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REPORT ON
INITIAL SAFETY FACTOR ASSESSMENT
ASH POND
KILLEN ELECTRIC GENERATING STATION
MANCHESTER, OHIO

by Haley & Aldrich, Inc.
Cleveland, Ohio

for Dayton Power & Light Company
Aberdeen, Ohio

File No. 40373-447
October 2016

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12 October 2016
File No. 40373-447

Dayton Power & Light Company
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Attention: Mr. Craig Spangler
Leader, Commodities

Subject: Report on Initial Safety Factor Assessment
Ash Pond
Killen Electric Generating Station
Manchester, Ohio

Mr. Spangler:

We are pleased to submit herewith our report entitled, "Report on Initial Safety Factor Assessment, Ash Pond, Killen Electric Generating Station, Manchester, Ohio." This report includes background information regarding the project, the results of our field investigation program, and the results of our initial safety factor assessment.

This work was performed by Haley & Aldrich, Inc. (Haley & Aldrich) on behalf of Dayton Power & Light Company in accordance with the United States Environmental Protection Agency's Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257, specifically §257.73(e).

The scope of our work consisted of the following: 1) reviewing readily available reports, investigations, plans and data pertaining to the surface impoundment; 2) planning and executing a field investigation program to obtain subsurface information for liquefaction and slope stability analyses; 3) conducting a geotechnical laboratory testing program on soil samples recovered from subsurface explorations; 4) performing engineering evaluations related to liquefaction and slope stability; and 5) preparing and submitting this report presenting the results of our assessment.

Thank you for inviting us to complete this assessment and please feel free to contact us if you wish to discuss the contents of the report.

Sincerely yours,
HALEY & ALDRICH, INC.

Derrick A. Shelton
Geotechnical Program Manager | Senior Associate

Steven F. Putrich, P.E
Vice President

Enclosures

Table of Contents

		Page
List of Tables		**iii**
List of Figures		**iii**
1.	**Introduction**	**1**
1.1	GENERAL	1
1.2	PURPOSE OF SAFETY FACTOR ASSESSMENT	1
1.3	ELEVATION DATUM AND HORIZONTAL CONTROL	1
2.	**Description of Ponds**	**2**
2.1	DESCRIPTION OF ASH POND	2
3.	**Field Investigation Program**	**3**
3.1	PREVIOUS EXPLORATIONS AND LABORATORY TESTING PERFORMED BY OTHERS	3
3.2	CURRENT SUBSURFACE EXPLORATION PROGRAM	3
3.2.1	Test Borings	3
3.2.2	Groundwater Observation Wells	4
3.2.3	Cone Penetrometer Soundings	4
3.3	LABORATORY TESTING PROGRAM	5
4.	**Subsurface Conditions**	**6**
4.1	GEOLOGY	6
4.2	SUBSURFACE CONDITIONS	6
4.3	GROUNDWATER CONDITIONS	7
5.	**Safety Factor Assessment**	**8**
5.1	DESIGN WATER LEVELS	8
5.2	MATERIAL PROPERTIES	9
5.3	DESIGN SEISMIC EVENT	10
5.4	LIQUEFACTION POTENTIAL EVALUATION	10
5.5	STABILITY ANALYSIS	11
5.5.1	Methodology for Analyses	11
5.5.2	Pseudo-static Coefficient	11
5.5.3	Results of Stability Evaluation	11
5.6	CONCLUSIONS	12
6.	**Certification**	**14**
References		**15**

Table of Contents

Tables
Figures
Appendix A – Test Boring Logs and CPT Related Information
Appendix B – Laboratory Test Results
Appendix C – Analyses
Appendix D – Historic Subsurface Explorations and Laboratory Test Results

List of Tables

Table No.	Title
I	Summary of Subsurface Explorations
II	Summary of Laboratory Test Results
III	Summary of Observation Well Readings
IV	Material Properties
V	Summary of Static and Seismic Stability Analyses

List of Figures

Figure No.	Title
1	Project Locus
2	Subsurface Exploration Location Plan

1. Introduction

1.1 GENERAL

Haley & Aldrich, Inc. (Haley & Aldrich) has been contracted by Dayton Power & Light Company (DP&L) to perform the Initial Safety Factor Assessment for the Coal Combustion Residuals (CCR) surface impoundment Ash Pond located at Killen Electric Generating Station (Killen Station) in Manchester, Ohio. This work was completed in accordance with the United States Environmental Protection Agency's (EPA's) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257, specifically §257.73(e) (EPA, 2015).

1.2 PURPOSE OF SAFETY FACTOR ASSESSMENT

The purpose of this study was to investigate the subsurface soil and water conditions at the site and to perform the initial safety factor assessment in accordance with Section §257.73(e)(1) of the Final CCR Rule. To achieve the objective discussed above, the scope of work undertaken for this investigation included the tasks listed below.

- Planning and executing a field investigation program to obtain subsurface information for liquefaction and slope stability analyses. The program consisted of:
  - Six (6) test borings drilled to depths ranging from approximately 10 to 91 ft below ground surface;
  - Four (4) observation wells installed to depths ranging from approximately 52 to 59 ft below ground surface; and
  - Five (5) cone penetrometer soundings advanced to depths ranging from approximately 65 to 90 ft below ground surface.
- Conducting a geotechnical laboratory testing program on soil samples recovered from subsurface explorations to aid in classification and for determination of engineering properties required for engineering analyses.
- Evaluating liquefaction susceptibility of material used to construct the impoundment embankments.
- Performing static and seismic stability analyses for rotational and block failure surfaces using limit equilibrium methods.

1.3 ELEVATION DATUM AND HORIZONTAL CONTROL

The elevations referenced in this report are in feet and are based on the North American Vertical Datum of 1988 (NAVD88) unless otherwise noted. The horizontal control is the Ohio State Plane South Coordinate System, which is based on North American Datum 83 (NAD83).

2. Description of Ponds

A summary of relevant information associated with the Ash Pond is provided below. Additional details can be found in Haley & Aldrich's Initial Structural Stability Assessment Report submitted to DP&L under separate cover.

2.1 DESCRIPTION OF ASH POND

The Coal Combustion Residuals (CCR) surface impoundment located at Killen Station is shown on the attached Figure 1, "Project Locus." The impoundment is bordered on the north by U.S. Route 52; on the south by the Ohio River; on the east by agricultural land; and on the west by the plant cooling tower, switchyard, and coal storage area. The CCR surface impoundment is comprised of a bottom ash portion and a fly ash portion separated by a splitter dike, but is considered to be a single impoundment by the Ohio Department of Natural Resources. Therefore, for the purposes of this report, the overall impoundment is referred to as the "Ash Pond."

The Ash Pond was originally designed by Ebasco Services, Inc. (Ebasco), with construction completed in 1982. The function of the Ash Pond is to settle and store bottom ash and fly ash sluiced from the Killen Station generating unit, and to receive coal pile runoff and other waste waters from the plant. After initial settling of bottom ash, flow from the bottom ash portion of the pond is conveyed to the fly ash portion through a concrete channel equipped with removable steel channel stop logs. The fly ash portion of the pond has a single discharge point. A decant structure consisting of a 17-ft by 18-ft rectangular concrete overflow structure conveys water from the fly ash portion of the pond through a series of pipes that discharge into a drainage ditch. The drainage ditch discharges into the Ohio River.

The impoundment is surrounded on all sides by above-grade earthen embankments with low-permeability cores comprised of cohesive fill soil. The embankment height as measured from the crest to the exterior toe of slope ranges from approximately 21 ft to 84 ft. The interior and exterior slopes are designed at 2.5 horizontal to 1 vertical (2.5H:1V). At the design crest elevation, the Ash Pond is approximately 230 acres in area with storage volume of approximately 13,400 acre-ft. The maximum storage and surcharge pool elevations of the fly ash portion of the Ash Pond are 568.5 ft and 573 ft, respectively, based on plant datum. The maximum storage and surcharge pool elevations of the bottom ash portion of the Ash Pond are 569.5 ft and 573 ft, respectively, based on plant datum.

3. Field Investigation Program

3.1 PREVIOUS EXPLORATIONS AND LABORATORY TESTING PERFORMED BY OTHERS

Several subsurface exploration and laboratory testing programs were previously performed at the site by others. The approximate locations of the relevant explorations performed by others are shown on the boring location plan included in Appendix D. A brief summary of the explorations is provided below and relevant logs and laboratory test results are included in Appendix D.

- One-hundred and seven (107) test borings were drilled by Buckeye Drilling Corporation of Columbus, Ohio for Ebasco during the period February 1974 to April 1974 as part of the subsurface exploration program for Killen Electric Generating Station Units No.1 and No. 2 Ash Disposal Pond Dike and Foundation Studies.

- Sixty-six (66) test borings were drilled by Bowser-Morner Testing Laboratories of Dayton, Ohio for Ebasco during the period December 1973 to July 1975 as part of the subsurface exploration program for Killen Electric Generating Station Units No.1 and No. 2 Ash Disposal Pond Dike and Foundation Studies.

- Sixteen (16) test pits were performed by UCON Construction Company, a subsidiary of DP&L for Ebasco during the period October 1975 to December 1975 as part of the subsurface exploration program for Killen Electric Generating Station Units No.1 and No. 2 Ash Disposal Pond Dike and Foundation Studies.

3.2 CURRENT SUBSURFACE EXPLORATION PROGRAM

A subsurface exploration program was conducted at the project site during the period 16 May 2016 to 16 June 2016 to obtain subsurface information for engineering evaluations. The program consisted of six (6) test borings, four (4) observation wells, and five (5) cone penetrometer soundings (CPTs). The test borings and observation wells were drilled by Stearns Drilling Company of Dutton, Michigan using ATV-mounted CME 850 and CME 1050 drill rigs. The CPT soundings were advanced by ConeTec, Inc. of West Berlin, New Jersey using a truck-mounted rig. A Haley & Aldrich representative was present in the field to observe the subsurface explorations.

The locations of the subsurface explorations are shown on Figure 2. The as-drilled locations and elevations of the explorations were determined in the field by CESO, Inc. of Dayton, Ohio by optical survey. The locations and elevations of the explorations should be considered accurate only to the degree implied by the method used. A summary of the subsurface explorations is presented in Table I[1].

3.2.1 Test Borings

The test borings were drilled to depths ranging from 10 ft to 91 ft below ground surface. The borings were advanced using 4-1/4-in. inside diameter (i.d.) hollow stem augers. Split-spoon samples were typically obtained at 5 ft intervals. Occasionally, continuous split-spoon sampling was performed. The standard penetration resistance was determined at each sample level by counting the number of blows

[1] Note: A table that does not appear near its citation can be found in a separate table at the end of the report.

required to drive a standard split-spoon sampler (1-3/8-in. inside diameter, 2-in. outside diameter) a distance of 24 in. into undisturbed soil and ash under the impact of a 140-lb hammer free-falling 30 in. The number of blows required to advance the sampler was recorded for each 6-in. interval. The standard penetration resistance N-value is determined by summing the number of blows required to advance the sampler the middle 12 in. of the 24-in. sampling range.

Relatively undisturbed samples of embankment fill and native soil were obtained by pushing a 3-in. diameter thin-walled steel tube (Shelby tube) at planned sampling depths at several test boring locations. An offset borehole designated HA-B5A was performed immediately adjacent to HA-B5 to obtain Shelby tubes. The hydraulics of the drill rig were used to advance the tubes. The tubes were removed from the ground and sealed.

Samples recovered from the borings were taken to Consulting Services Incorporated of Cincinnati, Ohio and GeoTesting Express, Inc. of Acton, Massachusetts for laboratory testing. The boring logs are presented in Appendix A. The boring logs and related information depict subsurface conditions only at the specific locations and at the particular time designated on the logs. Subsurface conditions at other locations may differ from conditions occurring at the exploration locations. Also the passage of time may result in a change in the subsurface conditions at these exploration locations.

3.2.2 Groundwater Observation Wells

The test borings associated with the observation wells were drilled to depths ranging from approximately 52 ft to 59 ft below ground surface. The borings were typically drilled using the same procedures described above in Paragraph 3.2.1 for the test borings. Samples recovered from the well borings were taken to the Haley & Aldrich's office for further evaluation.

Groundwater observation wells were installed in completed boreholes at the locations listed in Table I[2] upon completion of drilling. The details of the well installations and the relationship to major soil strata are shown on the test boring logs in Appendix A.

The observation wells consisted of 2-in. I.D. slotted PVC well screens attached to 2-in. I.D. PVC riser pipes. The annular space surrounding each well point was backfilled with No. 2 Morie sand to a height of 3 to 5 ft above the top of the screen. A 3-ft thick bentonite plug was installed above the sand pack elevation. The wells were backfilled above the bentonite plug with auger cuttings to within 5 ft below ground surface. A 2-ft to 3-ft thick bentonite seal was installed at that elevation. The upper 2 to 3 ft of the wells were sealed with cement grout.

3.2.3 Cone Penetrometer Soundings

Several of the CPT soundings were performed immediately adjacent to SPT borings to facilitate correlating the readings from the CPT sounding with the laboratory test results and correlations associated with the split-spoon and Shelby tube samples. The CPT soundings were advanced to depths ranging from approximately 65 ft to 90 ft below ground surface. The CPT soundings were performed using a piezocone penetrometer that provides measurements of pore water pressure at one or more locations on the penetrometer surface in general conformance with ASTM D5778. CPT data, including

[2] Note: A table that does not appear near its citation can be found in a separate table at the end of the report.

pore pressure measurements, were collected at 5-cm depth intervals. The rod string and cone were advanced in natural soil and fill materials at the standard rate of 2 cm/sec.

Seismic cone penetration testing was used to obtain in-situ measurements of shear wave velocity at HAC1 and HAC4. Measurements were taken at 1-meter (3.3-ft) intervals at all seismic cone penetration test locations. Pore water dissipation testing was also performed at select depths in CPTs HAC1, HAC4, and HAC6 to estimate hydraulic conductivity/pore pressure dissipation properties. The CPT sounding results are presented in Appendix A.

3.3 LABORATORY TESTING PROGRAM

A laboratory testing program was conducted on selected soil samples recovered from subsurface explorations to aid in classification and for determination of engineering properties required for design. The primary purpose of the testing program was to evaluate the index and strength properties of soil. Testing included natural moisture contents, Atterberg limits, grain size distributions, percent passing the No. 200 sieve, unconsolidated undrained (UU) triaxial strength, isotropically consolidated undrained (CIU) triaxial strength, and Shelby tube density. The tests were performed in general conformance with applicable ASTM test procedures. Results of the laboratory testing program are presented in Appendix B and are summarized in Table II[3].

[3] Note: A table that does not appear near its citation can be found in a separate table at the end of the report.

4. Subsurface Conditions

4.1 GEOLOGY

Killen Station is located in the Bluegrass Section of the Interior Low Plateaus physiographic province of Ohio (Brockman, 2007). The area was not glaciated during the Pleistocene ice ages, but was affected by outwash waters and sedimentation with melting glaciers. The region is characterized by unglaciated, alluvial clays and silts that were deposited in the backwater of the Ohio River, underlain by glacier outwash materials, typically consisting of sand, gravel and silt deposits (BBC&M, 2010). Ordovician sedimentary rocks, which mainly comprise shale and limestone, underlie the soil deposits.
Bedrock exists at a depth of approximately 20 ft below ground surface near the northeastern boundary of the site and to a depth of approximately 80 ft to 90 ft below ground surface along the Ohio River in the southwest portion of the site (Ebasco, 1979).

4.2 SUBSURFACE CONDITIONS

Descriptions of the soil conditions encountered during the subsurface exploration program conducted at the site are provided below in order of increasing depth below ground surface. Actual soil conditions between boring locations may differ from these typical descriptions. Refer to the test boring logs for specific descriptions of soil samples obtained from the borings.

The subsurface conditions identified by the CPT soundings do not represent material classifications based on grain-size distributions, index tests, or visual observation. Rather, the CPT soundings provide an indicator of relative behavior type based on the mechanical characteristics measured during the soundings. For this reason, the descriptions of subsurface conditions discussed below are only based on our visual-manual classification of samples obtained from test borings and the results of laboratory testing.

- *EMBANKMENT CORE FILL* - Below the ground surface along the embankment crest there is a stratum of EMBANKMENT CORE FILL material primarily described as lean CLAY (CL), lean CLAY with sand (CL), sandy lean CLAY (CL), and SILT with sand (ML). This stratum was encountered and fully penetrated in borings HA-B1, HA-B2, and HA-B3. Where encountered and fully penetrated, the thickness of the stratum ranged from approximately 54 ft to 64 ft. The consistency of cohesive, fine-grained soils encountered in this stratum ranged from medium stiff to hard, but was generally stiff to very stiff.

- *SHELL GRANULAR FILL* - Below the ground surface in boring HA-B4 there is a stratum of SHELL GRANULAR FILL on the face of the embankment that is primarily described as clayey SAND (SC), silty SAND (SM) with gravel, and poorly-graded SAND with silt and gravel (SP-SM). This stratum was fully penetrated by boring HA-B4 and was approximately 19 ft thick. The density of coarse-grained soils encountered in this stratum ranged from medium dense to very dense.

- *SHELL COHESIVE FILL* - Below the SHELL GRANULAR FILL in boring HA-B4 and below the ground surface at boring HA-B5 there is a stratum of SHELL COHESIVE FILL primarily described as lean CLAY (CL), SILT with sand (ML), and sandy SILT (ML). This stratum was encountered and fully penetrated by both borings. The thickness of this stratum ranged from approximately 2 ft to 11

ft. The consistency of fine-grained soils encountered in this stratum ranged from medium stiff to stiff.

- *ALLUVIAL CLAY/SILT* – Below the EMBANKMENT CORE FILL and SHELL COHESIVE FILL there is a stratum of natural soil primarily described as lean CLAY (CL), sandy lean CLAY (CL), lean CLAY with sand (CL), SILT (ML), SILT with sand (ML), and sandy SILT (ML). This stratum was encountered and fully penetrated in all borings except HA-B4. Where encountered and fully penetrated, the thickness of this stratum ranged from approximately 4 ft to 22 ft. The consistency of fine-grained soils encountered in this stratum ranged from soft to very stiff but was generally medium stiff to stiff.

- *ALLUVIAL SAND* – Below the SHELL COHESIVE FILL and ALLUVIAL CLAY/SILT DEPOSITS there is a stratum of natural soil primarily described as silty SAND (SM) and poorly-graded SAND with silt (SP). This stratum was encountered in all borings except HA-B3, but was not fully penetrated at any boring. The density of coarse-grained soils encountered in this stratum ranged from loose to medium dense.

4.3 GROUNDWATER CONDITIONS

Water levels were typically measured in the boreholes when water was encountered during drilling and within 24 hours after completion of the test borings. Measured water levels are summarized in Table I[4]. Water was not encountered in borings HAB1 and HAB3, but was encountered at the remaining boring locations. Where encountered, measured water levels in the test borings generally ranged from a depth of 26.3 to 83.5 ft below ground surface, which corresponds to a water level ranging between approximately El. 486.5 and El. 488.3.

In addition to water levels measured in the test borings, long-term water levels were measured in observation wells near the Ash Pond. Measured water levels in the observation wells generally ranged from a depth of 42.3 to 47.5 ft below ground surface, which corresponds to a water level ranging between approximately El. 487.0 and El. 489.4. The observation well readings are summarized in Table III[4].

Water levels were also estimated by the cone penetrometer soundings and are also summarized in Table I[4]. Water levels estimated during the soundings generally ranged from 52.0 to 84.2 ft below ground surface, which corresponds to a water level ranging between approximately El. 487.8 and El. 520.6. It should be noted that measurements estimated during the soundings did not involve physical observation of water levels, but rather an estimated water level based on pore pressure measurements. The estimates of water levels at each sounding should only be considered accurate to the degree implied by the determination method.

Water level readings have been made in the subsurface explorations at times and under conditions discussed herein. However, it must be noted that fluctuations in the level of the water may occur due to variations in power plant sluicing activities, season, rainfall, temperature, dewatering activities, and other factors not evident at the time measurements were made and reported herein.

[4] Note: A table that does not appear near its citation can be found in a separate table at the end of the report.

5. Safety Factor Assessment

As mentioned previously, the purpose of this study was to perform the initial safety factor assessment in accordance with Section §257.73(e)(1) of the Final CCR Rule. As required by the rule, the initial safety factor assessment is performed for a CCR unit to determine calculated factors of safety for each CCR unit relative to the minimum prescribed safety factors for the critical cross section of the embankment. The minimum required safety factors are defined as follows:

- For dikes constructed of soils that have susceptibility to liquefaction, the calculated liquefaction factor of safety must equal or exceed 1.20.
- The calculated static factor of safety under the long-term, maximum storage pool loading condition must equal or exceed 1.50.
- The calculated static factor of safety under the maximum surcharge pool loading condition must equal or exceed 1.40.
- The calculated seismic factor of safety must equal or exceed 1.00.

Stability analyses have been performed in general conformance with the principles and methodologies described in the USACE Slope Stability Manual (U.S. Army Corps of Engineers, 2003). Conventional static and seismic stability analyses of the impoundment embankment were performed for rotational and block failures using limit equilibrium methods. Limit equilibrium methods compare forces, moments, and stresses which cause instability of the mass of the embankment to those which resist that instability. The principle of the limit equilibrium method is to assume that if the slope under consideration were about to fail, or at the structural limit of failure, then the resulting shear stresses along the expected failure surface must be determined. These shear stresses are then compared with the shear strength of the soils along the expected failure surface to determine the safety factor. The details of the analyses performed for the Killen Station Ash Pond are presented in the following sections of this report.

5.1 DESIGN WATER LEVELS

In accordance with the Federal CCR Rule, the water retained in an impoundment must be modeled at the maximum storage pool level for the static drained and seismic undrained analyses. The maximum surcharge pool level must be used to model the ponded water for the static undrained analyses. A summary of the maximum storage pool and surcharge pool water levels at each portion of the Ash Pond are provided below based on plant datum.

Location	Maximum Storage Pool Level	Maximum Surcharge Pool Level
Fly Ash Portion of Ash Pond	El. 568.5	El. 573
Bottom Ash Portion of Ash Pond	El. 569.5	El. 573

The elevation of the groundwater table within the embankment and at the toe of slope were estimated based on groundwater conditions encountered in nearby subsurface explorations and groundwater observation wells. Additionally, there is no current evidence of seepage emanating from the exterior

slopes of the ponds, suggesting that the phreatic surface is contained within and/or below the embankment.

Given the prescribed impoundment pool levels and the observed static groundwater levels discussed above, a seepage analysis was performed to determine the piezometric head between the interior slope of the impoundment embankment and the exterior toe of the embankment. The computer software program, Slide 6.029, developed by RocScience, Inc., was used to perform the seepage analyses. Permeability values for each material layer were estimated from typical published values based on material description and correlations to grain size. During the course of the seepage analyses, minor adjustments were made to the permeability values and isotropic permeability ratios in order to best model the conditions observed in the field. Results from the seepage analysis provided pore pressure values within the model that were used in the stability analysis.

The models suggest that much of the seepage emanating from the Ash Pond is moving downward into the more permeable alluvial foundation soils and establishing a groundwater table at or near the approximate elevation of the Ohio River rather than moving laterally through the less permeable embankment. The phreatic surfaces used in the slope stability models are shown on the slope stability graphical output included in Appendix C.

5.2 MATERIAL PROPERTIES

The material properties used in our analyses have been developed using the results of the referenced test borings, CPT soundings, and laboratory testing. For the CPTs, material strengths were typically evaluated by averaging the measurements in a particular stratum and choosing conservative strength properties equal to the average value minus one standard deviation. In cases where subsurface explorations and/or laboratory test data did not exist for certain strata, material properties were estimated based on properties used in historic analyses previously performed by others at or near the site as indicated below:

- Sluiced Fly Ash – properties estimated using historical values (URS Greiner, 1999)

A summary of the design material properties is provided below in Table IV.

TABLE IV MATERIAL PROPERTIES						
Material	Material Strength	Unit Weight (pcf)	Cohesion (psf)	Friction Angle (degrees)	Vertical Stress Ratio	Minimum Shear Strength (psf)
Embankment Core Fill	Drained	130	800	28	--	--
	Undrained	130	--	--	0.45	1500
Shell Granular Fill	Drained	130	0	38	--	--
	Undrained	130	0	38	--	--
Shell Cohesive Fill	Drained	125	1000	28	--	--
	Undrained	125	2000	0	--	--
Sluiced Fly Ash	Drained	80	0	30	--	--
	Undrained	80	750	0	--	--
Alluvial Clay/Silt	Drained	120	750	28	--	--
	Undrained	120	--	--	0.23	1000
Alluvial Sand	Drained	120	0	32	--	--
	Undrained	120	0	32	--	--

Seismic cone penetration testing was used to obtain in-situ measurements of shear wave velocity at soundings HAC1 and HAC4. The insitu measurements were performed to a depth of 90 ft below existing ground surface. The site specific shear wave velocity profiles are included in Appendix A.

5.3 DESIGN SEISMIC EVENT

In accordance with Section §257.53 of the Final CCR Rule, the seismic safety factor is defined as the factor of safety determined under earthquake conditions using the peak ground acceleration for a seismic event with a 2% probability of exceedance in 50 years (2,500-year return period). The gridded hazard map data associated with the latest USGS National Seismic Hazard maps developed in 2014 indicates that the bedrock peak ground acceleration (PGA) at the site for the 2,500-year earthquake event is 0.09g, with the greatest contribution to the hazard coming from an earthquake with a modal magnitude of 4.8 as indicated on the deaggregation chart included in Appendix C. The bedrock PGA value was adjusted by the USGS site coefficient, F_{PGA}, of 1.6 for Site Class D in order to determine the peak free field ground acceleration, k_{max}, of 0.14g. Note that the value of k_{max} corresponds to the peak ground acceleration at the base of the impoundment embankment.

5.4 LIQUEFACTION POTENTIAL EVALUATION

During strong earthquake shaking, loose, saturated cohesionless soil deposits may experience a sudden loss of strength and stiffness, sometimes resulting in loss of bearing capacity, large permanent lateral displacements, and/or seismic settlement of the ground. This phenomenon is called soil liquefaction. In accordance with the requirements of §257.73(e)(1), evaluations have been performed to assess the potential for liquefaction of the soils used to construct the impoundment embankment.

The results of the subsurface explorations performed at the site indicate that the majority of soils used to construct impoundment embankments consist of lean CLAY. However, the CPT soundings indicate that thin sand layers may exist within the embankment fill. As a result, a conservative assumption was

made to perform a liquefaction triggering analysis of all "sand-like" soils observed in CPTs and test borings that penetrated the embankment.

Details of the liquefaction triggering analysis are included in Appendix C and indicate that the "sand-like" portions of the materials used to construct the embankment have factors of safety against liquefaction triggering that are greater than 1.2, and are not susceptible to liquefaction. In accordance with the requirements of §257.73(e)(1), a post-liquefaction stability analysis was not required since the soils used to construct the embankment are not susceptible to liquefaction.

5.5 STABILITY ANALYSIS

5.5.1 Methodology for Analyses

The computer software program Slide 6.029 was used to evaluate the static and seismic stability of the impoundment embankments. Analyses were performed to evaluate static drained (long-term) and undrained (short-term) strength conditions for circular and block failures using Spencer's method of slices. Spencer's method of slices was selected because it fully satisfies the requirements of force and moment equilibrium (limit equilibrium method).

Seismic stability was evaluated using pseudo-static analyses. Pseudo-static analyses model the seismic shaking as a "permanent" body force that is added to the force-body diagram of a conventional static limit-equilibrium analysis; typically, only the horizontal component of earthquake shaking is modeled because the effects of vertical forces tend to average out to near zero (Jibson, 2011). This is a traditional approach for evaluating the stability of a slope during earthquake shaking and provides a simplified safety factor analysis for one earthquake pulse. A 20 percent reduction in material strength was incorporated in the pseudo-static analyses to represent the approximate threshold between large and small strains induced by cyclic loading (Duncan, 2014). A safety factor greater than or equal to one (FS ≥ 1.0) indicates a slope is stable and a safety factor below one (FS < 1.0) indicates that the slope is unstable.

5.5.2 Pseudo-static Coefficient

The pseudo-static coefficient, k_s, used in our seismic analyses was calculated using the equation below, which uses the peak free field ground acceleration discussed above and a reduction factor of 0.50 (Hynes-Griffin and Franklin, 1984).

$$k_s = 0.50 \times \frac{k_{\max}}{\mathrm{g}} = 0.50 \times \frac{0.14\mathrm{g}}{\mathrm{g}} = 0.07$$

5.5.3 Results of Stability Evaluation

The critical cross section is defined as that which is anticipated to be most susceptible to failure amongst all cross sections. To identify the critical cross section at our project site, we examined the following conditions at several cross section locations at the impoundment:

a. the geometry of the upstream and downstream slopes;
b. phreatic surface levels within and below the cross sections;
c. subsurface soil conditions;

d. presence or lack of surcharge loads behind the crest of the embankment; and
e. presence or lack of reinforcing measures in front of the embankment.

Examination of the conditions noted above resulted in the identification of one critical cross section at the Ash Pond. The location of the critical cross section is shown on Figure 2. The results of our analyses are presented below in Table V and are shown on the Slide output files included in Appendix C.

As shown below, the static safety factors are above the minimum required values for the critical cross section. Similarly, the pseudo-static analyses for the analyzed section indicates an acceptable seismic safety factor.

TABLE V
SUMMARY OF STATIC AND SEISMIC STABILITY EVALUATIONS

Pond	Cross Section	Condition[1]	Earthquake Event	Soil Strength	Required Safety Factor	Safety Factor	
						Rotational Failure Surface	Block Failure Surface
Ash Pond	A-A'	Static	-	Drained	1.5	2.0	2.2
				Undrained	1.4	1.8	1.8
		Seismic	2,500-year	Undrained[2]	1.0	1.1	1.0

1. Refer to Table IV for material properties.
2. Soil strengths have been reduced by 20 percent for seismic analyses.

5.6 CONCLUSIONS

The analyses associated with the safety factor assessment have been performed in accordance with the requirement of Section §257.73 of the Final CCR Rule. A summary of our conclusions as they relate to the rule requirements are provided below.

- §257.73(e)(1)(i) - *The calculated static factor of safety under the long-term, maximum storage pool loading conditions must equal or exceed 1.50.*

  As shown in Table V, the static safety factors for the long-term (drained) maximum storage pool condition are above the minimum required value for the critical section analyzed. Accordingly, this requirement has been met.

- §257.73(e)(1)(ii) - *The calculated static factor of safety under the maximum surcharge pool loading condition must equal or exceed 1.40.*

  As shown in Table V, the static safety factors for the maximum surcharge pool loading condition (undrained) are above the minimum required value for the critical section analyzed. Accordingly, this requirement has been met.

- §257.73(e)(1)(iii) - *The calculated seismic factor of safety must equal or exceed 1.00.*

As shown in Table V, the calculated seismic safety factor is above the minimum required value for the critical section analyzed. Accordingly, this requirement has been met.

- §257.73(e)(1)(iv) - *For dikes constructed of soils that have susceptibility to liquefaction, the calculated liquefaction factor of safety must equal or exceed 1.20.*

  The results of our subsurface investigation and liquefaction triggering evaluation indicate that the material used to construct the impoundment embankment are not susceptible to liquefaction. Accordingly, this requirement has been met.

6. Certification

Based on our review of the information provided to us by DP&L and the results of our field investigations and analyses, it is our opinion that the calculated factors of safety for the critical cross section of the impoundment embankment meet the minimum factors of safety specified in §257.73(e)(1)(i) through (iv) of the EPA's Final CCR Rule.

Certification Statement

I certify that the Initial Safety Factor Assessment for the Ash Pond at the DP&L Killen Electric Generating Station meets the requirements of §257.73(e) of the EPA's Final CCR Rule.

Signed: _____
Consulting Engineer

Print Name: Steven F. Putrich
Ohio License No.: 67329
Title: Vice President
Company: Haley & Aldrich, Inc.

Professional Engineer's Seal and date:

References

1. BBC&M Engineering, Inc., (2010). “Ponds 3A, 5, 6 & 7 Slope Stability Investigation J.M. Stuart Station Aberdeen, Ohio”.

2. Brockman, C.S., (2007). “Physiographic Regions of Ohio”, Ohio Department of Natural Resources.

3. Duncan, J.M., Wright, S.G, and Brandon, T.L. (2014). Soil Strength and Slope Stability. John Wiley & Sons, Upper Saddle River, 2nd Edition, pp. 182-184.

4. Ebasco Services Incorporated, (1979). “Killen Electric Generating Station Units No. 1 and No. 2 Ash Disposal Pond, Dike and Foundation Studies, Final Engineering Report”.

5. Environmental Protection Agency, (2015). Code of Federal Regulations, “Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule, “Title 40, Chapter I, Parts 257 and 261, April 17.

6. Jibson, R.W., (2011). “Methods for assessing the stability of slopes during earthquakes—A Retrospective,” Engineering Geology, v. 122, p. 43-50.

7. Hynes-Griffin, M.E. and Franklin, A.G. (1984). “Rationalizing the seismic coefficient method,” [Miscellaneous Paper GL-84-13]. U.S. Army Corp of Engineers Waterways Experiment Station. Vicksburg, Mississippi, 21pp.

8. URS Greiner Woodward Clyde (1999). “Geotechnical Summary Report Ash Pond #10 DP&L J.M. Stuart Station Aberdeen, OH”.

9. U.S. Army Corps of Engineers (2003). “Engineering and Design: Slope Stability,” Engineer Manual EM-1110-2-1902, Department of the Army, U.S. Army Corps of Engineers, Washington, DC, October.

TABLES

TABLE I
SUMMARY OF SUBSURFACE EXPLORATIONS
DAYTON POWER AND LIGHT
KILLEN STATION
MANCHESTER, OHIO

Exploration Designation[1]	Ground Surface El.[2] (ft)	Northing[2]	Easting[2]	Total Exploration Depth (ft)	Water[3]	
					Depth Below Ground Surface (ft)	Elevation (ft)
TEST BORINGS						
HAB1	572.1	249311.185	1693192.985	81.0	Not Encountered	--
HAB2	571.8	249194.434	1691248.468	91.0	83.5	488.3
HAB3	572.1	252009.940	1691102.249	66.0	Not Encountered	--
HAB4	539.1	249125.610	1691185.005	61.0	52.6	486.5
HAB5	513.2	249057.433	1691106.853	31.0	26.3	486.9
HAB5A	513.2	249057.433	1691106.853	10.0	Not Measured	--
MONITORING WELLS						
MW-10	530.8	252699.426	1690216.989	59.0	See Table III	
MW-11	532.6	252191.552	1690537.601	59.0	See Table III	
MW-12	530.8	251677.148	1691286.390	56.0	See Table III	
MW-13	526.4	250546.125	1690636.851	52.0	See Table III	
CONE PENETROMETER SOUNDINGS						
HAC1	572.0	249161.458	1691282.940	90.0	84.2	487.8
HAC3	572.4	251457.639	1693487.555	75.0	80.0	492.4
HAC4	572.1	253152.017	1691562.914	88.7	80.9	491.2
HAC5	572.6	253104.197	1690694.987	85.1	52.0	520.6
HAC6	572.2	252006.591	1691104.794	64.8	52.0	520.2

Notes:
1) Technical monitoring of subsurface explorations completed during the period 16 May 2016 through 16 June 2016 was performed by Haley & Aldrich, Inc.

2) As drilled locations and ground surface elevations of test borings and cone penetrometer soundings were determined in the field by CESO, INC. of Dayton, Ohio by optical survey. The coordinates are provided in units of feet, relative to the Ohio State Plane South Coordinate System (NAD83). The elevation data are provided in feet above sea level, relative to NAVD88.

3) Water level readings represent the highest water level observed either during drilling, after completion of the boring, or as indicated by subsurface exploration instruments. Refer to the subsurface exploration logs for additional water level data. Water level readings have been made in the subsurface explorations at times and under conditions discussed herein. However, it must be noted that fluctuations in the level of the water may occur due to variations in season, rainfall, temperature, and other factors not evident at the time measurements were made and reported.

TABLE II
SUMMARY OF LABORATORY TEST RESULTS
DAYTON POWER AND LIGHT
KILLEN STATION
MANCHESTER, OHIO

Boring Designation	Sample Number	Sample Depth (ft)	USCS Symbol	Material Type	Moisture Content (%)	LL	PL	PI	% Gravel	% Sand	% Fines	Tube Density		UU Triaxial			CU Triaxial			
												Average Moisture Content (%)	Average Dry Density (pcf)	Moisture Content (%)	Dry Density (pcf)	Undrained Shear Strength (psf)	Average Moisture Content (%)	Average Dry Density (pcf)	c' (psf)	ϕ' (degrees)
HAB1	S5	24.0-26.0	CL	FILL(CORE)	14.9				0.0	22.6	77.0									
HAB1	U2	49.0-51.0	CL	FILL(CORE)	18.0	40	21	19			85.3	17.1	109.4				17.1	108.7	1598.4	34.4
HAB1	U3	66.0-68.0	CL	ALLUVIAL	20.0	27	17	10			62.0	14.7	101.5	17.2	99.8	1726.6				
HAB2	U1	16.0-18.0	CL	FILL(CORE)	14.0	28	16	12			70.2	14.6	115.8				14.5	114.7	823.7	32.6
HAB2	U2	28.0-30.0	CL	FILL(CORE)	14.0	27	16	11			74.6	13.5	119.1	13.6	120.1	5757.1				
HAB2	U3	66.0-68.0	CL	ALLUVIAL	15.0	26	17	9			56.4	15.1	104.0				15.0	102.6	391.7	31.2
HAB2	S15	79.0-80.1	CL-ML	ALLUVIAL	16.2	29	22	7			64.0									
HAB3	U1	10.0-12.0	CL	FILL(CORE)	17.0	30	17	13			89.6	16.6	114.0	16.5	116.1	3301.9				
HAB3	U2	22.0-24.0	CL	FILL(CORE)	13.0	29	16	13			86.0	15.7	114.3				15.2	114.0	789.1	28.3
HAB3	S5	39.0-41.0	CL	FILL(CORE)	14.5				0.0	33.9	66.1									
HAB3	U3	59.0-61.0	CL	ALLUVIAL	20.0	31	18	13			94.3	19.8	100.3				19.8	100.7	1540.8	23.8
HAB4	S1	4.0-6.0	SC	FILL(SHELL GRANULAR)	9.3	25	17	8			33.0									
HAB4	S2	9.0-11.0	SM	FILL(SHELL GRANULAR)	6.1				15.9	66.8	17.3									
HAB4	U1	26.0-28.0	CL	FILL(SHELL COHESIVE)	22.0	41	23	18			92.1	21.5	101.5				21.5	101.6	1440.0	27.7
HAB4	S8	39.0-41.0	SM	ALLUVIAL	13.2						46.0									
HAB5A	U1	3.0-5.0	CL	ALLUVIAL	23.0	43	24	19			89.8	23.1	95.9	28.6	92.0	1234.8				
HAB5A	U3	8.0-10.0	CL	ALLUVIAL	13.0	28	16	12			66.2	16.9	98.3				16.9	98.3	351.4	26.2
HAB5	S5	8.0-10.0	ML	ALLUVIAL	19.4	24	23	1			71.0									
HAB5	S10	24.0-26.0	SM	ALLUVIAL	23.3				0.0	58.3	41.7									

TABLE III
SUMMARY OF OBSERVATION WELL READINGS
DAYTON POWER AND LIGHT
KILLEN STATION
MANCHESTER, OHIO

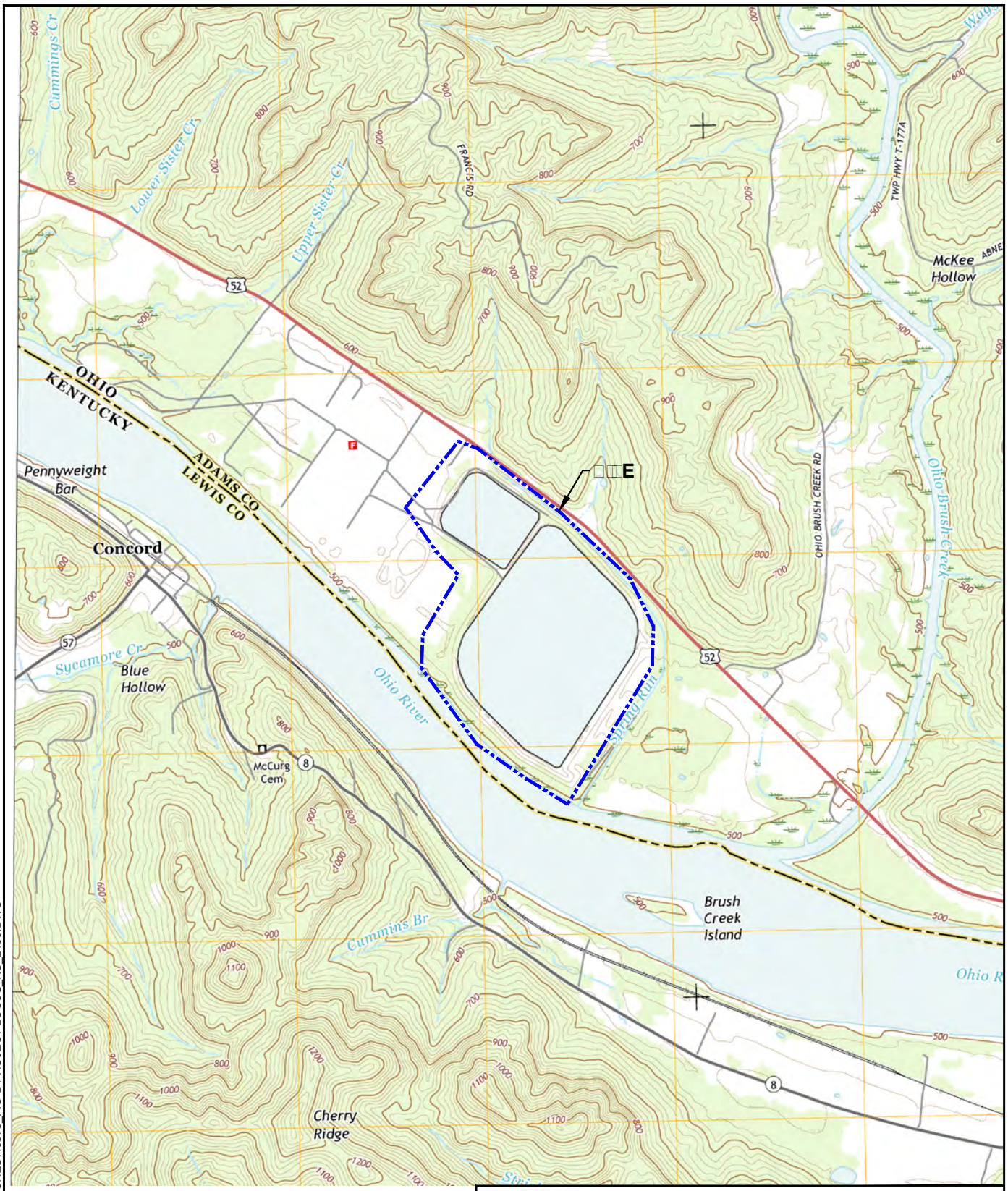
Observation Well Designation	Top of Casing Elevation (ft)	Well Depth (ft)	Measurement Date	Depth to Water[1,2] (ft)	Groundwater Elevation (ft)	Well Installation Notes
MW-10	533.6	59.0	7/26/2016	46.1	487.5	Well was installed on 06/08/2016
MW-11	535.5	59.0	7/26/2016	47.5	488.0	Well was installed on 06/09/2016
MW-12	533.9	56.0	7/26/2016	44.5	489.4	Well was installed on 06/09/2016
MW-13	529.3	52.0	7/26/2016	42.3	487.0	Well was installed on 06/09/2016

Notes:

1) Groundwater level readings have been made in the wells at times and under conditions discussed herein. However it must be noted that fluctuations in the level of the groundwater may occur due to variations in season, rainfall, temperature, and other factors not evident at the time measurements were made and reported.

2) Depth to water readings are recorded from top of casing.

