10YR 7/6	heterogeneous, dry to damp,non-plastic fines, colluvium, a-1-b/sp (0.0' - 0.8')	
	1.0				
	100%		10YR 6/6	Sand, some Gravel, some Silt, Boulders and Cobbles encountered, damp, non-plastic,	
2.0			Bright Brown	colluvium, a-1-b/sm (0.8' - 2.0')	No presence of seasonal high
	100%				groundwater table within
3.0			10YR 6/6	Sand, some Silt, little Clay, homogeneous, damp, rounded, low plastic fines,	the test pit.
	100%		Bright Brown	residuum, a-2-4/sc (2.0' - 7.0')	
	1.0				
	100%				
5.0					
	1.0				
	100%				
6.0					
	1.0	7.8	10YR 6/6	Sand and gravel, rounded, heterogeneous, dry, non-plastic fines, colluvium,	
	100%		Bright Brown	a-1-b/sm, (7.0' - 7.8')	
7.0				Pit terminated at 7.8 ft	
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/9/24.					

DEPTH (FEET)	RECOVERY IN FEET/ % RECOVERY	DESCRIPTION			REMARKS*
		PROFILE	COLOR	MATERIAL CLASSIFICATION	
	1.0	1.0	Bright brown	Sand and Gravel, rounded, heterogeneous, dry, non-plastic fines,	
1.0	100%	6.0	10YR 6/6	colluvium, a-1-b/sp (0.0' - 0.8')	
Test pits were completed by Southeast Connections, LLC . using a Cat 305E2 CR Mini Excavator with a 2 ft bucket on 9/9/24.					

A:\340-0001\341-1321\CAD\DWG\Enriches\341132-GT01-Boring Location Plan and Cross Sections.dwg[GT01] LS(1/21/2025 - Huhwey) - LF: 1/21/2025 11:48 AM



REFERENCES

1. EXISTING TOPOGRAPHY IS A COMPILATION OF PUBLICLY AVAILABLE DATA AND CEC TOPOGRAPHIC SURVEY DATED 6/19/2024. PUBLICLY AVAILABLE CONTOURS TAKEN FROM VIRGINIA GIS CLEARINGHOUSE REST SERVICES - VGIN.
2. STREAM AND WETLAND DELINEATION DATA PROVIDED BY TRANSCO. IN APRIL, JULY, AND SEPTEMBER 2024.
3. EXISTING INFORMATION WITHIN THE PROJECT AREA IS A COMBINATION OF INFORMATION PROVIDED BY TRANSCO IN MARCH, APRIL, OCTOBER, AND NOVEMBER 2024 AND CEC SURVEY CONDUCTED IN JUNE 2024.
4. EQUIPMENT LAYOUT PROVIDED BY TRANSCO IN DECEMBER 2024.

LEGEND

- | | | |
|----------------------------------|-------------------------------|---|
| EXISTING INDEX CONTOUR | PROPOSED LIMIT OF DISTURBANCE | APPROXIMATE TEST BORING LOCATION |
| EXISTING INTERMEDIATE CONTOUR | PROPOSED INDEX CONTOUR | APPROXIMATE FIELD RESISTIVITY TRANSECT LOCATION |
| EXISTING SURVEYED PROPERTY LINE | PROPOSED INTERMEDIATE CONTOUR | PROPOSED FILL FOUNDATION KEY WITH DRAIN |
| EXISTING TAX PARCEL LINE | PROPOSED ACCESS ROAD | PROPOSED UNDRAINED FILL FOUNDATION KEY |
| EXISTING RIGHT-OF-WAY | PROPOSED GRAVEL PAD | PROPOSED INTERMEDIATE FILL KEY |
| EXISTING GAS LINE (BY OTHERS) | PROPOSED CUT/FILL BOUNDARY | PROPOSED SUBSURFACE DRAIN |
| EXISTING GAS LINE (SURVEYED) | PROPOSED STORM OUTLET PIPE | PROPOSED OUTLET DRAIN |
| EXISTING EDGE OF PAVEMENT | PROPOSED CHANNEL | CROSS SECTION NAME |
| EXISTING PAVEMENT LIMITS | PROPOSED FENCE | CROSS SECTION SHEET NUMBER |
| EXISTING EDGE OF GRAVEL | PROPOSED RIPRAP APRON | DETAIL NUMBER |
| EXISTING GRAVEL LIMITS | PROPOSED R-4 RIPRAP | SHEET NUMBER |
| EXISTING FENCE | | |
| EXISTING STREAM (BY OTHERS) | | |
| EXISTING PEM WETLAND (BY OTHERS) | | |
| EXISTING PFO WETLAND (BY OTHERS) | | |

REVISION RECORD

NO.	DATE	DESCRIPTION

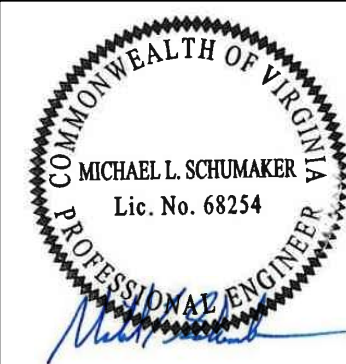
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com



TRANSCONTINENTAL GAS PIPE LINE CO.
COMPRESSOR STATION 165
PITTSYLVANIA COUNTY, VIRGINIA

GEOTECHNICAL PLAN

DATE:	JANUARY 2025	DRAWN BY:	HCB
DWG SCALE:	1"=60'	CHECKED BY:	TAB
PROJECT NO:	341-132	APPROVED BY:	MLS



DRAWING NO: **GT-01**
SHEET 1 OF 3

Table 1
Subsurface Investigation Summary








Notes:

- Not Obtained / Not Encountered
- (1) All thicknesses, depths, and elevations recorded are approximate.
- (2) Water level readings were recorded at the completion of soil sampling, at the completion of rock coring, or after at least 24-hours.
- (3) Bedrock sampling occurred via Hollow Stem Auger and/or Split-Spoon Sampler with the exception of Test Boring B-12 where coring took place via NQ rock coring methods.
- (4) Average values are italicized, and summed values are bolded.