FIGURES



E G M
N D
D NGLE

HALEY ALDRICH

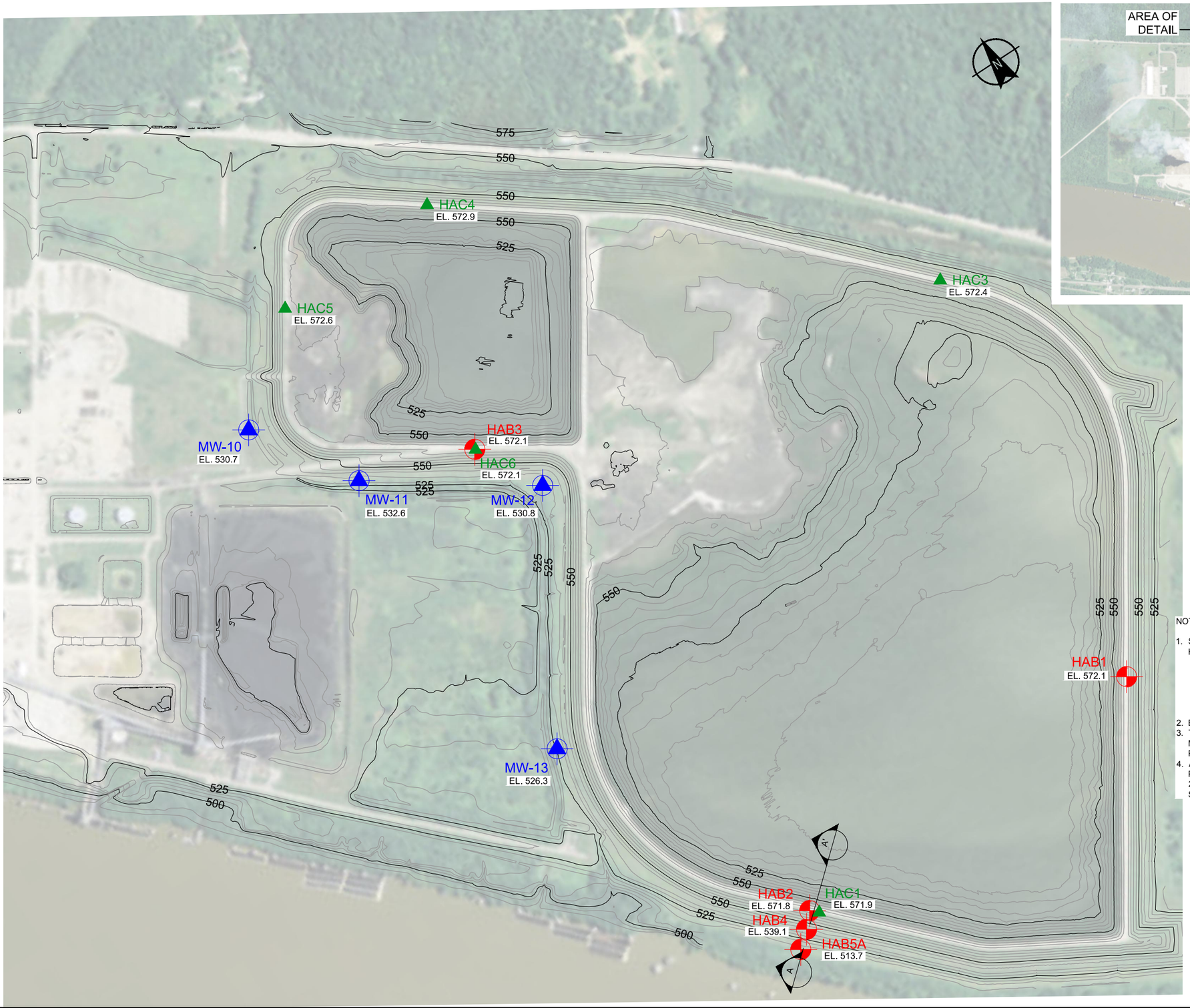
DAYTON POWER & LIGHT COMPANY
KILLEN GENERATING STATION
14869 U. S. 52
MANCHESTER, OHIO

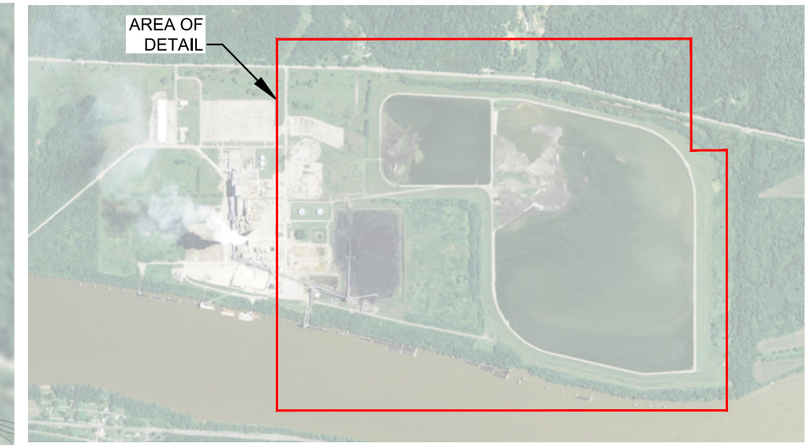
PROJECT LOCUS

APPROXIMATE SCALE: 1" = 2 400'
OCTOBER 2016

FIGURE 1

LUCAS, ANDY Printed: 9/9/2016 11:05 AM Layout: HA-FIG-A-P
G:\40373 DP&L\CAD-KS\GLOBAL\FIGURES\40373_FIG-1-PROJECT LOCUS_KS_2400.DWG





KEY MAP

0 1000 2000

APPROXIMATE SCALE IN FEET

LEGEND

HAB1 EL. 572.1 — DESIGNATION, LOCATION AND GROUND SURFACE ELEVATION OF TEST BORINGS PERFORMED BY STEARNS DRILLING COMPANY OF DUTTON, MICHIGAN DURING THE PERIOD 13 JUNE 2016 TO 16 JUNE 2016. DESIGNATIONS THAT INCLUDE AN "A" CORRESPOND TO OFFSET BORINGS PERFORMED IMMEDIATELY ADJACENT TO THE ORIGINAL BORING.

HAC3 EL. 572.4 — DESIGNATION, LOCATION AND GROUND SURFACE ELEVATION OF CONE PENETROMETER SOUNDINGS PERFORMED BY CONETEC, INC. OF WEST BERLIN, NEW JERSEY DURING THE PERIOD 16 MAY 2016 TO 18 MAY 2016.

MW-12 EL. 530.8 — DESIGNATION, LOCATION AND GROUND SURFACE ELEVATION OF MONITORING WELL INSTALLED BY STEARNS DRILLING COMPANY OF DUTTON, MICHIGAN DURING THE PERIOD 6 JUNE 2016 TO 16 JUNE 2016.

A A' — LOCATION OF SLOPE STABILITY CROSS SECTION

NOTES:

1. SITE TOPOGRAPHY PREPARED BY R. B. JERGENS, BASED ON ACTUAL FIELD AND HYDROGRAPHIC SURVEY, PERFORMED AUGUST 13, 2014.
   - SITE COORDINATES ESTABLISHED USING THE ODOT VRS NETWORK BASED ON THE U.S. STATE PLANE COORDINATE SYSTEM, NAD83(2011), OHIO SOUTH ZONE # 3402, USFT.
   - ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) GEOID12A.
2. BACKGROUND IMAGE FOR KEY MAP IS DATED 15 JUNE 2014 FROM ESRI GIS.
3. TECHNICAL MONITORING OF TEST BORINGS, CONE PENTROMETER SOUNDINGS AND MONITORING WELLS COMPLETED DURING THE PERIOD 16 MAY 2016 TO 16 JUNE 2016, WAS PERFORMED BY HALEY & ALDRICH, INC.
4. AS-DRILLED LOCATIONS AND GROUND SURFACE ELEVATIONS OF TEST BORINGS, CONE PENTROMETER SOUNDINGS, AND MONITORING WELLS PERFORMED BY HALEY & ALDRICH IN 2016 WERE DETERMINED IN THE FIELD BY CESO, INC. OF DAYTON, OHIO BY OPTICAL SURVEY.

0 500 1000

SCALE IN FEET

HALEY ALDRICH

DAYTON POWER & LIGHT COMPANY
KILLEN ELECTRIC GENERATING STATION
MANCHESTER, OHIO

SUBSURFACE EXPLORATION
LOCATION PLAN

SCALE: AS SHOWN
OCTOBER 2016

FIGURE 2

POSTOLOWSKI, KEVIN Printed: 8/23/2016 10:45 AM Layout: FIG 2
G:\40373 KILLEN POND\CAD\40373_445_0012 EXPO KILLEN AS-DRILLED.DWG

APPENDIX A

Test Boring Logs and CPT Related Information

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B1

Project	Dayton Power and Light Power Station, Killen Station-Manchester, Ohio
Client	The Dayton Power and Light Company
Contractor	Stearns Drilling

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	S	-	Rig Make & Model: CME 1050
Inside Diameter (in.)	4.0	3/8	-	Bit Type: Cutting Head Drill Mud: None
Hammer Weight (lb)	spun	140	-	Casing: HSA Spun to 89.0 ft
Hammer Fall (in.)	-	30	-	Hoist/Hammer: Winch Automatic Hammer PID Make & Model:

File No.	40373-446
Sheet No.	1 of 4
Start	14 June 2016
Finish	14 June 2016
Driller	B. Grahm
H&A Rep.	C. Toscano
Elevation	572.1
Datum	NAVD 88
Location	See Plan N 249311 E 1693193

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																
	3 6 9 9	S1 15	4.0 6.0		SM	Medium dense gray to red-brown silty SAND (SM), no odor, dry, contains trace gravel -FILL (CORE)-				5	55	40				
5																
				563.1 9.0												
	3 5 8 10	S2 15	9.0 11.0		ML	Stiff red-brown SILT with sand (ML), no odor, dry, contains pockets of lean clay					20	80				
10																
				558.1 14.0												
	6 8 5 5	S3 20	14.0 16.0		CL	Stiff red-brown to gray-brown lean CLAY (CL), no odor, moist						100	S	M	M	H
15																
	5 8	S4 24	19.0 21.0		CL	Stiff red-brown sandy lean CLAY (CL), no odor, moist, contains trace coal (bituminous)					30	70				
20																

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
6/14/15	16:20	0.5	80	81	Dry
6/15/16		24	80	81	Dry

Sample ID

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	81.0
Rock Cored (ft)	-
Samples	14S, 3U

Boring No. HA-B1

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B1
File No. 40373-446
Sheet No. 2 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	6 9															
	6 6 13 12	S5 20	24.0 26.0		CL	Very stiff red-gray-brown lean CLAY with sand (CL), no odor, moist -FILL (CORE)-				3	20	77	S	M	M	H
25																
	P U S H	U1 24	27.0 29.0		CL	Red-gray-brown lean CLAY with sand (CL), moist PP=4.0 tsf					25	75				
	6 6 13 12	S6 15	29.0 31.0		CL	Very stiff red-brown lean CLAY with sand (CL), no odor, moist					25	75				
30																
	5 8 14 15	S7 24	34.0 36.0		CL	Very stiff red-brown lean CLAY with sand (CL), no odor, dry					15	85				
35																
	13 23 13 16	S8 24	39.0 41.0		CL	Similar to S7, except hard					15	85				
40																
	13 21 15 17	S9 24	44.0 46.0		CL	Similar to S8 Note: Gray-brown lean CLAY found in tip of spoon.					15	85				
45																
	P	U2	49.0		CL	Red-brown to gray-brown lean CLAY with sand (CL), dry,					15	85				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA-B1

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B1
File No. 40373-446
Sheet No. 3 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50	U S H	24	51.0			torvane=8.0 kg/cm^2 PP=4.5 tsf										
55	7 9 15 20	S10 24	54.0 56.0		CL	Very stiff red-brown to gray lean CLAY (CL), no odor, moist -FILL (CORE)-					10	90	S	M	M	H
				513.1												
60	6 9 12 19	S11 24	59.0 61.0	59.0	CL	Very stiff red-brown to gray lean CLAY (CL), no odor, moist, contains trace anthracite coal particles -ALLUVIAL DEPOSITS-					5	95				
65	7 6 10 13	S12 20	64.0 66.0		CL	Very stiff red-brown sandy lean CLAY (CL), no odor, dry					40	60				
	P U S H	U3 24	66.0 68.0		CL	Red-brown sandy lean CLAY (CL), dry PP=4.0 tsf					38	62				
70																
				498.1												
75	5 8 10 10	S13 29	74.0 76.0	74.0	SM	Medium dense yellow-brown silty SAND (SM), contains frequent interbedded layers of lean clay (up to 4.0 in. thick)					60	40				
											60	40				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA-B1

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B1
File No. 40373-446
Sheet No. 4 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
80	6 8 9 10	S14 22	79.0 81.0		SM	Similar to S13 except moist, contains frequent layers of fine sandy silt and lean clay										
				491.1 81.0		-ALLUVIAL DEPOSITS-										
						BOTTOM OF EXPLORATION 81.0 FT										

Notes:
-Set 24.0 hour temporary standpipe at 80.0 ft.
-Screen set at 75.0 ft to 80.0 ft.
-Borehole tremie grouted to ground surface after 24 hour water level reading.

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B2

Project	Dayton Power and Light Power Station, Killen Station-Manchester, Ohio
Client	The Dayton Power and Light Company
Contractor	Stearns Drilling

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	S	-	Rig Make & Model: CME 1050
Inside Diameter (in.)	4.0	3/8	-	Bit Type: Cutting Head Drill Mud: None
Hammer Weight (lb)	spun	140	-	Casing: HSA Spun to 89.0 ft
Hammer Fall (in.)	-	30	-	Hoist/Hammer: Winch Automatic Hammer PID Make & Model:

File No.	40373-446
Sheet No.	1 of 4
Start	13 June 2016
Finish	14 June 2016
Driller	B. Grahm
H&A Rep.	C. Toscano
Elevation	571.8
Datum	NAVD 88
Location	See Plan N 249194 E 1691248

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																
5	2 4 5 5	S1 24	4.0 6.0		CL	Very stiff red-brown to gray-brown lean CLAY (CL), no odor, dry -FILL (CORE)-					5	95	S	M	M	H
10	5 8 8 12	S2 20	9.0 11.0		CL	Stiff red-brown lean CLAY with sand (CL), no odor, dry, trace coarse to fine gravel				5	10	85				
15	5 10 9 11	S3 24	14.6 16.0		CL	Very stiff red-brown lean CLAY with sand (CL), no odor, moist, contains trace coarse to fine gravel				5	20	75				
	PUSH	U1 24	16.0 18.0		CL	Red-brown sandy lean CLAY (CL), moist, torvane=9.0 kg/cm^2 PP=<5 tsf					30	70				
20	2 3	S4 24	19.0 21.0		CL	Medium stiff red-brown lean CLAY (CL), no odor. moist, contains trace coarse and fine sand					5	95	S	M	M	

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
6/14/16		0.5	89	91	83.5
06/15/16		24	89	91	85.3

Sample ID

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	91.0
Rock Cored (ft)	-
Samples	17S, 3U

Boring No. HA-B2

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B2
File No. 40373-446
Sheet No. 2 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	4 7															
25	4 5 7 9	S5 24	24.0 26.0		CL	Similar to S4 except stiff -FILL (CORE)-					5	95				
30	P U S H	U2 22	28.0 30.0		CL	Red-brown lean CLAY with sand (CL), moist, torvane=9.0 kg/cm^2 PP=<5 tsf					25	75				
35	4 7 6 9	S6 24	34.0 36.0		CL	Similar to S5					5	95	S	M	M	H
40	4 4 6 11	S7 24	39.0 41.0		CL	Stiff red-brown lean CLAY with sand (CL), no odor, dry					15	85				
45	5 6 10 10	S8 20	44.0 46.0		CL	Similar to S7, except very stiff, moist					15	85				
	6	S9	49.0		CL	Similar to S8					15	85				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA-B2

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B2
File No. 40373-446
Sheet No. 3 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50	10 13 19	24	51.0													
55	6 10 13 15	S10 22	54.0 56.0		CL	Very stiff red-brown to gray-brown lean CLAY (CL), no odor, dry -FILL (CORE)-					5	95				H
60	5 6 9 14	S11 24	59.0 61.0		CL	Stiff red-brown lean CLAY (CL), no odor, moist					5	95				
65	5 5 7 9	S12 20	64.0 66.0	507.8 64.0	CL	Stiff red-brown sandy lean CLAY (CL), stratified, no odor, moist -ALLUVIAL DEPOSITS-					40	60				
	P U S H	U3 24	66.0 68.0		CL	Red-brown sandy lean CLAY (CL), moist					44	56				
				503.8 68.0												
70	5 8 7 9	S13 18	69.0 71.0		SM	Medium dense brown silty SAND (SM), stratified, no odor, dry, contains occasional seams of silty clay					80	20				
75	4 4 6 10	S14 18	74.0 76.0		SM	Loose red-brown to light brown silty SAND (SM), well stratified, no odor, dry, contains frequent interbedded seams and layers (2.0 in. thick) of fine sand and lean clay					80	20				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA-B2

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B2

File No. 40373-446

Sheet No. 4 of 4

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
80	3 4 8 11	S15 15	79.0 81.0	492.3 79.5	CL-ML	Stiff red-brown sandy silty lean CLAY (CL-ML), no odor, moist, with interbedded seams and layers of fine sand and lean clay					36	64				
85	4 4 16 20	S16 15	84.0 86.0	487.8 84.0	SM	Medium dense red-brown silty SAND (SM), no odor, wet, contains trace coarse gravel -ALLUVIAL DEPOSITS-		5	10	35	30	20				
90	6 4 15 25	S17 10	89.0 91.0	482.8 89.0	GP-GM	Medium dense red-brown poorly graded GRAVEL with silt and sand (GP-GM), no odor, wet	5	45	15	10	15	10				
				480.8 91.0		BOTTOM OF EXPLORATION 91.0 FT Note: -Set 24 hour temporary standpipe to 89.0 ft. -Screen set at 79.0 ft to 89.0 ft. -Borehole tremie grouted to ground surface after 24 hour water level reading.										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA-B2

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B3

Project	Dayton Power and Light Power Station, Killen Station-Manchester, Ohio
Client	The Dayton Power and Light Company
Contractor	Stearns Drilling

File No.	40373-446
Sheet No.	1 of 3
Start	15 June 2016
Finish	15 June 2016
Driller	B. Grahm
H&A Rep.	C. Toscano
Elevation	572.1
Datum	NAVD 88
Location	See Plan N 252010 E 1691102

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	S	-	Rig Make & Model: CME 1050
Inside Diameter (in.)	4.0	3/8	-	Bit Type: Cutting Head Drill Mud: None
Hammer Weight (lb)	spun	140	-	Casing: HSA Spun to 64.0 ft
Hammer Fall (in.)	-	30	-	Hoist/Hammer: Winch Automatic Hammer PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																
	5 7 6 6	S1 20	4.0 6.0		CL	Stiff yellow-brown lean CLAY (CL), no odor, moist, contains trace coarse to fine sand and gravel -FILL (CORE)-					10	90	S	M	M	H
5																
10	P U S H	U1 22	10.0 12.0		CL	Yellow-brown lean CLAY (CL), moist, torvane=9.0 kg/cm^2 PP=>4.5 tsf					10	90				
	3 4 8 9	S2 24	14.0 16.0		CL	Stiff yellow-brown lean CLAY (CL), no odor, dry, contains trace coal particles and trace coarse to fine sand					10	90				
15																
	P U	N/R	19.0 21.0			No recovery, cleaned out borehole at 22.0 ft										
20																

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
6/15/16	-	0.5	65	66	Dry
6/16/16		24	65	66	Dry

Sample ID

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	66.0
Rock Cored (ft)	-
Samples	9S, 3U

Boring No. HA-B3

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B3
File No. 40373-446
Sheet No. 2 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	S H															
	P U S H	U2 24	22.0 24.0		CL	Yellow-brown lean CLAY (CL), torvane=9.0 kg/cm^2 PP=>4.5 tsf					14	86				
						-FILL (CORE)-										
25																
	6 8 10 12	S3 20	29.0 31.0		CL	Very stiff yellow-brown lean CLAY (CL), no odor, moist, contains trace fine gravel and coarse to fine sand					10	90	S	M	M	H
30																
	5 8 11 11	S4 20	34.0 36.0		CL	Similar to S3					10	90				H
35																
	3 4 8 11	S5 24	39.0 41.0		CL	Stiff red-brown sandy lean CLAY (CL), no odor, moist, contains trace fine gravel					34	66				H
40																
	6 10 12 14	S6 24	44.0 46.0		CL	Similar to S3					10	90				
45																
	6	S7	49.0		CL	Very stiff yellow-brown lean CLAY with sand (CL), no odor, moist, contains					15	85				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA-B3

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B3
File No. 40373-446
Sheet No. 3 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50	10 18 19	24	51.0			trace gravel -FILL (CORE)-										
				518.1 54.0												
55	6 9 11 15	S8 24	54.0 56.0		CL	Very stiff red-brown lean CLAY (CL), no odor, moist -ALLUVIAL DEPOSITS-					5	95				
60	P U S H	U3 24	59.0 61.0		CL	Red-brown lean CLAY (CL), no odor, moist, torvane=6.0 kg/cm^2 PP=>3.5 tsf					6	94				
65	4 6 9 10	S9 24	64.0 66.0		CL	Stiff red-brown lean CLAY (CL), no odor, moist, conatins trace coal particles					10	90				
				506.1 66.0		BOTTOM OF EXPLORATION 66.0 FT Notes: -Set 24.0 hour temporary standpipe at 65.0 ft. -Screen set at 60.0 ft to 65.0 ft. -Borehole tremie grouted to ground surface after 24 hour water level reading.										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA-B3

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B4

Project	Dayton Power and Light Power Station, Killen Station-Manchester, Ohio
Client	The Dayton Power and Light Company
Contractor	Stearns Drilling

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	S	-	Rig Make & Model: CME 850
Inside Diameter (in.)	4.25	3/8	-	Bit Type: Cutting Head Drill Mud: None
Hammer Weight (lb)	spun	140	-	Casing: HSA Spun to 61.0 ft
Hammer Fall (in.)	-	30	-	Hoist/Hammer: Winch Automatic Hammer PID Make & Model:

File No.	40373-446
Sheet No.	1 of 3
Start	14 June 2016
Finish	14 June 2016
Driller	J. Gryska
H&A Rep.	S. Lewis
Elevation	539.1
Datum	NAVD 88
Location	See Plan N 249126 E 1691185

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0																
5	7 15 14 15	S1 24	4.0 6.0		SC	Medium dense clayey SAND (SC), no odor, dry PP=4.5 tsf -FILL (SHELL GRANULAR)-					67	33				
				530.1 9.0												
10	9 28 43 44	S2 24	9.0 11.0		SM	Very dense brown silty SAND with gravel (SM), no odor, moist PP=3.5 tsf		16	14	24	29	17				
				525.1 14.0												
15	10 11 23 26	S3 24	14.0 16.0		SP-SM	Dense brown poorly-graded SAND with silt and gravel (SP-SM), no odor, moist, contains frequent layers of silt		15	15	15	45	10				
				520.1 19.0												
20	4 5	S4 24	19.0 21.0		ML	Stiff brown SILT with sand (ML), no odor, moist PP=4.5 tsf					20	80				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
6/15/16		24	60	61	52.6

Sample ID

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	61.0
Rock Cored (ft)	-
Samples	12S

Boring No. HA-B4

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B4
File No. 40373-446
Sheet No. 2 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	6 7					-FILL (SHELL COHESIVE)-										
	4 8 7 11	S5 24	24.0 26.0	515.1 24.0	CL	Stiff gray-brown lean CLAY (CL), no odor, moist PP=4.5 tsf					5	95				
25		U1 24	26.0 28.0		CL	Gray-brown lean CLAY (CL), no odor, moist, torvane=5.0 kg/cm^2					8	92				
	1 3 4 7	S6 24	28.0 30.0		CL	Medium stiff brown lean CLAY (CL), no odor, moist, mottled with gray color PP=4.5 tsf					5	95				
30				509.1 30.0												
	3 4 5 5	S7 24	34.0 36.0		SM	Loose brown silty SAND (SM), no odor, moist, contains frequent layers of dry sand and clay -ALLUVIAL DEPOSITS-					60	40				
35																
	2 4 4 6	S8 24	39.0 41.0		SM	Similar to S7 PP=0.5 tsf					54	46				
40																
	1 4 7 8	S9 23	44.0 46.0		SM	Similar to S7, except medium dense PP=0.0 tsf					60	40				
45																
	3	S10	49.0		SM	Similar to S7					60	40				

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B4
File No. 40373-446
Sheet No. 3 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
50	5 4 7	22	51.0			PP=0.0 tsf										
						-ALLUVIAL DEPOSITS-										
55	2 14 18 21	S11 23	54.0 56.0		SM	Dense brown silty SAND with gravel (SM), no odor, wet, contains frequent layers of sand and clay PP=0.5 tsf	5	15	10	15	25	30				
				480.1 59.0												
60	2 4 5 4	S12 24	59.0 61.0		SP	Loose dark brown poorly graded SAND with silt, no odor, wet PP=0.0 tsf			5	50	30	15				
				478.1 61.0		BOTTOM OF EXPLORATION 61.0 FT Notes: -Set 24.0 hour temporary standpipe at 60.0 ft. -Screen set at 55.0 ft to 60.0 ft. -Borehole tremie grouted to ground surface after 24 hour water level reading.										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA-B4

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B5

Project	Dayton Power and Light Power Station, Killen Station-Manchester, Ohio
Client	The Dayton Power and Light Company
Contractor	Stearns Drilling

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	S	-	Rig Make & Model: CME 1050
Inside Diameter (in.)	4.25	3/8	-	Bit Type: Cutting Head Drill Mud: None
Hammer Weight (lb)	spun	140	-	Casing: HSA Spun to 31.0 ft
Hammer Fall (in.)	-	30	-	Hoist/Hammer: Winch Automatic Hammer PID Make & Model:

File No.	40373-446
Sheet No.	1 of 2
Start	14 June 2016
Finish	14 June 2016
Driller	J. Gryska
H&A Rep.	S. Lewis
Elevation	513.2
Datum	NAVD 88
Location	See Plan N 249057 E 1691107

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	1 3 5 6	S1 18	0.0 2.0		ML	Medium stiff dark brown sandy SILT (ML), no odor, moist PP=1.0 tsf -FILL (SHELL COHESIVE)-		5	5	5	15	70				
				511.2 2.0												
	1 3 5 5	S2 19	2.0 4.0		CL	Medium stiff gray silty lean CLAY (CL), no odor, moist, contains wood fragments -ALLUVIAL DEPOSITS-					5	95				
5	2 4 4 6	S3 24	4.0 6.0		CL	Similar to S2 PP=4.0 tsf					5	95				
				507.2 6.0												
	7 6 6 6	S4 5	6.0 8.0		ML	Stiff brown SILT (ML), no odor, moist PP=0.0 tsf Poor recovery due to rock					5	95				
	3 5 5 7	S5 24	8.0 10.0		ML	Stiff brown SILT with sand (ML), no odor, moist PP=1.5 tsf					29	71				
10	3 3 4 4	S6 24	10.0 12.0		ML	Similar to S5, except medium stiff and with frequent sand layers PP=1.0 tsf					15	85				
	1 1 3 3	S7 24	12.0 14.0		ML	Soft brown sandy SILT (ML), no odor, moist PP=1.0 tsf					30	70				
15	1 2 3 3	S8 24	14.0 16.0		ML	Medium stiff brown sandy SILT (ML), no odor, moist, contains frequent sand layers					30	70				
20	2 2	S9 24	19.0 21.0		ML	Similar to S8 PP=1.0 tsf					30	70				

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
6/15/16		24	30	31	26.3

Sample ID

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	31.0
Rock Cored (ft)	-
Samples	11S, 3U

Boring No. HA-B5

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B5

File No. 40373-446

Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	4 6															
				489.2 24.0	SM	Loose brown silty SAND (SM), no odor, moist -ALLUVIAL DEPOSITS-					58	42				
25	3 4 4 5	S10 23	24.0 26.0													
				484.2 29.0	SC	Loose brown clayey SAND (SC), no odor, wet PP=0.5 tsf					70	30				
30	1 2 6 15	S11 22	29.0 31.0													
				482.2 31.0		BOTTOM OF EXPLORATION 31.0 FT Notes: -Set 24.0 hour temporary standpipe at 30.0 ft. -Screen set at 25.0 ft to 30.0 ft. -Borehole tremie grouted to ground surface after 24 hour water level reading.										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. HA-B5

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

HALEY ALDRICH

Boring No. HA-B5A

Project	Dayton Power and Light Power Station, Killen Station-Manchester, Ohio
Client	The Dayton Power and Light Company
Contractor	Stearns Drilling

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HSA	S	-	Rig Make & Model: CME 1050
Inside Diameter (in.)	4.25	3/8	-	Bit Type: Cutting Head Drill Mud: None
Hammer Weight (lb)	spun	140	-	Casing: HSA Spun to 31.0 ft
Hammer Fall (in.)	-	30	-	Hoist/Hammer: Winch Automatic Hammer PID Make & Model:

File No.	40373-446
Sheet No.	1 of 1
Start	14 June 2016
Finish	14 June 2016
Driller	J. Gryska
H&A Rep.	S. Lewis
Elevation	513.2
Datum	NAVD 88
Location	See Plan N 249057 E 1691107

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0				511.2												
				2.0												
	PUSH	U1 22	3.0 5.0		CL	Gray lean CLAY (CL), no odor, moist PP=4.0 tsf					10	90				
5						-ALLUVIAL DEPOSITS-										
				507.2												
	PUSH	U2 18	6.0 8.0	6.0	ML	Brown SILT (ML), no odor, moist pp=1.5 tsf					5	95				
				505.2												
	PUSH	U3 24	8.0 10.0	8.0	CL	Brown sandy lean CLAY (CL), moist, torvane=9.0 kg/cm^2 PP=4.0 tsf					34	66				
10				503.2 10.0		BOTTOM OF EXPLORATION 10.0 FT Note: -Borehole tremie grouted to ground surface upon completion.										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample ID

O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	10.0
Rock Cored (ft)	-
Samples	3U

Boring No. HA-B5A

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-07-1 HA-LIB09_REV_2016_1003.GLB HA-TB+CORE+WELL-09 W FENCE.GDT \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\FIELDWORK\BORING LOGS\GINT\40373-446TB_2016.GPJ 5 Oct 16

TEST BORING REPORT

Boring No. MW-10

Project	KILLEN ELECTRIC GENERATING STATION
Client	DAYTON POWER AND LIGHT
Contractor	STEARNS DRILLING

File No. 40373-261
Sheet No. 1 of 3
Start 08 June 2016
Finish 08 June 2016
Driller B. Grahm
H&A Rep. S. Lewis
Elevation 530.8
Datum
Location
N 252,701
E 1,690,217

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Steel	Steel	--	Rig Make & Model: CME 1050
Inside Diameter (in.)	4.25	1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud: None
Hammer Fall (in.)		30	-	Casing: Auger
				Hoist/Hammer: Automatic Hammer
				PID Make & Model: N/A

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
0						ML	Blind Drill to 4', soil logged off of auger flights from 0-4'
							Dark, brown sandy SILT (ML), no odor, dry, trace fine gravel
							-FILL-
	3 8 9 11	S1 24	4.0 6.0			ML	Very stiff, brown SILT (ML), no odor, moist, gray and dark brown mottles
5							
					521.8 9.0	CL	Medium stiff, brown lean CLAY (CL), no odor, moist, gray and dark brown mottles
	2 3 5 7	S2 24	9.0 11.0				-ALLUVIUM-
10							
	0 2 3 3	S3 24	14.0 16.0				
15					515.3 15.5	ML	Medium stiff, brown SILT (ML), no odor, moist
							-ALLUVIUM-
	1 1	S4 24	19.0 21.0			ML	Soft brown, SILT (ML), no odor, wet, dark brown mottles
20							

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
6/8/2016	12:20	22.00	49	59	42.34

Sample ID
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	59
Rock Cored (ft)	
Samples	14

Boring No. MW-10

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-07-1 HA-LIB09-REV.GLB HA-TB+CORE+WELL-07-1.GDT \\CLE\PROJECTS\40373_DP&L\GINT AND HIST. LOGS\KILLEN.GPJ Oct 5, 16

TEST BORING REPORT

Boring No. MW-10
File No. 40373-261
Sheet No. 2 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
20	2 1						
25	1 1 1 2	S5 24	24.0 26.0			ML	Soft, brown sandy SILT (ML), fine sand, no odor, wet, interbedded layers of clay seams -ALLUVIUM-
30	1 2 7 9	S6 20	29.0 31.0			ML	Sandy SILT, as above
					500.3 30.5	SP	Loose, light brown poorly graded fine to medium SAND (SP), no odor, moist
35	2 6 8 13	S7 16	34.0 36.0			SP	Similar to S6 (below 30.5 ft)
					495.3 35.5	SW	Medium dense, light brown well graded fine to medium SAND with fine to coarse gravel (SW), no odor, moist
					491.8 39.0	SP	Medium dense, light brown poorly graded fine to medium SAND (SP), no odor, moist
40	4 6 9 10	S8 17	39.0 41.0				
45	2 2 3 6	S9 24	44.0 46.0			SP	Loose, light brown poorly graded fine to medium SAND (SP), trace fine gravel, no odor, wet,
	2	S10	49.0			SP	Loose, light brown poorly graded fine to medium SAND (SP), no odor, wet, interbedded layers of clay

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. MW-10

H&A-TEST BORING-07-1 HA-LIB09-REV.GLB HA-TB+CORE+WELL-07-1.GDT \\CLE\PROJECTS\40373_DP&L\GINT AND HIST. LOGS\KILLEN.GPJ Oct 5, 16

TEST BORING REPORT

Boring No. MW-10

File No. 40373-261
Sheet No. 3 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
50	3 5 6	18	51.0				
	3 6 12 14	S11 16	51.0 53.0			SP	Poorly-graded SAND, as above
							-ALLUVIUM-
	2 4 9 13	S12 13	53.0 55.0			SP	Poorly-graded SAND, as above
55	3 7 10 12	S13 16	55.0 57.0			SP	Poorly-graded SAND, as above
	5 5 8 11	S14 18	57.0 59.0			SP	Medium dense, dark brown fine to medium SAND with silt (SP), no odor, wet
					471.8 59.0		BOTTOM OF EXPLORATION 59.0 FT

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. MW-10

TEST BORING REPORT

Boring No. MW-11

Project	KILLEN ELECTRIC GENERATING STATION
Client	DAYTON POWER AND LIGHT
Contractor	STEARNS DRILLING

File No. 40373-261
Sheet No. 1 of 3
Start 08 June 2016
Finish 09 June 2016
Driller B. Grahm
H&A Rep. S. Lewis
Elevation 532.6
Datum
Location
N 252,190
E 1,690,537

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Steel	Steel	--	Rig Make & Model: CME 750
Inside Diameter (in.)	4.25	1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud: None
Hammer Fall (in.)		30	-	Casing: Auger
				Hoist/Hammer: Automatic Hammer
				PID Make & Model: N/A

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
0						ML	Brown, SILT
	8 8 8 9	S1 24	1.0 3.0			ML	Very stiff, brown SILT (ML), no odor, dry, rootlets present -FILL-
	5 6 7 7	S2 0	3.0 5.0				No recovery
5	2 3 4 5	S3 24	5.0 7.0			ML	Medium stiff, brown SILT (ML), no odor, moist, dark brown and gray mottling
					525.6 7.0		
	2 2 2 3	S4 24	7.0 9.0			ML	SILT, as above
10	2 2 2 3	S5 24	9.0 11.0			ML	Soft, brown SILT (ML), with fine sand, no odor, moist -ALLUVIUM-
	1 2 3 2	S6 24	11.0 13.0			ML	Medium stiff, brown sandy SILT (ML), frequent fine sand layers, no odor, moist,
	1 2 2 3	S7 22	13.0 15.0			ML	SILT, as above
15							
					513.6 19.0		
	2 2	S8 24	19.0 21.0			SM	Loose, brown silty fine SAND (SM), no odor, moist -ALLUVIUM-
20							

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
6/10/2016	09:00	24.00	49	59	43.47

Sample ID
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	59
Rock Cored (ft)	
Samples	18

Boring No. MW-11

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-07-1 HA-LIB09-REV.GLB HA-TB+CORE+WELL-07-1.GDT \\CLE\PROJECTS\40373_DP&L\GINT AND HIST. LOGS\KILLEN.GPJ Oct 5, 16

TEST BORING REPORT

Boring No. MW-11
File No. 40373-261
Sheet No. 2 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
20	2 3						
					508.6 24.0	SW-SM	Loose, brown fine to coarse SAND with silt (SW-SM), trace fine rounded gravel, no odor, moist
25	2 3 5 8	S9 14	24.0 26.0				-ALLUVIUM-
					503.6 29.0	SW	Loose, brown fine to coarse SAND with fine to coarse gravel (SW), no odor, moist
30	2 3 5 6	S10 14	29.0 31.0				-ALLUVIUM-
35	2 2 3 4	S11 12	34.0 36.0			SW	Loose, brown fine to coarse SAND with fine to coarse subround to rounded gravel (SW), no odor, moist
40	5 10 12 15	S12 16	39.0 41.0			SW	Medium dense, light brown fine to coarse SAND (SW), trace fine gravel, no odor, moist
					488.6 44.0	SP	Loose, light brown fine to medium SAND (SP), no odor, wet
45	4 5 5 7	S13 20	44.0 46.0				-ALLUVIUM-
	3	S14	49.0			SP	Medium dense, tan-brown fine to medium SAND (SP), no odor, wet

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. MW-11

TEST BORING REPORT

Boring No. MW-11

File No. 40373-261
Sheet No. 3 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
50	6 7 7	22	51.0				
	3 4 8 9	S15 20	51.0 53.0			SP	Medium dense, light brown fine to medium SAND (SP), no odor, wet
							-ALLUVIUM-
	3 6 8 10	S16 18	53.0 55.0			SP	Poorly-graded SAND, as above
55	4 7 10 13	S17 18	55.0 57.0			SP	Poorly-graded SAND, as above except, clay inclusions present
	4 6 8 10	S18 19	57.0 59.0			SP	Medium dense light brown fine to medium SAND (SP), no odor, wet, clay inclusions present
					473.6 59.0		BOTTOM OF EXPLORATION 59.0 FT

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. MW-11

TEST BORING REPORT

Boring No. MW-12

Project	KILLEN ELECTRIC GENERATING STATION
Client	DAYTON POWER AND LIGHT
Contractor	STEARNS DRILLING

File No. 40373-261
Sheet No. 1 of 3
Start 09 June 2016
Finish 09 June 2016
Driller J. Gryska
H&A Rep. T. Clausen
Elevation 530.8
Datum
Location
N 251,676
E 1,691,287

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Steel	Steel	--	Rig Make & Model: CME 750
Inside Diameter (in.)	4.25	1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud: None
Hammer Fall (in.)		30	-	Casing: Auger
				Hoist/Hammer: Automatic Hammer
				PID Make & Model: N/A

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
0			0.0 2.0				Advanced augers 2 feet without sampling.
	2 1 1 2	SS-1 12/24	2.0 4.0		528.8 2.0	ML	Soft to medium stiff, redish-brown, SILT (ML) and sandy SILT (ML), very fine sand fraction, little clay fines, moist -FILL-
5			4.0 6.0				
	2 3 4 4	SS-2 21/24	6.0 8.0		524.8 6.0	ML	Medium stiff, very dark brown to redish-brown, SILT (ML) to sandy SILT (ML), very fine sand fraction, trace coarse sand, trace clay, mottled gray (few), moist
			8.0 10.0				
10	2 3 5 4	SS-3 21/24	10.0 12.0		520.8 10.0	ML	Medium Stiff, very dark brown to redish-brown, SILT (ML) to sandy SILT (ML), trace gray mottles, trace medium coarse sand, moist
			12.0 14.0				
15	2 2 4 5	SS-4 22/24	14.0 16.0		516.8 14.0 516.4 14.4 516.1 14.7	ML ML ML	SILT to sandy SILT (ML) as above, with depth increasing percentage of clay fines, mottled gray, low to medium plasticity, moist Clayey, sandy SILT (ML) from 14.4 to 14.7 feet SILT (ML) to sandy SILT (ML), with depth increasing percentage of clay fines, mottled gray, low to medium plasticity, moist
			16.0 19.0				-ALLUVIUM-
20	1 3	SS-5 21/24	19.0 21.0		511.8 19.0	SM/ SP-SM	Loose, very dark brown to red-brown, silty SAND (SM) to poorly-graded SAND with silt (SP-SM), very fine to fine sand, 10-20 percent silt, decreasing silt content with depth, moist

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
6/13/2016	17:20	96.00	46	56	40.05

Sample ID
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	56
Rock Cored (ft)	
Samples	14

Boring No. MW-12

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

TEST BORING REPORT

Boring No. MW-12
File No. 40373-261
Sheet No. 2 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
20	3 5					
			21.0 24.0		SP	Medium dense, brown, poorly-graded fine SAND (SP), moist to dry -ALLUVIUM-
25	4 8 11 10	SS-6 23/24	24.0 26.0		SP	Medium dense, brown, poorly-graded fine SAND (SP), moist to dry
			26.0 29.0			
				501.8 29.0	SP	Poorly-graded SAND (SP) as above with 10-20 percent coarse sand, trace fine gravel clasts,
30	5 8 12 11	SS-7 15/24	29.0 31.0	501.3 29.5	SW	1-2 inch oxidized zone
				501.2 29.6	SW	Oxidized rusty orange color, well-graded SAND (SW) with gravel
				500.6 30.2		Brown to dark gray-brown, well-graded SAND (SW), fine to coarse sand, 10-20 percent fine gravel clasts, mixed sediment lithologies, subrounded to angular grains, moist to dry
			31.0 34.0			
				496.8 34.0	SP	Brown to light brown, poorly-graded SAND (SP), fine sand, 10-15 percent medium coarse sand, 10-15 percent fine to coarse gravel clasts
35	4 5 4 4	SS-8 22/24	34.0 36.0	495.8 35.0	SP	Medium dense, brown, poorly-graded fine SAND (SP), moist to dry
				495.4 35.4	SP	Dark brown to light gray-brown, poorly-graded SAND (SP), coarse and medium sand, 10-25 percent coarse sand, trace fine gravel, moist to dry
				495.0 35.8		
			37.0 39.0			
				491.8 39.0	SP	Loose, brown to gray-brown to very light red-brown, poorly-graded SAND (SP)
40	5 8 17 19	SS-9 15/24	39.0 41.0	490.8 40.0	SP	Medium-dense to densePoorly-graded SAND with gravel, fine to medium sand, 10-20 percent coarse sand, 10-20 percent fine gravel, mixed lithologies, subrounded to subangular grains, wet
			41.0 44.0			
				486.8 44.0	SP	Loose to medium dense, brown to dark gray-brown to light red-brown, poorly-graded SAND (SP), fine to medium sand, 5-10 percent coarse sand, trace fine gravel, wet
45	5 6 7 8	SS-10 24/24	44.0 46.0			
			46.0 48.0			
				482.8 48.0	SP	Poorly-graded SAND (SP), as above, wet
	3 3 5 9	SS-11 24/24	48.0 50.0	481.2		

Well Diagram

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. MW-12

TEST BORING REPORT

Boring No. MW-12
File No. 40373-261
Sheet No. 3 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
50					49.6	SP	Redish-brown, poorly-graded SAND (SP), more coarse than above, mostly medium sand, 10 to 25 percent coarse sand, trace 15 percent fine coarse gravel, mixed lithologies, coarse sand/fine gravel clasts, wet
	3 7 15 19	SS-12	50.0 52.0		480.8 50.0	SP	Loose, dark brown to light red-brown, poorly-graded SAND (SP), fine to medium sand, trace to 10 percent coarse sand, trace fine gravel, wet, grading to medium-dense to dense poorly-graded SAND with silt (SP-SM), fine to medium sand, trace to 10 percent silt, trace to 10 percent coarse sand, trace fine gravel, wet
	3 4 7 10	SS-13	52.0 54.0			SP	As above, loose to medium dense, poorly-graded SAND (SP), wet
	2 3 4 7	SS-14 10/24	54.0 56.0			SP	Poorly-graded SAND, as above, wet
55					474.8 56.0		**BOTTOM OF EXPLORATION AT 56 FEET**

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. MW-12

TEST BORING REPORT

Boring No. MW-13

Project	KILLEN ELECTRIC GENERATING STATION
Client	DAYTON POWER AND LIGHT
Contractor	STEARNS DRILLING

File No. 40373-261
Sheet No. 1 of 3
Start 08 June 2016
Finish 09 June 2016
Driller J. Gryska
H&A Rep. T. Clausen
Elevation 526.4
Datum
Location
N 250,547
E 1,690,635

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	Steel	Steel	--	Rig Make & Model: CME 750
Inside Diameter (in.)	4.25	1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud: None
Hammer Fall (in.)		30	-	Casing: Auger
				Hoist/Hammer: Automatic Hammer
				PID Make & Model: N/A

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
0			0.0 2.0				Advanced augers to 2 feet without sampling.
	2 5 9 8	SS-1 24/24	2.0 4.0		524.4 2.0	ML/ SM	Stiff, Dark brown to redish-brown, SILT (ML) and sandy SILT (ML), fine to very fine sand fracture, mottled gray and red-brown, with trace roots, trace clay, dry -FILL-
5			4.0 6.0				
	2 3 5 8	SS-2 24/24	6.0 8.0		520.1 6.3	CL	Soft to stiff, dark gray, silty, sandy CLAY (CL), moist, low to medium plasticity, trace woody debris (stem)
					518.9 7.5	ML	-ALLUVIUM-
			8.0 10.0				Very dense, dark redish-brown, SILT with very fine sand (ML), mottled gray, dry to moist, trace coarse sand -ALLUVIUM-
10	4 4 5 8	SS-3 24/24	10.0 12.0				
			12.0 14.0				
	3 4 8 9	SS-4 24/24	14.0 16.0		512.4 14.0	ML	Vey dark redish-brown, SILT (ML) to sandy SILT (ML), very fine sand fraction 10-20 percent, non-cohesive, non-plastic, few clay fines, not mottled, dry to moist
15			16.0 18.0				
	2 3 5 6	SS-5 24/24	18.0 20.0		508.4 18.0	ML	Very dark redish-brown, SILT (ML) and sandy SILT (ML) as above, very fine sand fraction 10-30 percent, very few clay fines, moist
20							

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water
6/13/2016	16:30	104.00	42	52	38.54

Sample ID
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram
Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	52
Rock Cored (ft)	
Samples	15

Boring No. MW-13

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

***Note: Maximum particle size (mps) is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

TEST BORING REPORT

Boring No. MW-13
File No. 40373-261
Sheet No. 2 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
20			20.0 23.0			
	2 3 3 4	SS-6 24/24	23.0 25.0	503.4 23.0	ML/ CL	Soft to Medium stiff, very dark redish-brown, sandy SILT (ML) as above with an inreasing percentage of clay, becoming sandy lean CLAY with silt (CL), very fine sand fraction with micas, moist, low to medium plasticity in sandy clay -ALLUVIUM-
25			25.0 28.0			
	1 3 4 4	SS-7 24/24	28.0 30.0	498.4 28.0	SM	Soft to Medium Stiff, Very dark redish-brown, silty SAND (SM), sandy SILT (ML) and silty, clayey SAND (SC), very fine sand fraction, moist, sandy clay has low to medium plasticity -ALLUVIUM-
30			30.0 33.0			
	1 2 4 5	SS-8 24/24	33.0 35.0	493.4 33.0	SM/ SC	Very dark redish-brown, silty SAND (SM) and silty, clayey SAND (SC), sand fraction more coarse than above, fine to medium sand 2 inch seam of poorly-graded silty SAND (SP-SM) at 34 feet
				491.8 34.6	SP	Loose to medium dense, very dark red-brown, poorly-graded SAND (SP), fine sand, trace silt, moist -ALLUVIUM-
35			35.0 38.0			
		SS-9 19/24	38.0 40.0	488.4 38.0	SP	Loose to medium dense, redish-brown, poorly-graded SAND (SP), fine sand, 10 percent silt, wet
40	1 1 3 1	SS-10 24/24	40.0 42.0	486.4 40.0	SP	As above, dark redish-brown, poorly-graded SAND (SP), fine sand, trace silt, wet
	2 2 5 7	SS-11 18/24	42.0 44.0	484.4 42.0	SC	Redish-brown, clayey, silty SAND (SC), low to medium plasticity, wet
				483.2 43.2	SW	4 inch layer of redish-brown, well-graded SAND with gravel (SW), gravel clasts of varying lithologies, rounded to subangular, wet
				482.9 43.5	SC	-ALLUVIUM-
	1 3 6 8	SS-12 18/24	44.0 46.0	482.4 44.0	SP	Redish-brown, clayey, silty SAND (SC), low to medium plasticity, wet
45				481.2 45.2		As above, loose to medium dense, redish-brown, poorly-graded SAND (SP), fine sand, trace silt, wet
				480.4		Trace organics, sand stained black (natural coal)
	5 3 4 6	SS-13 22/24	46.0 48.0	46.0	SP	As above, loose to medium dense, poorly-graded SAND (SP) with occassional black staining (natural coal), wet
	2 2 5 7	SS-14 24/24	48.0 50.0	478.4 48.0	SP	As above, poorly-graded SAND (SP) with trace fine gravel sized natural coal fragment (pebble) and trace black staining, wet

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. MW-13

H&A-TEST BORING-07-1 HA-LIB09-REV.GLB HA-TB+CORE+WELL-07-1.GDT \\CLE\PROJECTS\40373_DP&L\GINT AND HIST. LOGS\KILLEN.GPJ Oct 5, 16

TEST BORING REPORT

Boring No. MW-13

File No. 40373-261
Sheet No. 3 of 3

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	Well Diagram	Stratum Change Elev/Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)
50	2 2 4 5	SS-15 22/24	50.0 52.0		476.4 50.0	SP	Poorly-graded SAND, as above, color change from brown to dark gray-brown, fine sand, trace 10 percent black organics (natural coal fragments), and trace coarse sand to fine gravel sized natural coal fragments, wet (coal fragments smear/streak black on paper, hard to soft, lignite)
					474.4 52.0		-ALLUVIUM-
							BOTTOM OF EXPLORATION AT 52 FEET

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. MW-13

Cone Penetration Test Summary and

Standard Cone Penetration Test Plots

CONETEC

Job No:	16-53042
Client:	Haley & Aldrich
Project:	DP&L Killen Station, Manchester, OH
Start Date:	16-May-2016
End Date:	18-May-2016

CONE PENETRATION TEST SUMMARY

Sounding ID	File Name	Date	Cone	Assumed Phreatic Surface[1] (ft)	Final Depth (ft)	Shear Wave Velocity Tests	Northing[2] (ft)	Easting (ft)	Elevation (ft)	Refer to Notation Number
SCPT16-HAC1	16-53042_SPHAC1	17-May-2016	419:T1500F15U500	84.2	90.06	29	249161	1691283	571.98	
CPT16-HAC3	16-53042_CPHAC3	17-May-2016	419:T1500F15U500	80.0	75.13		251458	1693488	572.41	3
SCPT16-HAC4	16-53042_SPHAC4	18-May-2016	419:T1500F15U500	80.9	89.07	27	253152	1691563	572.14	
CPT16-HAC5	16-53042_CPHAC5	17-May-2016	419:T1500F15U500	52.0	85.30		253104	1690695	572.63	3
CPT16-HAC6	16-53042_CPHAC6	16-May-2016	419:T1500F15U500	52.0	65.12		252007	1691105	572.15	3
Totals	5 soundings				404.69	56				

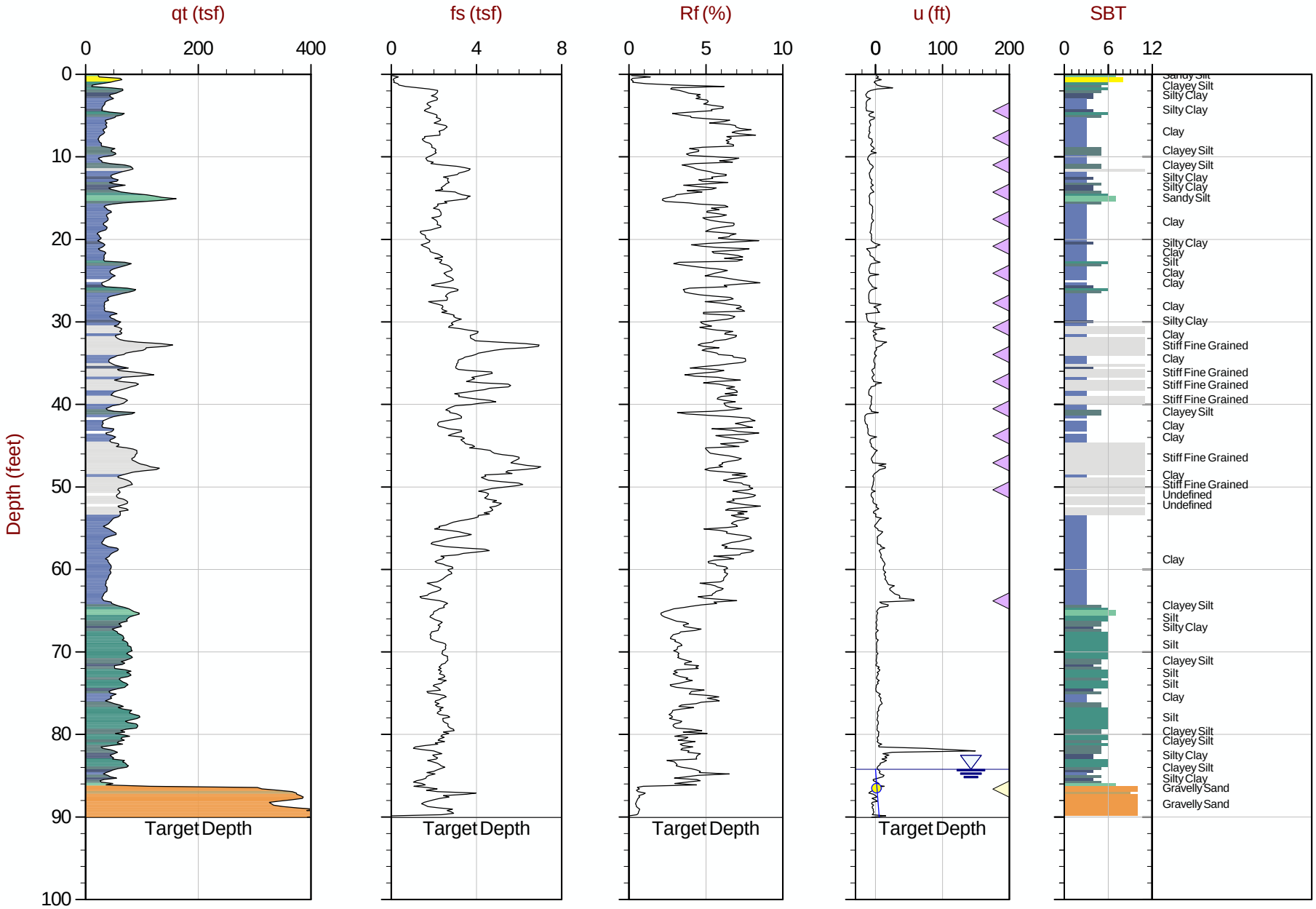
1. Assumed phreatic surface depths were determined from the pore pressure data unless otherwise noted. Hydrostatic data were used for calculated parameters.
2. Coordinates are NAD83 / Ohio State Plane Coordinates South and were provided to us by the client.
3. Assumed phreatic surface estimated from dynamic pore pressure response.
4. No phreatic surface detected

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:17:16 07:41
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: 419:T1500F15U500



Max Depth: 27.450 m / 90.06 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_SPHAC1.COR

SBT: Robertson and Campanella, 1986
Coords: Ohio SPC South N: 249161ft E: 1691283ft Elev: 571.98ft

Hydrostatic Line · Ueq · Assumed Ueq · PPD, Ueq achieved · PPD, Ueq not achieved

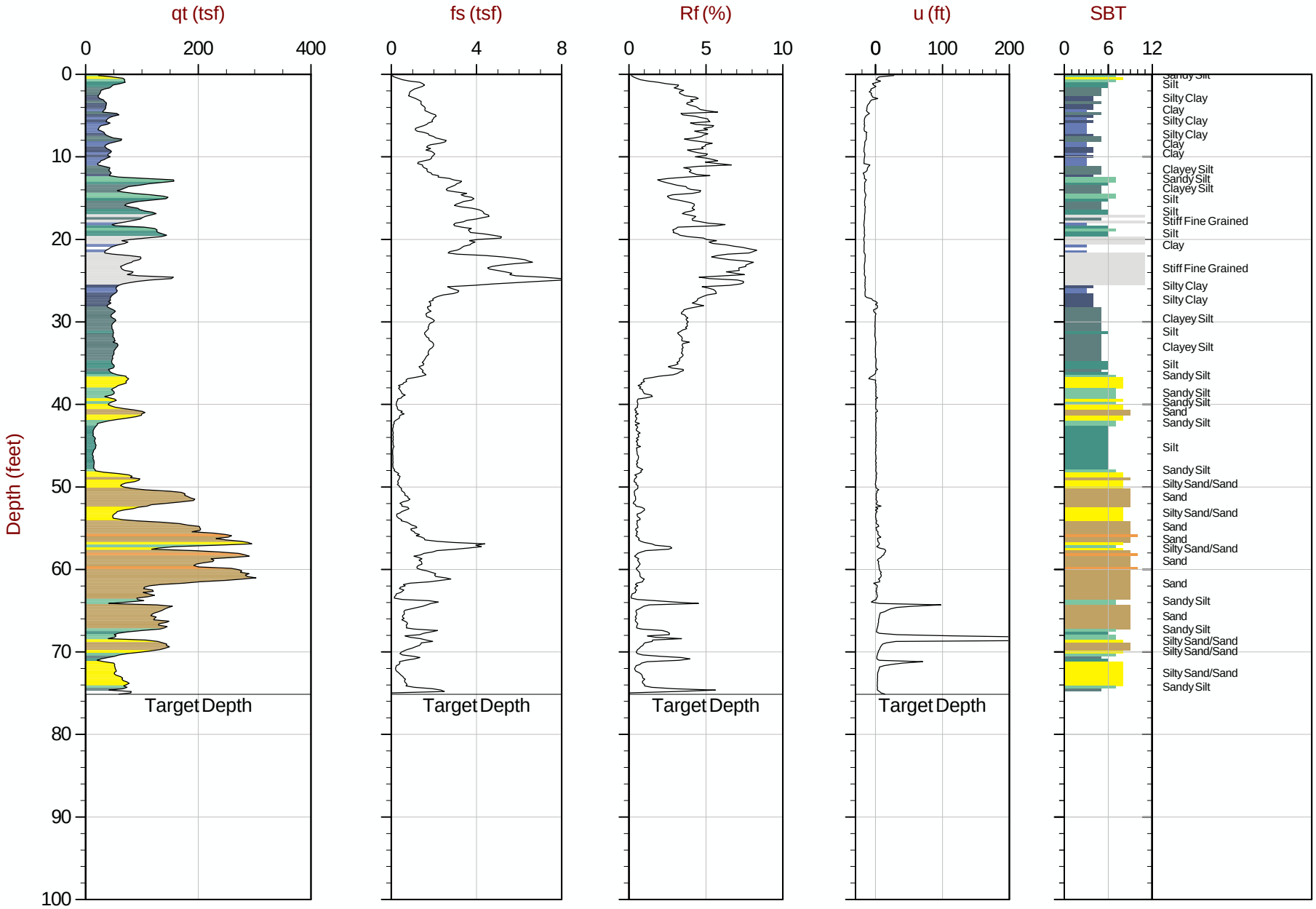
The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:17:16 13:43
Site: DP&L Killen Station, Manchester, OH

Sounding: CPT16-HAC3
Cone: 419:T1500F15U500



Max Depth: 22.900 m / 75.13 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_CPHAC3.COR

SBT: Robertson and Campanella, 1986
Coords: Ohio SPC South N: 251458ft E: 1693488ft Elev: 572.41ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

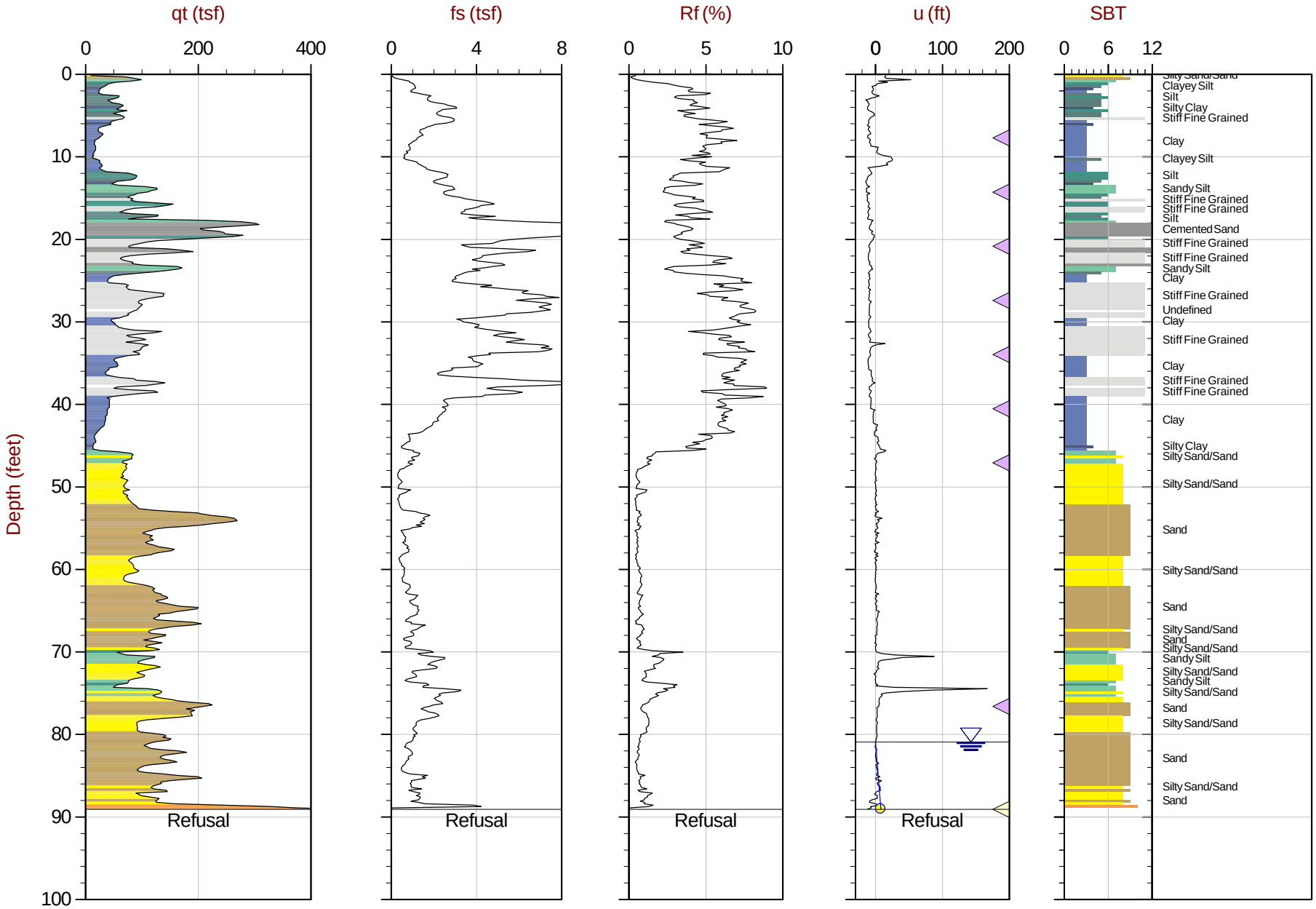
The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:18:16 07:49
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: 419:T1500F15U500



Max Depth: 27.150 m / 89.07 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_SPHAC4.COR

SBT: Robertson and Campanella, 1986
Coords: Ohio SPC South N: 253152ft E: 1691563ft Elev: 572.14ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

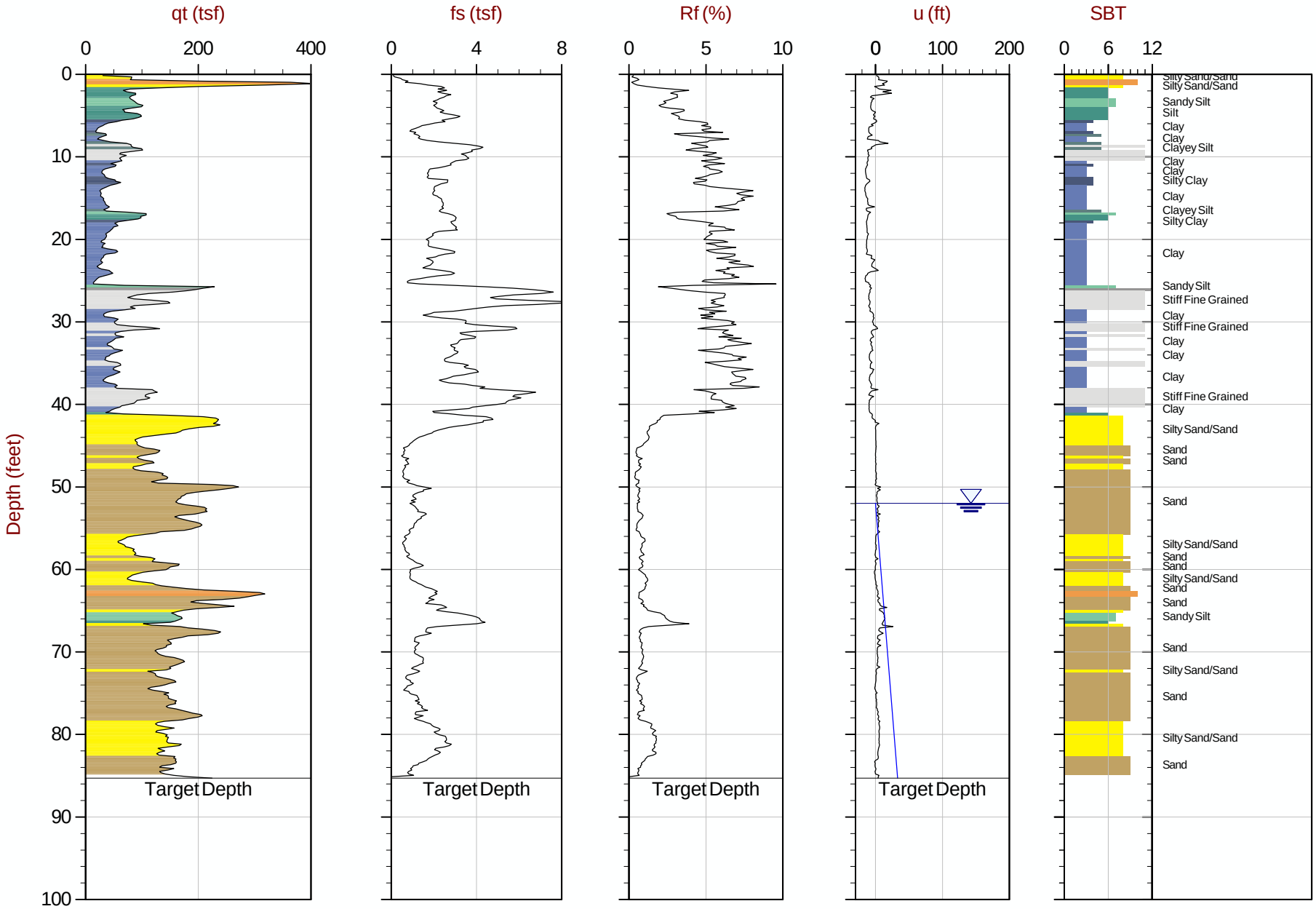
The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:17:16 16:08
Site: DP&L Killen Station, Manchester, OH

Sounding: CPT16-HAC5
Cone: 419:T1500F15U500



Max Depth: 26.000 m / 85.30 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_CPHAC5.COR

SBT: Robertson and Campanella, 1986
Coords: Ohio SPC South N: 253104ft E: 1690695ft Elev: 572.63ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

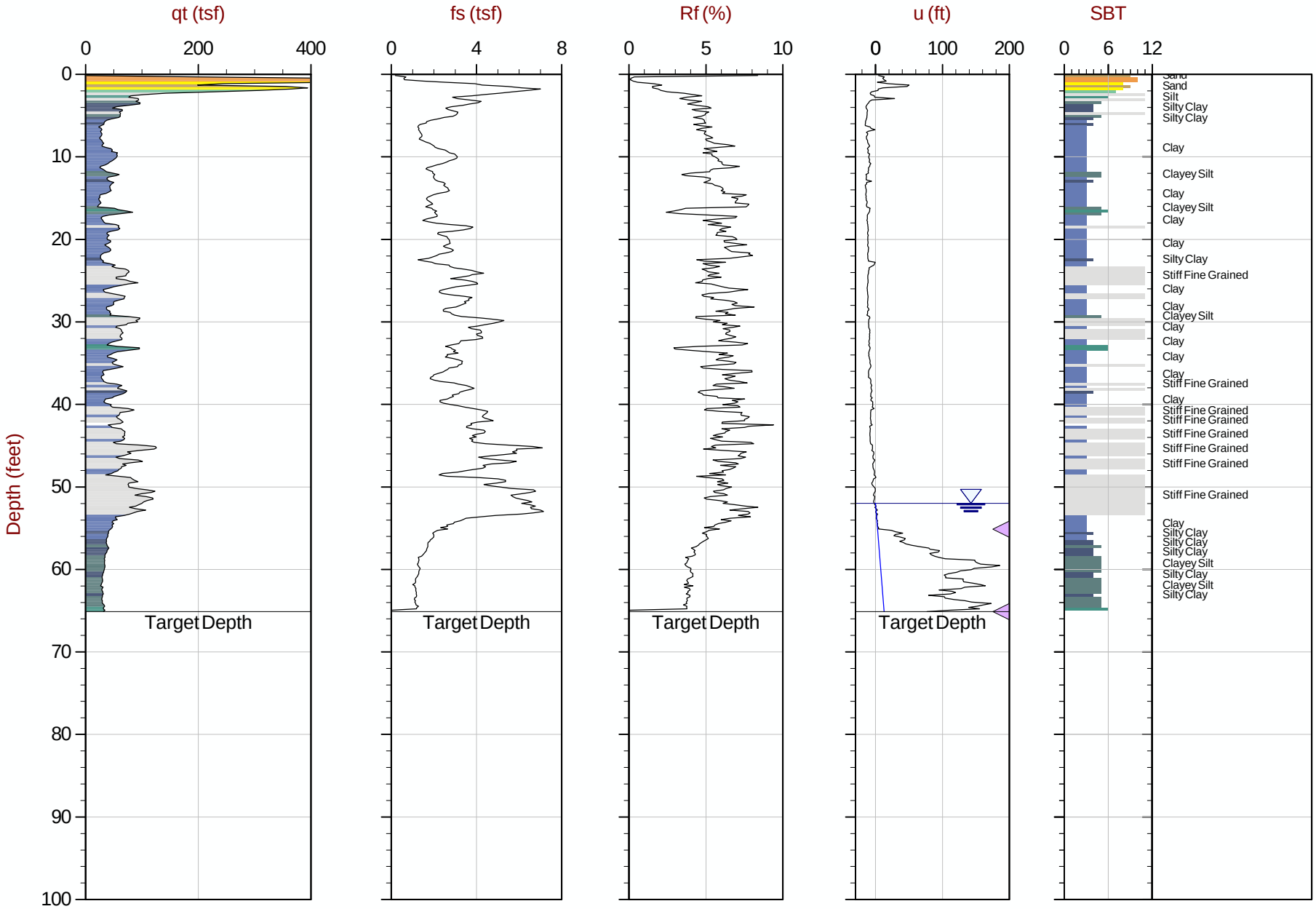
The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:16:16 12:42
Site: DP&L Killen Station, Manchester, OH

Sounding: CPT16-HAC6
Cone: 419:T1500F15U500



Max Depth: 19.850 m / 65.12 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_CPHAC6.COR

SBT: Robertson and Campanella, 1986
Coords: Ohio SPC South N: 252007ft E: 1691105ft Elev: 572.15ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Normalized Cone Penetration Test Plots

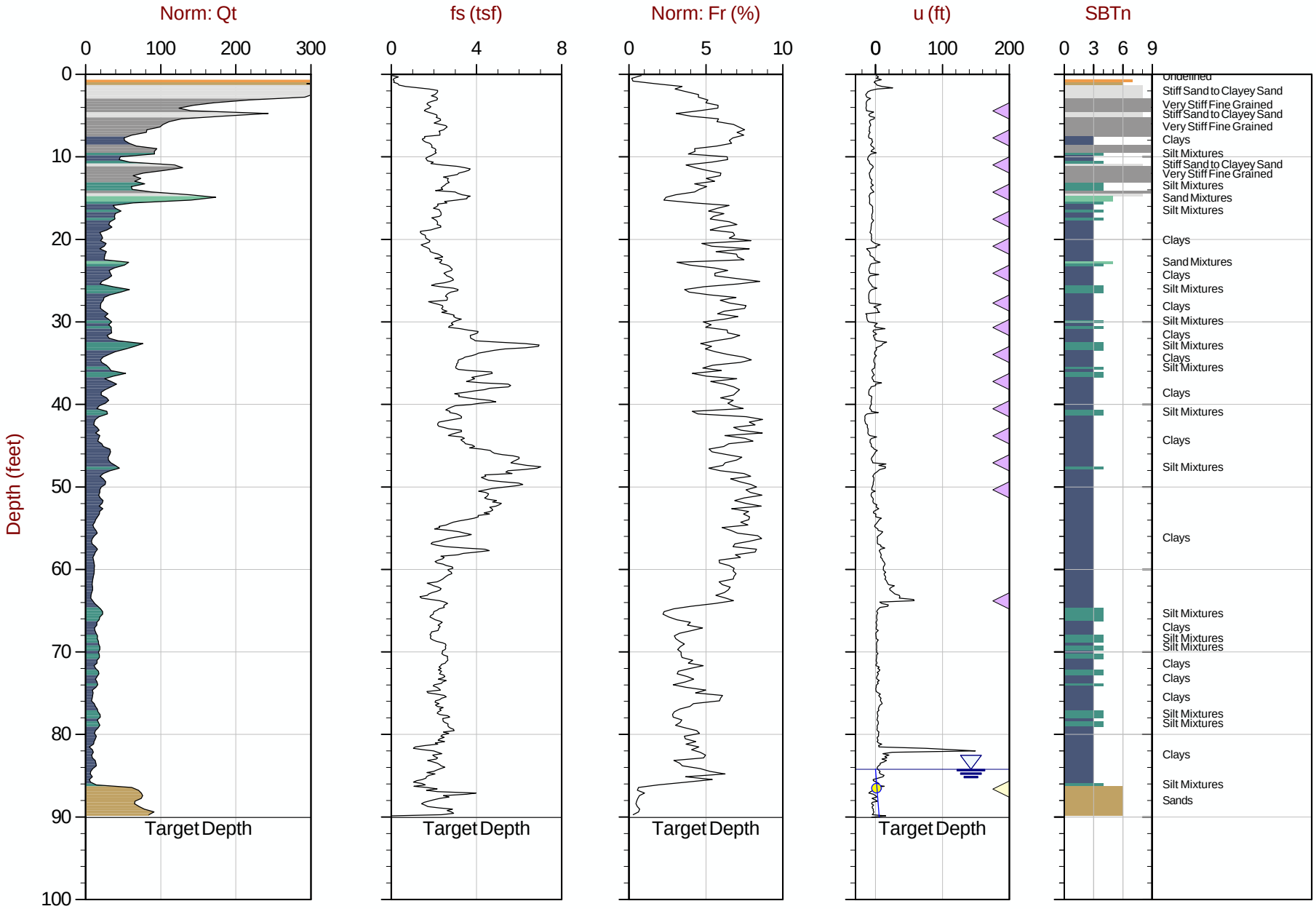
CONETEC

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:17:16 07:41
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: 419:T1500F15U500



Max Depth: 27.450 m / 90.06 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_SPHAC1.COR

SBT: Robertson, 1990
Coords: Ohio SPC South N: 249161ft E: 1691283ft Elev: 571.98ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

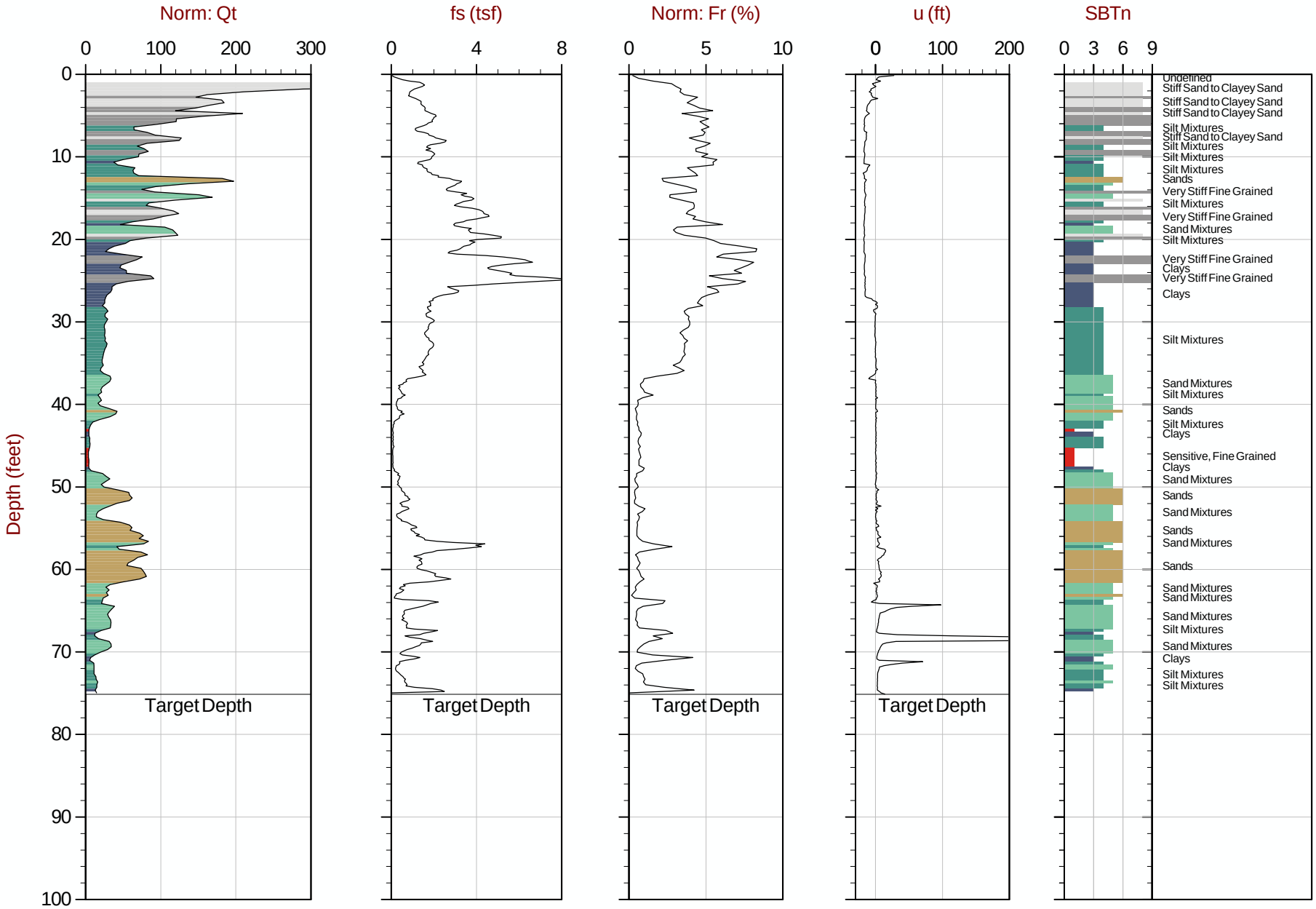
The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:17:16 13:43
Site: DP&L Killen Station, Manchester, OH

Sounding: CPT16-HAC3
Cone: 419:T1500F15U500



Max Depth: 22.900 m / 75.13 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_CPHAC3.COR

SBT: Robertson, 1990
Coords: Ohio SPC South N: 251458ft E: 1693488ft Elev: 572.41ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

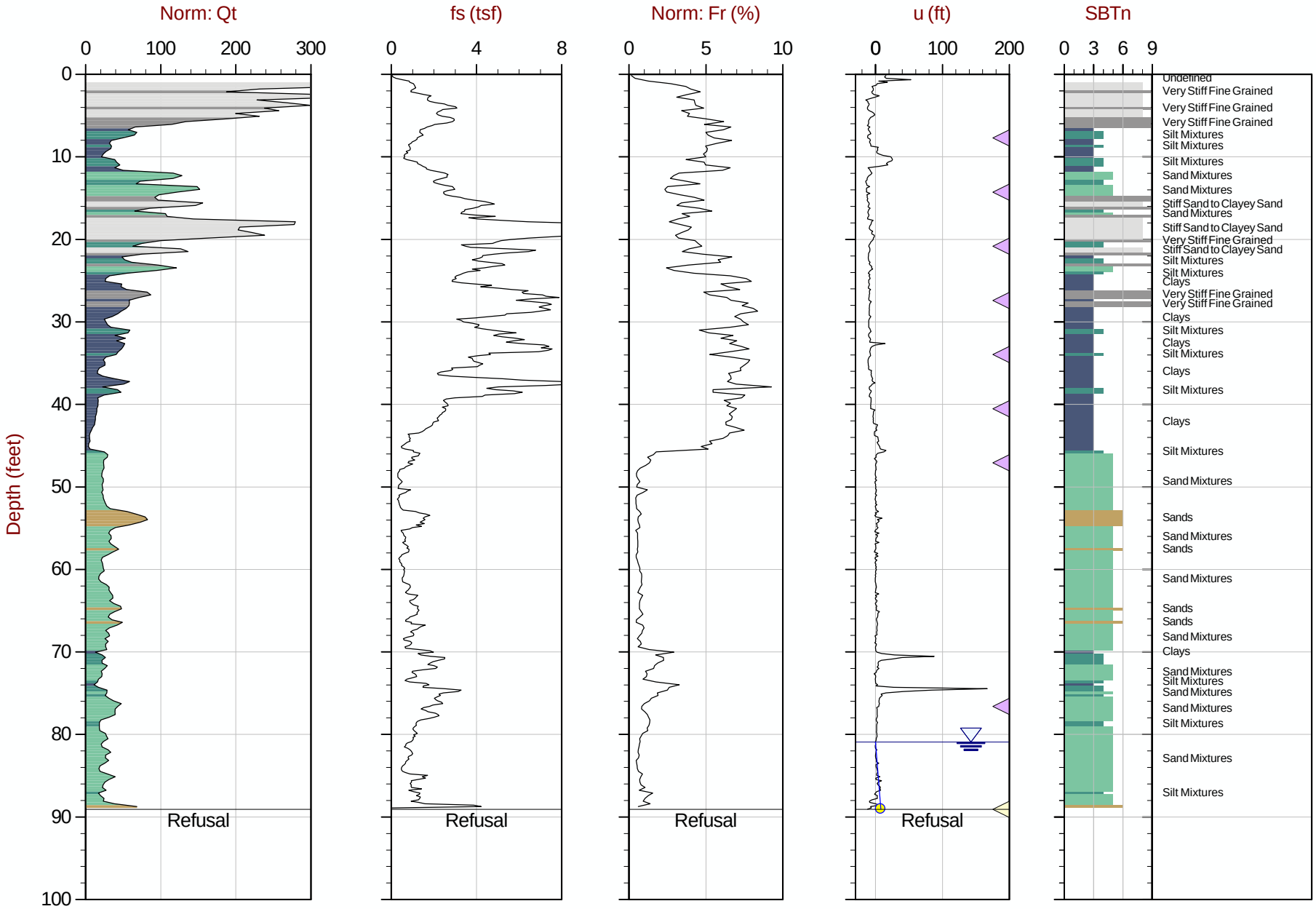
The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:18:16 07:49
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: 419:T1500F15U500



Max Depth: 27.150 m / 89.07 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_SPHAC4.COR

SBT: Robertson, 1990
Coords: Ohio SPC South N: 253152ft E: 1691563ft Elev: 572.14ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

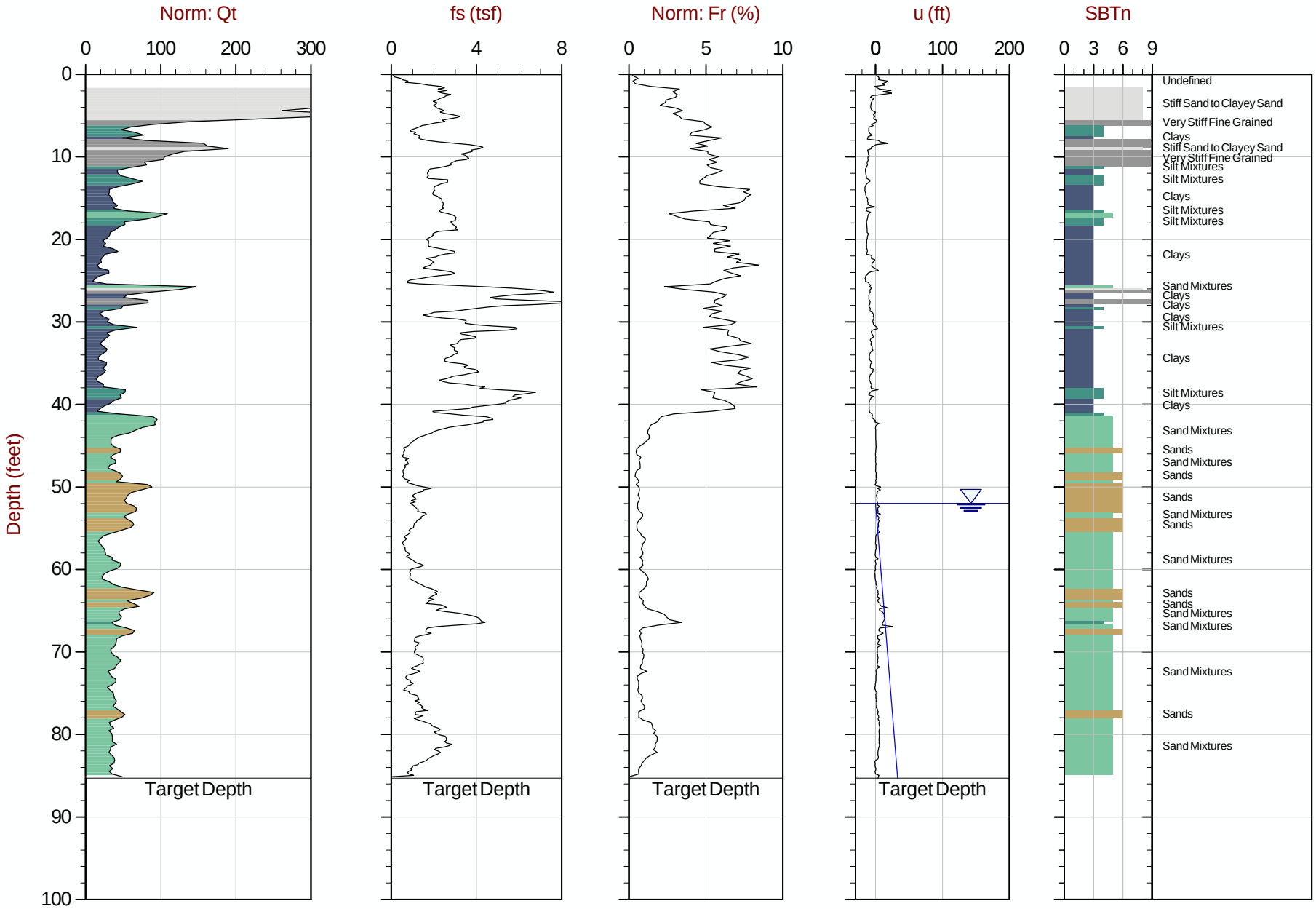
The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:17:16 16:08
Site: DP&L Killen Station, Manchester, OH

Sounding: CPT16-HAC5
Cone: 419:T1500F15U500



Max Depth: 26.000 m / 85.30 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_CPHAC5.COR

SBT: Robertson, 1990
Coords: Ohio SPC South N: 253104ft E: 1690695ft Elev: 572.63ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