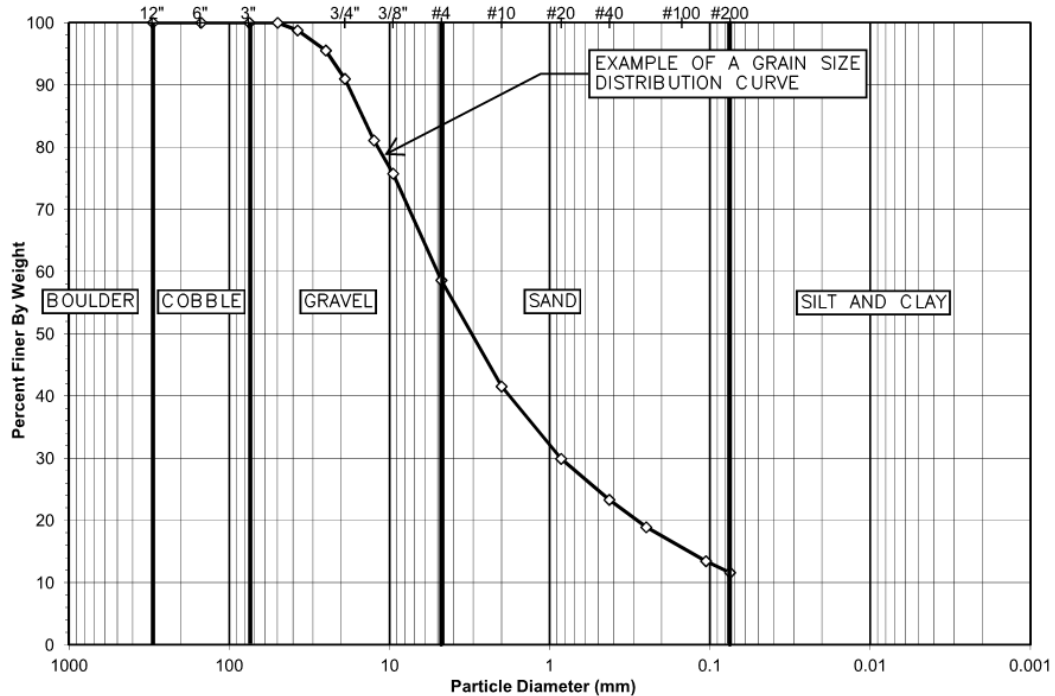
BORING INFORMATION ⁽¹⁾			SOIL THICKNESS ⁽¹⁾				BEDROCK ⁽¹⁾		WATER LEVELS ⁽¹⁾⁽²⁾		
Test Boring	Existing Ground Elevation (ft)	Boring Depth (ft bgs)	Topsoil (ft)	Residuum (ft)	Weathered Bedrock Sampling (ft)	Soil Total (ft)	Bedrock Sampling ⁽³⁾ (ft)	Top of Bedrock Elevation (ft)	After Soil Sampling (ft bgs)	After Rock Coring (ft bgs)	≥ 24 Hours (ft bgs)
B-1	671	10.5	0.8	9.7	--	10.5	--	--	Dry	--	Dry
B-2	664	45.9	0.8	38.2	6.9	45.9	--	618.2	38.2	--	35.6
B-3	673	22.6	0.3	20.7	0.6	21.6	1.0	651.0	Dry	--	Dry
B-4	677	12.1	0.8	11.2	0.1	12.1	--	664.7	Dry	--	Dry
B-5	664	16.5	0.4	16.1	--	16.5	--	--	14.1	--	Backfilled Immediately
B-6	665	31.5	0.3	31.2	--	31.5	--	--	27.5	--	25.5
B-7	674	48.3	0.4	35.6	6.4	42.4	5.9	631.9	33.0	--	Backfilled Immediately
B-8	673	16.5	0.4	16.1	--	16.5	--	--	Dry	--	Backfilled Immediately
B-9	656	16.5	0.4	16.1	--	16.5	--	--	Dry	--	Dry
B-10	663	16.5	0.6	15.9	--	16.5	--	--	Dry	--	Dry
B-11	670	31.5	0.5	31.0	--	31.5	--	--	28.4	--	28.0
B-12	665	38.1	--	33.0	0.1	33.1	5.0	632.3	Dry	7.5	Backfilled Immediately
B-13	649	19.5	--	19.5	--	19.5	--	--	16.9	--	16.4
B-14	638	16.5	0.3	16.2	--	16.5	--	--	Dry	--	Backfilled Immediately
B-15	649	10.0	0.3	9.7	--	10.0	--	--	Dry	--	Dry
B-16	658	16.5	0.2	16.3	--	16.5	--	--	Dry	--	Backfilled Immediately
B-17	658	10.5	0.3	10.2	--	10.5	--	--	Dry	--	Backfilled Immediately
B-18	648	10.5	0.8	9.7	--	10.5	--	--	Dry	--	Backfilled Immediately
B-19	652	16.5	0.4	16.1	--	16.5	--	--	Dry	--	Backfilled Immediately
B-20	653	10.5	0.5	10.0	--	10.5	--	--	Dry	--	Backfilled Immediately
B-21	637	16.5	0.4	16.1	--	16.5	--	--	14.5	--	Backfilled Immediately
B-22	626	19.5	0.4	19.1	--	19.5	--	--	Dry	--	Backfilled Immediately
B-23	673	16.5	0.8	15.7	--	16.5	--	--	Dry	--	Dry
B-24	674	16.5	0.4	16.1	--	16.5	--	--	Dry	--	Dry
Total or Avg ⁽⁴⁾	<i>660</i>	486.0	<i>0.5</i>	<i>18.7</i>	<i>2.8</i>	474.1	11.9	<i>639.6</i>	<i>24.7</i>	--	<i>26.4</i>

APPENDIX C – TEST BORING LOGS

Rock Types

Rock Name	Characteristics	Symbol
Claystone	Clay sized particles that are consolidated, lacking fissility.	
Coal	Black and shiny, can break into cubes or conchoidally.	
Conglomerate	Gravel sized grains and larger held together by finer material, called a breccia if clasts are angular.	
Limestone	Effervescences w/ diluted HCl, can be composed of clay up to gravel particles (fossils).	
Sandstone	Primarily sand sized particles modified w/ the descriptor fine, medium, or coarse.	
Shale	Clay sized particles, shale has fissility which is a horizontal sheet-like or laminated feature.	
Siltstone	Composed of silt, normally breaks as irregular chunks.	

Grain Size Distribution Curve



Glossary

Alluvial Soil or Alluvium: Soil deposited by water in a river, stream, floodplain, or delta.

Bedrock: Materials underlying soil or other unconsolidated surficial materials in which refusal is consistently encountered on lithified, undisturbed, natural bedrock.

Colluvial Soil or Colluvium: Incoherent soil on or at the base of a slope deposited by gravity or slope movement.

Fill: Soil derived from natural soil, rock, or processed materials that was placed by artificial methods, such as construction, waste disposal, or dumping.

Glacial Outwash: Soil, typically sand and gravel, deposited by glacial streams or meltwater in a preexisting valley or over a plain.

Glacial Till: Soil deposited by and underneath a glacier, generally consisting of a heterogeneous, unstratified mixture of clay, sand, gravel, and boulders.

N-Value: The blow count representation of the penetration resistance of the soil determined by the Standard Penetration Test (SPT). It is the sum of the number of blows required to drive the sampler the second and third 6-inch increments (sample depth interval of 6 to 18 inches) and is recorded in blows per foot (bpf). The N-value is considered to be an indication of the relative density of coarse-grained soils (sand and gravel) or consistency of fine-grained soils (silt and clay).

Pocket Pen (PP): Field penetration test performed using a hand-held penetrometer that estimates unconfined compressive strength of cohesive soil in tons per square foot (tsf).

Recovery %: Total length of rock core or soil sample retrieved divided by the total length of the core run or sample interval, expressed as a percentage.

Refusal: The depth at which greater than 50 SPT hammer blows are required to drive the sampling spoon 6 inches or less.

Residual Soil or Residuum: Soil derived from the physical or chemical weathering of the underlying parent bedrock, generally with N-values less than 30 and 50 bpf in cohesive and cohesionless materials, respectively.

Rock Quality Designation (RQD): The sum of the length of intact rock core pieces longer than 4 inches (excluding mechanical breaks) divided by the total length of the core run, expressed as a percentage.

Shelby Tube: A 2" to 3" diameter, thin walled sampling tube that is pushed into the soil to obtain a relatively undisturbed soil sample for geotechnical laboratory tests.

Split Spoon Sampler: A soil sampling tube which is driven, retrieved, and split-open lengthwise for removal and visual inspection, and testing of the soil obtained.

Standard Penetration Test (SPT) ASTM D1586 : Field penetration test consisting of driving a 2-inch outside diameter split-spoon sampler 18 inches using a 140-pound hammer free falling a distance of 30 inches. The number of blows required to advance the spoon through successive 6-inch increments is recorded to determine the N-value.

Weathered Rock: Materials derived from lithified, undisturbed, natural bedrock which are able to be sampled with a split-spoon. Cohesive and cohesionless materials generally have N-values greater than 30 and 50 bpf, respectively.

Rock Quality Descriptions

Weathering

Completely Weathered: All rock material is decomposed and/or disintegrated. The original rock structure may still be intact.

Highly Weathered: More than half of the rock material is decomposed. Fresh rock is present only as a discontinuous framework or as corestones.

Moderately Weathered: Less than half of the rock material is decomposed. Fresh rock is present at a discontinuous framework or as corestones.

Slightly Weathered: Discoloration or staining indicates weathering of rock material on discontinuity surfaces. Rock may be discolored and softened.

Fresh: No visible signs of rock material weathering.

RQD

Descriptor	%
Very Poor	<25
Poor	25-50
Fair	50-75
Good	75-90
Excellent	>90

Brokenness

Descriptor	Fracture Spacing (in & ft)
Very Broken	<1 (<0.08)
Broken	1-3 (0.08-0.25)
Moderately Broken	3-6 (0.25-0.5)
Slightly Broken	>6 (>0.5)

Rock Hardness

Descriptor	Field Criterion	Relative Unconfined Compressive Strength
Very Hard	Difficult to break w/ Hammer	> 30,000 psi
Hard	Hand-held sample breaks w/ Hammer	8,000 to 30,000 psi
Medium Hard	Cannot scrape surface w/ knife	2,000 to 8,000 psi
Soft	Cutting or scraping w/ knife difficult	500 to 2,000 psi
Very Soft	Can be cut w/ knife	< 500 psi

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

COARSE-GRAINED SOILS
(more than 50% of material is larger than No. 200 sieve size.)

GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size	GW	Clean Gravels (Less than 5% fines)
	GP	Well-graded gravels, gravel-sand mixtures, little or no fines
	GM	Poorly-graded gravels, gravel-sand mixtures, little or no fines
	GC	Gravels with fines (More than 12% fines)
SANDS 50% or more of coarse fraction smaller than No. 4 sieve size	SW	Silty gravels, gravel-sand-silt mixtures
	SP	Clayey gravels, gravel-sand-clay mixtures
	SM	Clean Sands (Less than 5% fines)
	SC	Well-graded sands, gravelly sands, little or no fines
SANDS 50% or more of coarse fraction smaller than No. 4 sieve size	SP	Poorly graded sands, gravelly sands, little or no fines
	SM	Silty sands, sand-silt mixtures
	SC	Clayey sands, sand-clay mixtures
	SC	Clayey sands, sand-clay mixtures

FINE-GRAINED SOILS
(50% or more of material is smaller than No. 200 sieve size.)