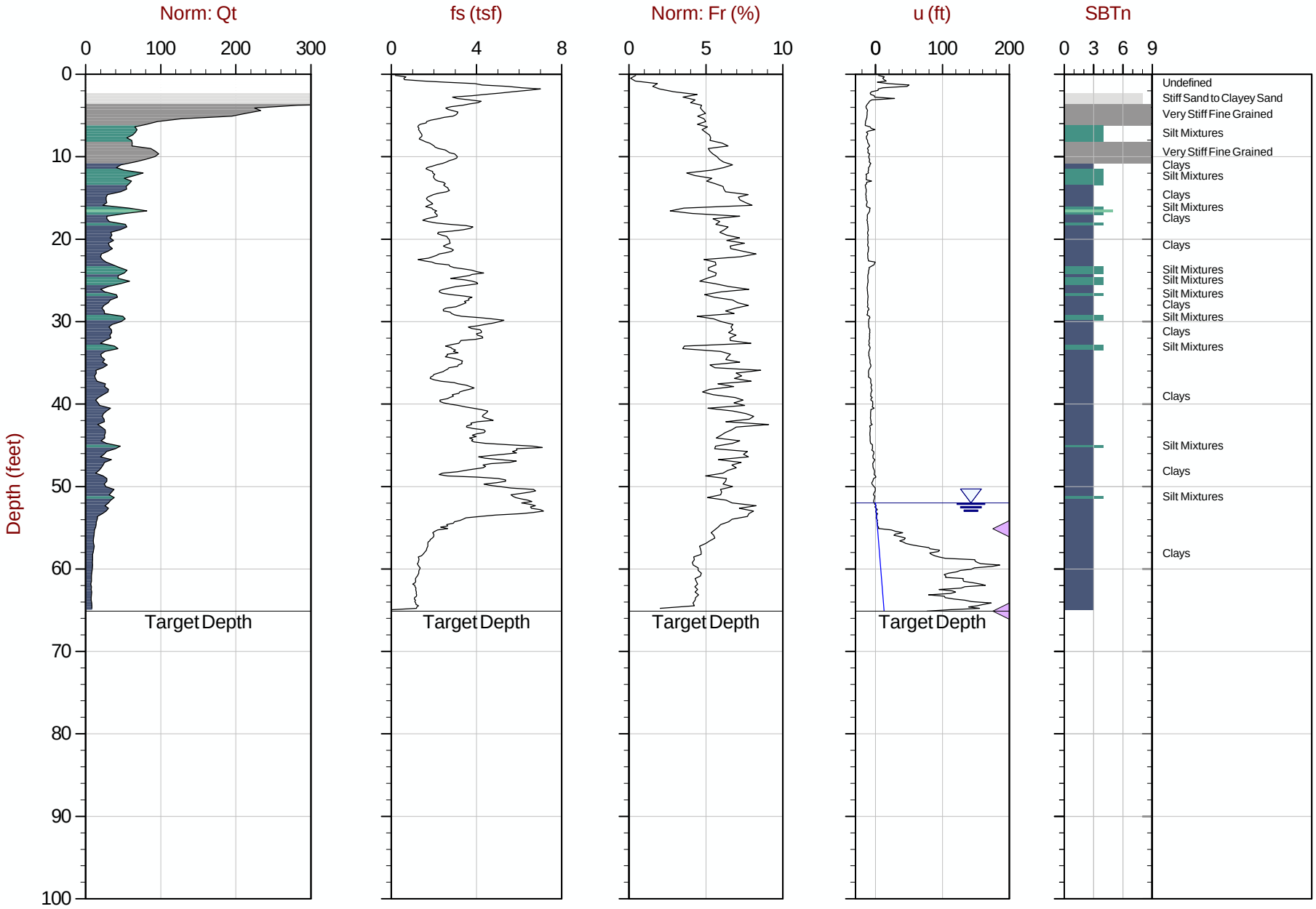
The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:16:16 12:42
Site: DP&L Killen Station, Manchester, OH

Sounding: CPT16-HAC6
Cone: 419:T1500F15U500



Max Depth: 19.850 m / 65.12 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_CPHAC6.COR

SBT: Robertson, 1990
Coords: Ohio SPC South N: 252007ft E: 1691105ft Elev: 572.15ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Seismic Cone Penetration Test Plots

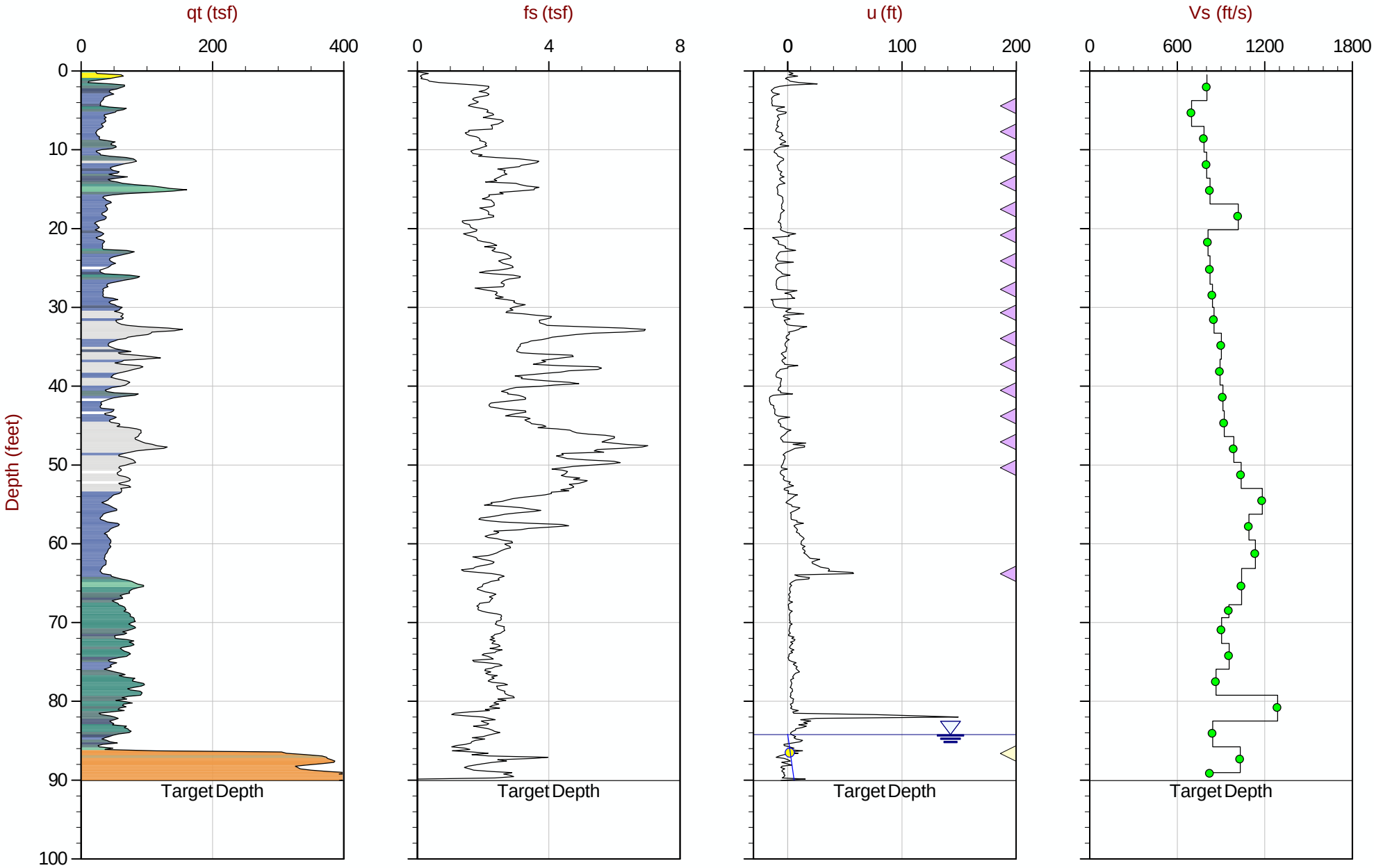
CONETEC

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:17:16 07:41
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: 419:T1500F15U500



Max Depth: 27.450 m / 90.06 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_SPHAC1.COR

SBT: Robertson and Campanella, 1986
Coords: Ohio SPC South N: 249161ft E: 1691283ft Elev: 571.98ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

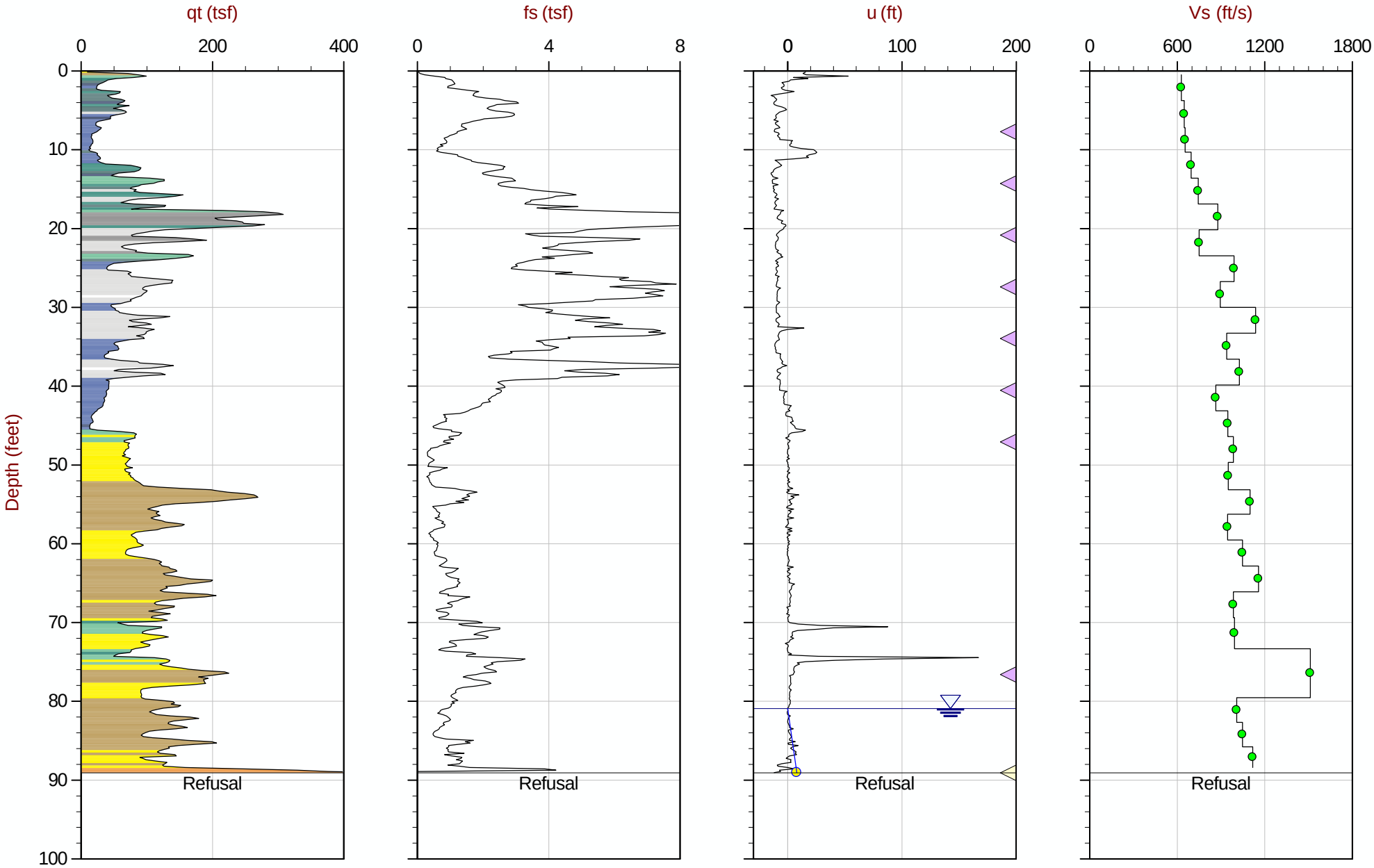
The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 05:18:16 07:49
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: 419:T1500F15U500



Max Depth: 27.150 m / 89.07 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: 0.100 m

File: 16-53042_SPHAC4.COR

SBT: Robertson and Campanella, 1986
Coords: Ohio SPC South N: 253152ft E: 1691563ft Elev: 572.14ft

Hydrostatic Line Ueq Assumed Ueq PPD, Ueq achieved PPD, Ueq not achieved

The reported coordinates were acquired from consumer-grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Seismic Cone Penetration Test Tabular Results (Vs)

CONETEC

Job No:	16-53042
Client:	Haley & Aldrich
Project:	DP&L Killen Station, Manchester, OH
Sounding ID:	SCPT16-HAC1
Date:	17-May-2016

Seismic Source:	Beam
Source Offset (ft):	1.97
Source Depth (ft):	0.00
Geophone Offset (ft):	0.66

SCPTu SHEAR WAVE VELOCITY TEST RESULTS - Vs

Tip Depth (ft)	Geophone Depth (ft)	Ray Path (ft)	Ray Path Difference (ft)	Travel Time Interval (ms)	Interval Velocity (ft/s)
1.15	0.49	2.03			
4.43	3.77	4.26	2.23	2.77	804
7.71	7.05	7.32	3.07	4.39	699
10.99	10.33	10.52	3.20	4.08	784
14.27	13.62	13.76	3.24	4.04	802
17.55	16.90	17.01	3.25	3.95	825
20.83	20.18	20.27	3.26	3.20	1019
24.11	23.46	23.54	3.27	4.02	812
27.72	27.07	27.14	3.60	4.36	826
30.68	30.02	30.08	2.95	3.50	842
33.96	33.30	33.36	3.27	3.84	852
37.24	36.58	36.63	3.28	3.63	903
40.52	39.86	39.91	3.28	3.67	894
43.80	43.14	43.19	3.28	3.59	913
47.08	46.42	46.47	3.28	3.55	923
50.36	49.70	49.74	3.28	3.32	989
53.64	52.99	53.02	3.28	3.16	1038
56.92	56.27	56.30	3.28	2.77	1184
60.20	59.55	59.58	3.28	3.00	1092
63.81	63.16	63.19	3.61	3.17	1136
68.41	67.75	67.78	4.59	4.41	1042
70.05	69.39	69.42	1.64	1.72	955
73.33	72.67	72.70	3.28	3.63	904
76.61	75.95	75.98	3.28	3.43	956
79.89	79.23	79.26	3.28	3.78	867
83.17	82.51	82.54	3.28	2.55	1288
86.45	85.79	85.82	3.28	3.88	844
89.73	89.07	89.10	3.28	3.18	1032
90.06	89.40	89.42	0.33	0.40	826

Job No:	16-53042
Client:	Haley & Aldrich
Project:	DP&L Killen Station, Manchester, OH
Sounding ID:	SCPT16-HAC4
Date:	18-May-2016

Seismic Source:	Beam
Source Offset (ft):	1.97
Source Depth (ft):	0.00
Geophone Offset (ft):	0.66

SCPTu SHEAR WAVE VELOCITY TEST RESULTS - Vs

Tip Depth (ft)	Geophone Depth (ft)	Ray Path (ft)	Ray Path Difference (ft)	Travel Time Interval (ms)	Interval Velocity (ft/s)
1.15	0.49	2.03			
4.43	3.77	4.26	2.23	3.55	628
7.87	7.22	7.48	3.23	4.98	648
10.99	10.33	10.52	3.04	4.64	655
14.27	13.62	13.76	3.24	4.65	696
17.55	16.90	17.01	3.25	4.37	744
20.83	20.18	20.27	3.26	3.72	878
24.11	23.46	23.54	3.27	4.36	750
27.40	26.74	26.81	3.27	3.30	990
30.68	30.02	30.08	3.27	3.65	896
33.96	33.30	33.36	3.27	2.88	1138
37.24	36.58	36.63	3.28	3.49	939
40.52	39.86	39.91	3.28	3.19	1026
43.80	43.14	43.19	3.28	3.79	865
47.08	46.42	46.47	3.28	3.46	948
50.36	49.70	49.74	3.28	3.33	986
53.81	53.15	53.19	3.44	3.62	950
56.92	56.27	56.30	3.12	2.83	1100
60.20	59.55	59.58	3.28	3.47	945
63.48	62.83	62.86	3.28	3.13	1048
66.77	66.11	66.14	3.28	2.83	1158
70.05	69.39	69.42	3.28	3.33	986
73.98	73.33	73.35	3.94	3.96	993
80.22	79.56	79.58	6.23	4.12	1512
83.33	82.68	82.70	3.12	3.09	1008
86.45	85.79	85.82	3.12	2.97	1048
89.07	88.42	88.44	2.62	2.35	1118

Pore Pressure Dissipation Summary and

Pore Pressure Dissipation Plots

CONETEC

Job No: 16-53042
Client: Haley & Aldrich
Project: DP&L Killen Station, Manchester, OH
Start Date: 16-May-2016
End Date: 18-May-2016

CPTu PORE PRESSURE DISSIPATION SUMMARY

Sounding ID	File Name	Cone Area (cm^2)	Duration (s)	Test Depth (ft)	Estimated Equilibrium Pore Pressure U_{eq} (ft)	Calculated Phreatic Surface (ft)	Estimated Phreatic Surface (ft)
SCPT16-HAC1	16-53042_SPHAC1	15	645	4.43			
SCPT16-HAC1	16-53042_SPHAC1	15	300	7.71			
SCPT16-HAC1	16-53042_SPHAC1	15	350	10.99			
SCPT16-HAC1	16-53042_SPHAC1	15	605	14.27			
SCPT16-HAC1	16-53042_SPHAC1	15	600	17.55			
SCPT16-HAC1	16-53042_SPHAC1	15	900	20.83			
SCPT16-HAC1	16-53042_SPHAC1	15	1165	24.11			
SCPT16-HAC1	16-53042_SPHAC1	15	600	27.72			
SCPT16-HAC1	16-53042_SPHAC1	15	330	30.68			
SCPT16-HAC1	16-53042_SPHAC1	15	600	33.96			
SCPT16-HAC1	16-53042_SPHAC1	15	600	37.24			
SCPT16-HAC1	16-53042_SPHAC1	15	620	40.52			
SCPT16-HAC1	16-53042_SPHAC1	15	600	43.80			
SCPT16-HAC1	16-53042_SPHAC1	15	600	47.08			
SCPT16-HAC1	16-53042_SPHAC1	15	600	50.36			
SCPT16-HAC1	16-53042_SPHAC1	15	1020	63.81			
SCPT16-HAC1	16-53042_SPHAC1	15	200	86.61	2.39	84.22	
CPT16-HAC1A	16-53042_CPHAC1A	15	13800	20.01			

Job No:	16-53042
Client:	Haley & Aldrich
Project:	DP&L Killen Station, Manchester, OH
Start Date:	16-May-2016
End Date:	18-May-2016

CPTu PORE PRESSURE DISSIPATION SUMMARY

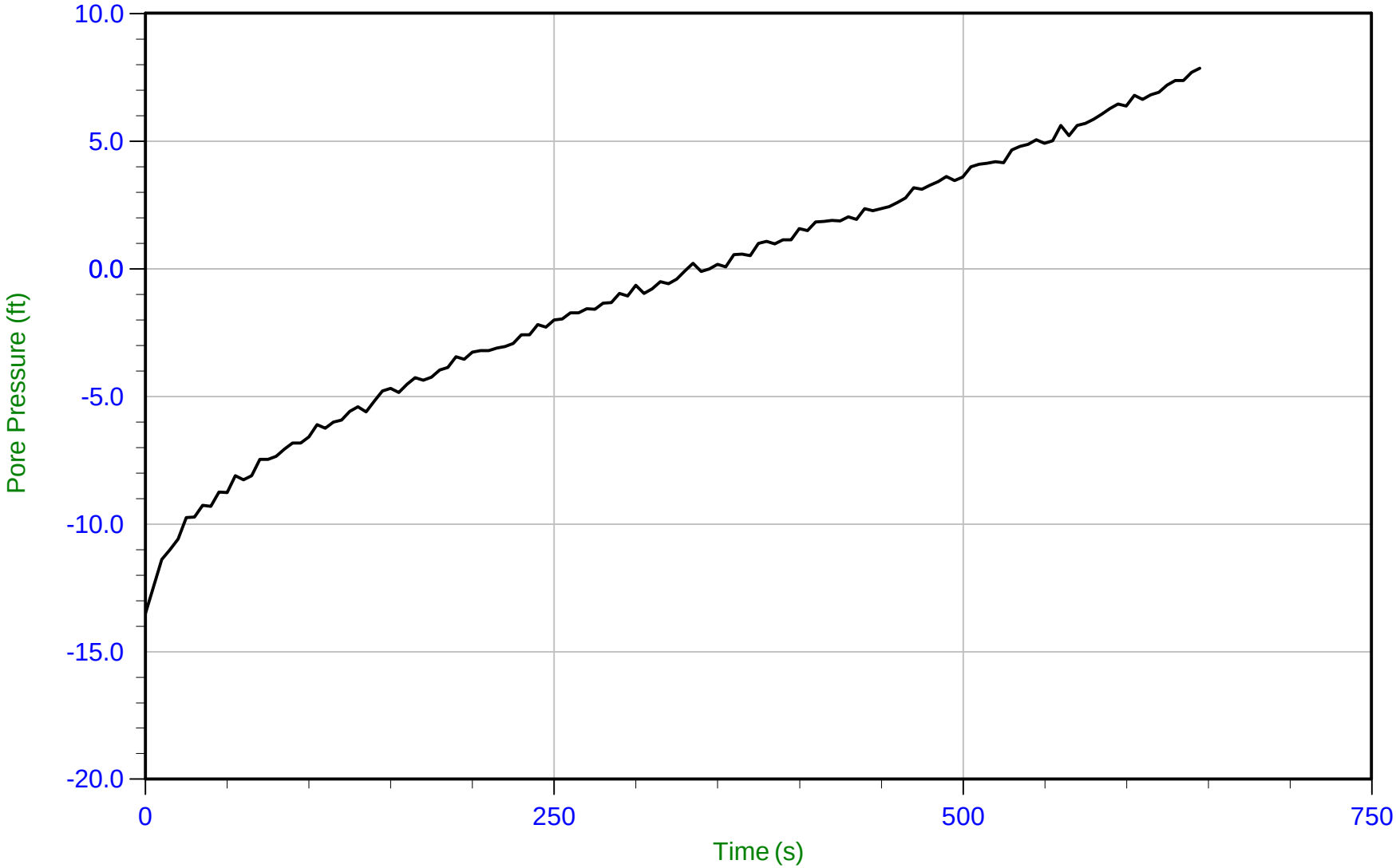
Sounding ID	File Name	Cone Area (cm^2)	Duration (s)	Test Depth (ft)	Estimated Equilibrium Pore Pressure U_{eq} (ft)	Calculated Phreatic Surface (ft)	Estimated Phreatic Surface (ft)
SCPT16-HAC4	16-53042_SPHAC4	15	300	7.71			
SCPT16-HAC4	16-53042_SPHAC4	15	300	14.27			
SCPT16-HAC4	16-53042_SPHAC4	15	305	20.83			
SCPT16-HAC4	16-53042_SPHAC4	15	325	27.39			
SCPT16-HAC4	16-53042_SPHAC4	15	300	33.96			
SCPT16-HAC4	16-53042_SPHAC4	15	300	40.52			
SCPT16-HAC4	16-53042_SPHAC4	15	300	47.08			
SCPT16-HAC4	16-53042_SPHAC4	15	290	76.61			
SCPT16-HAC4	16-53042_SPHAC4	15	200	89.07	8.15	80.93	
CPT16-HAC6	16-53042_CPHAC6	15	180	55.12			
CPT16-HAC6	16-53042_CPHAC6	15	400	65.12			
Totals	29 dissipations		455.6 min				

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 1.350 m / 4.429 ft
Duration: 645.0 s

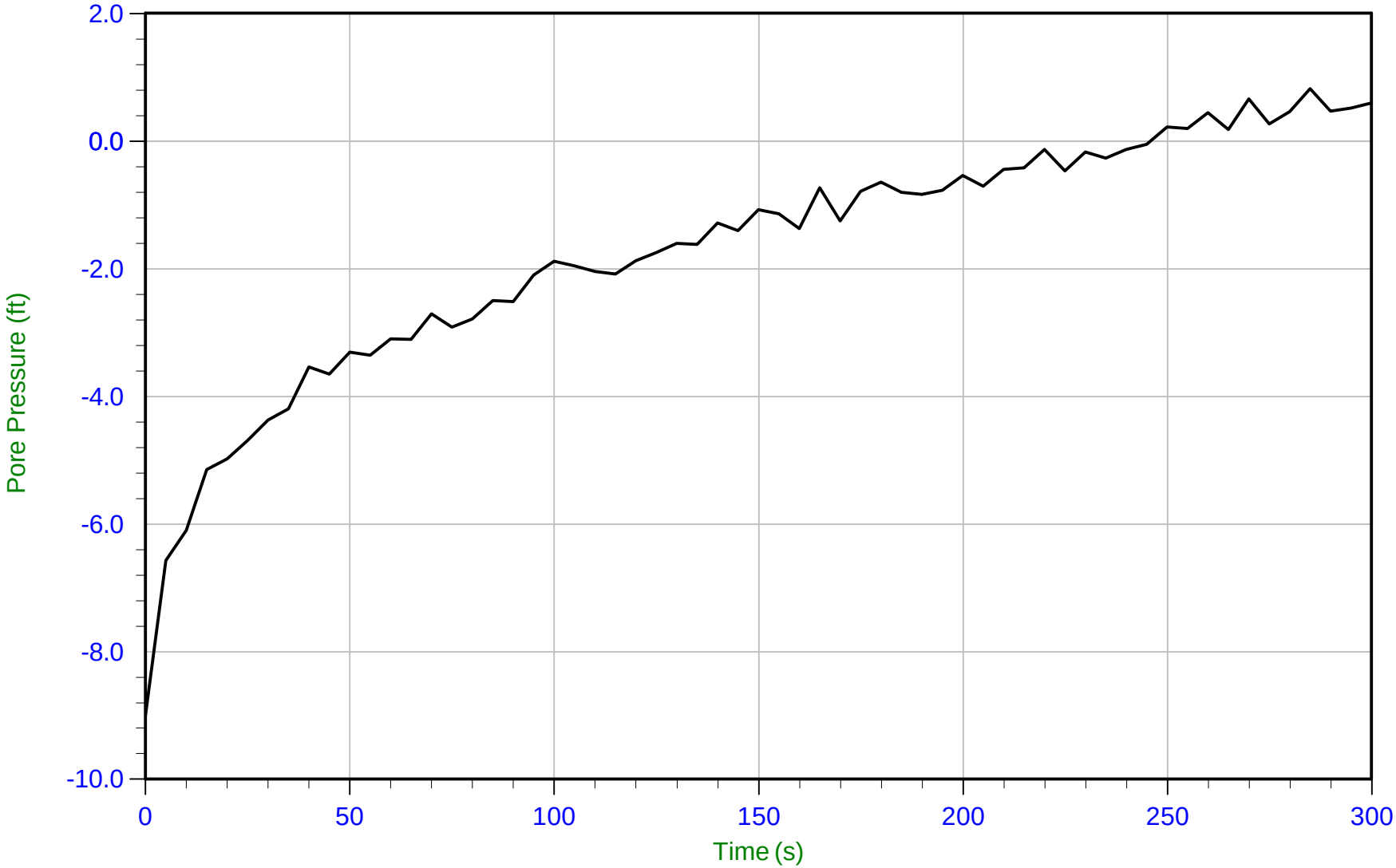
U Min: -13.5 ft
U Max: 7.9 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 2.350 m / 7.710 ft
Duration: 300.0 s

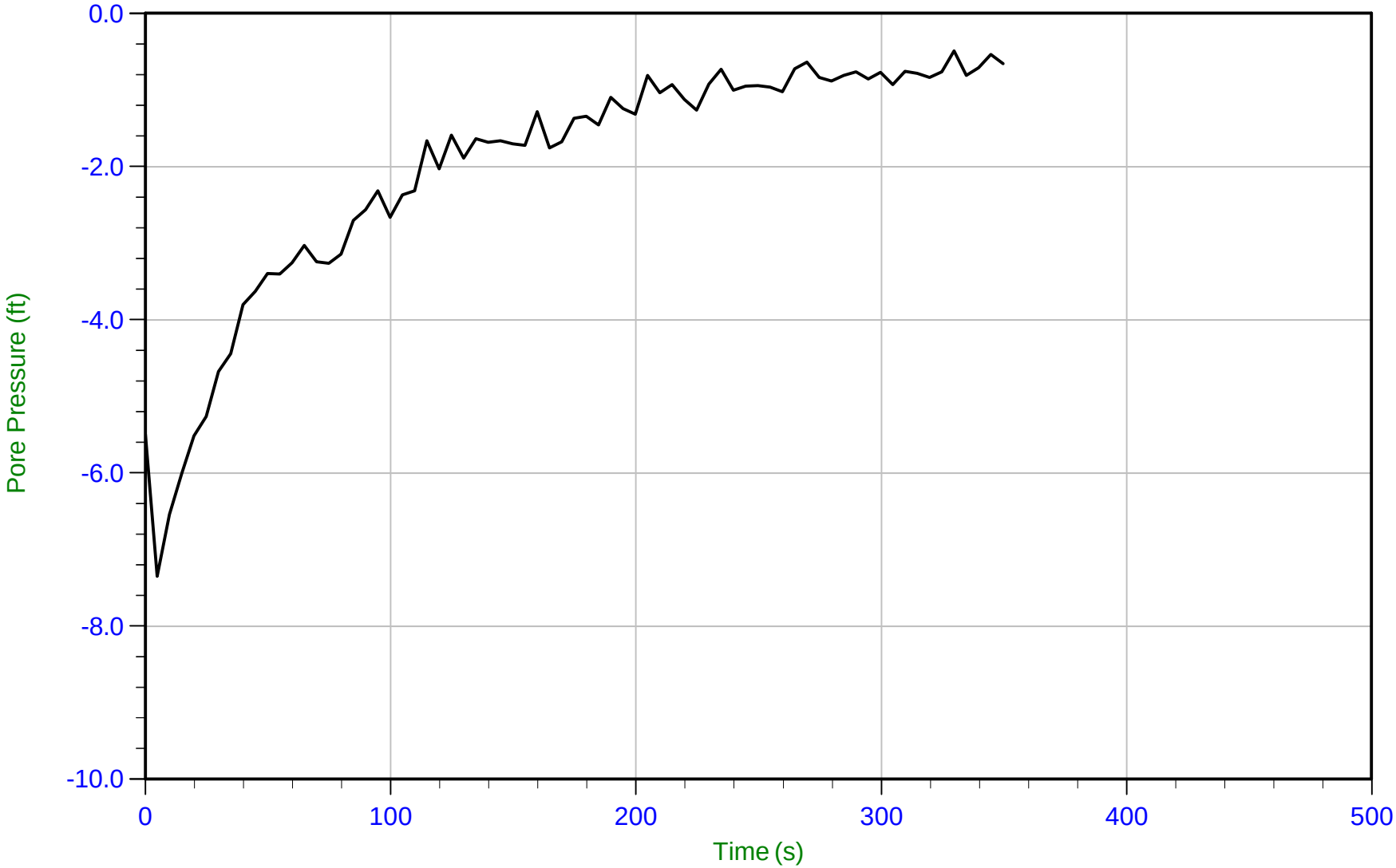
U Min: -9.0 ft
U Max: 0.8 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 3.350 m / 10.991 ft
Duration: 350.0 s

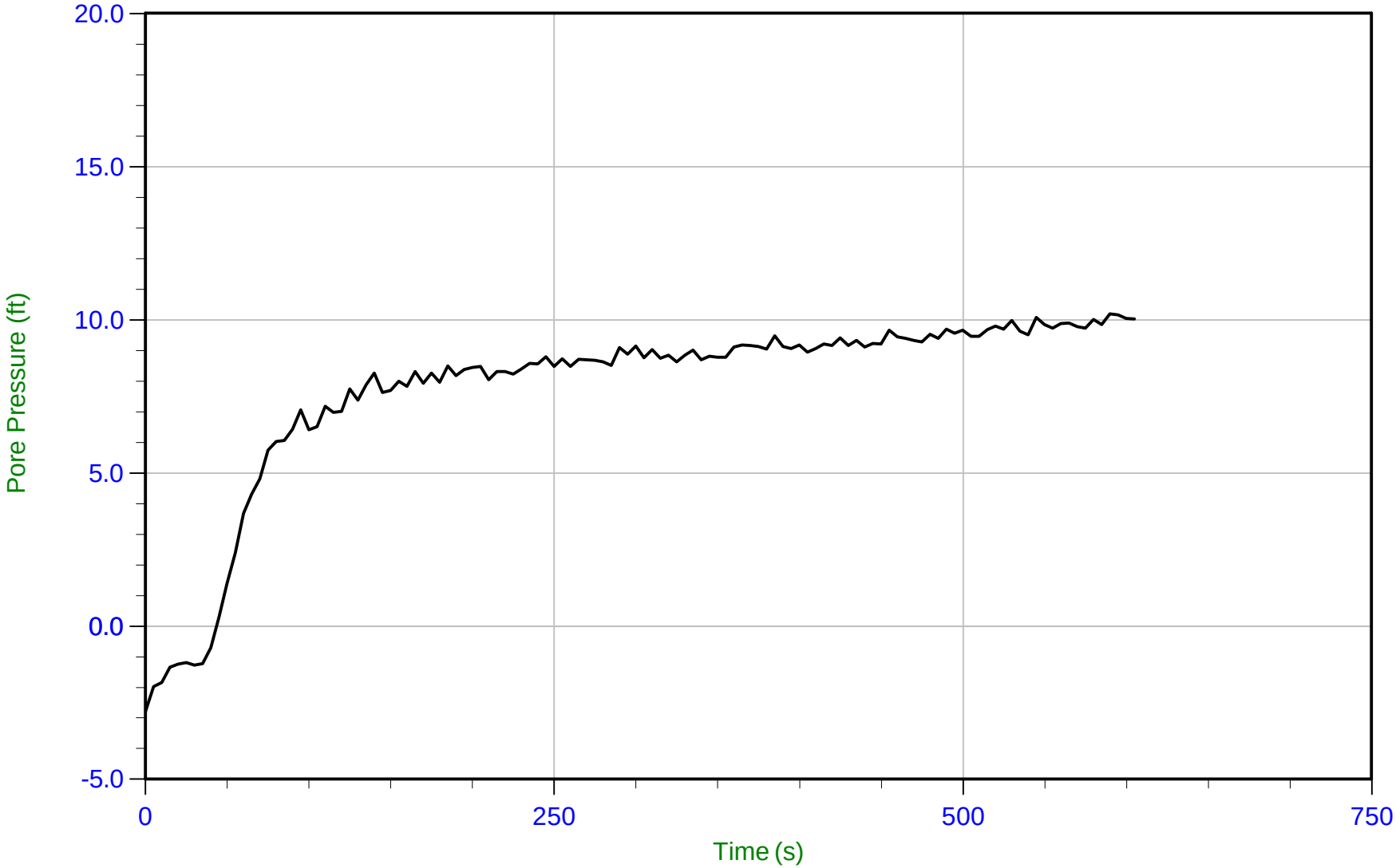
U Min: -7.4 ft
U Max: -0.5 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 4.350 m / 14.271 ft
Duration: 605.0 s

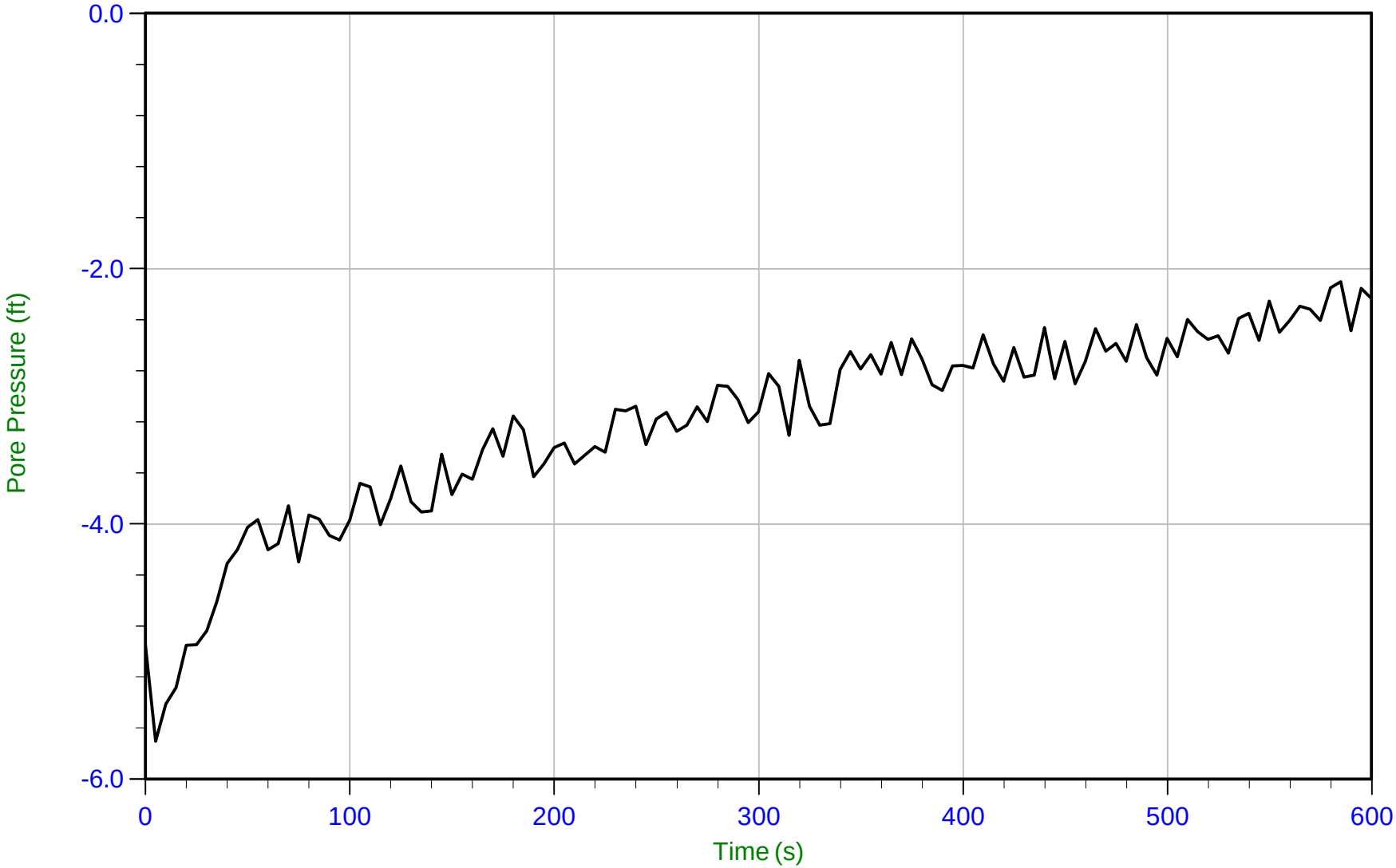
U Min: -2.8 ft
U Max: 10.2 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 5.350 m / 17.552 ft
Duration: 600.0 s

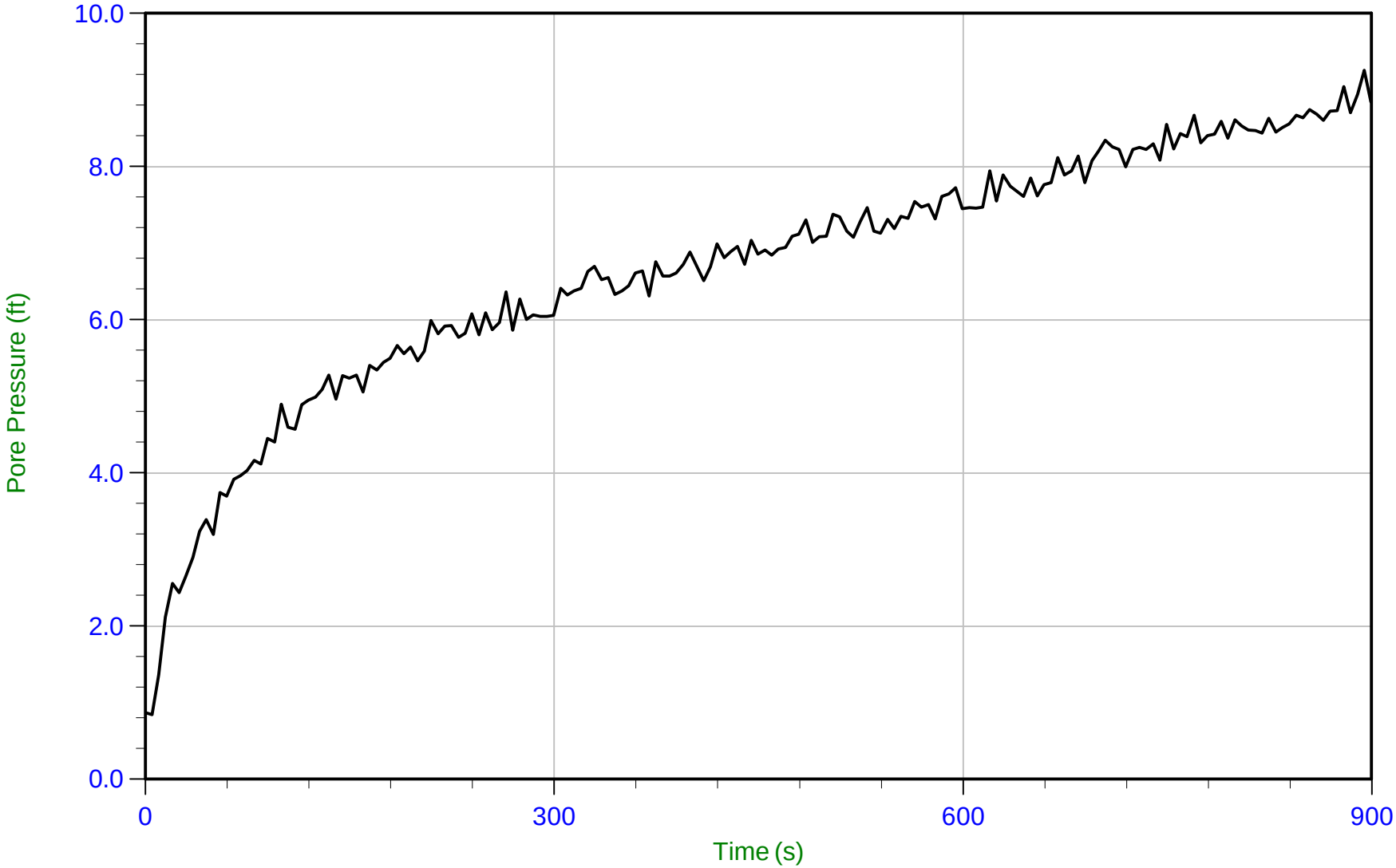
U Min: -5.7 ft
U Max: -2.1 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 6.350 m / 20.833 ft
Duration: 900.0 s

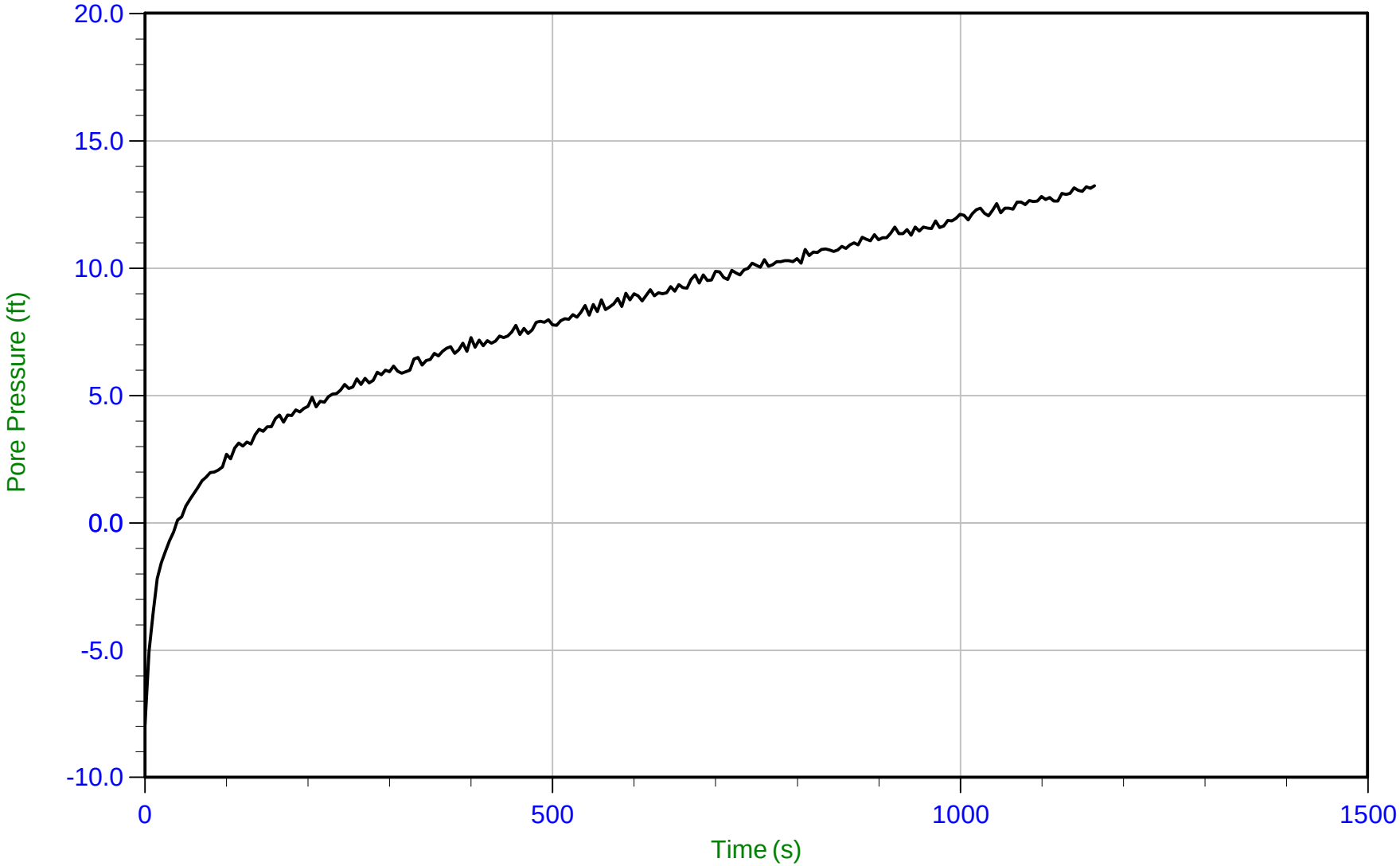
U Min: 0.8 ft
U Max: 9.3 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 7.350 m / 24.114 ft
Duration: 1165.0 s

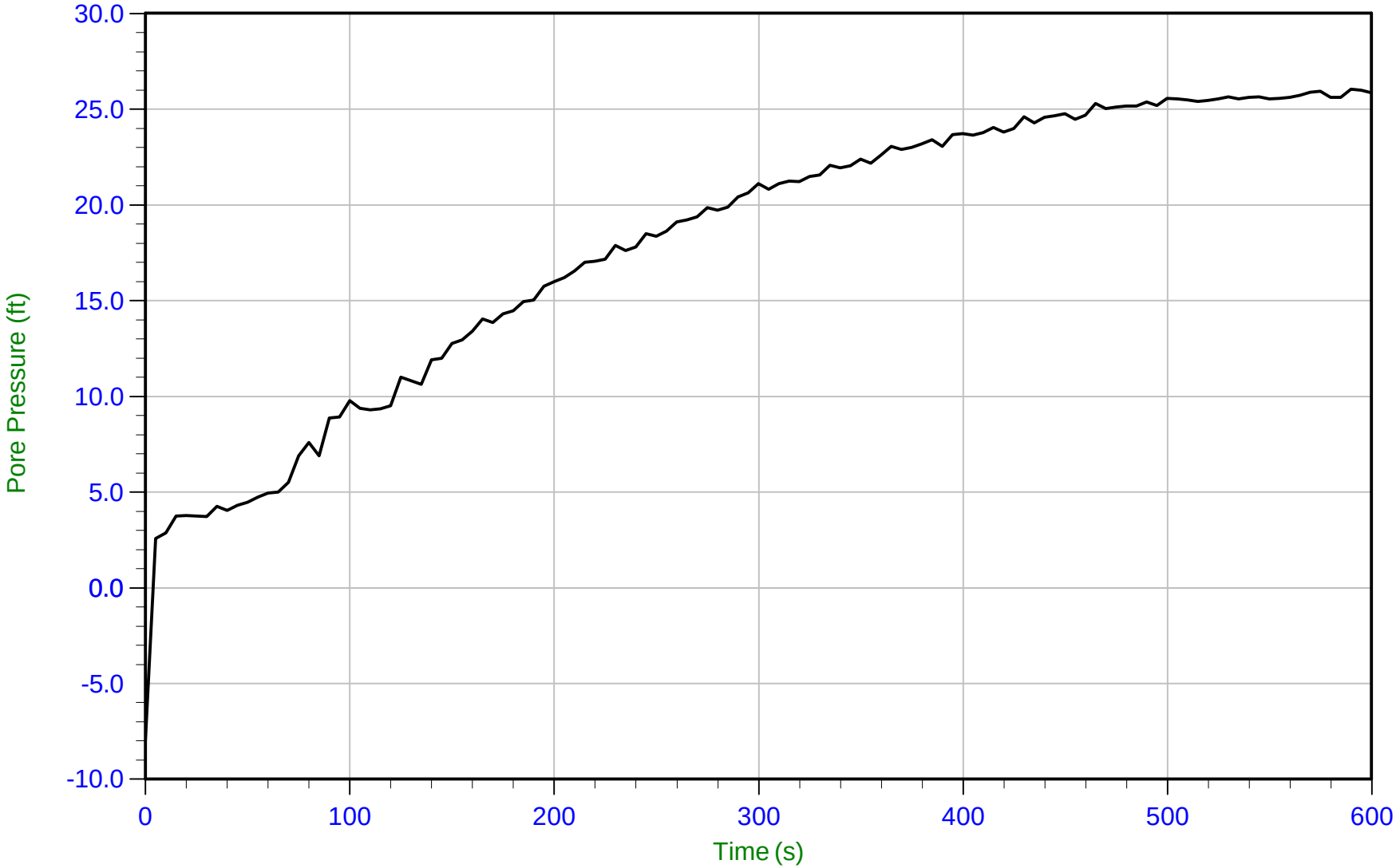
U Min: -7.9 ft
U Max: 13.2 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 8.450 m / 27.723 ft
Duration: 600.0 s

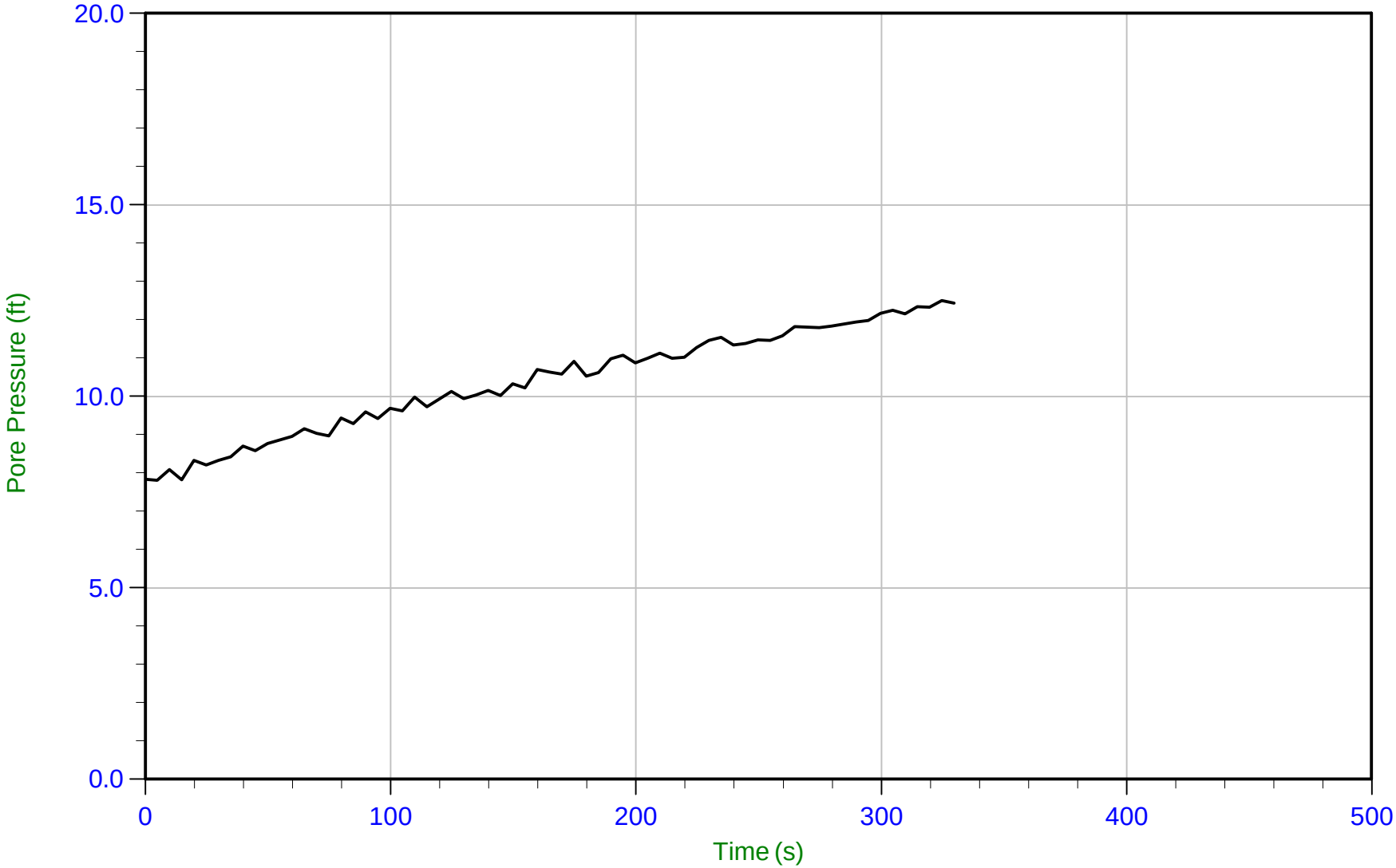
U Min: -8.0 ft
U Max: 26.1 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 9.350 m / 30.675 ft
Duration: 330.0 s

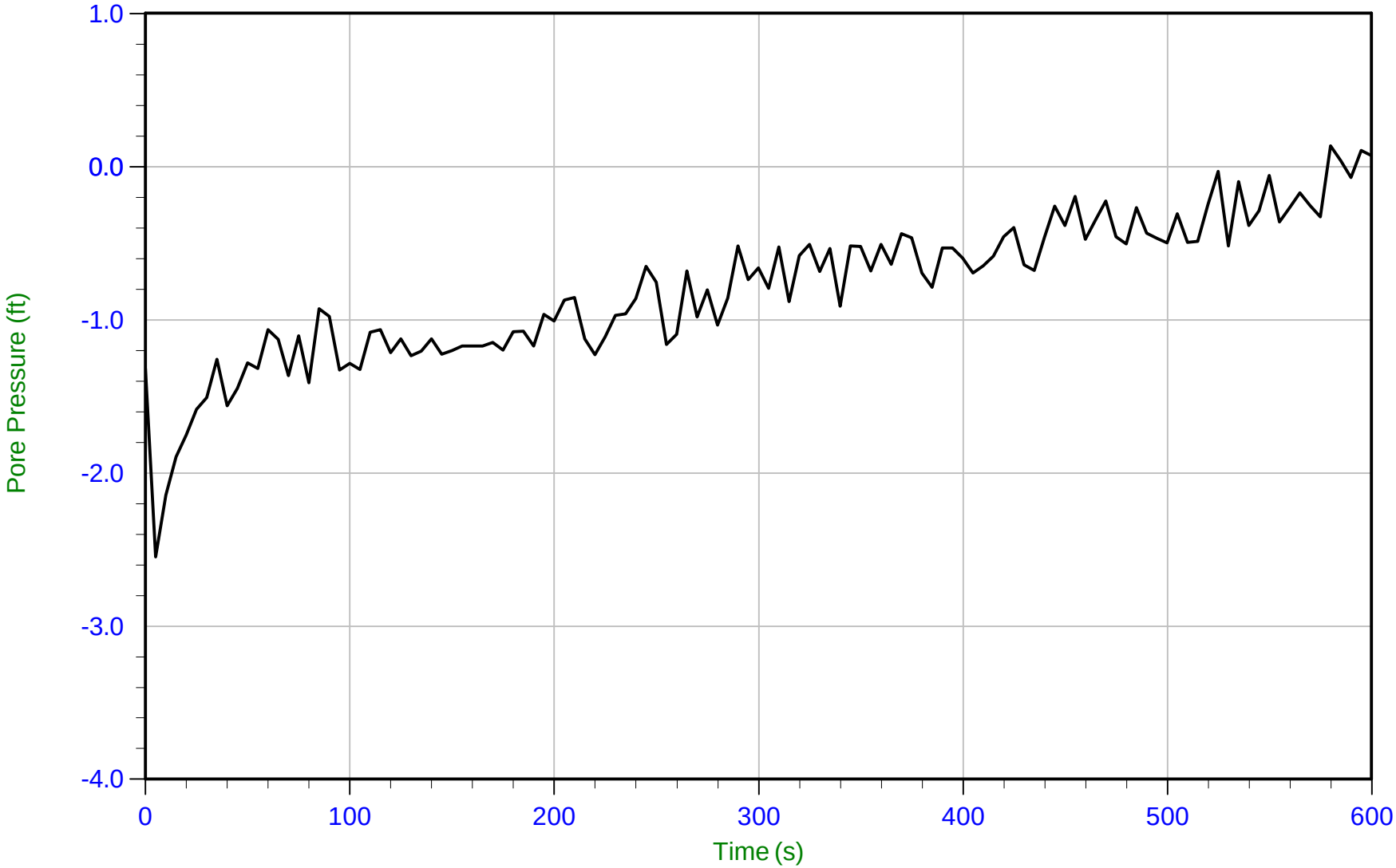
U Min: 7.8 ft
U Max: 12.5 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 10.350 m / 33.956 ft
Duration: 600.0 s

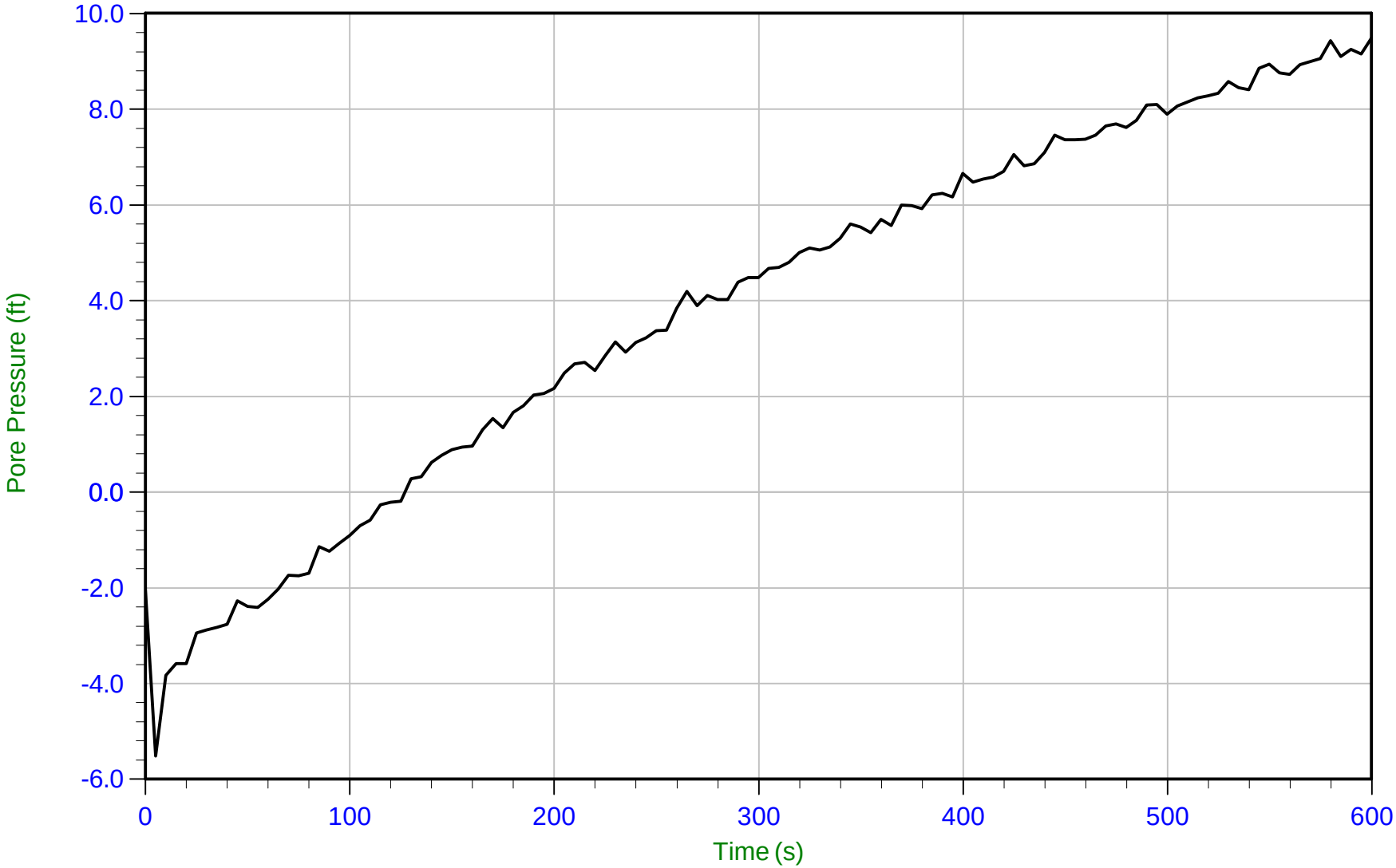
U Min: -2.5 ft
U Max: 0.1 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 11.350 m / 37.237 ft
Duration: 600.0 s

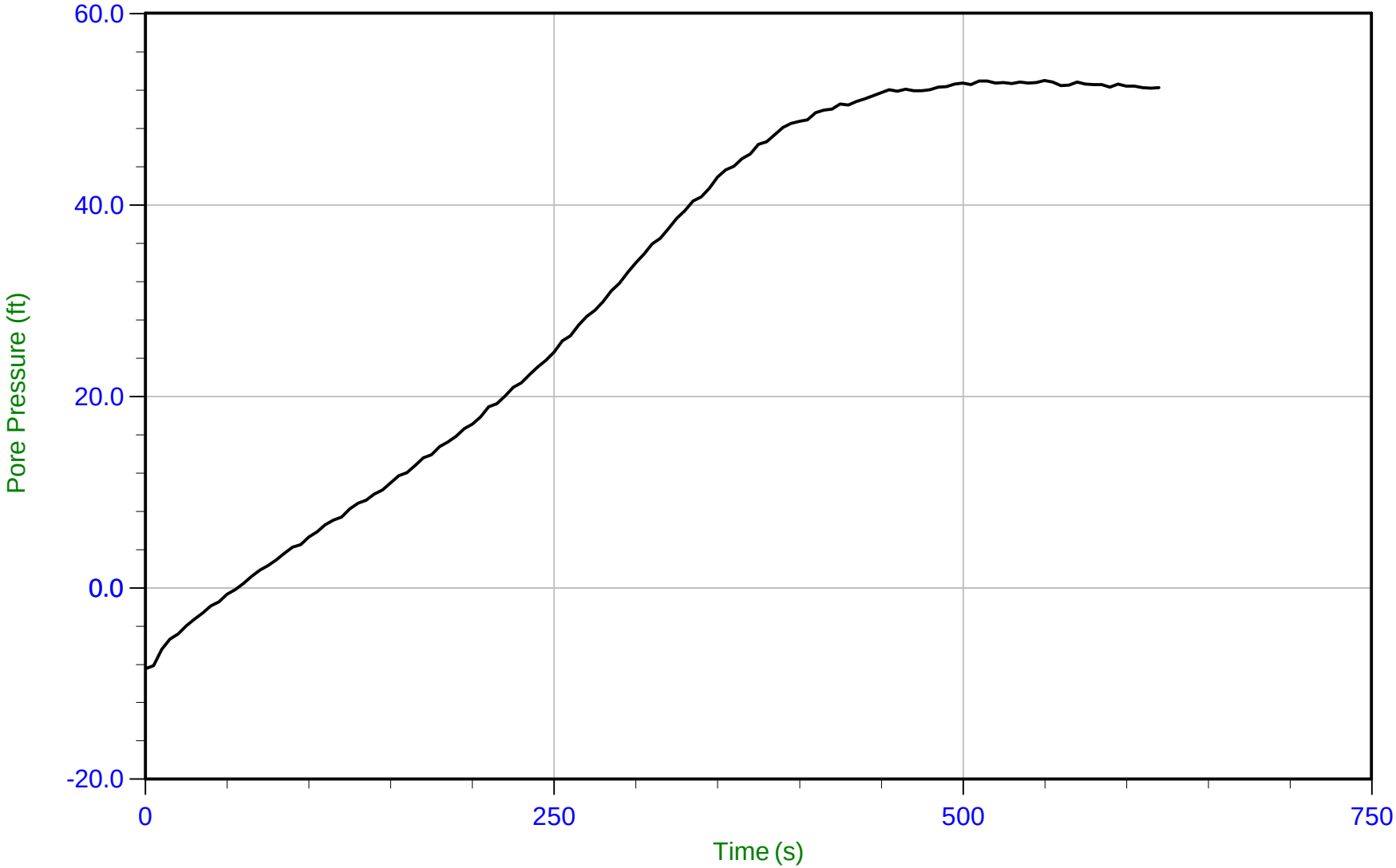
U Min: -5.5 ft
U Max: 9.5 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 12.350 m / 40.518 ft
Duration: 620.0 s

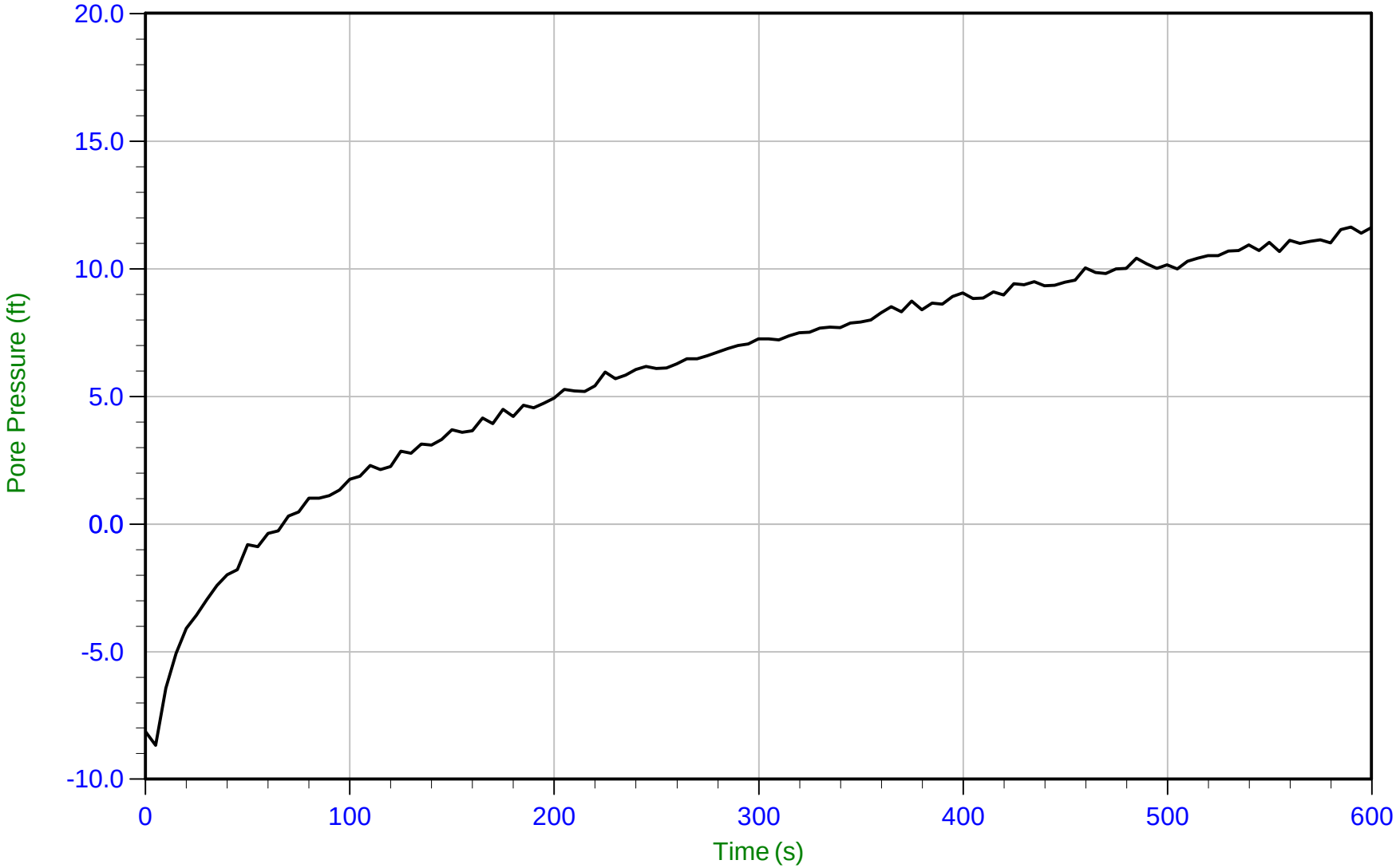
U Min: -8.5 ft
U Max: 53.0 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 13.350 m / 43.799 ft
Duration: 600.0 s

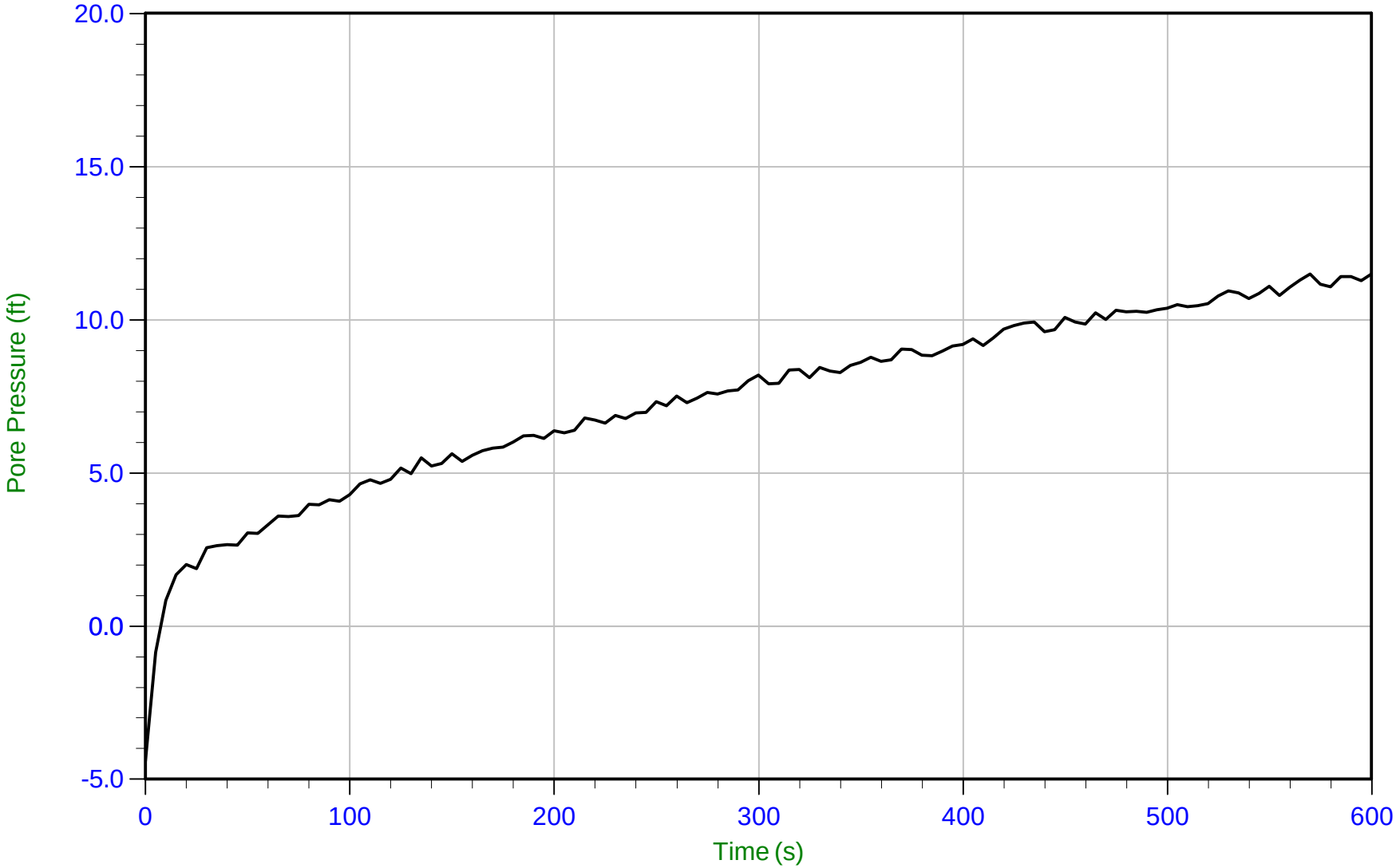
U Min: -8.7 ft
U Max: 11.6 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 14.350 m / 47.079 ft
Duration: 600.0 s

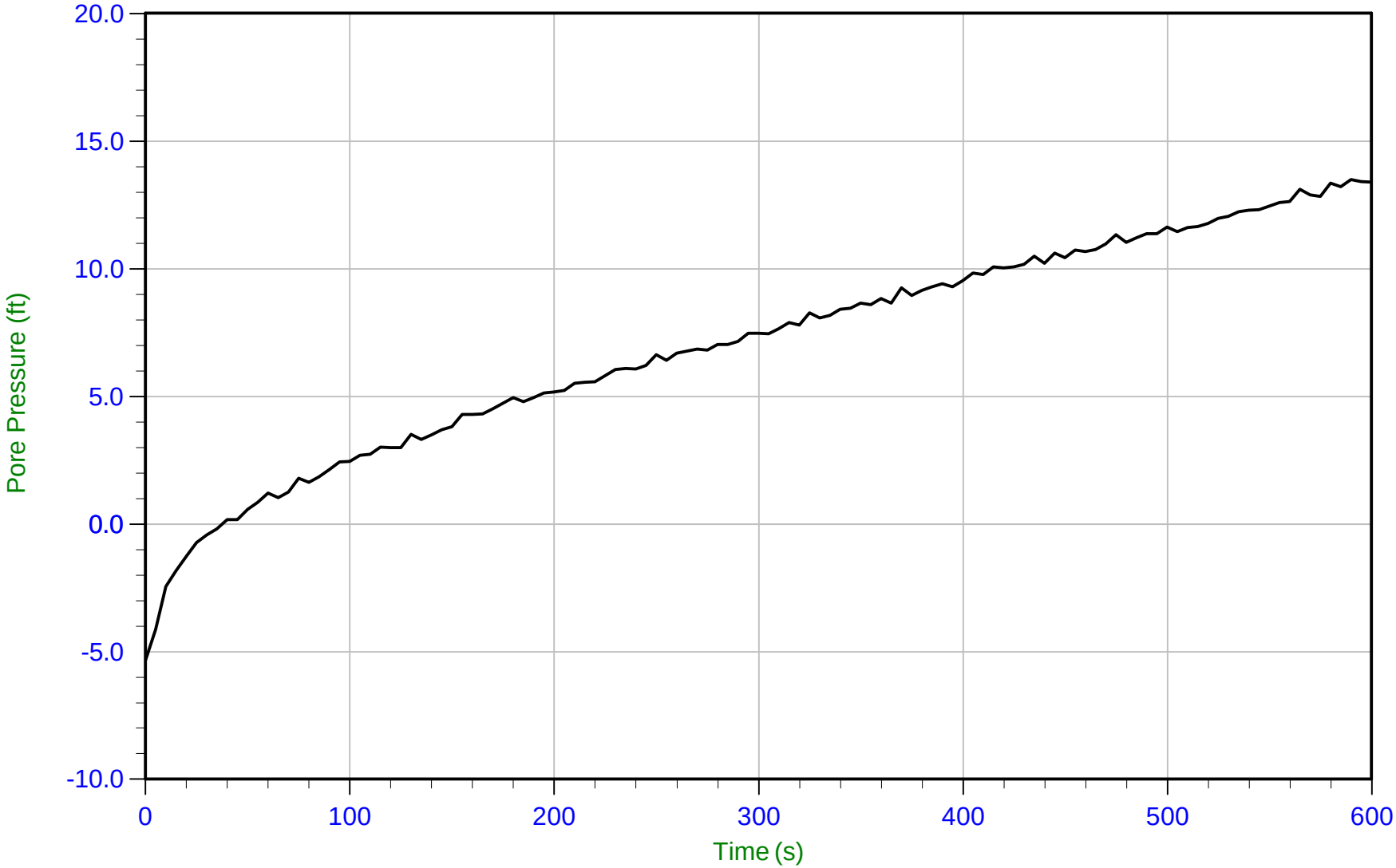
U Min: -4.4 ft
U Max: 11.5 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 15.350 m / 50.360 ft
Duration: 600.0 s

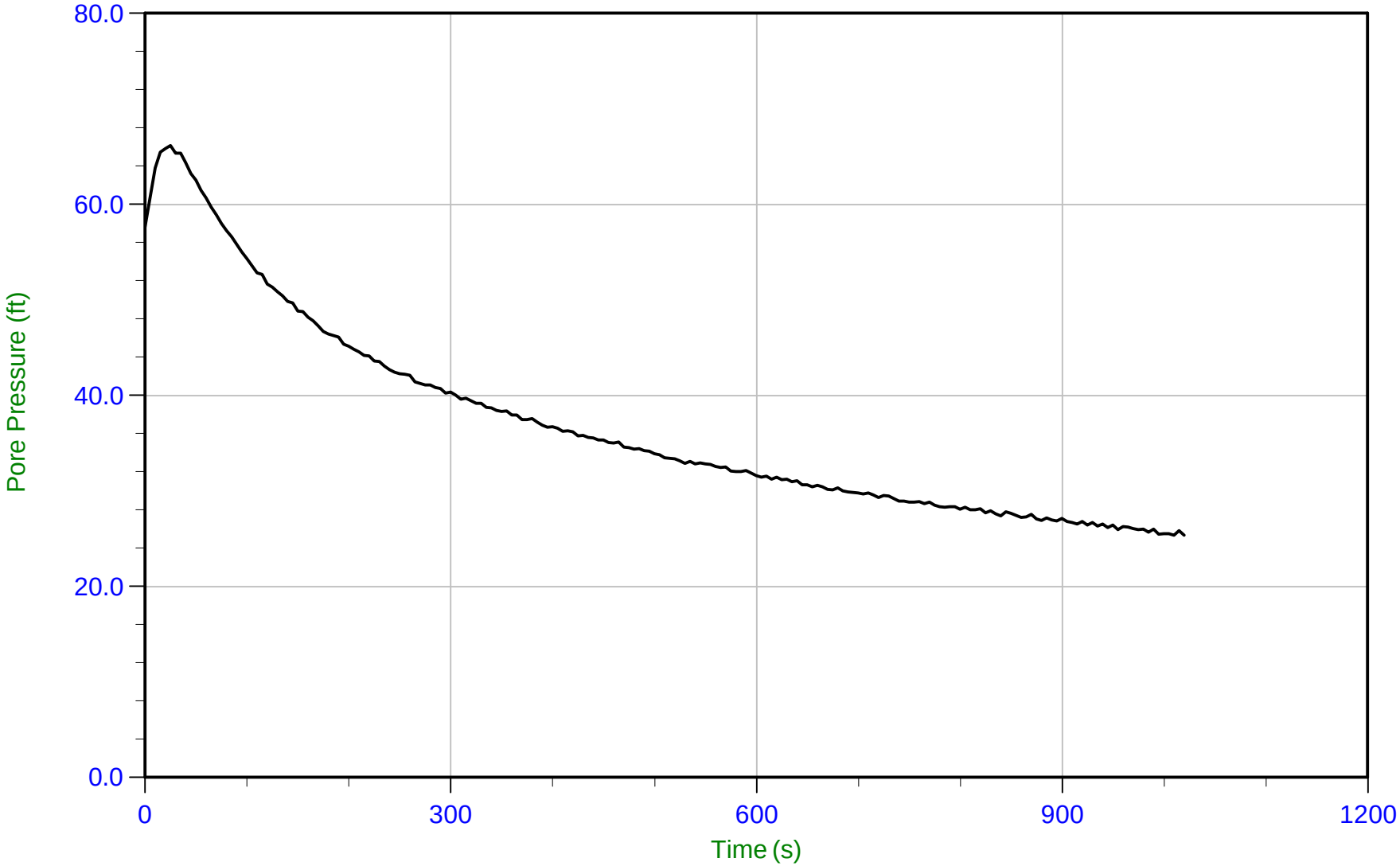
U Min: -5.3 ft
U Max: 13.5 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 19.450 m / 63.812 ft
Duration: 1020.0 s

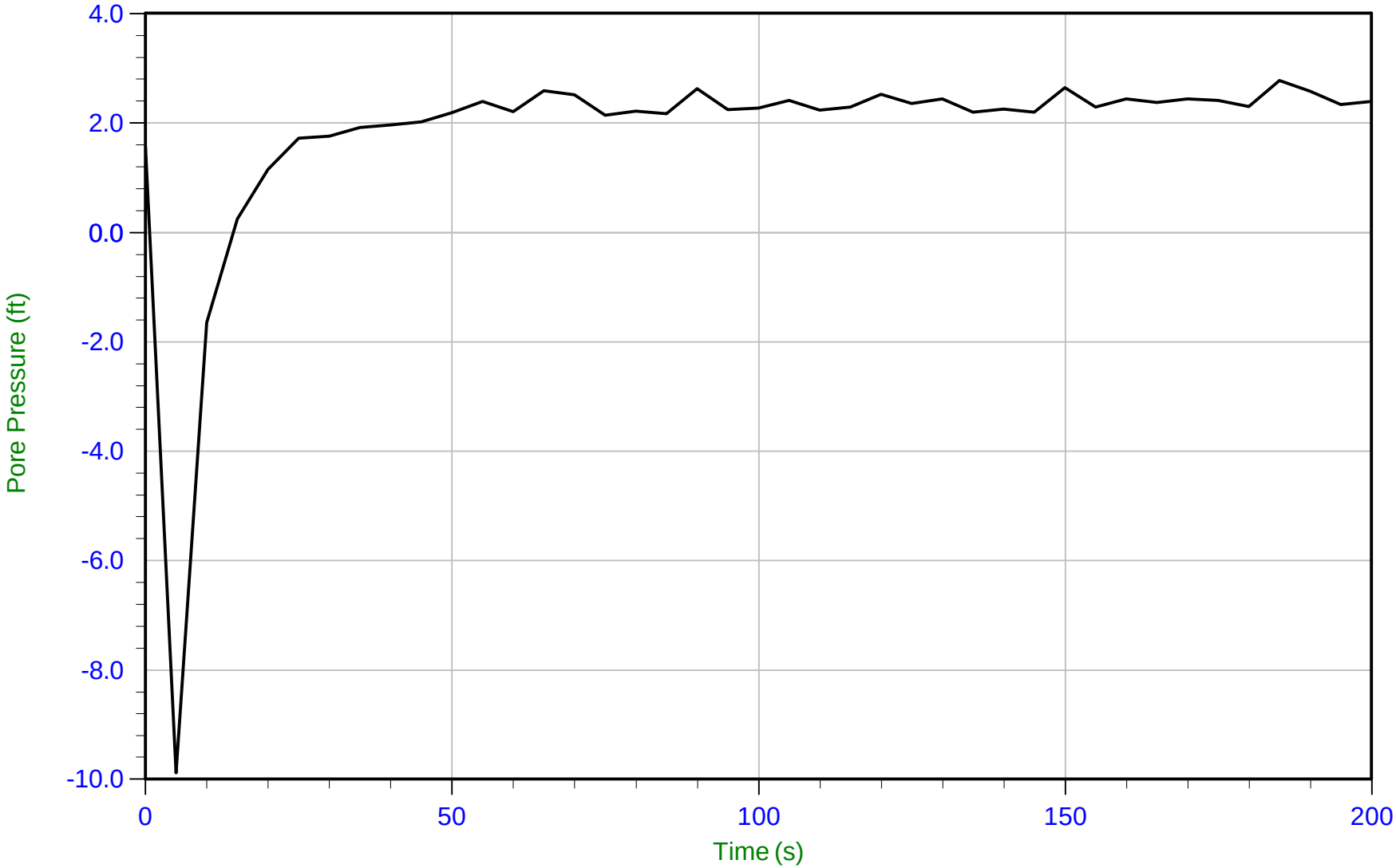
U Min: 25.3 ft
U Max: 66.2 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 17-May-2016 07:41:28
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC1
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC1.PPD
Depth: 26.400 m / 86.613 ft
Duration: 200.0 s

U Min: -9.9 ft
U Max: 2.8 ft

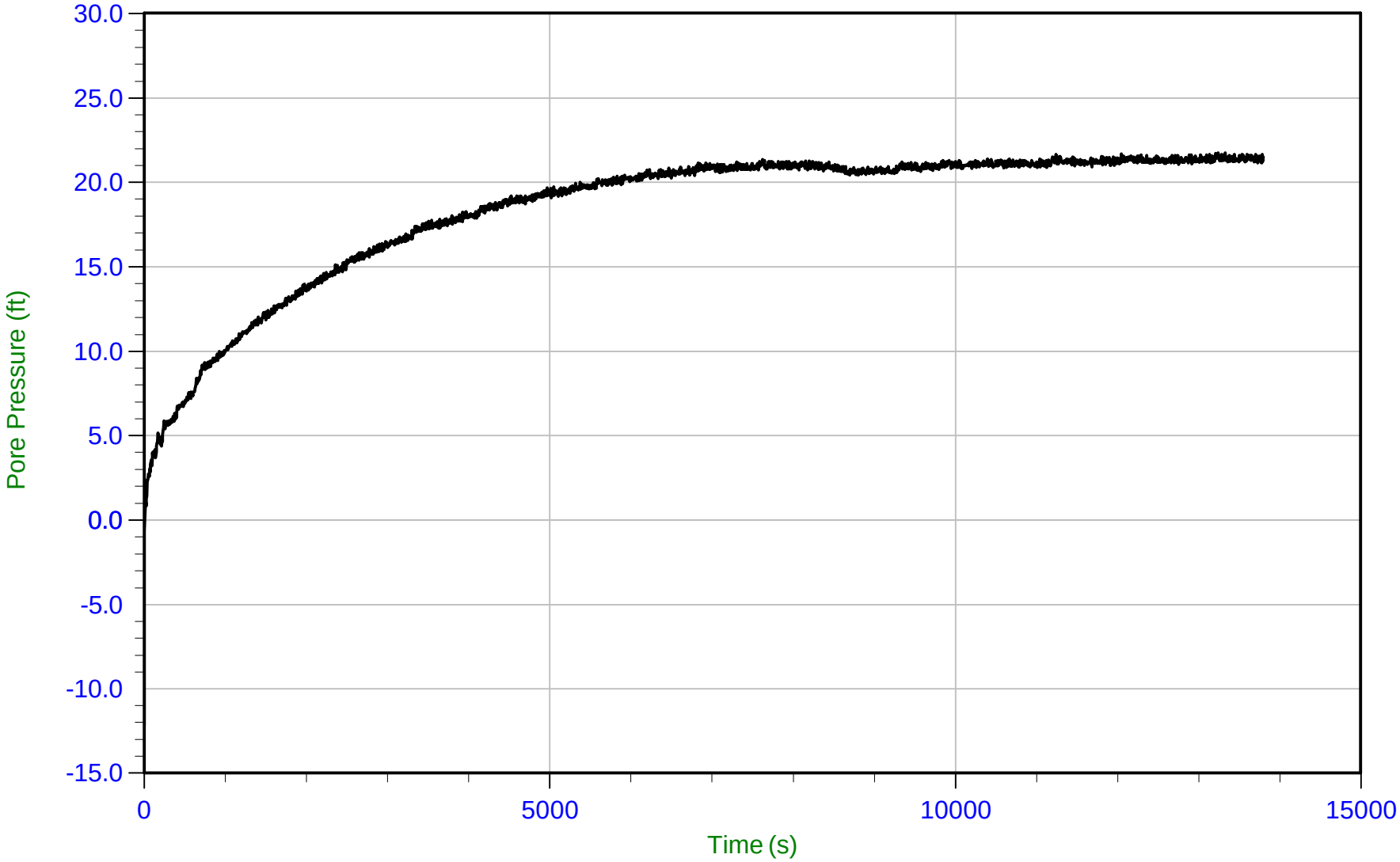
WT: 25.671 m / 84.221 ft
Ueq: 2.4 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 18-May-2016 12:26:54
Site: DP&L Killen Station, Manchester, OH

Sounding: CPT16-HAC1A
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_CPHAC1A.PPD
Depth: 6.100 m / 20.013 ft
Duration: 13800.0 s