SILTS AND CLAYS Liquid limit less than 50%	ML	Inorganic silts and very fine sands, rock flour, silty of clayey fine sands or clayey silts with slight plasticity
	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	OL	Organic silts and organic silty clays of low plasticity
	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
SILTS AND CLAYS Liquid limit 50% or greater	CH	Inorganic clays of high plasticity, fat clays
	OH	Organic clays of medium to high plasticity, organic silts
	PT	Peat and other highly organic soils
	PT	Peat and other highly organic soils

LABORATORY CLASSIFICATION CRITERIA

$$C_u = \frac{D_{60}}{D_{10}} \text{ greater than } 4; C_c = \frac{D_{30}}{D_{10} \times D_{60}} \text{ between } 1 \text{ and } 3$$

GP Not meeting all gradation requirements for GW

GM Atterberg limits below "A" line or P.I. less than 4
GC Atterberg limits above "A" line with P.I. greater than 7
Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols

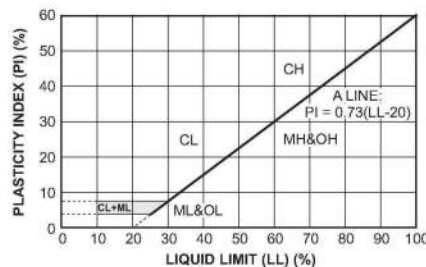
$$C_u = \frac{D_{60}}{D_{10}} \text{ greater than } 4; C_c = \frac{D_{30}}{D_{10} \times D_{60}} \text{ between } 1 \text{ and } 3$$

SP Not meeting all gradation requirements for GW

SM Atterberg limits below "A" line or P.I. less than 4
SC Atterberg limits above "A" line with P.I. greater than 7
Limits plotting in shaded zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols.

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:
Less than 5 percent GW, GP, SW, SP
More than 12 percent GM, GC, SM, SC
5 to 12 percent Borderline cases requiring dual symbols

PLASTICITY CHART



N-Value Rating

Fine-Grained Soils (Silt and Clay)

Consistency	Blows/ft	PP (tsf)
Very Soft	0-2	<0.25
Soft	3-4	0.25-0.5
Medium Stiff	5-8	0.5-1
Stiff	9-15	1-2
Very Stiff	16-32	2-4
Hard	>32	>4

Coarse-Grained Soils (Sand and Gravel)

Relative Density	Blows/ft
Very Loose	0-4
Loose	5-10
Medium Dense	11-30
Dense	31-50
Very Dense	>50

Unconsolidated Material

Term	Grain Size in mm (in)	Approximate Example Size
Clay and Silt	<.075	can't see grains to barely visible
Fine Sand	0.075-0.4	table salt to sugar
Med. Sand	0.4-2.0 (~<1/16)	openings in a window screen
Coarse Sand	2.0-4.75 (~1/16-1/8)	sidewalk salt
Gravel	4.75-75 (~1/8-3)	pea to tennis ball
Cobble	75-300 (3-12)	tennis ball to basketball
Boulder	>300 (>12)	larger than a basketball

Other Features – Used to describe other identifiable, pertinent features (e.g., angularity of coarse-grained soils, organics, construction debris, etc.)

Term

Term	%
Trace	< 5
Few	5-15
Some	15-45

Moisture Content

Dry: Sample is dusty or obviously dry.
Moist: Anything that does not fit the definition of dry or wet.
Wet: Sample contains free water.



Civil & Environmental Consultants, Inc.

Definitions of Standard
Terms and Symbols



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700 Cherrington Parkway
Moon Township, PA 15108

BORING NUMBER B-1

PAGE 1 OF 1

CLIENT	Transcontinental Gas Pipeline Company	PROJECT NAME	Compressor Station 165
PROJECT NUMBER	341-132	PROJECT LOCATION	Pittsylvania County, Virginia
DATE STARTED	6/25/24	COMPLETED	6/25/24
GROUND ELEVATION	671 ft	BACKFILL	Auger Cuttings
SOIL SAMPLING CONTRACTOR	Test Boring Services, Inc.	WATER LEVELS:	
SOIL SAMPLING METHOD	HSA & SPT	AT END OF SOIL SAMPLING	--- Dry
CEC REP	QPB	CHECKED BY	HCB
AT END OF CORING	--- Not Applicable		
NOTES	Elevation obtained from CEC survey.		
24hrs AFTER DRILLING	--- Dry		

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								20	40	60	80
								☐ FINES CONTENT (%) ☐			
								20	40	60	80
670		Topsoil - 0.8 feet	0	SS 1	100	1-5-5 (10)	4.0				
		Reddish Brown, Sandy Lean Clay, CL, Moist, Stiff (RESIDUUM)									
				SS 2	87	5-5-6 (11)					
665			5								
		Trace fat clay nodules observed throughout sample SS-3.		SS 3	100	8-5-4 (9)					
		Reddish Brown, Sandy Silt, ML, Moist, Soft (RESIDUUM)	10	SS 4	100	2-2-2 (4)					
		Bottom of boring at 10.5 feet.									



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BORING NUMBER B-2

PAGE 1 OF 2

CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/25/24 COMPLETED 6/25/24

GROUND ELEVATION 664 ft BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

▽ AT END OF SOIL SAMPLING 38.2 ft / Elev 625.8 ft

CEC REP QPB CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

▽ 24hrs AFTER DRILLING 35.6 ft / Elev 628.4 ft

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
		Topsoil - 0.8 feet	0	SS 1	100	1-5-3 (8)	4.5				
		Brown, Sandy Lean Clay, CL, Moist, Medium Stiff (RESIDUUM)									
660		Brown, SANDY LEAN CLAY, CL, Moist, Stiff to Medium Stiff (RESIDUUM)	5	SS 2	100	2-5-7 (12)					
655		Brown And Light Gray, Silty Sand, SM, Moist, Loose (RESIDUUM) <i>Some carbonaceous material observed throughout sample.</i>	10	SS 4	100	3-3-4 (7)					
650		Brown, Clayey Sand, SC, Moist, Very Loose to Loose (RESIDUUM)	15	SS 5	100	1-1-3 (4)					
645		Brown, Silty Sand with Gravel, SM, Wet, Very Loose (RESIDUUM)	20	SS 7	100	1-1-1 (2)					
640		Brown, SILTY SAND, SM, Wet, Loose (RESIDUUM)	25	SS 8	100	1-2-4 (6)					
		Brown, Silty Sand with Gravel, SM, Wet to Moist, Very Loose to Medium Dense (RESIDUUM) <i>Some fat clay nodules observed throughout stratum.</i>	25	SS 9	100	1-2-1 (3)					
				SS 10	100	1-2-1 (3)					
635			30								

CEC CUSTOM LOG 341-132 LOGS.GPJ CEC.GDT 10/14/24

(Continued Next Page)



Civil & Environmental Consultants, Inc.
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Moon Township, PA 15108

BORING NUMBER B-2

PAGE 2 OF 2

CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	▲ SPT N VALUE ▲			
								20 40 60 80			
								PL MC LL			
								20 40 60 80			
								□ FINES CONTENT (%) □			
								20 40 60 80			
630		Brown, Silty Sand with Gravel, SM, Wet to Moist, Very Loose to Medium Dense (RESIDUUM) <i>Some fat clay nodules observed throughout stratum.</i> (continued) <i>Samples observed to transition from wet to moist at approximately 33 feet bgs.</i>	30	SS 11	100	2-3-7 (10)					
				SS 12	100	5-9-13 (22)					
			35								
625		Orangish Brown, Completely Weathered, Micaceous Sandstone, Very Soft (WEATHERED BEDROCK)		SS 13	100	6-12-14 (26)					
				SS 14	100	6-13-18 (31)					
				SS 15	100	5-16-37 (53)					
620		Light Grayish Brown, Completely Weathered, Micaceous Sandstone, Very Soft (WEATHERED BEDROCK) Bottom of boring at 45.9 feet.	45	SS 16	100	38-50/0.4					50/0.4



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Moon Township, PA 15108

BORING NUMBER B-3

PAGE 1 OF 1

CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/25/24

COMPLETED 6/25/24

GROUND ELEVATION 673 ft

BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

AT END OF SOIL SAMPLING --- Dry



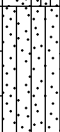
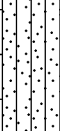
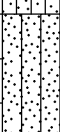
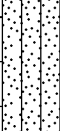
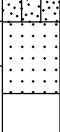