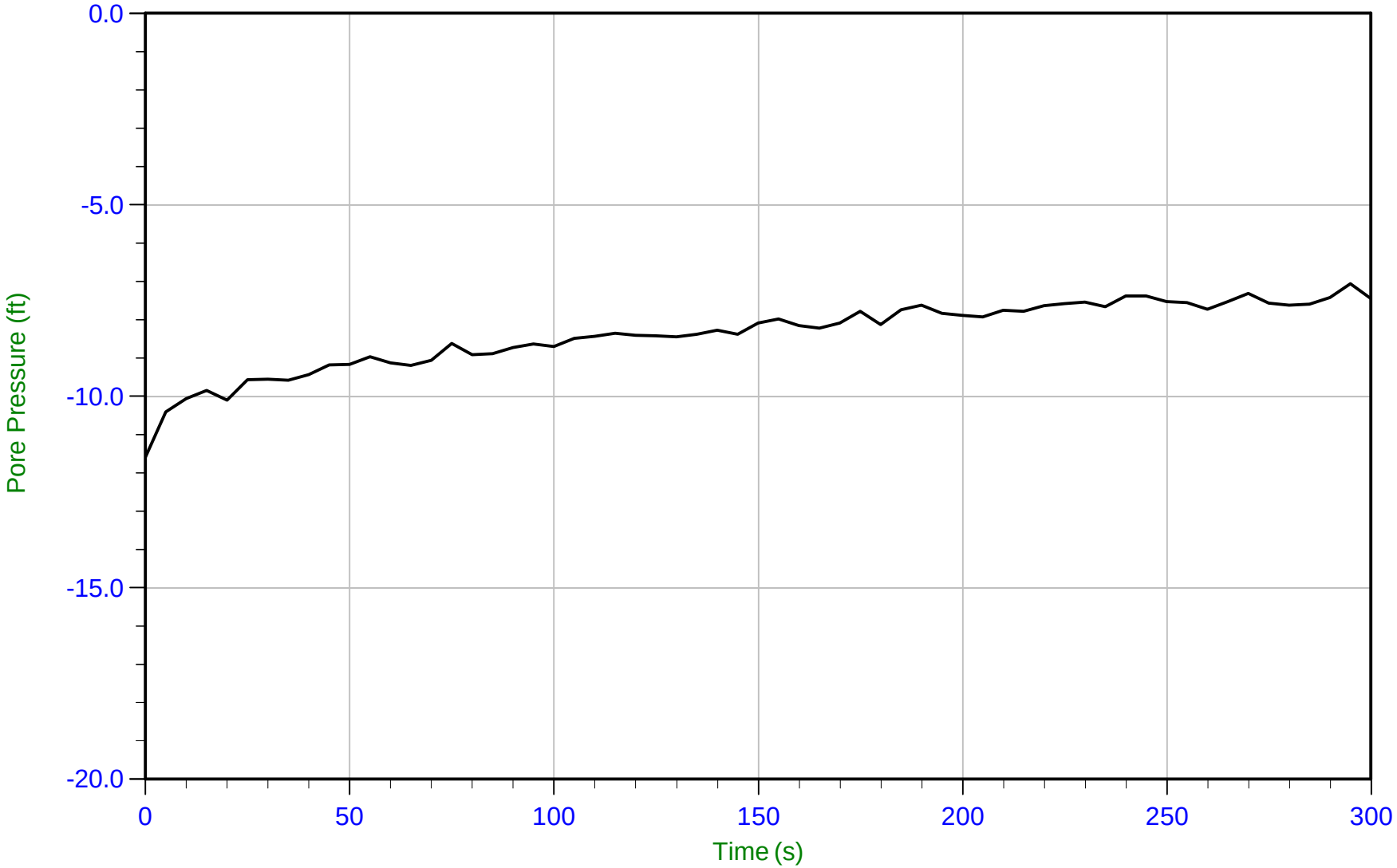
U Min: -12.2 ft
U Max: 21.7 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 18-May-2016 07:49:00
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC4.PPD
Depth: 2.350 m / 7.710 ft
Duration: 300.0 s

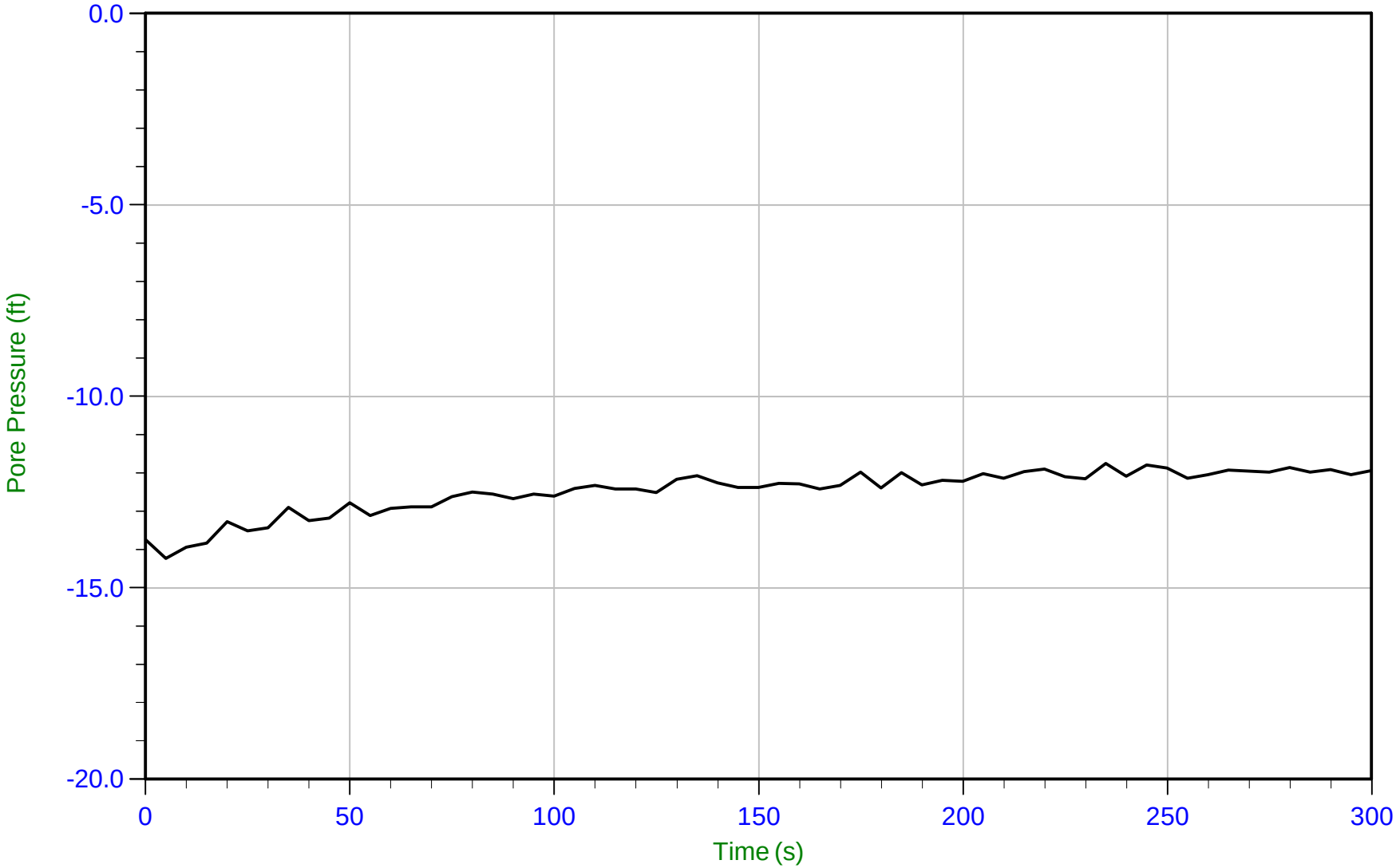
U Min: -11.6 ft
U Max: -7.1 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 18-May-2016 07:49:00
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC4.PPD
Depth: 4.350 m / 14.271 ft
Duration: 300.0 s

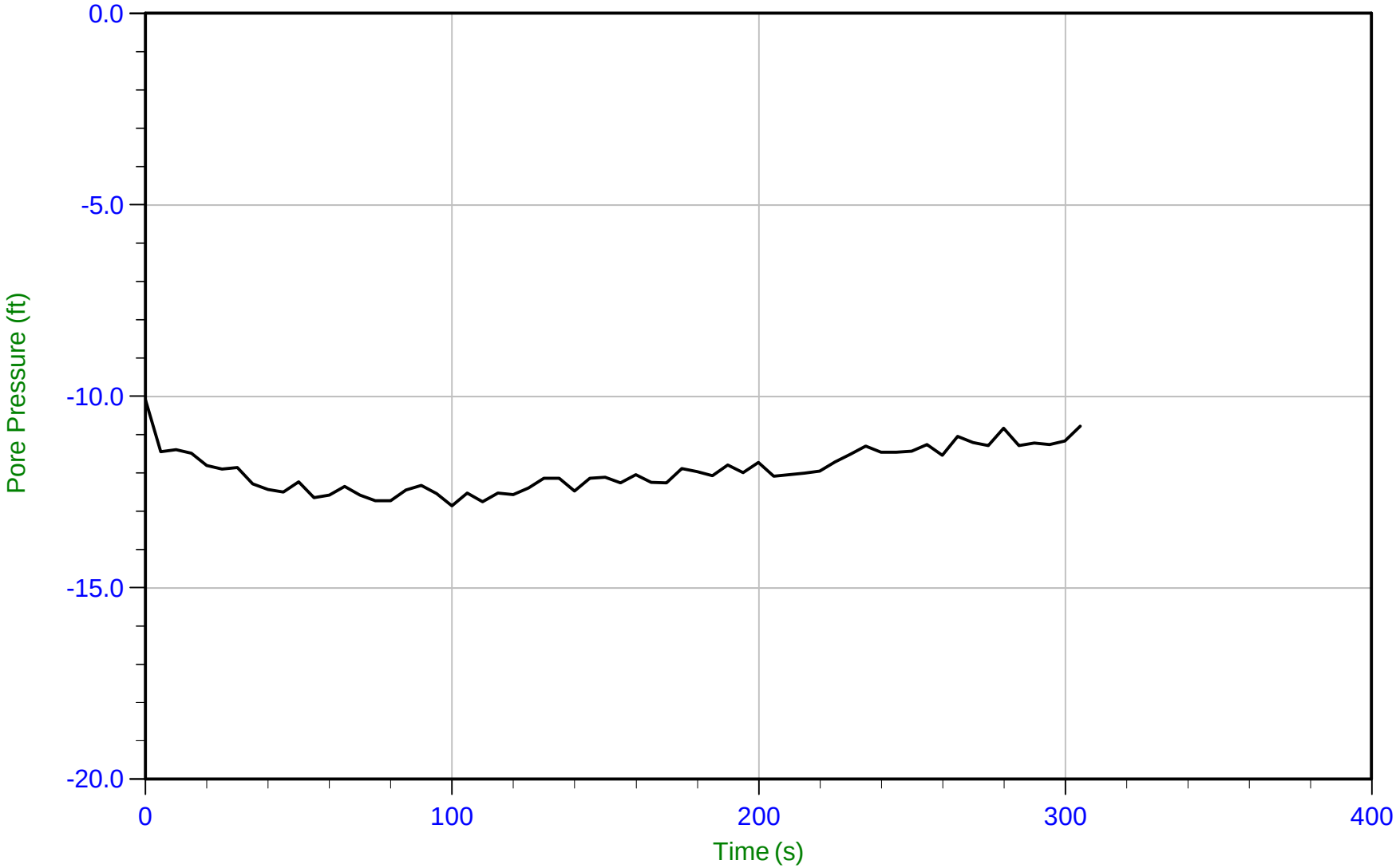
U Min: -14.2 ft
U Max: -11.7 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 18-May-2016 07:49:00
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC4.PPD
Depth: 6.350 m / 20.833 ft
Duration: 305.0 s

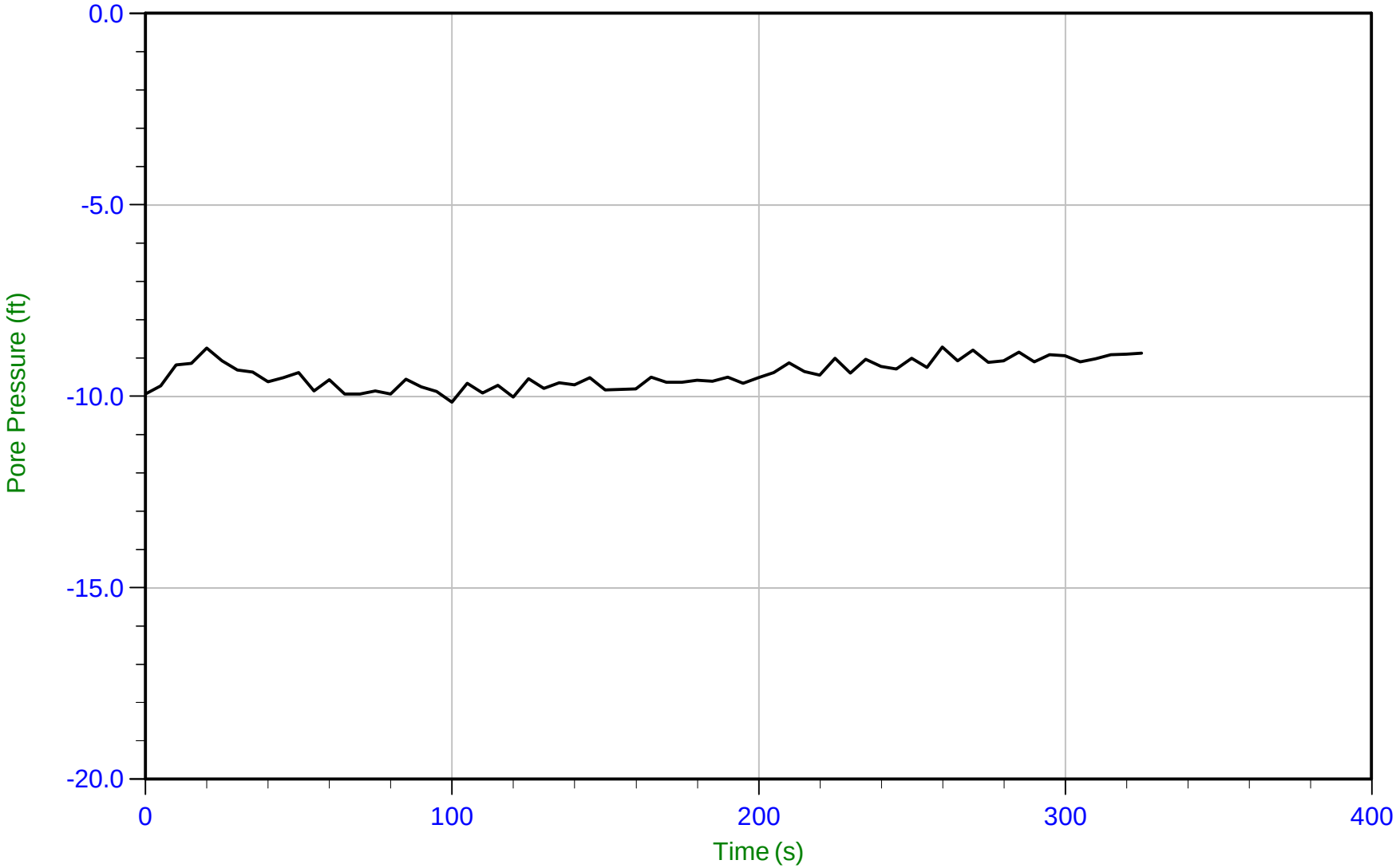
U Min: -12.9 ft
U Max: -10.1 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 18-May-2016 07:49:00
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC4.PPD
Depth: 8.350 m / 27.395 ft
Duration: 325.0 s

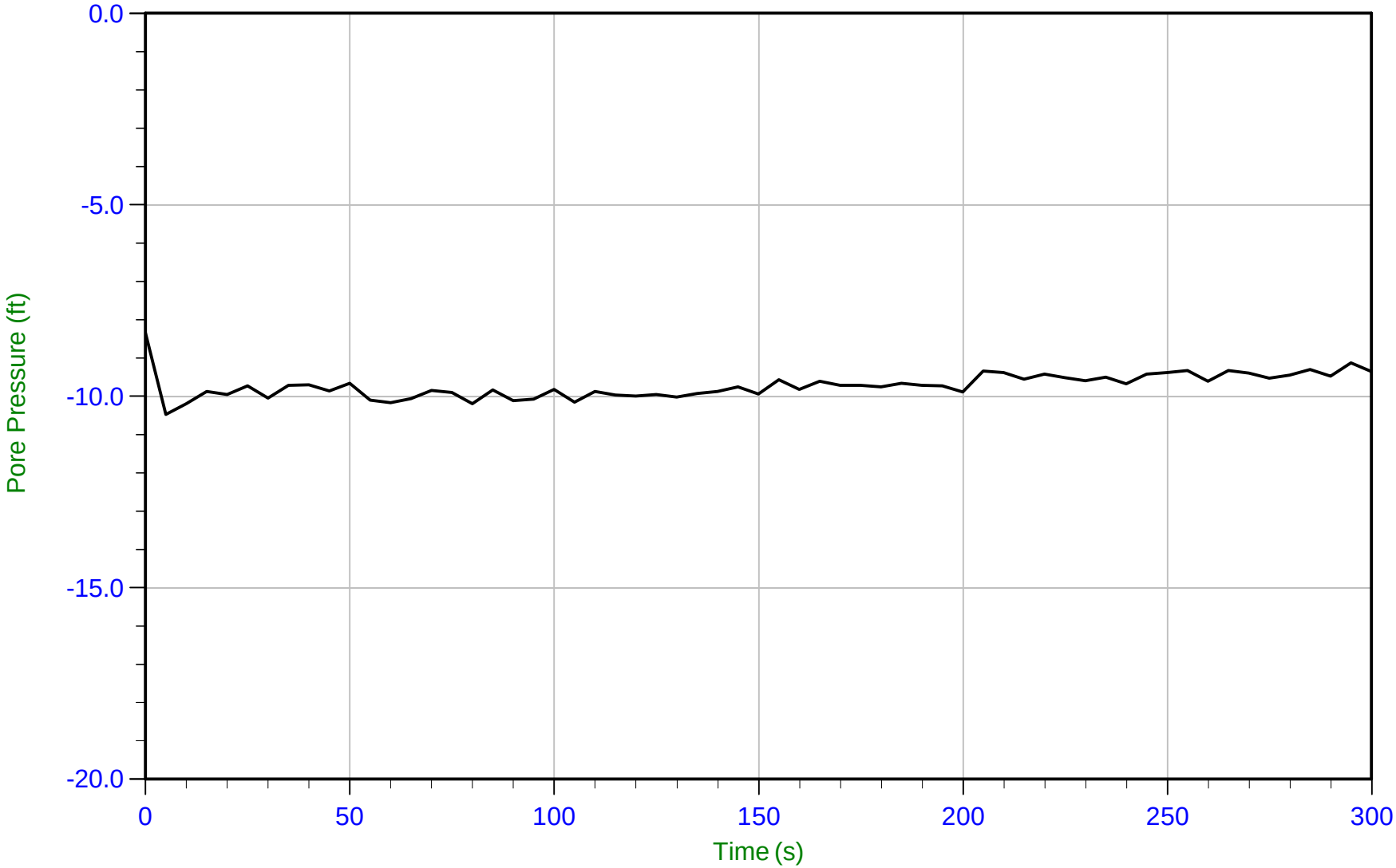
U Min: -10.2 ft
U Max: -8.7 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 18-May-2016 07:49:00
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC4.PPD
Depth: 10.350 m / 33.956 ft
Duration: 300.0 s

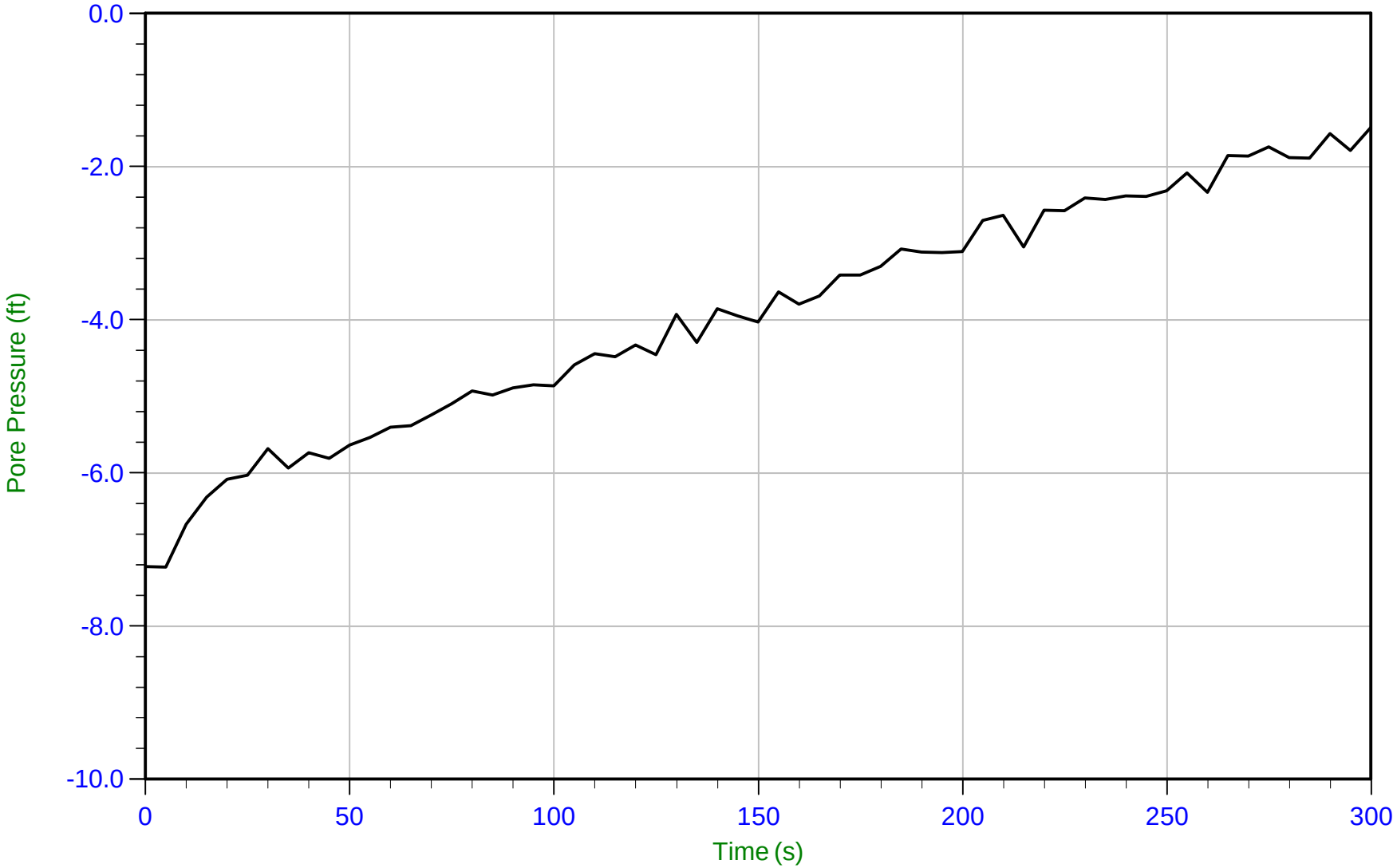
U Min: -10.5 ft
U Max: -8.3 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 18-May-2016 07:49:00
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC4.PPD
Depth: 12.350 m / 40.518 ft
Duration: 300.0 s

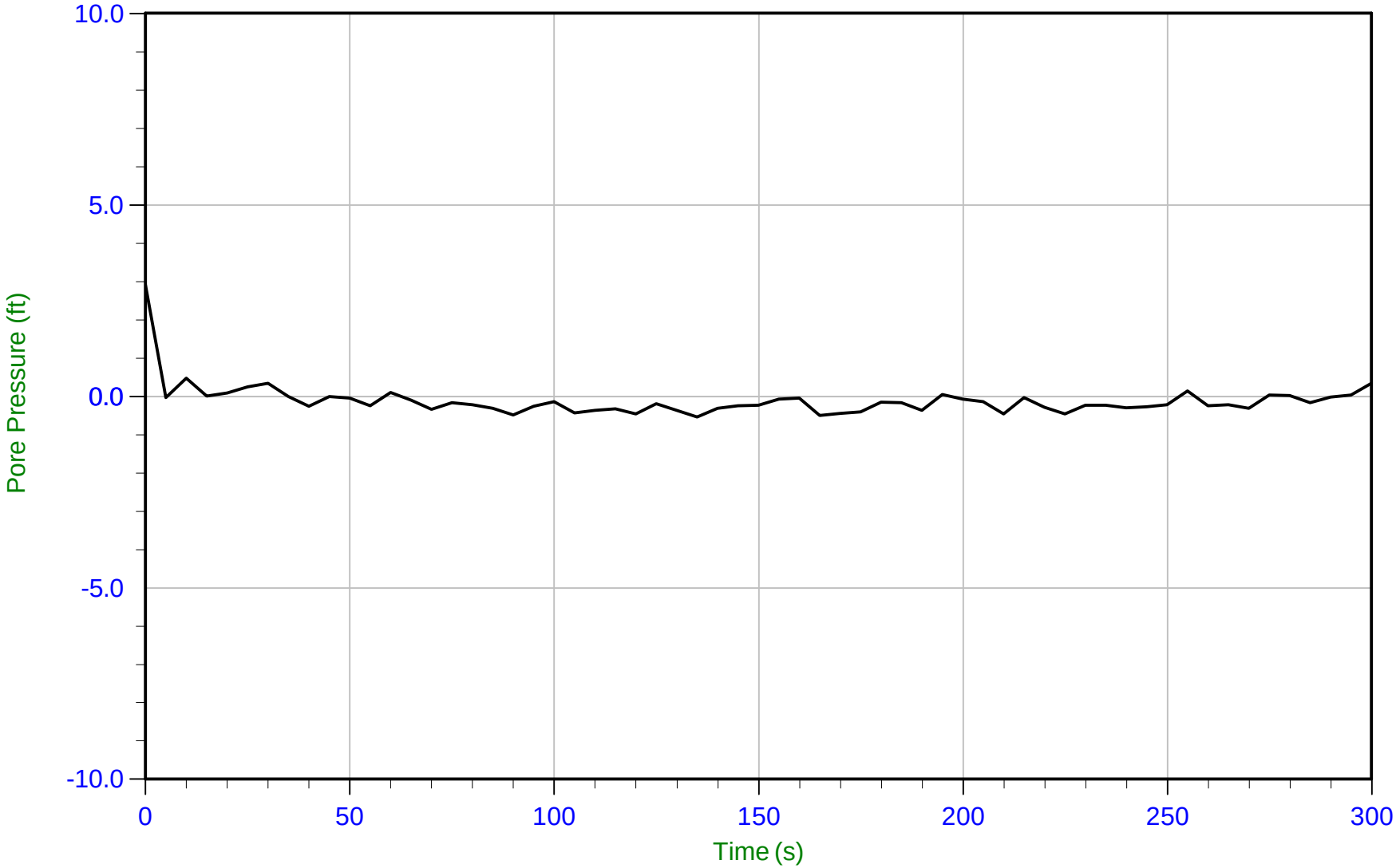
U Min: -7.2 ft
U Max: -1.5 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 18-May-2016 07:49:00
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC4.PPD
Depth: 14.350 m / 47.079 ft
Duration: 300.0 s

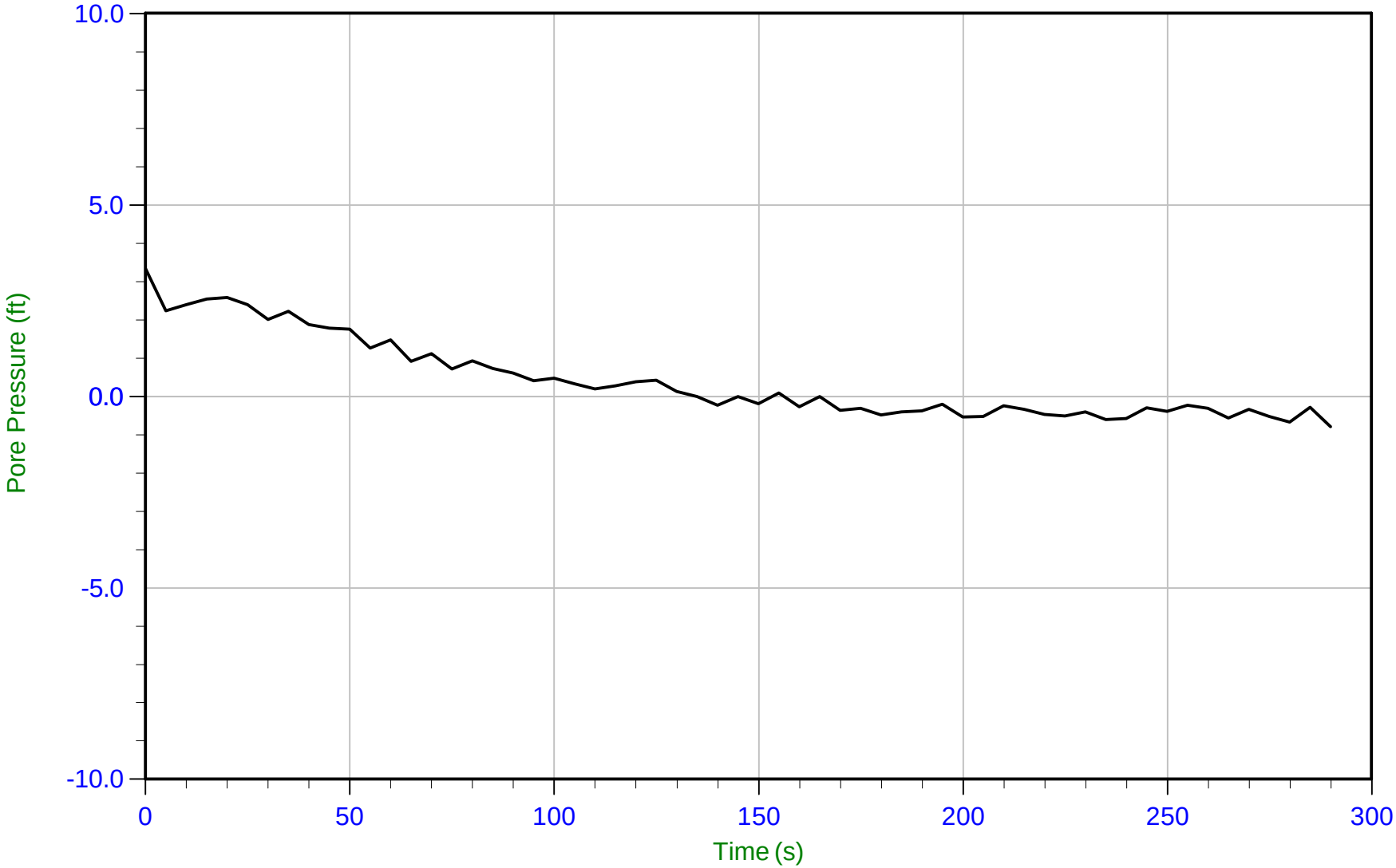
U Min: -0.5 ft
U Max: 2.9 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 18-May-2016 07:49:00
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC4.PPD
Depth: 23.350 m / 76.607 ft
Duration: 290.0 s

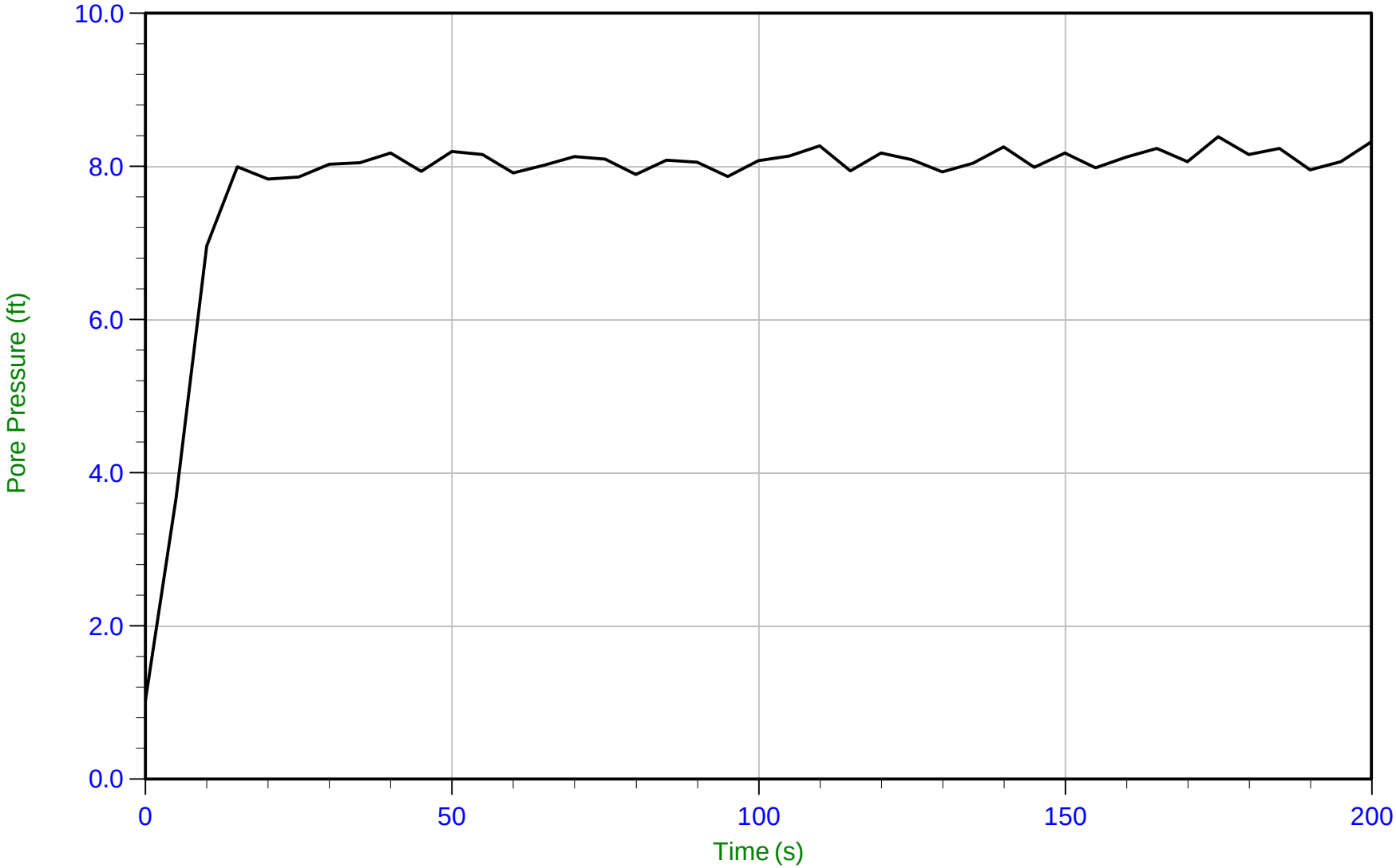
U Min: -0.8 ft
U Max: 3.3 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 18-May-2016 07:49:00
Site: DP&L Killen Station, Manchester, OH

Sounding: SCPT16-HAC4
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_SPHAC4.PPD
Depth: 27.150 m / 89.074 ft
Duration: 200.0 s

U Min: 1.0 ft
U Max: 8.4 ft

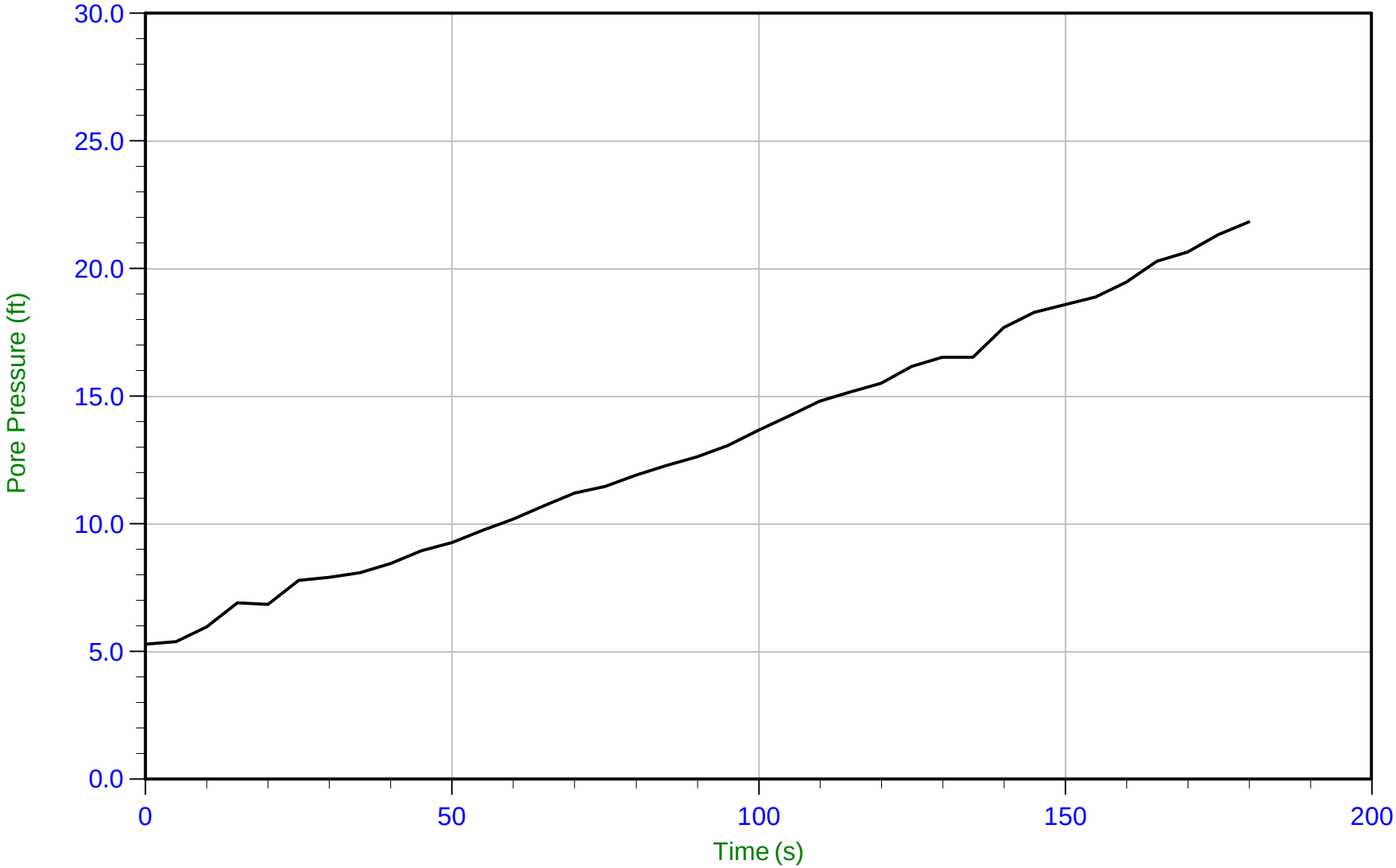
WT: 24.666 m / 80.926 ft
Ueq: 8.1 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 16-May-2016 12:42:53
Site: DP&L Killen Station, Manchester, OH

Sounding: CPT16-HAC6
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_CPHAC6.PPD
Depth: 16.800 m / 55.117 ft
Duration: 180.0 s

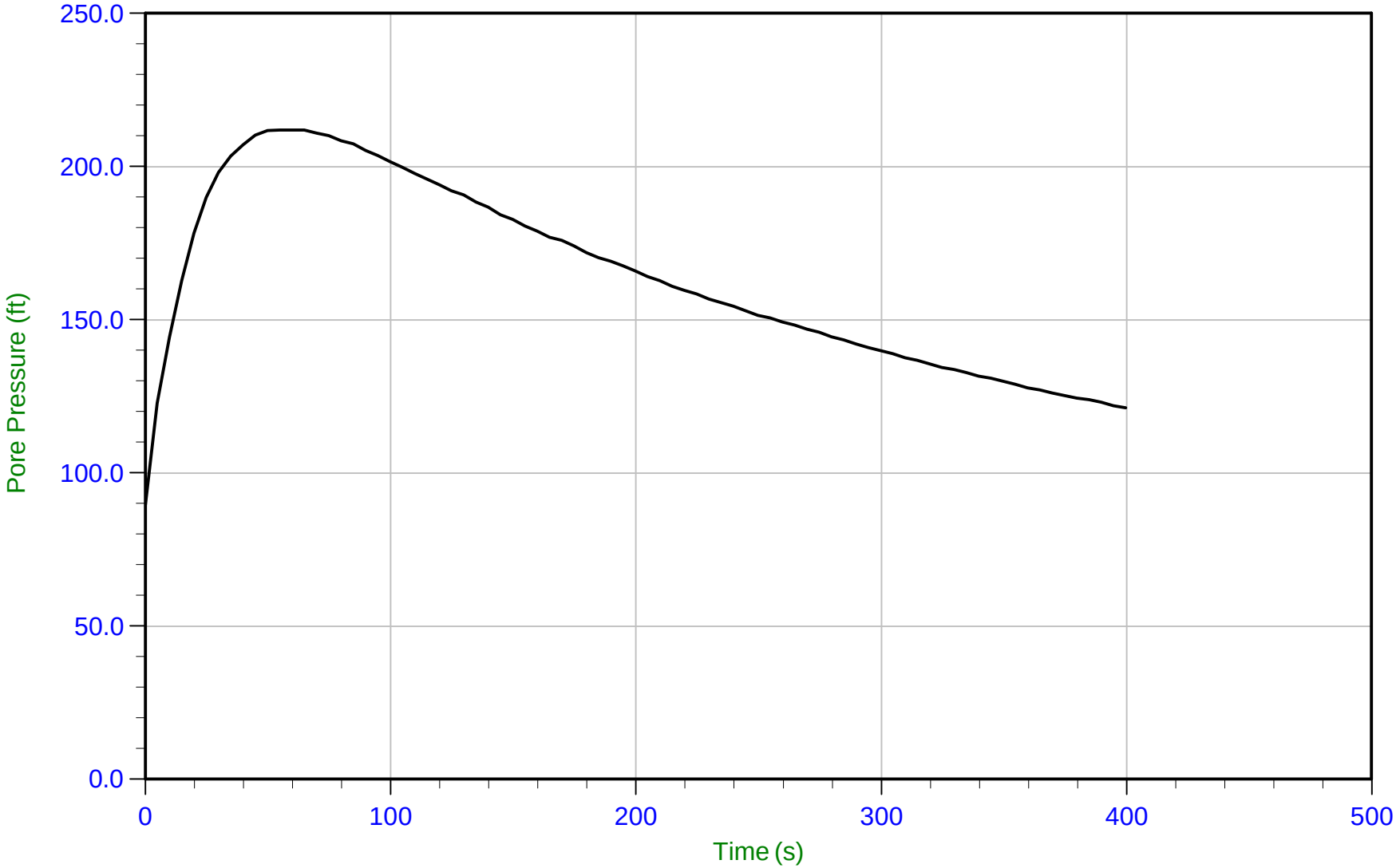
U Min: 5.3 ft
U Max: 21.8 ft

CONETEC

Haley & Aldrich

Job No: 16-53042
Date: 16-May-2016 12:42:53
Site: DP&L Killen Station, Manchester, OH

Sounding: CPT16-HAC6
Cone: AD419
Cone Area: 15 sq cm



Trace Summary:

Filename: 16-53042_CPHAC6.PPD
Depth: 19.850 m / 65.124 ft
Duration: 400.0 s

U Min: 89.6 ft
U Max: 212.0 ft

APPENDIX B

Laboratory Test Results

Summary of Laboratory Results

Borehole	Depth	Sample Type	Liquid Limit	Plastic Limit	Plasticity Index	Classification	Water Content (%)	Unconfined Compressive Strength (tsf)	Dry Density (pcf)	Wet Density (pcf)	Max. Dry Density (pcf)	Opt. Water Content (%)	CBR	Swell (%)	RQD	Percent Recovery	Percent Finer (No. 200)
HA-B1	24.0					* SILTY CLAY (CL-ML)	14.9										77
HA-B2	79.0		29	22	7	SANDY SILTY CLAY (CL-ML)	16.2										64
HA-B3	39.0					* SANDY SILTY CLAY (CL-ML)	14.5										66
HA-B4	4.0		25	17	8	CLAYEY SAND (SC)	9.3										33
HA-B4	9.0					* SILTY SAND W/ GRAVEL (SM)	6.1										17
HA-B4	39.0					* SILTY SAND (SM)	13.2										46
HA-B5	8.0		24	23	1	SILT with SAND (ML)	19.4										71
HA-B5	24.0					* SILTY SAND (SM)	23.3										42