CEC REP QPB

CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

24hrs AFTER DRILLING --- Dry

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
670		Topsoil - 0.3 feet Reddish Brown, Lean Clay with Sand, CL, Moist, Medium Stiff (RESIDUUM)	0	SS 1	100	2-4-4 (8)	4.5	▲			
		Reddish Brown, Poorly-Graded Sand with Silt, SP-SM, Moist, Medium Dense to Loose (RESIDUUM)	5	SS 2	100	4-7-6 (13)		▲			
665		Reddish Brown, Poorly-Graded Sand with Silt, SP-SM, Moist, Medium Dense to Loose (RESIDUUM)		SS 3	100	3-3-5 (8)		▲			
		Brown, Sandy Silt, ML, Moist, Medium Stiff (RESIDUUM) Trace elastic silt nodules observed throughout sample.	10	SS 4	100	2-2-3 (5)		▲			
660		Brown, Sandy Silt with Gravel, ML, Moist, Medium Stiff (RESIDUUM)		SS 5	100	2-2-4 (6)		▲			
		Brown, Silty Sand, SM, Moist, Loose (RESIDUUM)	15	SS 6	100	2-4-3 (7)		▲			
655		Trace carbonaceous material observed throughout SS-7	20	SS 7	100	2-3-3 (6)		▲			
		Reddish Brown, Completely To Highly Weathered, Sandstone, Very Soft to Soft (WEATHERED BEDROCK) Auger refusal encountered at approximately 21.5 feet bgs.		SS 8	100	47-50/0.1					50/0.1
		Brown, Completely To Highly Weathered, Sandstone, Very Soft to Soft (BEDROCK) Bottom of boring at 22.6 feet.		SS 9	100	50/0.1					50/0.1



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BORING NUMBER B-4

PAGE 1 OF 1

CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/25/24

COMPLETED 6/25/24

GROUND ELEVATION 677 ft

BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

AT END OF SOIL SAMPLING --- Dry

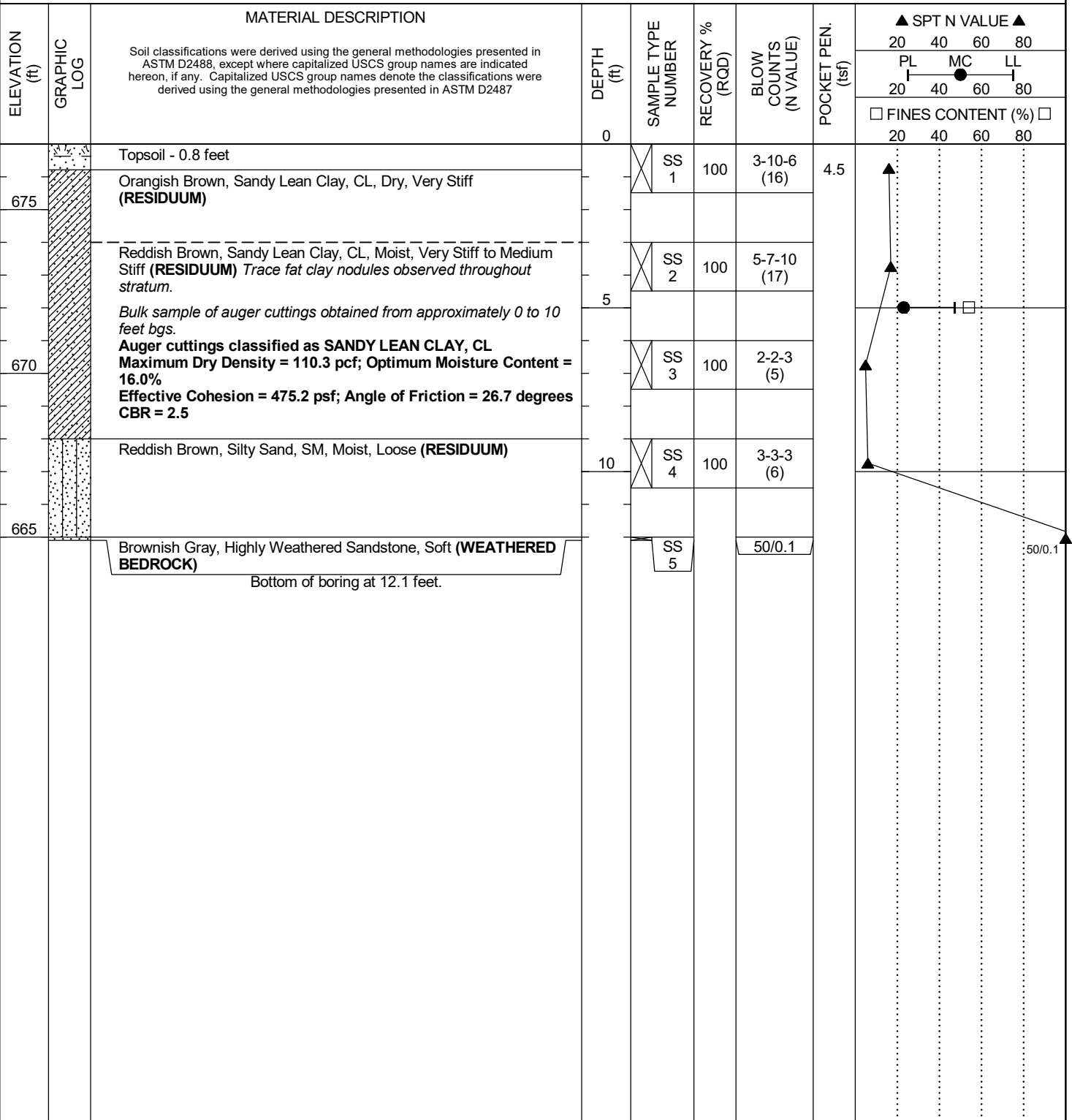
CEC REP QPB

CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

24hrs AFTER DRILLING --- Dry





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Moon Township, PA 15108

BORING NUMBER B-5

PAGE 1 OF 1

CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/26/24

COMPLETED 6/26/24

GROUND ELEVATION 664 ft

BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

▽ AT END OF SOIL SAMPLING 14.1 ft / Elev 649.9 ft

CEC REP QPB

CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

24hrs AFTER DRILLING --- Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20 40 60 80			
							PL MC LL			
							20 40 60 80			
							□ FINES CONTENT (%) □			
							20 40 60 80			
		Topsoil - 0.4 feet	0	SS 1	87	2-1-3 (4)				
		Brown, Sandy Lean Clay, CL, Dry to Moist, Soft (RESIDUUM)								
660		Orangish Brown, Lean Clay with Sand, CL, Moist, Stiff (RESIDUUM)	5	SS 2	100	4-6-8 (14)				
		Brown, Clayey Sand, SC, Wet, Loose to Very Loose (RESIDUUM) Trace fat clay nodules observed throughout stratum.		SS 3	100	2-3-3 (6)				
655			10	SS 4	100	2-2-2 (4)				
		Orangish Brown, Poorly-Graded Sand with Silt and Gravel, SP-SM, Wet, Very Loose to Loose (RESIDUUM) Trace fat clay nodules observed throughout stratum.		SS 5	100	2-1-2 (3)				
650			15	SS 6	100	2-2-5 (7)				
		Bottom of boring at 16.5 feet.								



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700 Cherrington Parkway
Moon Township, PA 15108

BORING NUMBER B-6

PAGE 1 OF 2

CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/25/24

COMPLETED 6/25/24

GROUND ELEVATION 665 ft

BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

▽ AT END OF SOIL SAMPLING 27.5 ft / Elev 637.5 ft

CEC REP QPB

CHECKED BY HCB

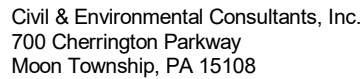
AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

▽ 24hrs AFTER DRILLING 25.5 ft / Elev 639.5 ft

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20	40	60	80
							PL	MC	LL	
							20	40	60	80
							□ FINES CONTENT (%) □			
							20	40	60	80
665		Topsoil - 0.3 feet Brown, Sandy Lean Clay, CL, Moist, Stiff (RESIDUUM)	0	SS 1	100	1-5-5 (10)				
660			5	SS 2	100	8-6-9 (15)				
		Brown, Silty Sand, SM, Moist, Loose (RESIDUUM) <i>Shelby tube obtained from offset boring from approximately 6 to 8 feet bgs. Recovery = 1.7 feet; Downward pressure ranged from approximately 0 to 400 psi.</i> Shelby tube classified as SILTY SAND, SM		SS 3	100	2-4-5 (9)				
655			10	SS 4	100	2-2-3 (5)				
		Dark Red, Silty Sand, SM, Moist to Wet, Loose to Very Loose (RESIDUUM) <i>Some elastic silt nodules observed throughout stratum. Shelby tube obtained from offset boring from approximately 12 to 14 feet bgs. Recovery = 2.0 feet; Downward pressure ranged from approximately 0 to 400 psi.</i> Shelby tube classified as SILTY SAND, SM		SS 5	100	2-3-3 (6)				
650			15							
				SS 6	100	2-2-2 (4)				
		<i>Samples observed to transition from moist to wet at approximately 18 feet bgs.</i>		SS 7	100	1-2-1 (3)				
645			20							
		Red, Clayey Gravel, GC, Moist, Medium Dense (RESIDUUM) <i>Some carbonaceous material observed throughout sample.</i>		SS 8	100	5-11-11 (22)				
640		Orangish Brown, Sandy Silt with Gravel, ML, Wet, Soft to Medium Stiff (RESIDUUM)	25	SS 9	100	1-1-2 (3)				
				SS 10	100	1-1-5 (6)				
635			30							

(Continued Next Page)





Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108

BORING NUMBER B-7

PAGE 2 OF 2

CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20	40	60	80
							PL	MC	LL	
							20	40	60	80
							□ FINES CONTENT (%) □			
							20	40	60	80
		Brown, Poorly-Graded Sand with Silt, SP-SM, Wet, Medium Dense (RESIDUUM)	30	SS 11	100	3-7-7 (14)				
640		Brown, Silty Sand, SM, Wet to Moist, Medium Dense (RESIDUUM)	35	SS 12	100	1-3-11 (14)				
635		Brown, Completely To Highly Weathered, Sandstone, Very Soft to Soft (WEATHERED BEDROCK) Sample classified as SILTY SAND, SM according to USCS	40	SS 13	67	18-20-23 (43)				
				SS 14	100	11-18-24 (42)				
630		Brown, Completely To Highly Weathered, Sandstone, Very Soft to Soft (BEDROCK)		SS 15	100	50/0.4				
			45	SS 16	100	50/0.2				
		Bottom of boring at 48.3 feet.		SS 17	100	50/0.3				

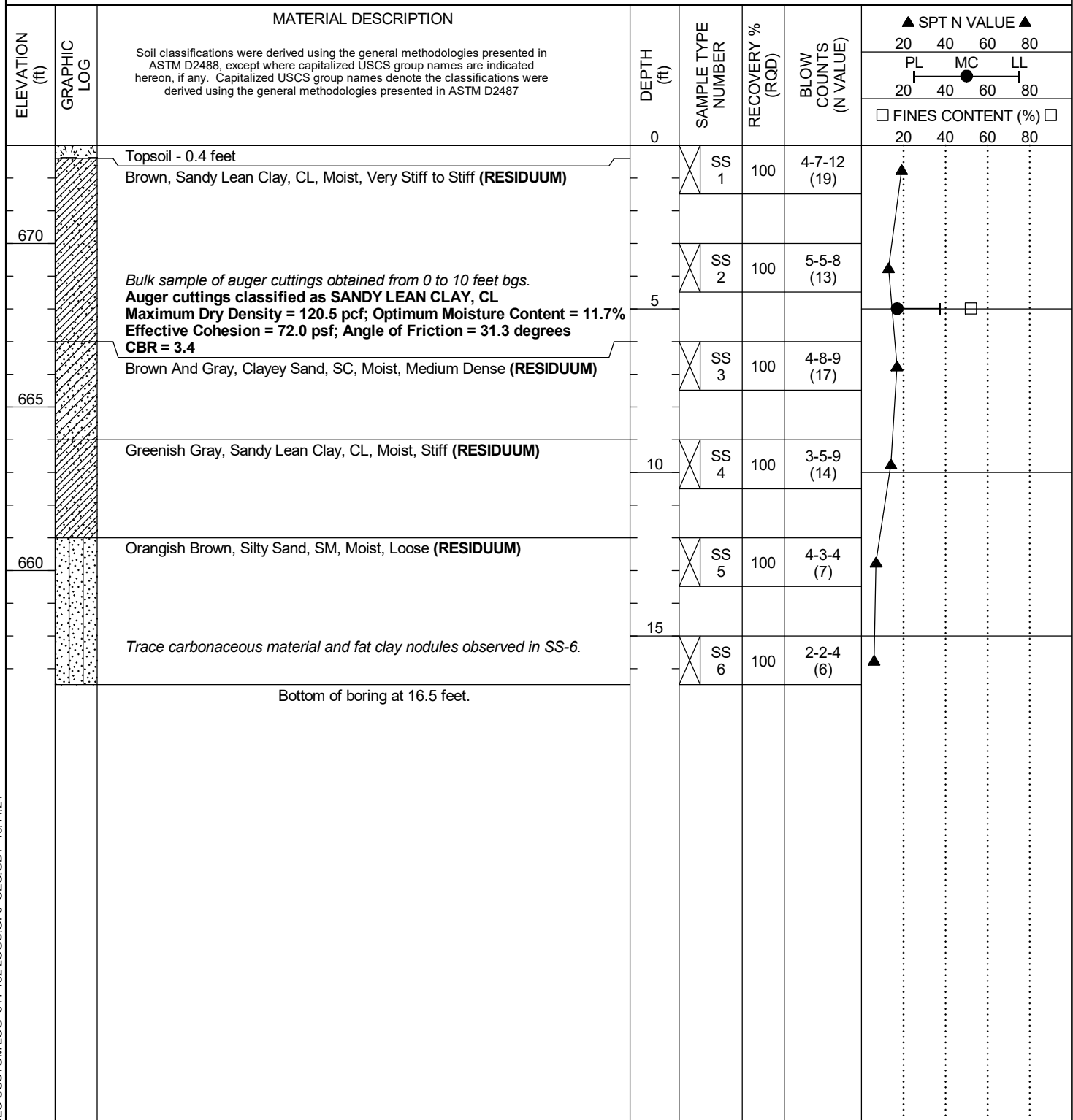


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BORING NUMBER B-8

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CLIENT	Transcontinental Gas Pipeline Company	PROJECT NAME	Compressor Station 165
PROJECT NUMBER	341-132	PROJECT LOCATION	Pittsylvania County, Virginia
DATE STARTED	6/26/24	COMPLETED	6/26/24
GROUND ELEVATION	673 ft	BACKFILL	Auger Cuttings
SOIL SAMPLING CONTRACTOR	Test Boring Services, Inc.	WATER LEVELS:	
SOIL SAMPLING METHOD	HSA & SPT	AT END OF SOIL SAMPLING	--- Dry
CEC REP	QPB	CHECKED BY	HCB
AT END OF CORING	--- Not Applicable		
NOTES	Elevation obtained from CEC survey.		
24hrs AFTER DRILLING	--- Backfilled Immediately		





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BORING NUMBER B-9

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CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/25/24

COMPLETED 6/25/24

GROUND ELEVATION 656 ft

BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

AT END OF SOIL SAMPLING --- Dry

CEC REP QPB

CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

24hrs AFTER DRILLING --- Dry

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲				
							20	40	60	80	
							PL	MC	LL		
							20	40	60	80	
							□ FINES CONTENT (%) □				
							20	40	60	80	
655		Topsoil - 0.4 feet	0	SS 1	100	1-3-5 (8)					
		Reddish Brown, Lean Clay, CL, Moist, Medium Stiff to Very Stiff (RESIDUUM)		SS 2	100	2-6-10 (16)					
650		Dark Red, Sandy Lean Clay, CL, Moist, Medium Stiff (RESIDUUM) <i>Trace fat clay nodules observed throughout sample.</i>	5	SS 3	100	3-4-4 (8)					
		Dark Reddish Brown, Sandy Silt, ML, Moist, Soft (RESIDUUM)	10	SS 4	100	1-2-2 (4)					
645		<i>Trace fat clay nodules observed in SS-5</i>		SS 5	100	1-1-3 (4)					
640		Reddish Brown, Sandy Silt with Gravel, ML, Moist, Stiff (RESIDUUM)	15	SS 6	100	4-4-5 (9)					
		Bottom of boring at 16.5 feet.									



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BORING NUMBER B-10

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CLIENT	Transcontinental Gas Pipeline Company	PROJECT NAME	Compressor Station 165
PROJECT NUMBER	341-132	PROJECT LOCATION	Pittsylvania County, Virginia
DATE STARTED	6/25/24	COMPLETED	6/25/24
GROUND ELEVATION	663 ft	BACKFILL	Auger Cuttings
SOIL SAMPLING CONTRACTOR	Test Boring Services, Inc.	WATER LEVELS:	
SOIL SAMPLING METHOD	HSA & SPT	AT END OF SOIL SAMPLING	--- Dry
CEC REP	QPB	CHECKED BY	HCB
AT END OF CORING	--- Not Applicable		
NOTES	Elevation obtained from CEC survey.		
24hrs AFTER DRILLING	--- Dry		

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20	40	60	80
							PL	MC	LL	
							20	40	60	80
							☐ FINES CONTENT (%) ☐			
							20	40	60	80
		Topsoil - 0.6 feet	0	SS 1	100	2-7-6 (13)				
660		Brown, Sandy Lean Clay, CL, Moist, Stiff (RESIDUUM)								
		Reddish Brown, Sandy Lean Clay with Gravel, CL, Moist, Stiff (RESIDUUM)	5	SS 2	100	2-5-7 (12)				
		Brown, Silty Sand, SM, Moist, Loose (RESIDUUM)		SS 3	100	2-4-4 (8)				
655		Brown, Sandy Silt, ML, Moist, Soft (RESIDUUM)	10	SS 4	100	2-2-2 (4)				
		White, Silty Sand, SM, Moist, Loose (RESIDUUM)		SS 5	100	2-5-5 (10)				
650		Brown, Silty Sand with Gravel, SM, Moist, Loose (RESIDUUM) Trace elastic silt nodules observed throughout sample.	15	SS 6	100	2-4-4 (8)				
		Bottom of boring at 16.5 feet.								