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Fax: 888.792.3121

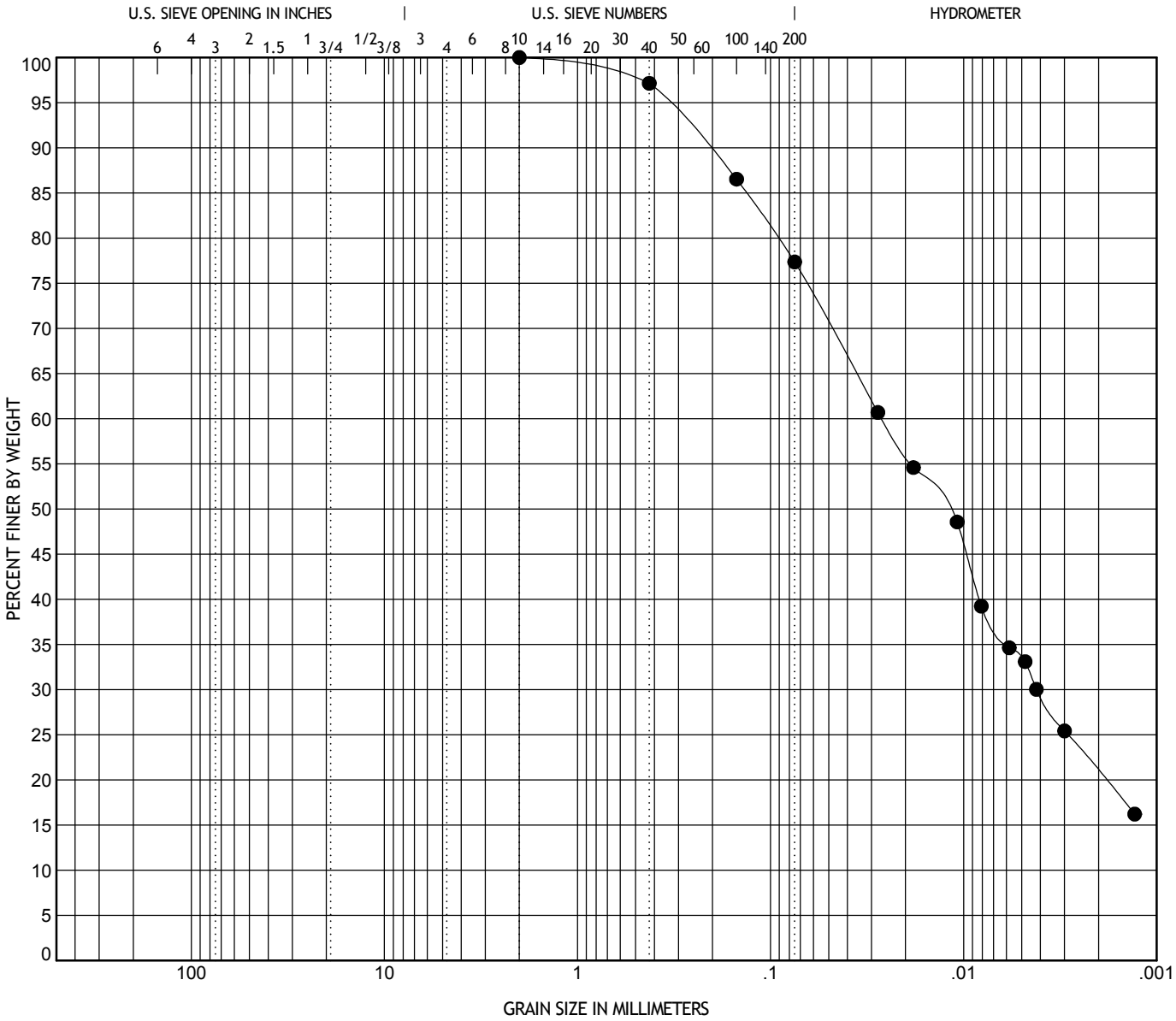
SS - Split Spoon Sample
GRAB - Bulk Grab Sample

PROJECT INFORMATION

Client: Haley and Aldrich
Project Name: Killen Station
Project Number: CN160038
Project Location: Aberdeen, OH

Note: * Indicates a visually classified sample

GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Boring	Depth (ft)	Classification	LL	PL	PI	Cc	Cu
●	HA-B1	24.0	* Silty Clay (CL-ML)					

	Boring	Depth (ft)	D95	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	HA-B1	24.0	.344	.026	.012	.004		0.0	22.6	43.9	33.4

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Client: Haley and Aldrich
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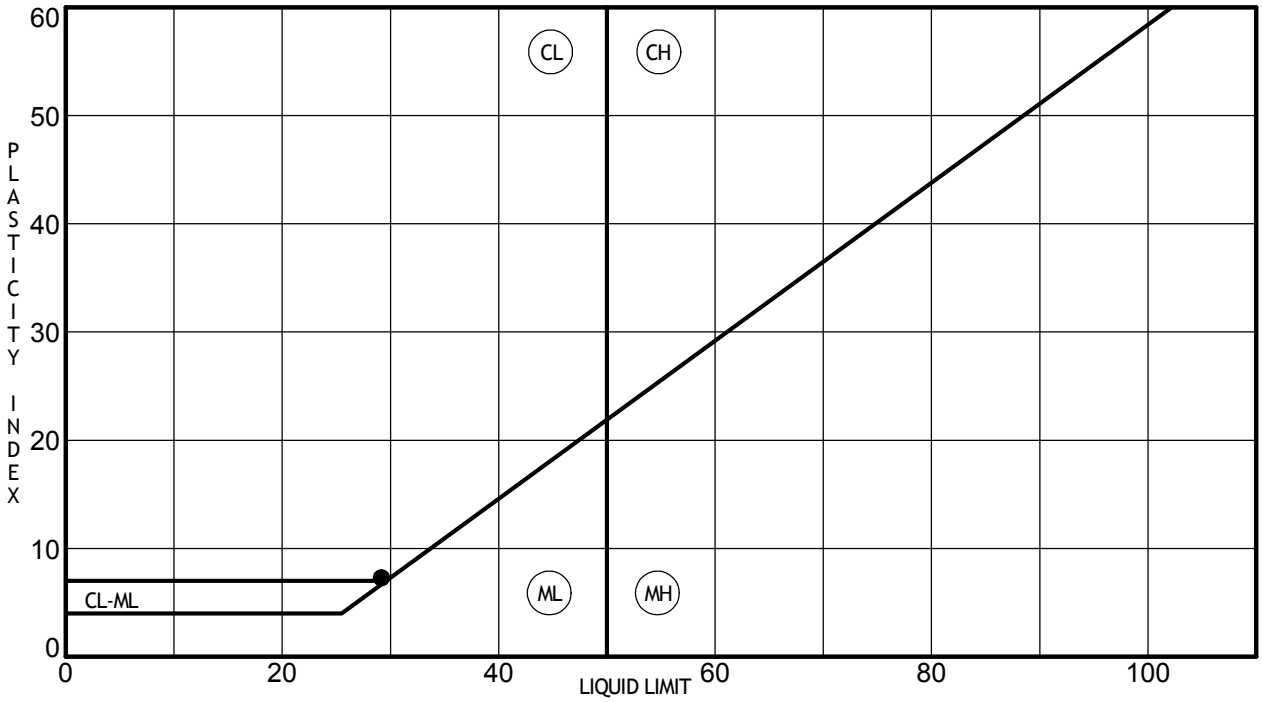
Project Number: CN160038
Project Location: Aberdeen, OH
Note: * Indicates a visually classified sample

Liquid and Plastic Limits Test Report



	Boring	Depth (ft)	LL	PL	PI	Water Content	% < #40	% < #200	USCS	Description
●	**HA-B2**	**79.0**	**29**	**22**	**7**	**16.2**		**64**	**(CL-ML)**	**SANDY SILTY CLAY (CL-ML)**

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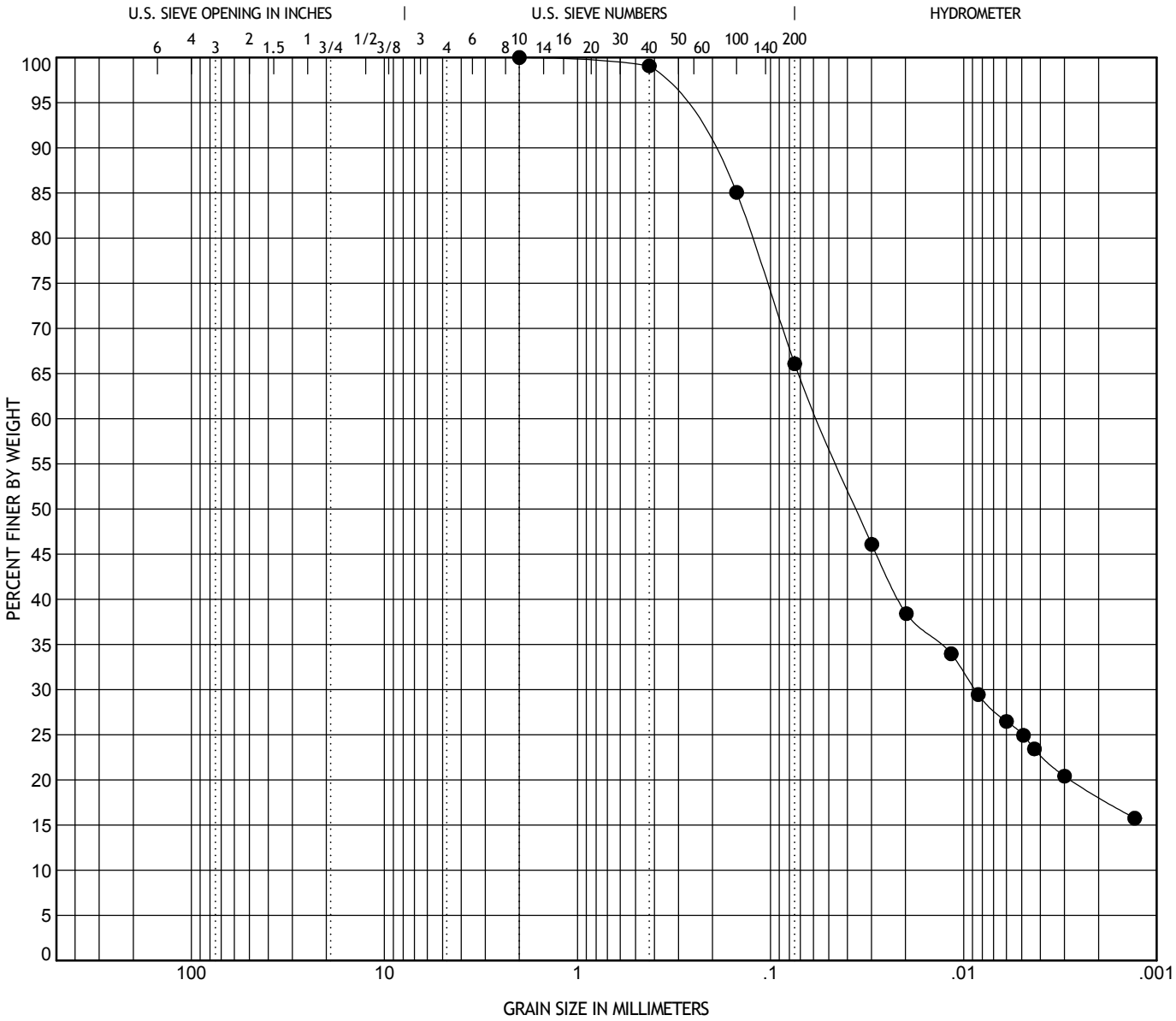
PROJECT INFORMATION

Client: Haley and Aldrich
Project Name: Killen Station
Project Number: CN160038
Project Location: Aberdeen, OH

GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Boring	Depth (ft)	Classification	LL	PL	PI	Cc	Cu
●	HA-B3	39.0	* SANDY SILTY CLAY (CL-ML)					

	Boring	Depth (ft)	D95	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	HA-B3	39.0	.314	.057	.036	.009		0.0	33.9	41.0	25.1

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PROJECT INFORMATION

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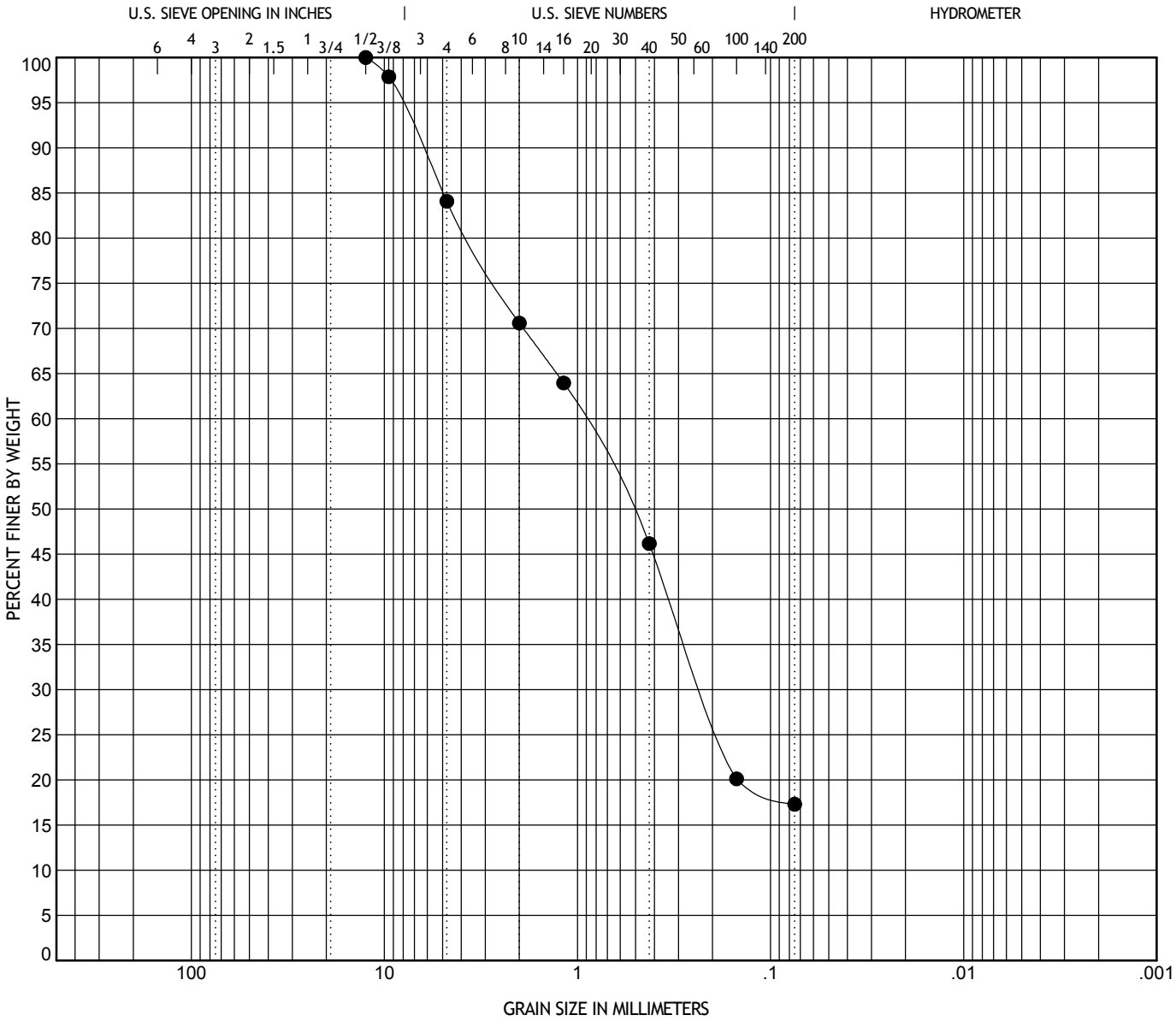
Project Name: Killen Station
Project Number: CN160038
Project Location: Aberdeen, OH

Note: * Indicates a visually classified sample

GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Boring	Depth (ft)	Classification	LL	PL	PI	Cc	Cu
●	HA-B4	9.0	* SILTY SAND W/ GRAVEL (SM)					

	Boring	Depth (ft)	D95	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	HA-B4	9.0	8.225	.94	.529	.223		15.9	66.8	17.3	

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PROJECT INFORMATION

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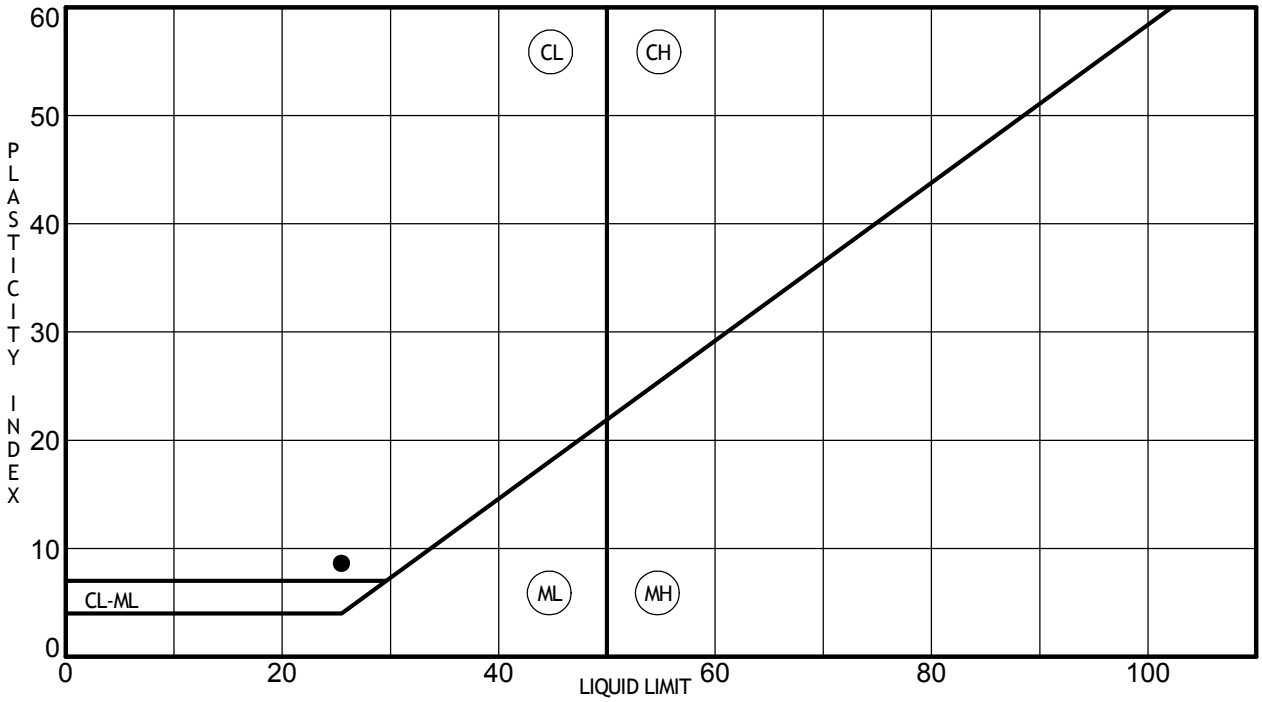
Project Name: Killen Station
Project Number: CN160038
Project Location: Aberdeen, OH

Note: * Indicates a visually classified sample

Liquid and Plastic Limits Test Report



	Boring	Depth (ft)	LL	PL	PI	Water Content	% < #40	% < #200	USCS	Description
●	**HA-B4**	**4.0**	**25**	**17**	**8**	**9.3**		**33**	**(SC)**	**CLAYEY SAND (SC)**

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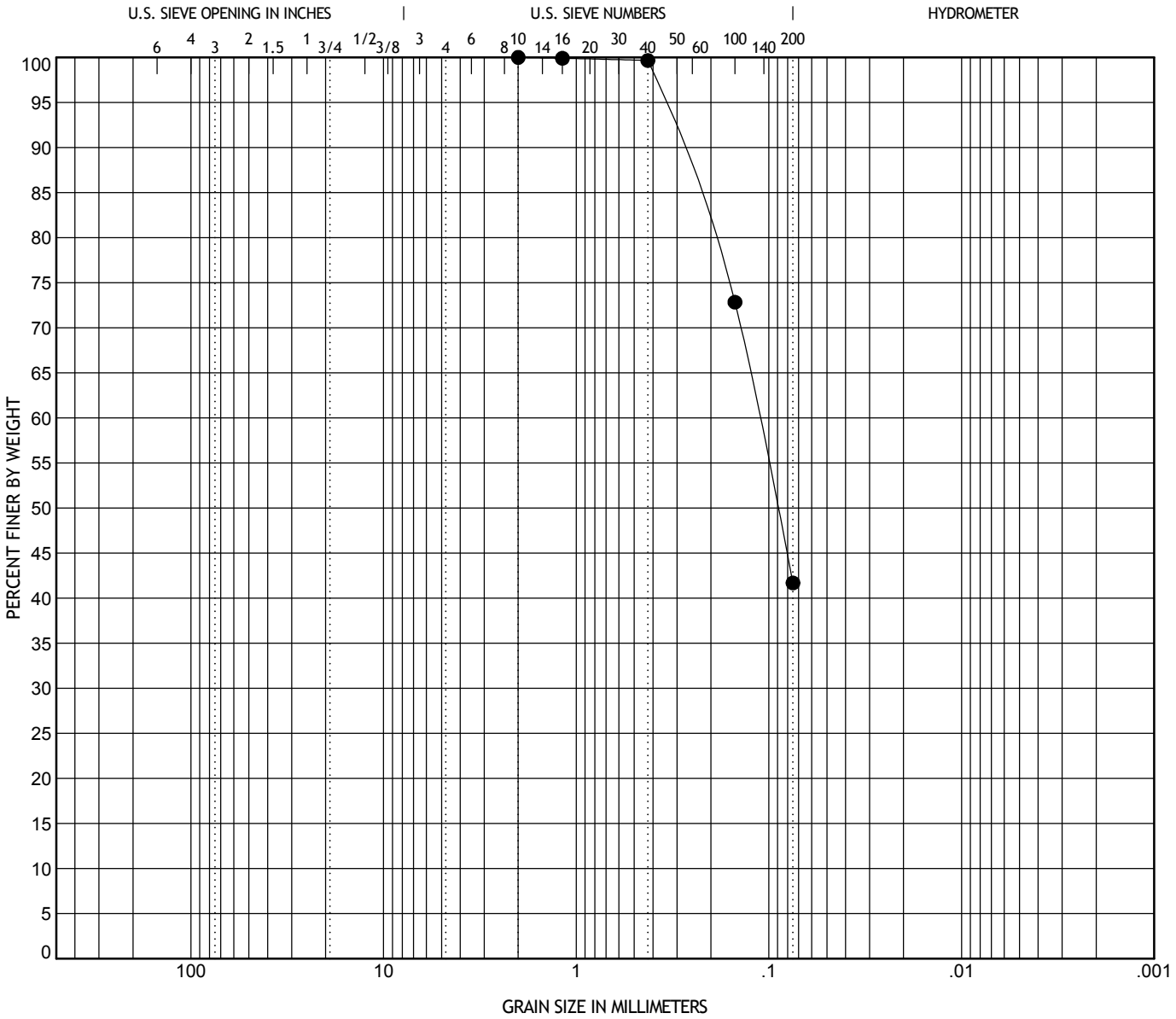
PROJECT INFORMATION

Client: Haley and Aldrich
Project Name: Killen Station
Project Number: CN160038
Project Location: Aberdeen, OH

GRAIN SIZE DISTRIBUTION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Boring	Depth (ft)	Classification	LL	PL	PI	Cc	Cu
●	HA-B5	24.0	* SILTY SAND (SM)					

	Boring	Depth (ft)	D95	D60	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	HA-B5	24.0	.355	.113	.09			0.0	58.3	41.7	

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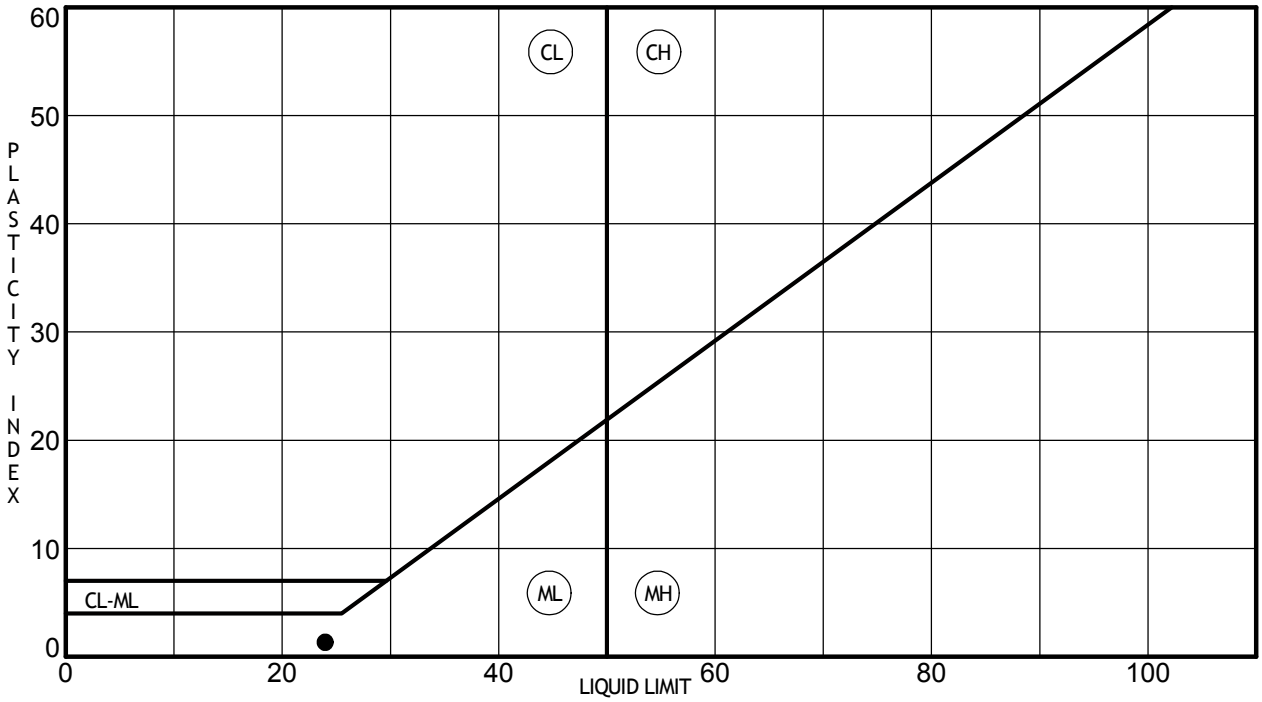
PROJECT INFORMATION

Client: Haley and Aldrich
Project Name: Killen Station
Project Number: CN160038
Project Location: Aberdeen, OH
Note: * Indicates a visually classified sample

Liquid and Plastic Limits Test Report



	Boring	Depth (ft)	LL	PL	PI	Water Content	% < #40	% < #200	USCS	Description
●	**HA-B5**	**8.0**	**24**	**23**	**1**	**19.4**		**71**	**(ML)**	**SILT with SAND (ML)**

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PROJECT INFORMATION

Client: Haley and Aldrich
Project Name: Killen Station
Project Number: CN160038
Project Location: Aberdeen, OH

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	---	Sample Type:	---	Tested By:	jbr
Sample ID:	---	Test Date:	07/08/16	Checked By:	emm
Depth :	---	Test Id:	382417		

Amount of Material Passing #200 Sieve - ASTM D1140

Boring ID	Sample ID	Depth	Visual Description	Fines, %
HAB1	U2	49-51	Moist, brown clay	85.3
HAB1	U3	66-68	Moist, yellowish brown sandy clay	62.0
HAB2	U1	16-18	Moist, yellowish brown clay with sand	70.2
HAB2	U2	28-30	Moist, reddish brown clay with sand	74.6
HAB2	U3	66-68	Moist, brown sandy clay	56.4
HAB3	U1	10-12	Moist, brown clay	89.6
HAB3	U2	22-24	Moist, brown clay	86.0
HAB3	U3	59-61	Moist, brown clay	94.3
HAB4	U1	26-28	Moist, brown clay	92.1

Notes: Tests performed using Method B - washing using a wetting agent
Dry mass of test specimen was determined directly

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	---	Sample Type:	---	Tested By:	jbr
Sample ID:	---	Test Date:	07/08/16	Checked By:	emm
Depth :	---	Test Id:	383234		

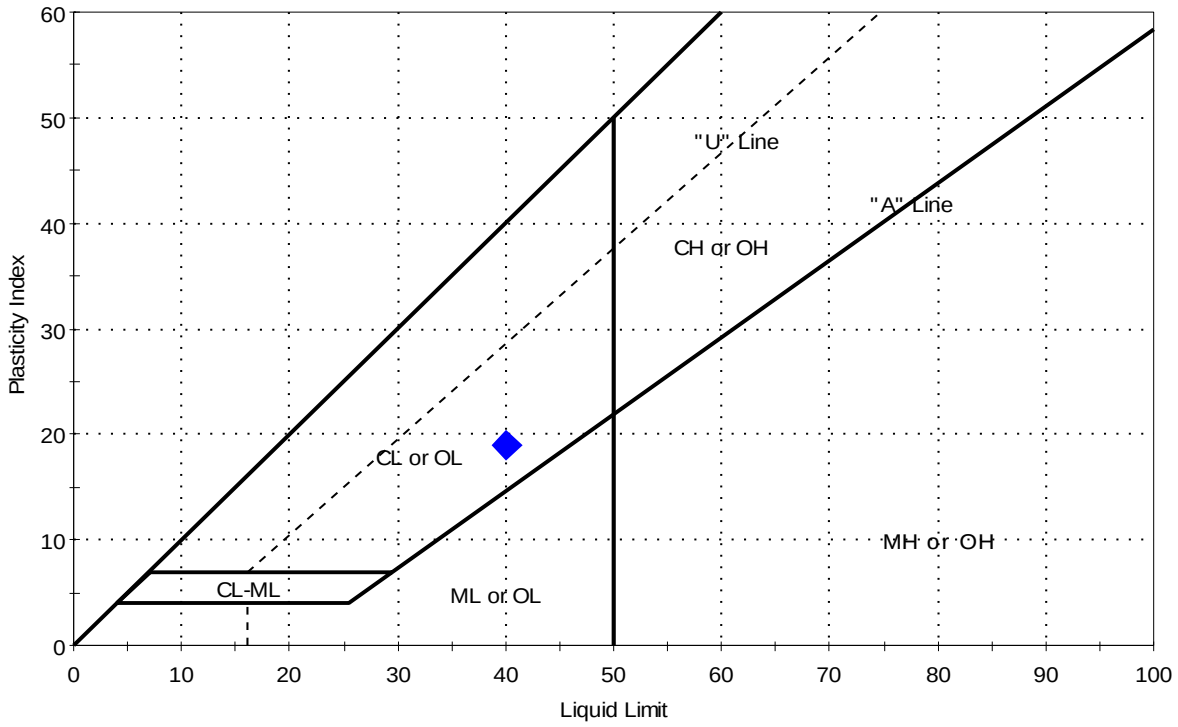
Amount of Material Passing #200 Sieve - ASTM D1140

Boring ID	Sample ID	Depth	Visual Description	Fines, %
HAB5	U1	3-5	Moist, brown clay	89.8
HAB5	U3	8-10	Moist, brown sandy clay	66.2

Notes: Tests performed using Method B - washing using a wetting agent
Dry mass of test specimen was determined directly

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB1	Sample Type:	tube	Tested By:	cam
Sample ID:	U2	Test Date:	07/14/16	Checked By:	emm
Depth :	49-51	Test Id:	382399		
Test Comment:	---				
Visual Description:	Moist, brown clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U2	HAB1	49-51	18	40	21	19	-0.1	

Sample Prepared using the WET method

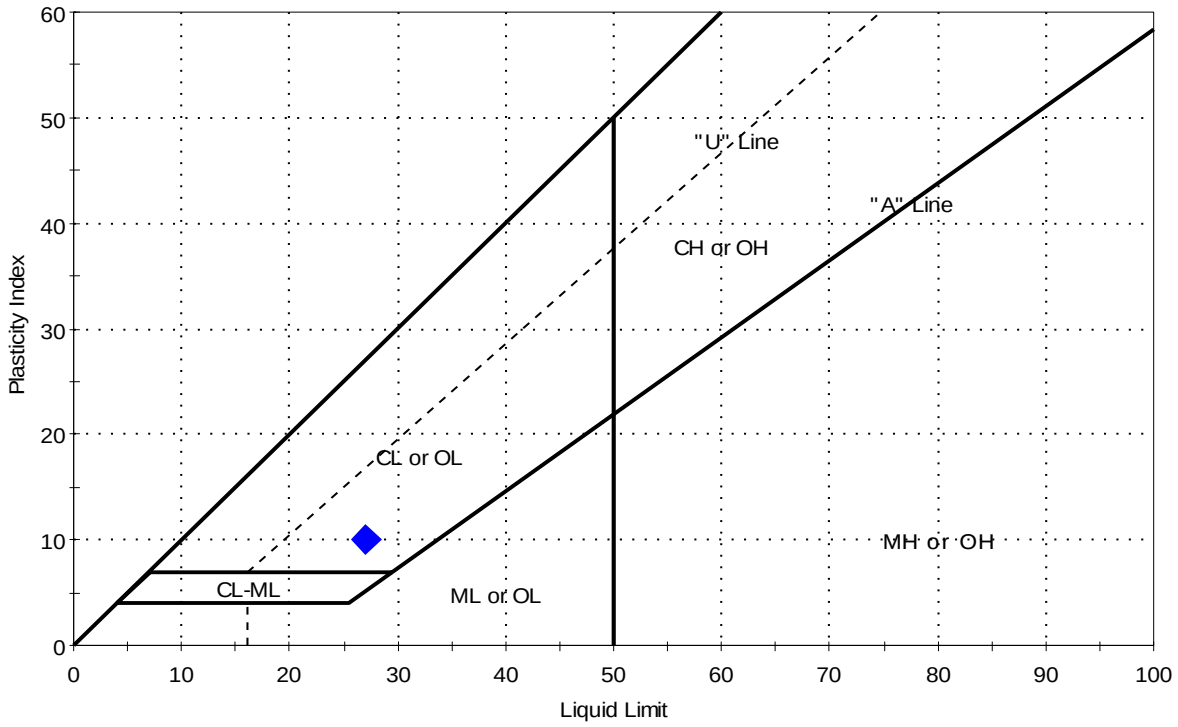
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB1	Sample Type:	tube	Tested By:	cam
Sample ID:	U3	Test Date:	07/14/16	Checked By:	emm
Depth :	66-68	Test Id:	382400		
Test Comment:	---				
Visual Description:	Moist, yellowish brown sandy clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U3	HAB1	66-68	20	27	17	10	0.3	

Sample Prepared using the WET method

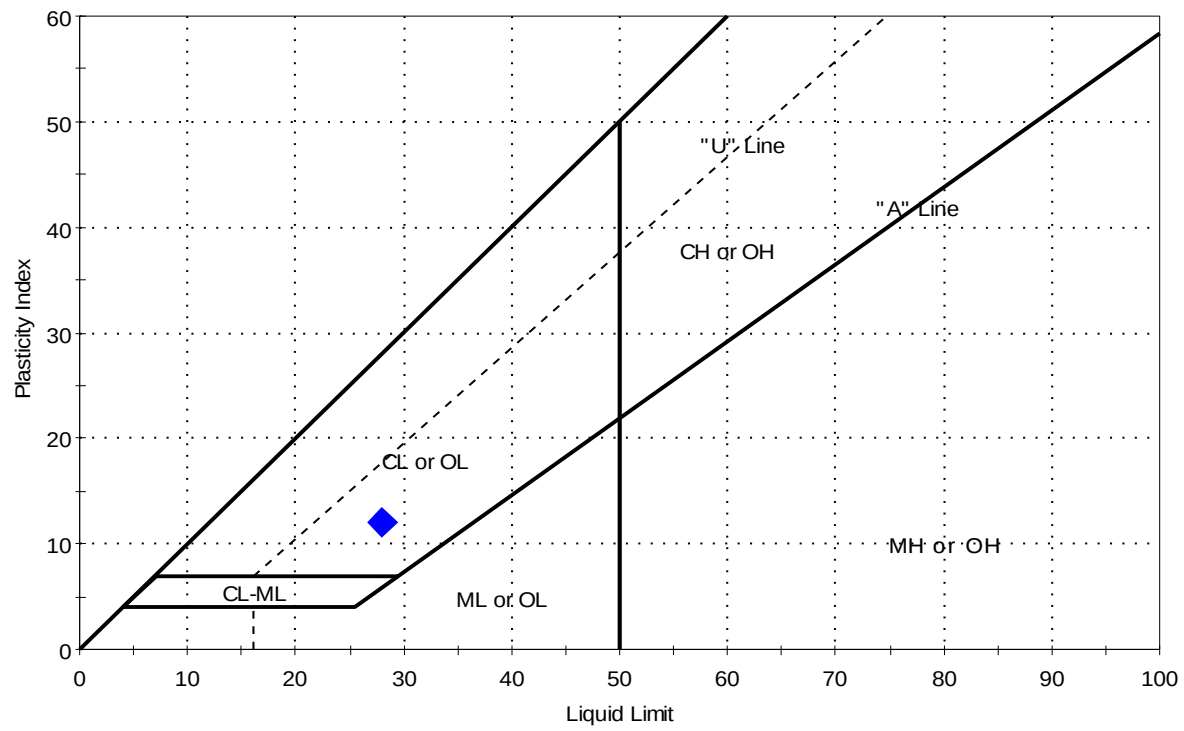
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB2	Sample Type:	tube	Tested By:	cam
Sample ID:	U1	Test Date:	07/15/16	Checked By:	emm
Depth :	16-18	Test Id:	382401		
Test Comment:	---				
Visual Description:	Moist, yellowish brown clay with sand				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U1	HAB2	16-18	14	28	16	12	-0.2	

Sample Prepared using the WET method

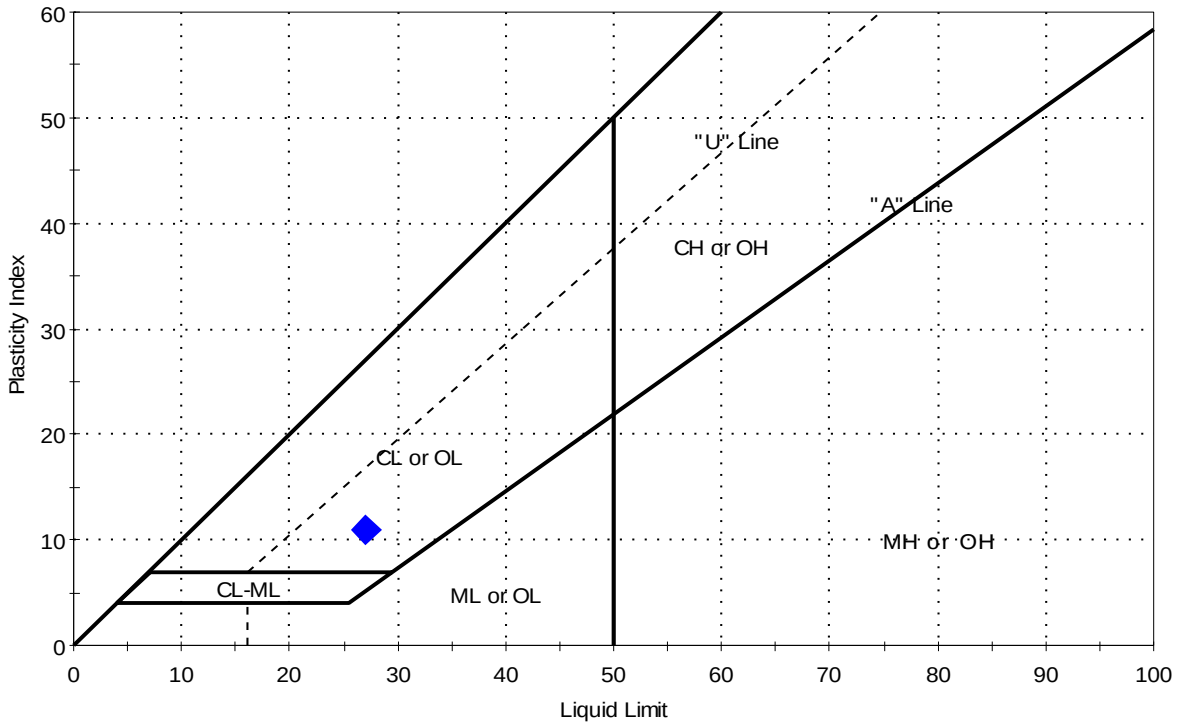
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB2	Sample Type:	tube	Tested By:	cam
Sample ID:	U2	Test Date:	07/12/16	Checked By:	emm
Depth :	28-30	Test Id:	382402		
Test Comment:	---				
Visual Description:	Moist, reddish brown clay with sand				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U2	HAB2	28-30	14	27	16	11	-0.2	

Sample Prepared using the WET method

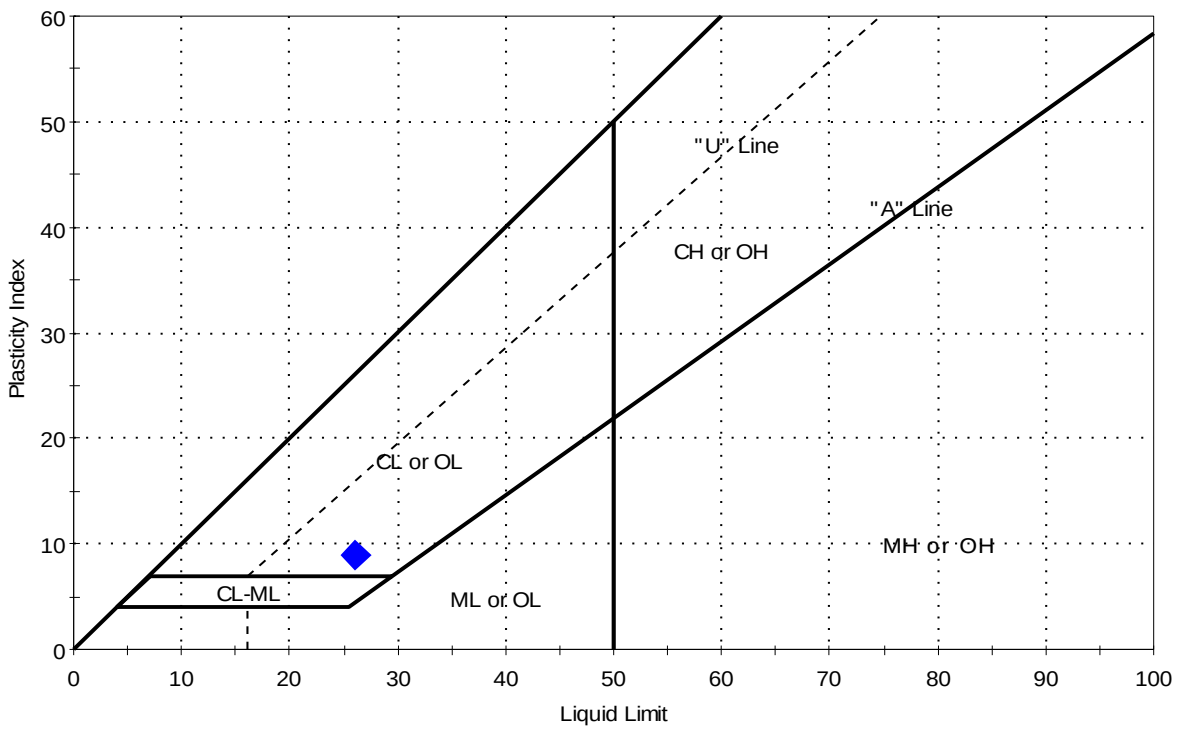
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB2	Sample Type:	tube	Tested By:	cam
Sample ID:	U3	Test Date:	07/13/16	Checked By:	emm
Depth :	66-68	Test Id:	382403		
Test Comment:	---				
Visual Description:	Moist, brown sandy clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U3	HAB2	66-68	15	26	17	9	-0.3	