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BORING NUMBER B-11

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CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/25/24

COMPLETED 6/25/24

GROUND ELEVATION 670 ft

BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

▽ AT END OF SOIL SAMPLING 28.4 ft / Elev 641.6 ft

CEC REP QPB

CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

▽ 24hrs AFTER DRILLING 28.0 ft / Elev 642.0 ft

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20	40	60	80
							PL	MC	LL	
670							20	40	60	80
		Topsoil - 0.5 feet								
		Reddish Brown, Sandy Lean Clay with Gravel, CL, Moist, Stiff (RESIDUUM)		SS 1	100	4-3-6 (9)				
		Reddish Brown, Silty Sand, SM, Moist, Medium Dense to Loose (RESIDUUM)		SS 2	100	4-6-7 (13)				
665			5							
				SS 3	100	4-4-4 (8)				
660			10	SS 4	100	2-3-3 (6)				
		Brown, Clayey Sand, SC, Moist, Loose (RESIDUUM) Trace fat clay nodules observed throughout stratum.		SS 5	100	2-4-3 (7)				
655			15	SS 6	100	3-4-5 (9)				
		Brown, Poorly-Graded Sand with Silt and Gravel, SP-SM, Moist, Loose (RESIDUUM)		SS 7	100	2-3-4 (7)				
		Brown, Well-Graded Sand with Silt, SW-SM, Moist, Loose (RESIDUUM)		SS 8	100	3-4-3 (7)				
650			20							
				SS 9	100	3-3-3 (6)				
645		Brown, Clayey Sand, SC, Moist, Loose (RESIDUUM) Trace fat clay nodules observed throughout sample.	25							
		Brown, Silty Sand, SM, Wet, Loose to Medium Dense (RESIDUUM)		SS 10	100	1-2-4 (6)				
640			30							

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BORING NUMBER B-12

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CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/26/24

COMPLETED 6/26/24

GROUND ELEVATION 665 ft

BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA, SPT, and NQ-Core

AT END OF SOIL SAMPLING --- Dry

CEC REP QPB

CHECKED BY HCB

▼ AT END OF CORING 7.5 ft / Elev 657.5 ft

NOTES Elevation obtained from CEC survey.

24hrs AFTER DRILLING --- Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20	40	60	80
							PL	MC	LL	
							□ FINES CONTENT (%) □			
665			0				20	40	60	80
660		Brown, Sandy Lean Clay with Gravel, CL, Moist, Medium Stiff (RESIDUUM)		SS 1	93	2-2-5 (7)				
		Orangish Brown And Gray, SANDY LEAN CLAY, CL, Moist, Very Stiff to Stiff (RESIDUUM) <i>Trace fat clay nodules observed throughout stratum.</i>	5	SS 2	80	4-7-9 (16)				
655		Orangish Brown And Gray, Clayey Sand, SC, Moist to Wet, Loose to Very Loose (RESIDUUM) <i>Some fat clay nodules observed throughout stratum.</i>	10	SS 4	87	3-4-5 (9)				
		<i>Trace carbonaceous material observed in SS-5.</i>								
650										
645		Light Brown, Silty Sand, SM, Moist, Very Loose (RESIDUUM)	15	SS 6	80	2-2-1 (3)				
640		Brown, Silty Sand with Gravel, SM, Moist, Loose (RESIDUUM)	20	SS 7	100	2-2-3 (5)				
635		Brown, Poorly-Graded Sand with Silt and Gravel, SP-SM, Moist, Loose to Dense (RESIDUUM)	25	SS 9	93	5-6-9 (15)				
			30	SS 10	73	3-8-10 (18)				

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BORING NUMBER B-12

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CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20	40	60	80
							PL	MC	LL	
635			30				20	40	60	80
		Brown, Poorly-Graded Sand with Silt and Gravel, SP-SM, Moist, Loose to Dense (RESIDUUM) (<i>continued</i>)		SS 11	87	12-12-20 (32)				
		Light Brown, Highly Weathered, Sandstone, Soft (WEATHERED BEDROCK)		SS 12	100	50/0.1				
630		Light Brown, Sandstone, Moderately Weathered, Moderately Broken, Medium Hard Unconfined Compressive Strength = 5,625 psi	35	NQ 1	100 (36)					
		Bottom of boring at 38.1 feet.								



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BORING NUMBER B-13

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CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/25/24

COMPLETED 6/25/24

GROUND ELEVATION 649 ft

BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

▽ AT END OF SOIL SAMPLING 16.9 ft / Elev 632.1 ft

CEC REP QPB

CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

▽ 24hrs AFTER DRILLING 16.4 ft / Elev 632.6 ft

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80			
		Reddish Brown, SANDY FAT CLAY, CH, Moist, Stiff (RESIDUUM)	0	SS 1	100	2-6-7 (13)				
645		Reddish Brown, Sandy Silt, ML, Moist, Stiff (RESIDUUM)	5	SS 2	100	4-4-5 (9)				
640		Reddish Brown To Brown, Silty Sand, SM, Moist, Loose to Very Loose (RESIDUUM) <i>Bulk sample of auger cuttings obtained from approximately 0 to 15 feet bgs.</i>	10	SS 3	100	2-3-4 (7)				
635		Brown, Silty Sand with Gravel, SM, Moist to Wet, Very Loose (RESIDUUM)	15	SS 4	87	2-2-2 (4)				
630		<i>Samples observed to transition from moist to wet at approximately 15 feet bgs.</i>		SS 5	87	1-2-2 (4)				
				SS 6	100	2-1-2 (3)				
				SS 7	100	2-1-1 (2)				
		Bottom of boring at 19.5 feet.								



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BORING NUMBER B-14

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CLIENT	Transcontinental Gas Pipeline Company	PROJECT NAME	Compressor Station 165
PROJECT NUMBER	341-132	PROJECT LOCATION	Pittsylvania County, Virginia
DATE STARTED	6/26/24	COMPLETED	6/26/24
GROUND ELEVATION	638 ft	BACKFILL	Auger Cuttings
SOIL SAMPLING CONTRACTOR	Test Boring Services, Inc.	WATER LEVELS:	
SOIL SAMPLING METHOD	HSA & SPT	AT END OF SOIL SAMPLING	--- Dry
CEC REP	QPB	CHECKED BY	HCB
NOTES	Elevation obtained from CEC survey.		
		AT END OF CORING	--- Not Applicable
		24hrs AFTER DRILLING	--- Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								20	40	60	80
								☐ FINES CONTENT (%) ☐			
								20	40	60	80
		Topsoil - 0.3 feet	0	SS 1	80	1-3-3 (6)					
635		Brown, Sandy Lean Clay, CL, Dry, Medium Stiff (RESIDUUM)									
		Reddish Brown, SANDY LEAN CLAY, CL, Moist, Very Stiff to Stiff (RESIDUUM)	5	SS 2	100	4-7-9 (16)					
630				SS 3	100	4-6-8 (14)					
		Dark Red, Lean Clay, CL, Moist, Soft (RESIDUUM) Trace fat clay nodules observed throughout sample.	10	SS 4	100	2-2-2 (4)	1.5				
625		Brown, Lean Clay with Sand, CL, Moist to Wet, Very Soft (RESIDUUM) Trace fat clay nodules observed throughout sample.		SS 5	87	1-1-1 (2)					
		Brown, Sandy Lean Clay, CL, Wet, Medium Stiff (RESIDUUM)	15	SS 6	100	3-3-4 (7)					
		Bottom of boring at 16.5 feet.									



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BORING NUMBER B-15

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CLIENT	Transcontinental Gas Pipeline Company	PROJECT NAME	Compressor Station 165
PROJECT NUMBER	341-132	PROJECT LOCATION	Pittsylvania County, Virginia
DATE STARTED	6/25/24	COMPLETED	6/25/24
GROUND ELEVATION	649 ft	BACKFILL	Auger Cuttings
SOIL SAMPLING CONTRACTOR	Test Boring Services, Inc.	WATER LEVELS:	
SOIL SAMPLING METHOD	HSA & SPT	AT END OF SOIL SAMPLING	--- Dry
CEC REP	QPB	CHECKED BY	HCB
AT END OF CORING	--- Not Applicable		
NOTES	Elevation obtained from CEC survey.		
24hrs AFTER DRILLING	--- Dry		

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								20	40	60	80
								☐ FINES CONTENT (%) ☐			
								20	40	60	80
		Topsoil - 0.3 feet	0	SS 1	100	5-8-8 (16)	2.5				
645		Brown To Orangish Brown, Sandy Lean Clay, CL, Moist, Very Stiff to Stiff (RESIDUUM)									
				SS 2	100	2-6-7 (13)	3.0				
			5								
		Reddish Brown, Lean Clay with Sand, CL, Moist, Stiff to Medium Stiff (RESIDUUM)		SS 3	100	5-5-7 (12)	2.5				
640											
				SS 4	100	3-5-4 (9)	2.5				
			10								
		Bottom of boring at 10.0 feet.									



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BORING NUMBER B-16

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CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/26/24 COMPLETED 6/26/24

GROUND ELEVATION 658 ft BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

AT END OF SOIL SAMPLING --- Dry

CEC REP QPB CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

24hrs AFTER DRILLING --- Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20	40	60	80
							PL	MC	LL	
							20	40	60	80
							□ FINES CONTENT (%) □			
							20	40	60	80
655		Topsoil - 0.2 feet	0	SS 1	87	5-9-6 (15)				
		Orangish Brown, Sandy Lean Clay with Gravel, CL, Moist, Stiff (RESIDUUM)								
		Reddish Brown, Clayey Sand, SC, Moist, Medium Dense (RESIDUUM)	5	SS 2	87	4-6-8 (14)				
650		Light Brown, Silty Sand, SM, Moist, Medium Dense to Loose (RESIDUUM)		SS 3	100	4-5-7 (12)				
			10	SS 4	100	3-3-4 (7)				
645				SS 5	100	3-4-5 (9)				
			15	SS 6	100	6-6-4 (10)				
		Bottom of boring at 16.5 feet.								



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BORING NUMBER B-17

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CLIENT	Transcontinental Gas Pipeline Company	PROJECT NAME	Compressor Station 165
PROJECT NUMBER	341-132	PROJECT LOCATION	Pittsylvania County, Virginia
DATE STARTED	6/26/24	COMPLETED	6/26/24
GROUND ELEVATION	658 ft	BACKFILL	Auger Cuttings
SOIL SAMPLING CONTRACTOR	Test Boring Services, Inc.	WATER LEVELS:	
SOIL SAMPLING METHOD	HSA & SPT	AT END OF SOIL SAMPLING	--- Dry
CEC REP	QPB	CHECKED BY	HCB
AT END OF CORING	--- Not Applicable		
NOTES	Elevation obtained from CEC survey.		
24hrs AFTER DRILLING	--- Backfilled Immediately		

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20	40	60	80
		Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487								
							PL	MC	LL	
							20	40	60	80
							☐ FINES CONTENT (%) ☐			
							20	40	60	80
		Topsoil 0.3 feet	0	SS 1	100	2-5-6 (11)				
655		Brown, Sandy Lean Clay, CL, Moist, Stiff (RESIDUUM)								
		Reddish Brown, Sandy Lean Clay, CL, Moist, Medium Stiff (RESIDUUM) Trace fat clay nodules observed throughout sample.	5	SS 2	100	2-3-3 (6)				
		Brown, Sandy Silt with Gravel, ML, Moist, Medium Stiff (RESIDUUM)		SS 3	100	2-3-4 (7)				
650										
			10	SS 4	100	2-3-5 (8)				
		Bottom of boring at 10.5 feet.								



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BORING NUMBER B-18

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CLIENT	Transcontinental Gas Pipeline Company	PROJECT NAME	Compressor Station 165
PROJECT NUMBER	341-132	PROJECT LOCATION	Pittsylvania County, Virginia
DATE STARTED	6/26/24	COMPLETED	6/26/24
GROUND ELEVATION	648 ft	BACKFILL	Auger Cuttings
SOIL SAMPLING CONTRACTOR	Test Boring Services, Inc.	WATER LEVELS:	
SOIL SAMPLING METHOD	HSA & SPT	AT END OF SOIL SAMPLING	--- Dry
CEC REP	QPB	CHECKED BY	HCB
AT END OF CORING	--- Not Applicable		
NOTES	Elevation obtained from CEC survey.		
24hrs AFTER DRILLING	--- Backfilled Immediately		

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
		Topsoil - 0.8 feet	0	SS 1	100	2-5-8 (13)					
645		Brown, Sandy Lean Clay, CL, Moist, Stiff (RESIDUUM)									
		Orangish Brown And Gray, Lean Clay with Sand, CL, Moist, Stiff (RESIDUUM)	5	SS 2	100	2-5-6 (11)	3.5				
640		Brown To Light Brown, Clayey Sand, SC, Moist to Wet, Loose to Very Loose (RESIDUUM)		SS 3	100	3-4-5 (9)					
		Trace fat clay nodules observed in SS-4.	10	SS 4	100	1-2-2 (4)					
		Bottom of boring at 10.5 feet.									



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BORING NUMBER B-19

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CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/26/24

COMPLETED 6/26/24

GROUND ELEVATION 652 ft

BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

AT END OF SOIL SAMPLING --- Dry

CEC REP QPB

CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

24hrs AFTER DRILLING --- Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲				
							20	40	60	80	
							PL	MC	LL		
							20	40	60	80	
							□ FINES CONTENT (%) □				
							20	40	60	80	
650		Topsoil - 0.4 feet	0	SS 1	100	7-6-8 (14)					
		Brown, CLAYEY SAND, SC, Moist, Medium Dense to Loose (RESIDUUM)									
		Bulk sample of auger cuttings from approximately 0 to 5 feet bgs.									
		5	SS 2	100	3-4-5 (9)						
645		Orangish Brown, Clayey Sand with Gravel, SC, Moist, Medium Dense (RESIDUUM)		SS 3	100	5-10-8 (18)					
640	Light Orangish Brown, Clayey Sand, SC, Wet, Very Loose (RESIDUUM) Trace fat clay nodules observed throughout stratum.		10	SS 4	100	2-1-1 (2)					
				SS 5	87	1-2-2 (4)					
		Brown, Clayey Gravel with Sand, GC, Moist, Medium Dense (RESIDUUM)	15	SS 6	100	5-11-18 (29)					
		Bottom of boring at 16.5 feet.									



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Moon Township, PA 15108

BORING NUMBER B-20

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CLIENT	Transcontinental Gas Pipeline Company	PROJECT NAME	Compressor Station 165
PROJECT NUMBER	341-132	PROJECT LOCATION	Pittsylvania County, Virginia
DATE STARTED	6/26/24	COMPLETED	6/26/24
GROUND ELEVATION	653 ft	BACKFILL	Auger Cuttings
SOIL SAMPLING CONTRACTOR	Test Boring Services, Inc.	WATER LEVELS:	
SOIL SAMPLING METHOD	HSA & SPT	AT END OF SOIL SAMPLING	--- Dry
CEC REP	QPB	CHECKED BY	HCB
AT END OF CORING	--- Not Applicable		
NOTES	Elevation obtained from CEC survey.		
24hrs AFTER DRILLING	--- Backfilled Immediately		

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80			
		Topsoil - 0.5 feet	0							
		Brown, Lean Clay with Sand, CL, Moist, Medium Stiff (RESIDUUM) <i>Trace carbonaceous material observed throughout sample.</i>		SS 1	80	3-3-5 (8)				
650										
		Brown, CLAYEY SAND, SC, Moist, Medium Dense to Loose (RESIDUUM) <i>Trace fat clay nodules observed throughout stratum.</i>		SS 2	100	4-7-8 (15)				
			5							
				SS 3	100	3-3-4 (7)				
645										
		Reddish Brown, Sandy Lean Clay, CL, Moist, Medium Stiff (RESIDUUM)		SS 4	100	2-2-3 (5)				
			10							
		Bottom of boring at 10.5 feet.								



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BORING NUMBER B-21

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CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/26/24 COMPLETED 6/26/24

GROUND ELEVATION 637 ft BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

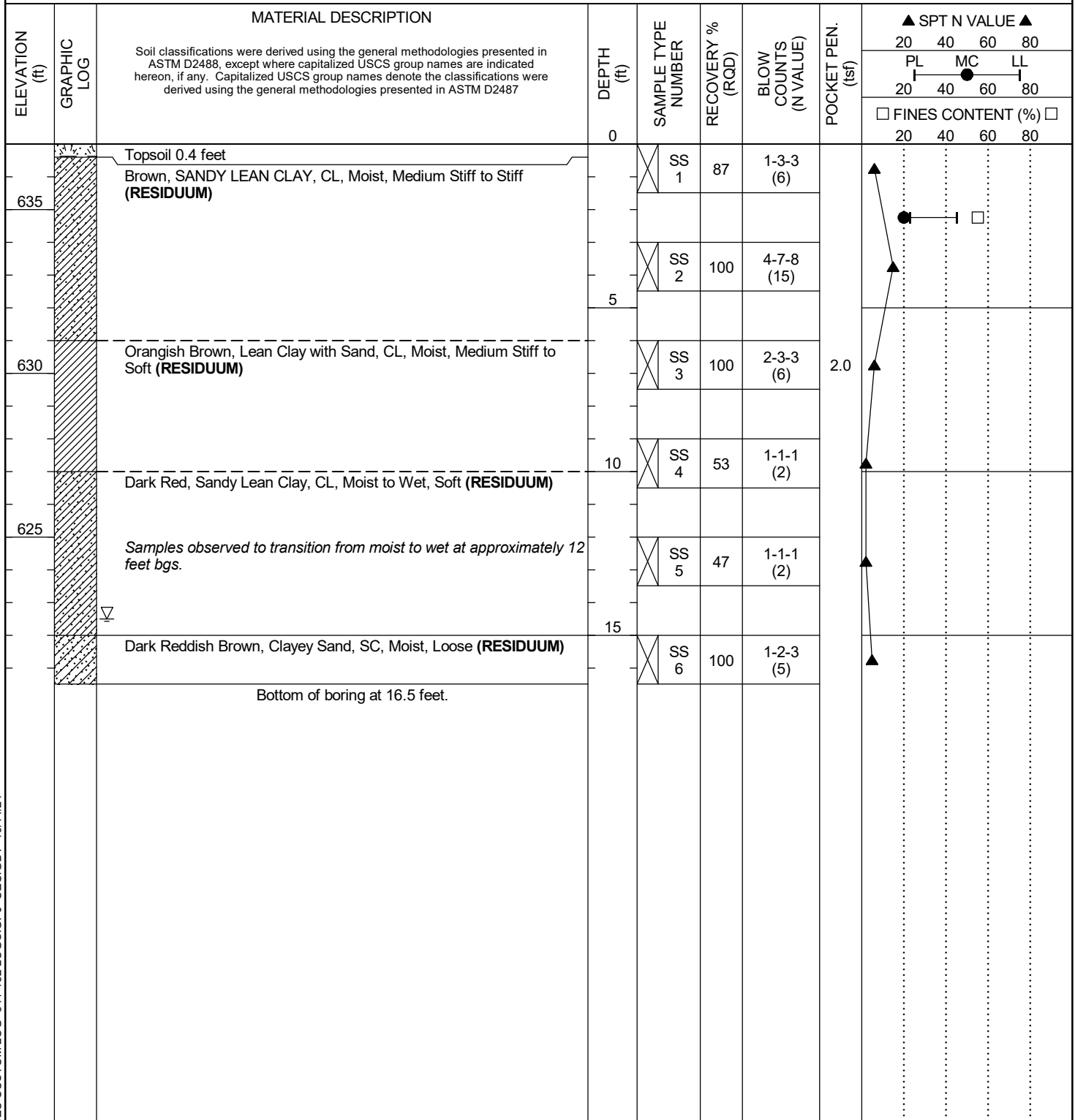
▽ AT END OF SOIL SAMPLING 14.5 ft / Elev 622.5 ft

CEC REP QPB CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation obtained from CEC survey.

24hrs AFTER DRILLING --- Backfilled Immediately





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BORING NUMBER B-22

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CLIENT	Transcontinental Gas Pipeline Company	PROJECT NAME	Compressor Station 165
PROJECT NUMBER	341-132	PROJECT LOCATION	Pittsylvania County, Virginia
DATE STARTED	6/26/24	COMPLETED	6/26/24
GROUND ELEVATION	626 ft	BACKFILL	Auger Cuttings
SOIL SAMPLING CONTRACTOR	Test Boring Services, Inc.	WATER LEVELS:	
SOIL SAMPLING METHOD	HSA & SPT	AT END OF SOIL SAMPLING	--- Dry
CEC REP	QPB	CHECKED BY	HCB
NOTES	Elevation obtained from CEC survey.		
		AT END OF CORING	--- Not Applicable
		24hrs AFTER DRILLING	--- Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	▲ SPT N VALUE ▲						
								20	40	60	80			
								PL	MC	LL				
								20	40	60	80			
								□ FINES CONTENT (%) □						
								20	40	60	80			
625		Topsoil - 0.4 feet Brown, Sandy Lean Clay, CL, Moist, Medium Stiff (RESIDUUM)	0	SS 1	100	2-2-3 (5)								
		Reddish Brown, Lean Clay, CL, Moist, Very Stiff (RESIDUUM) <i>Trace fat clay nodules observed throughout sample.</i>		SS 2	100	4-6-13 (19)								
620		Reddish Brown, CLAYEY SAND, SC, Moist, Loose (RESIDUUM)		SS 3	100	3-4-5 (9)								
		Reddish Brown, Sandy Lean Clay, CL, Moist to Wet, Very Soft to Medium Stiff (RESIDUUM) <i>Trace fat clay nodules observed throughout stratum.</i>	10	SS 4	100	1-1-2 (3)	1.0							
615		<i>Samples observed to transition from moist to wet at approximately 12 feet bgs.</i>		SS 5	73	1-1-1 (2)	0.5							
				SS 6	100	2-2-4 (6)	1.0							
610		Dark Reddish Brown, Clayey Sand, SC, Wet, Very Loose (RESIDUUM)		SS 7	100	1-2-2 (4)								
		Bottom of boring at 19.5 feet.												



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BORING NUMBER B-23

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CLIENT Transcontinental Gas Pipeline Company

PROJECT NAME Compressor Station 165

PROJECT NUMBER 341-132

PROJECT LOCATION Pittsylvania County, Virginia

DATE STARTED 6/25/24

COMPLETED 6/25/24

GROUND ELEVATION 673 ft

BACKFILL Auger Cuttings

SOIL SAMPLING CONTRACTOR Test Boring Services, Inc.

WATER LEVELS:

SOIL SAMPLING METHOD HSA & SPT

AT END OF SOIL SAMPLING --- Dry

CEC REP QPB

CHECKED BY HCB

AT END OF CORING --- Not Applicable

NOTES Elevation estimated from existing topography.

24hrs AFTER DRILLING --- Dry

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20	40	60	80
							PL	MC	LL	
							20	40	60	80
							☐ FINES CONTENT (%) ☐			
							20	40	60	80
		Topsoil - 0.8 feet	0	SS 1	100	2-6-5 (11)				
670		Brown, Sandy Lean Clay, CL, Dry to Moist, Stiff (RESIDUUM)								
			5	SS 2	100	5-5-4 (9)				
665										
		Brown, Sandy Silt, ML, Moist, Medium Stiff (RESIDUUM)	10	SS 3	100	3-4-4 (8)				
660										
		Brown, Silty Sand, SM, Moist, Loose (RESIDUUM)	15	SS 4	100	2-3-5 (8)				
		Bottom of boring at 16.5 feet.								



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BORING NUMBER B-24

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CLIENT	Transcontinental Gas Pipeline Company	PROJECT NAME	Compressor Station 165
PROJECT NUMBER	341-132	PROJECT LOCATION	Pittsylvania County, Virginia
DATE STARTED	6/25/24	COMPLETED	6/25/24
GROUND ELEVATION	674 ft	BACKFILL	Auger Cuttings
SOIL SAMPLING CONTRACTOR	Test Boring Services, Inc.	WATER LEVELS:	
SOIL SAMPLING METHOD	HSA & SPT	AT END OF SOIL SAMPLING	--- Dry
CEC REP	QPB	CHECKED BY	HCB
NOTES	Elevation estimated from existing topography.		
		AT END OF CORING	--- Not Applicable
		24hrs AFTER DRILLING	--- Dry

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲			
							20	40	60	80
							PL	MC	LL	
							20	40	60	80
							□ FINES CONTENT (%) □			
							20	40	60	80
		Topsoil 0.4 feet	0	SS 1	100	2-6-5 (11)				
670		Brown, Sandy Lean Clay, CL, Dry, Stiff (RESIDUUM)								
			5	SS 2	100	4-4-5 (9)				
665		Reddish Brown, Sandy Silt, ML, Moist, Stiff to Very Stiff (RESIDUUM)								
			10	SS 3	100	8-10-7 (17)				
660										
			15	SS 4	100	4-6-6 (12)				
		Bottom of boring at 16.5 feet.								