Sample Prepared using the WET method

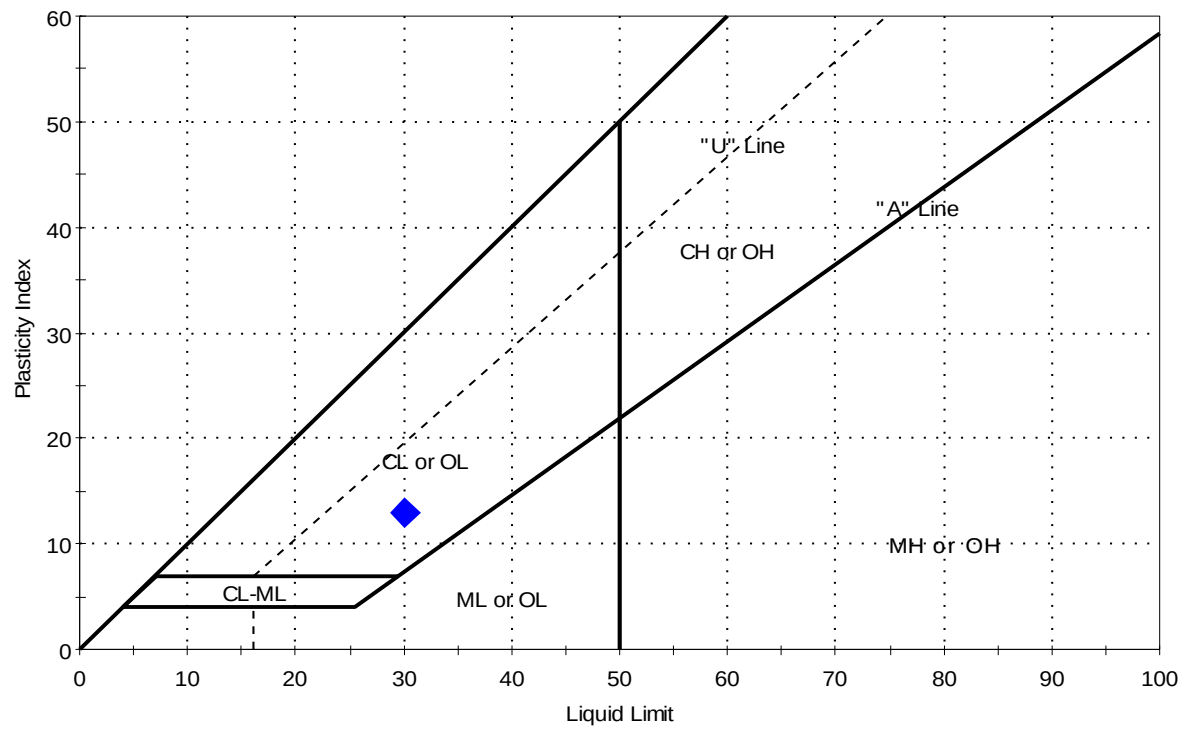
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB3	Sample Type:	tube	Tested By:	cam
Sample ID:	U1	Test Date:	07/14/16	Checked By:	emm
Depth :	10-12	Test Id:	382404		
Test Comment:	---				
Visual Description:	Moist, brown clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U1	HAB3	10-12	17	30	17	13	0	

Sample Prepared using the WET method

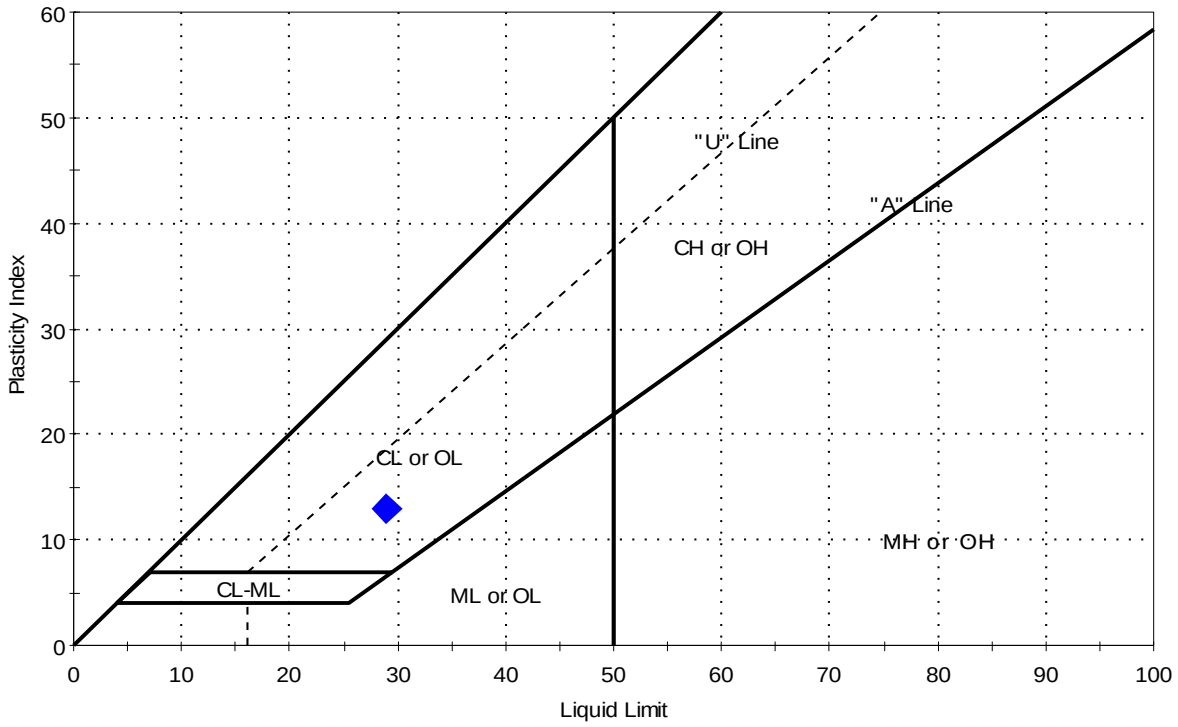
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB3	Sample Type:	tube	Tested By:	cam
Sample ID:	U2	Test Date:	07/12/16	Checked By:	emm
Depth :	22-24	Test Id:	382405		
Test Comment:	---				
Visual Description:	Moist, brown clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U2	HAB3	22-24	13	29	16	13	-0.2	

Sample Prepared using the WET method

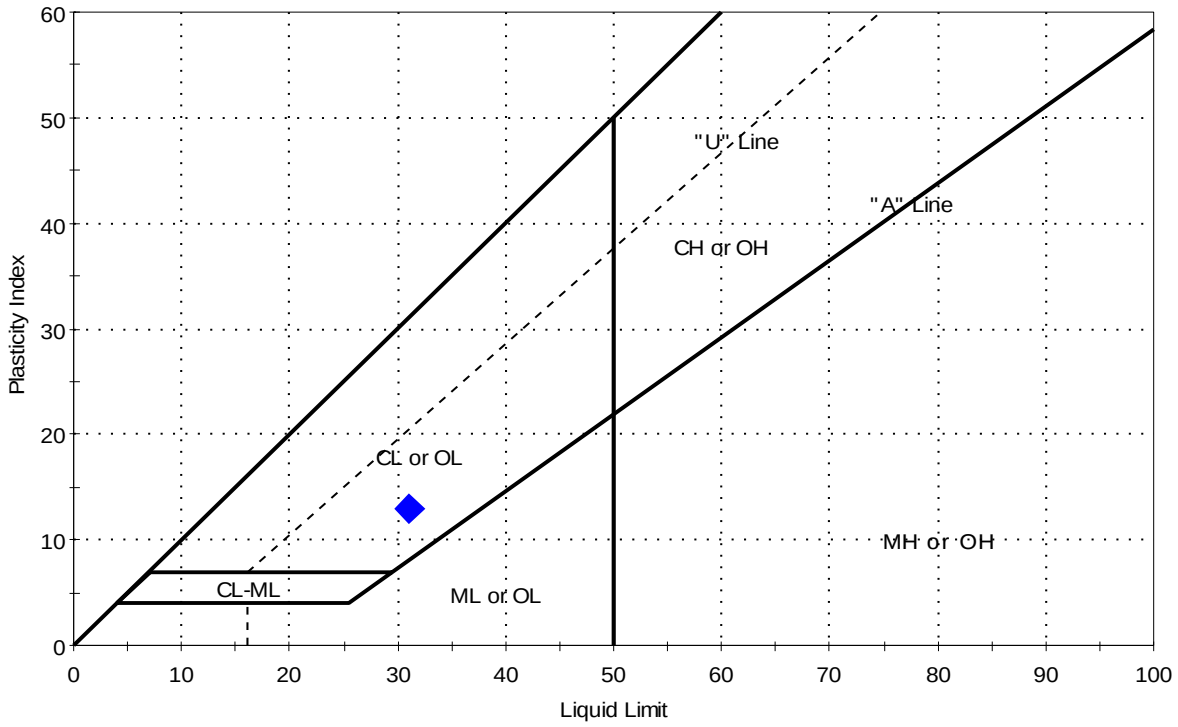
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB3	Sample Type:	tube	Tested By:	cam
Sample ID:	U3	Test Date:	07/11/16	Checked By:	emm
Depth :	59-61	Test Id:	382406		
Test Comment:	---				
Visual Description:	Moist, brown clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U3	HAB3	59-61	20	31	18	13	0.2	

Sample Prepared using the WET method

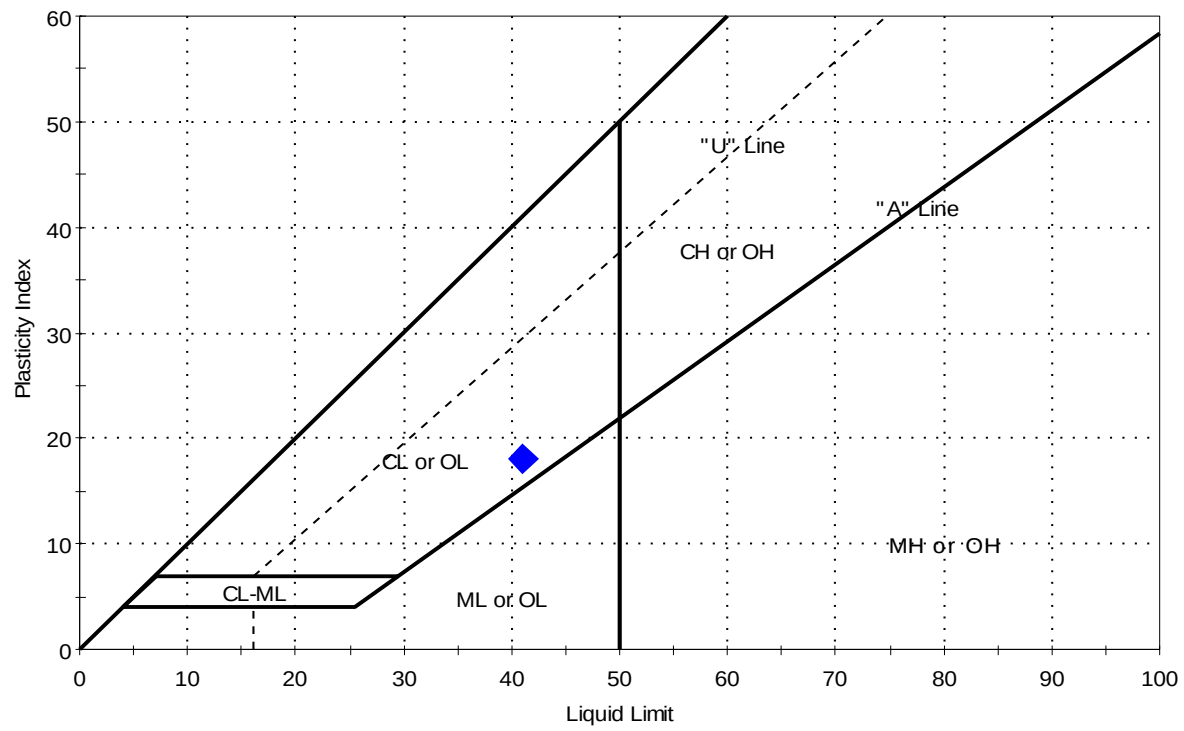
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB4	Sample Type:	tube	Tested By:	cam
Sample ID:	U1	Test Date:	07/12/16	Checked By:	emm
Depth :	26-28	Test Id:	382407		
Test Comment:	---				
Visual Description:	Moist, brown clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U1	HAB4	26-28	22	41	23	18	-0.1	

Sample Prepared using the WET method

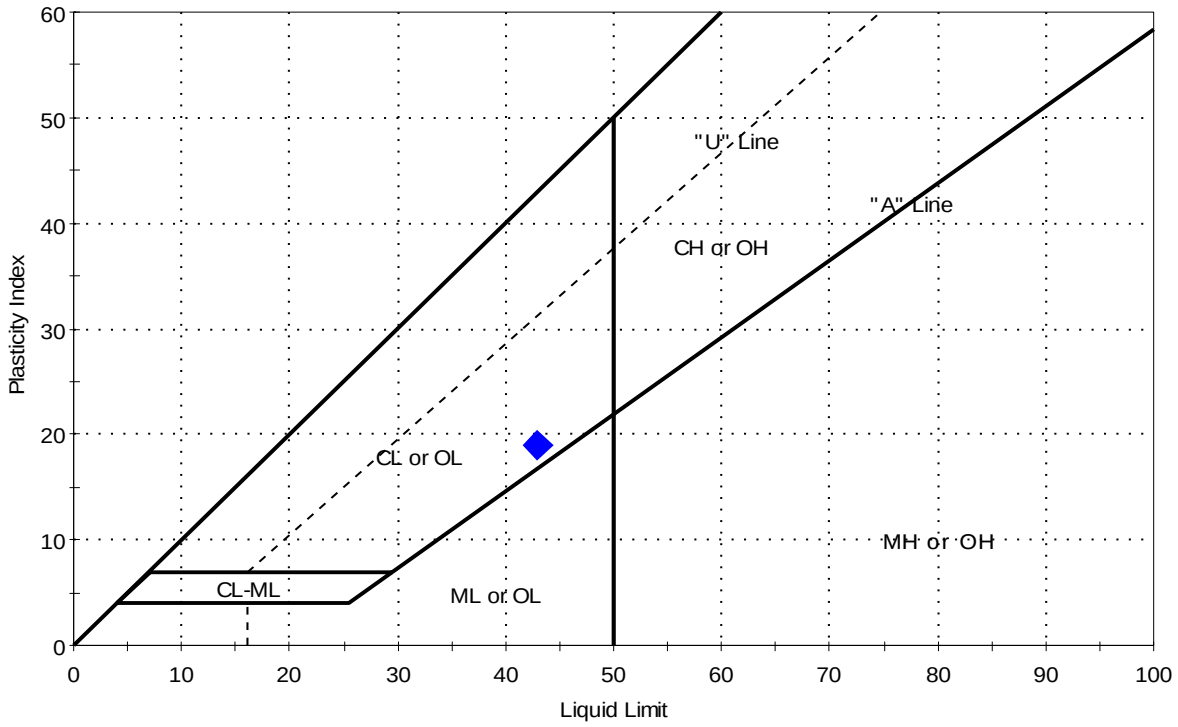
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB5	Sample Type:	tube	Tested By:	cam
Sample ID:	U1	Test Date:	07/19/16	Checked By:	emm
Depth :	3-5	Test Id:	382408		
Test Comment:	---				
Visual Description:	Moist, brown clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U1	HAB5	3-5	23	43	24	19	0	

Sample Prepared using the WET method

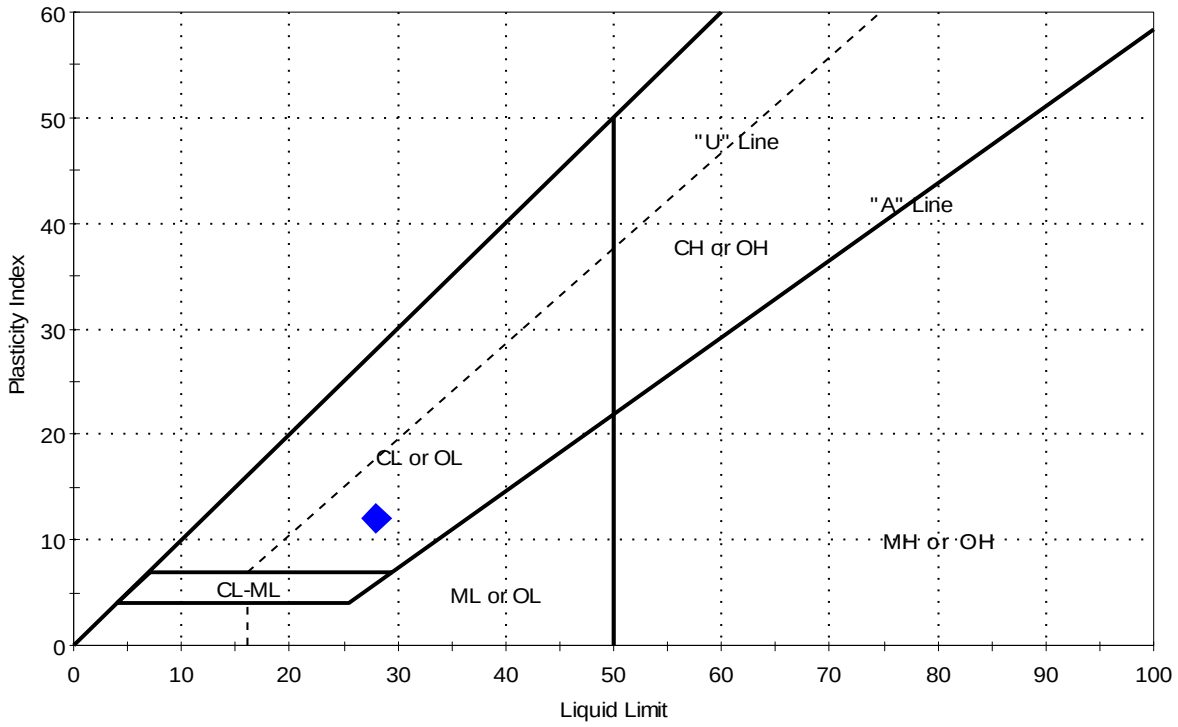
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.				
Project:	Killen Station - DP&L				
Location:	Manchester, OH			Project No:	GTX-304927
Boring ID:	HAB5	Sample Type:	tube	Tested By:	cam
Sample ID:	U3	Test Date:	07/12/16	Checked By:	emm
Depth :	8-10	Test Id:	383235		
Test Comment:	---				
Visual Description:	Moist, brown sandy clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	U3	HAB5	8-10	13	28	16	12	-0.2	

Sample Prepared using the WET method

Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Haley & Aldrich, Inc.		
Project Name:	Killen Station - DP&L		
Project Location:	Manchester, OH		
GTX #:	304927	Tested By:	md
Test Date:	06/30/16-07/12/16	Checked By:	emm

Tube Handling with Moisture Content (ASTM D2216), Density of Soil (ASTM D7263), Hand-Held Torvane, and Visual Description

Boring ID	Sample ID	Depth, ft	Section	Visual Description	Bulk Density, lb/ft^3	Moisture Content, %	Dry Density, lb/ft^3	Hand Held Torvane Readings, tsf			
								1	2	3	Average
HAB1	U2	49-51	Top	Moist, brown clay	124.8	15.8	107.8	1.48	1.58	1.85	1.63
			Middle	Moist, brown clay	129.3	17.2	110.3	---	---	---	---
			Bottom	Moist, brown clay	130.1	18.3	110.0	---	---	---	---
HAB1	U3	66-68	Top	Moist, yellowish brown sandy clay	114.0	14.8	99.3	0.35	0.43	0.50	0.43
			Middle	Moist, yellowish brown sandy clay	116.7	8.8	107.3	0.40	0.30	0.43	0.38
			Bottom	Moist, yellowish brown sandy clay	118.0	20.4	97.9	0.70	0.65	0.75	0.70
HAB2	U1	16-18	Top	Moist, yellowish brown clay with sand	133.1	15.0	115.7	---	---	---	---
			Middle	Moist, yellowish brown clay with sand	133.2	15.0	115.8	---	---	---	---
			Bottom	Moist, yellowish brown clay with sand	132.1	13.9	116.0	---	---	---	---
HAB2	U2	28-30	Top	Moist, reddish brown clay with sand	133.4	13.1	117.9	---	---	---	---
			Middle	Moist, reddish brown clay with sand	136.2	13.8	119.7	---	---	---	---
			Bottom	Moist, reddish brown clay with sand	136.1	13.6	119.8	---	---	---	---

Client:	Haley & Aldrich, Inc.		
Project Name:	Killen Station - DP&L		
Project Location:	Manchester, OH		
GTX #:	304927	Tested By:	md
Test Date:	06/30/16-07/12/16	Checked By:	emm

Tube Handling with Moisture Content (ASTM D2216), Density of Soil (ASTM D7263), Hand-Held Torvane, and Visual Description

Boring ID	Sample ID	Depth, ft	Section	Visual Description	Bulk Density, lb/ft^3	Moisture Content, %	Dry Density, lb/ft^3	Hand Held Torvane Readings, tsf			
								1	2	3	Average
HAB2	U3	66-68	Top	Moist, brown sandy clay	115.9	15.2	100.6	---	---	---	---
			Middle	Moist, brown sandy clay	123.7	15.1	107.4	---	---	---	---
			Bottom	Moist, brown sandy clay	119.7	15.0	104.1	---	---	---	---
HAB3	U1	10-12	Top	Moist, brown clay	127.9	17.1	109.3	0.90	1.05	1.10	1.02
			Middle	Moist, brown clay	135.0	17.2	115.2	1.38	1.08	1.20	1.22
			Bottom	Moist, brown clay	135.8	15.6	117.5	1.03	1.18	1.00	1.07
HAB3	U2	22-24	Top	Moist, brown clay	131.1	18.8	110.4	---	---	---	---
			Middle	Moist, brown clay	133.8	13.7	117.7	---	---	---	---
			Bottom	Moist, brown clay	131.3	14.5	114.7	---	---	---	---

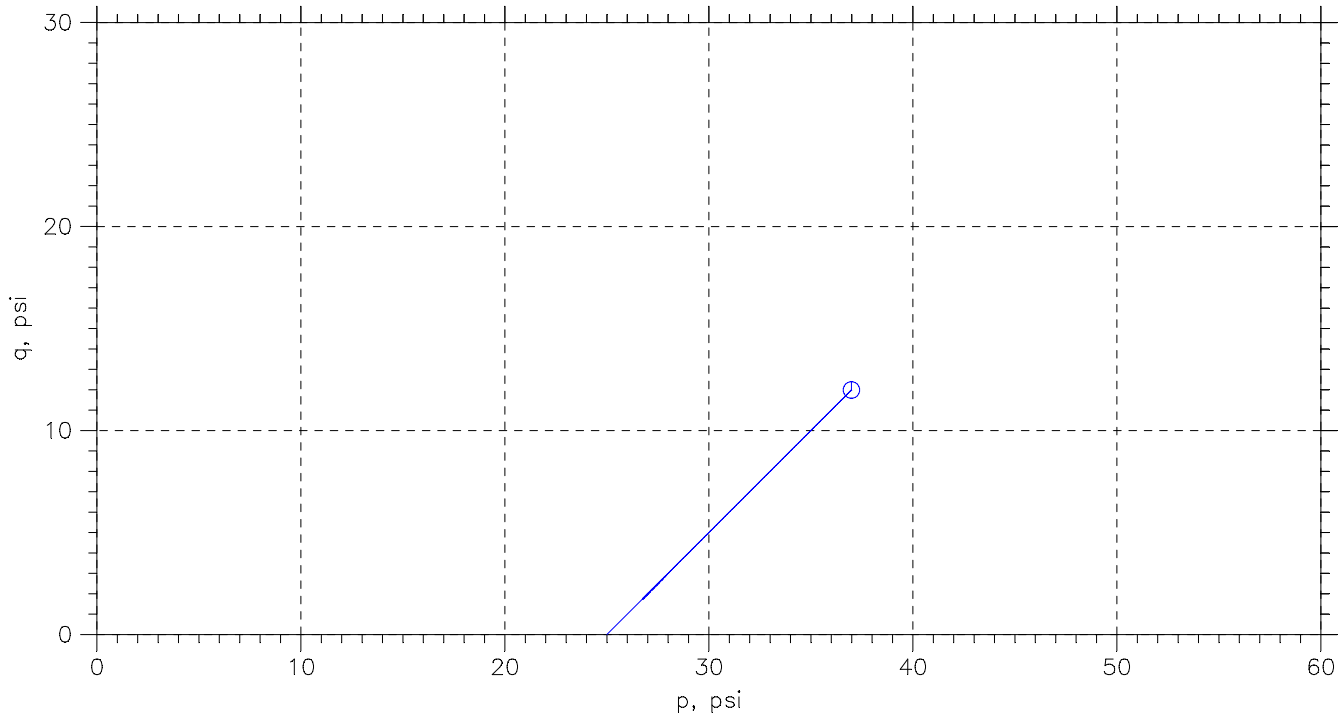
Client:	Haley & Aldrich, Inc.		
Project Name:	Killen Station - DP&L		
Project Location:	Manchester, OH		
GTX #:	304927	Tested By:	md
Test Date:	06/30/16-07/12/16	Checked By:	emm

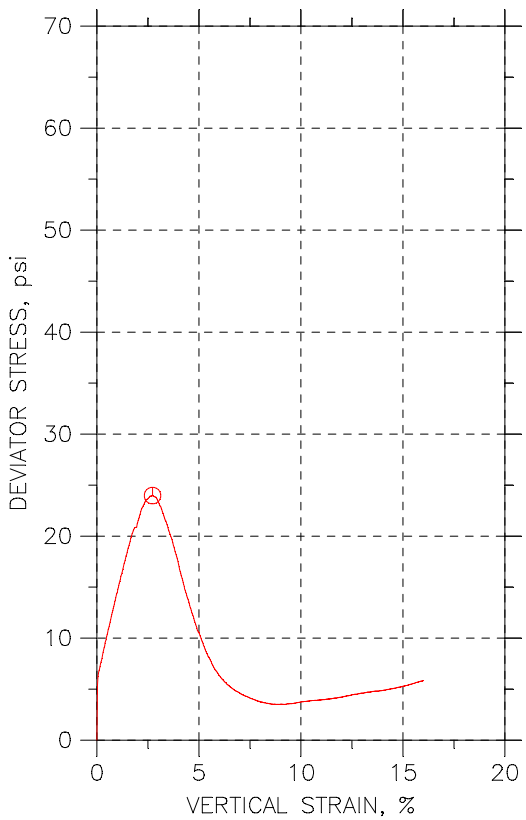
Tube Handling with Moisture Content (ASTM D2216), Density of Soil (ASTM D7263), Hand-Held Torvane, and Visual Description

Boring ID	Sample ID	Depth, ft	Section	Visual Description	Bulk Density, lb/ft^3	Moisture Content, %	Dry Density, lb/ft^3	Hand Held Torvane Readings, tsf			
								1	2	3	Average
HAB3	U3	59-61	Top	Moist, brown clay	119.1	19.5	99.6	---	---	---	---
			Middle	Moist, brown clay	118.5	19.8	98.9	---	---	---	---
			Bottom	Moist, brown clay	123.2	20.1	102.5	---	---	---	---
HAB4	U1	26-28	Top	Moist, brown clay	130.3	18.0	110.4	---	---	---	---
			Middle	Moist, brown clay	118.2	23.0	96.1	---	---	---	---
			Bottom	Moist, brown clay	121.3	23.6	98.1	---	---	---	---
HAB5	U1	3-5	Bottom	Moist, brown clay	118.1	23.1	95.9	---	---	---	---
HAB5	U3	8-10	Top	Moist, brown sandy clay	117.3	17.1	100.2	---	---	---	---
			Middle	Moist, brown sandy clay	121.6	20.3	101.1	---	---	---	---
			Bottom	Moist, brown sandy clay	106.2	13.3	93.7	---	---	---	---

Notes: Density determined on undisturbed tube samples provided to GeoTesting Express in Shelby tubes
Moisture content determined by ASTM D2216 at 110° C

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D2850





Symbol	⏲			
Sample No.	U3			
Test No.	UU-2			
Depth	66-68 ft			
Tested by	md			
Test Date	6/30/16			
Checked by	njh			
Check Date	7/20/16			
Diameter, in	2.86			
Height, in	6.9			
Water Content, %	17.2			
Dry Density, pcf	99.77			
Saturation, %	67.5			
Void Ratio	0.689			
Confining Stress, psi	25			
Undrained Strength, psi	11.99			
Max. Dev. Stress, psi	23.97			
Strain at Failure, %	2.72			
Strain Rate, %/min	1			
Estimated Specific Gravity	2.7			
Liquid Limit	27			
Plastic Limit	17			
Plasticity Index	10			

GeoTesting EXPRESS

Project: Killen Station - DP&L

Location: Manchester, OH

Project No.: GTX-304927

Boring No.: HAB1

Sample Type: intact

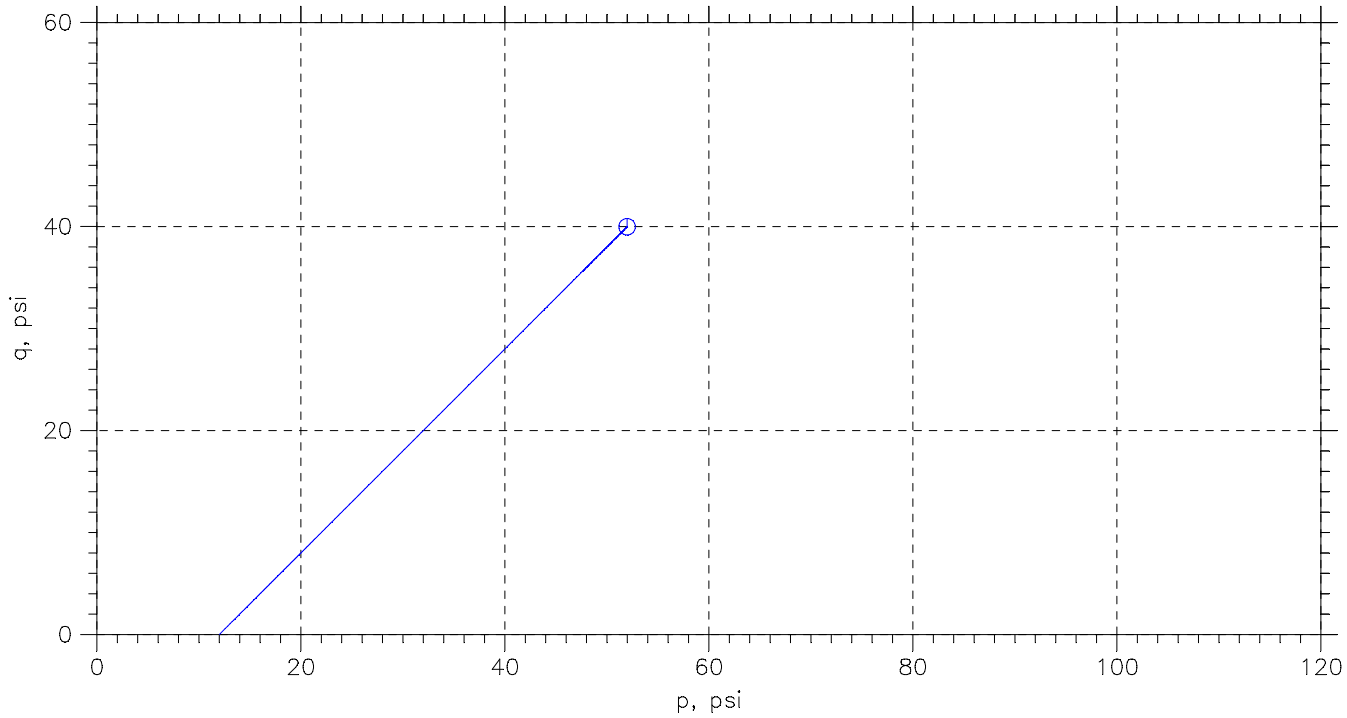
Description: Moist, yellowish brown sandy clay

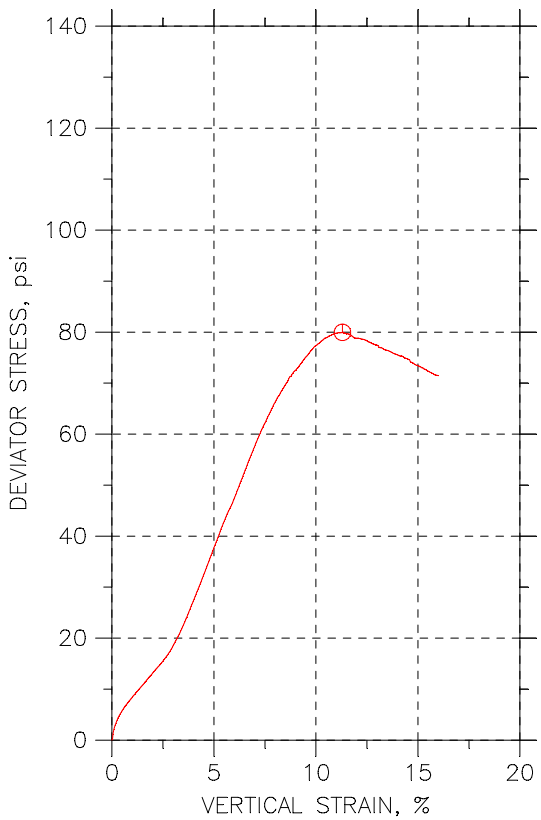
Remarks: System T

Phase calculations based on start and end of test.

Wed, 20-JUL-2016 12:58:20

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D2850





Symbol	⏲			
Sample No.	U2			
Test No.	UU-3			
Depth	28-30 ft			
Tested by	md			
Test Date	7/12/16			
Checked by	njh			
Check Date	7/20/16			
Diameter, in	2.86			
Height, in	6.31			
Water Content, %	13.6			
Dry Density, pcf	120.1			
Saturation, %	90.7			
Void Ratio	0.404			
Confining Stress, psi	12			
Undrained Strength, psi	39.98			
Max. Dev. Stress, psi	79.95			
Strain at Failure, %	11.3			
Strain Rate, %/min	1			
Estimated Specific Gravity	2.7			
Liquid Limit	27			
Plastic Limit	16			
Plasticity Index	11			

GeoTesting EXPRESS

Project: Killen Station - DP&L

Location: Manchester, OH

Project No.: GTX-304927

Boring No.: HAB2

Sample Type: intact

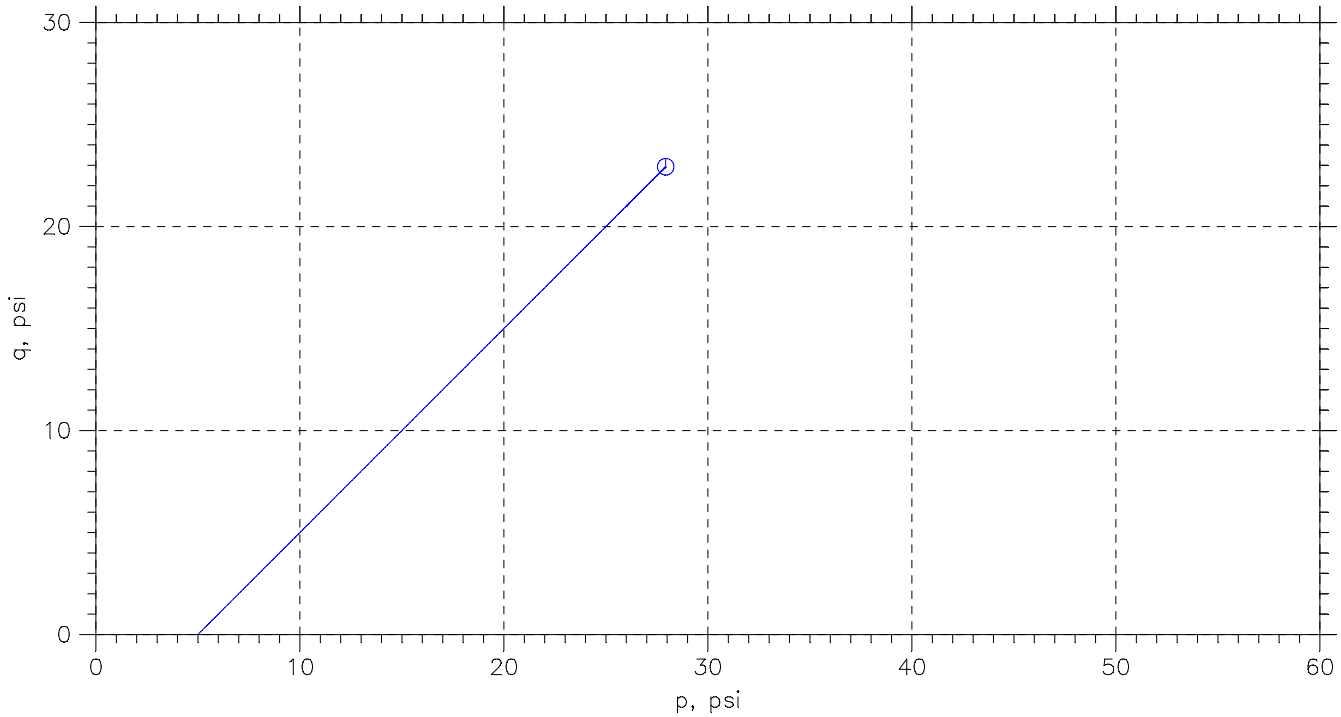
Description: Moist, reddish brown clay with sand

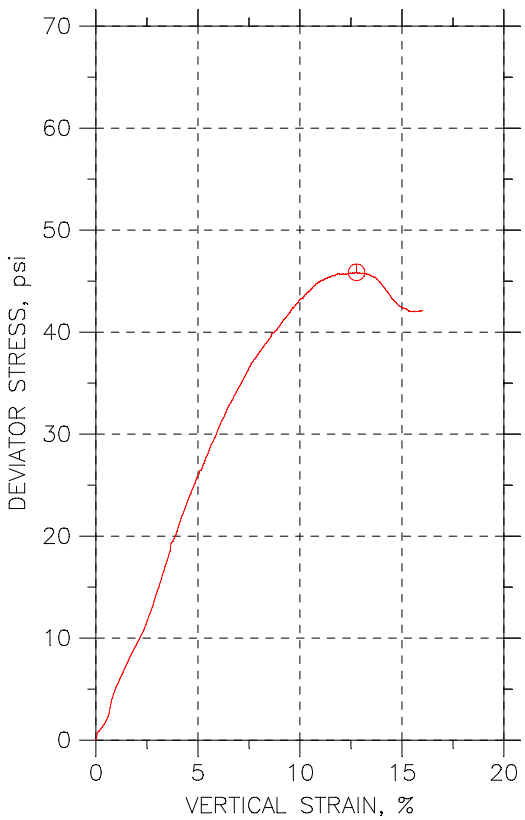
Remarks: System X

Phase calculations based on start and end of test.

Wed, 20-JUL-2016 13:12:53

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D2850





Symbol	⏲			
Sample No.	U1			
Test No.	UU-1			
Depth	10-12 ft			
Tested by	md			
Test Date	6/30/16			
Checked by	njh			
Check Date	7/20/16			
Diameter, in	2.85			
Height, in	6.25			
Water Content, %	16.5			
Dry Density, pcf	116.1			
Saturation, %	98.8			
Void Ratio	0.452			
Confining Stress, psi	5			
Undrained Strength, psi	22.93			
Max. Dev. Stress, psi	45.86			
Strain at Failure, %	12.8			
Strain Rate, %/min	1			
Estimated Specific Gravity	2.7			
Liquid Limit	30			
Plastic Limit	17			
Plasticity Index	13			

GeoTesting EXPRESS

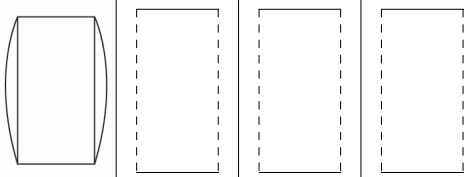
Project: Killen Station - DP&L

Location: Manchester, OH

Project No.: GTX-304927

Boring No.: HAB3

Sample Type: intact



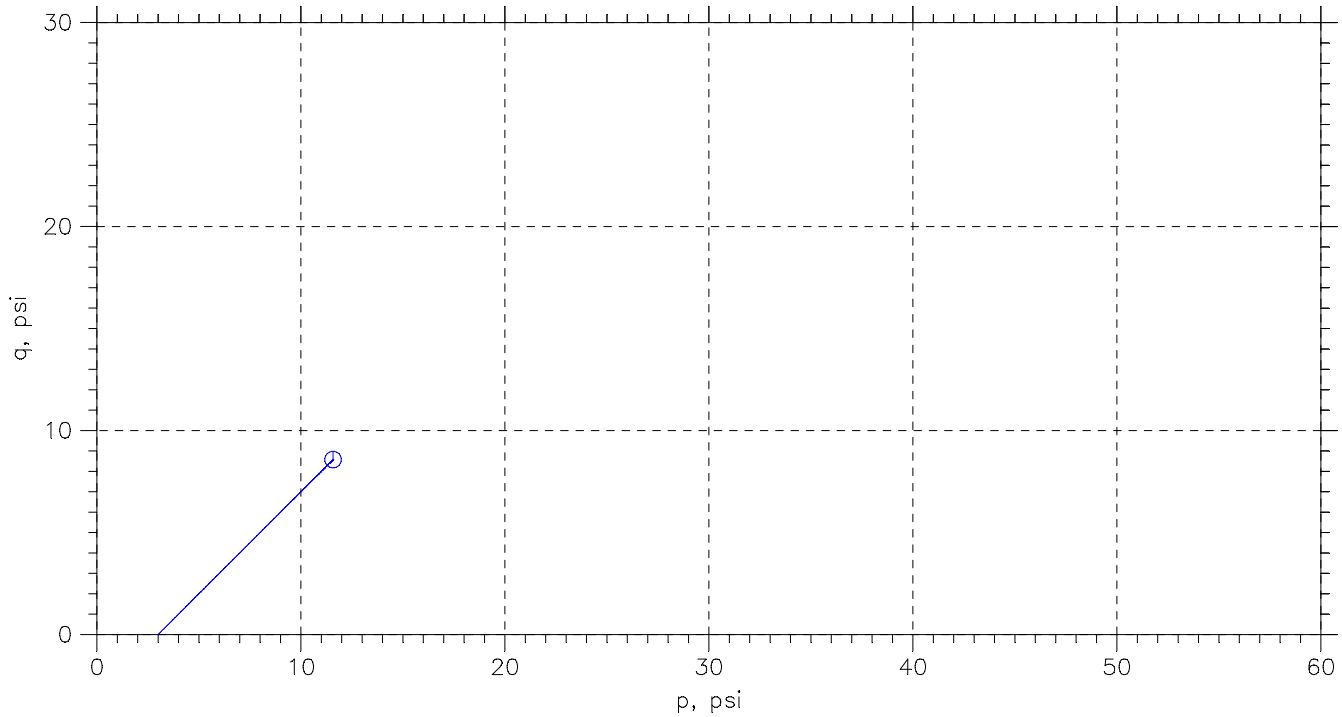
Description: Moist, brown clay

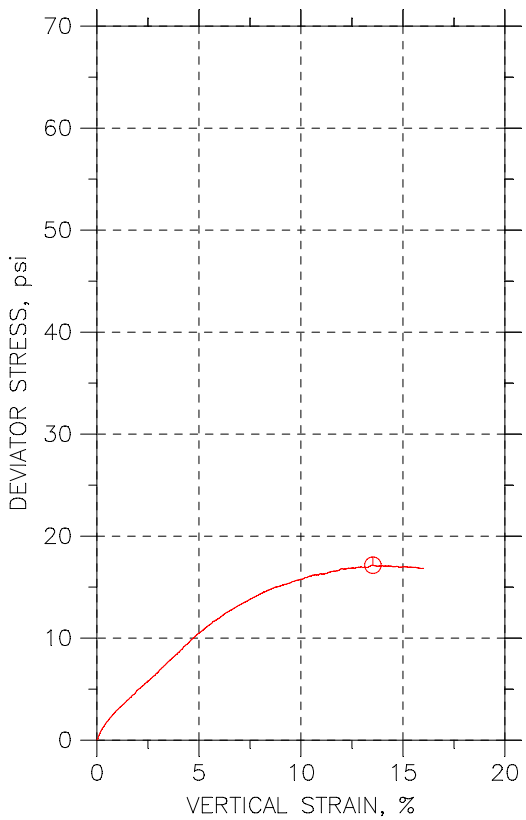
Remarks: System T

Phase calculations based on start and end of test.

Wed, 20-JUL-2016 12:59:21

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D2850





Symbol	⏲			
Sample No.	U1			
Test No.	UU-4			
Depth	3-5 ft			
Tested by	md			
Test Date	7/12/16			
Checked by	njh			
Check Date	7/20/16			
Diameter, in	2.87			
Height, in	6.25			
Water Content, %	28.6			
Dry Density, pcf	92.03			
Saturation, %	92.8			
Void Ratio	0.832			
Confining Stress, psi	3			
Undrained Strength, psi	8.575			
Max. Dev. Stress, psi	17.15			
Strain at Failure, %	13.5			
Strain Rate, %/min	1			
Estimated Specific Gravity	2.7			
Liquid Limit	43			
Plastic Limit	24			
Plasticity Index	19			

GeoTesting EXPRESS

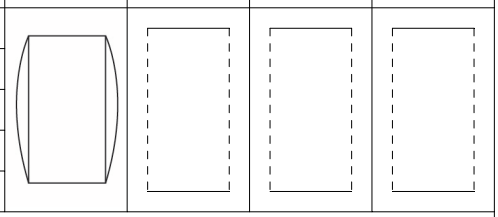
Project: Killen Station - DP&L

Location: Manchester, OH

Project No.: GTX-304927

Boring No.: HAB5

Sample Type: intact



Description: Moist, brown clay

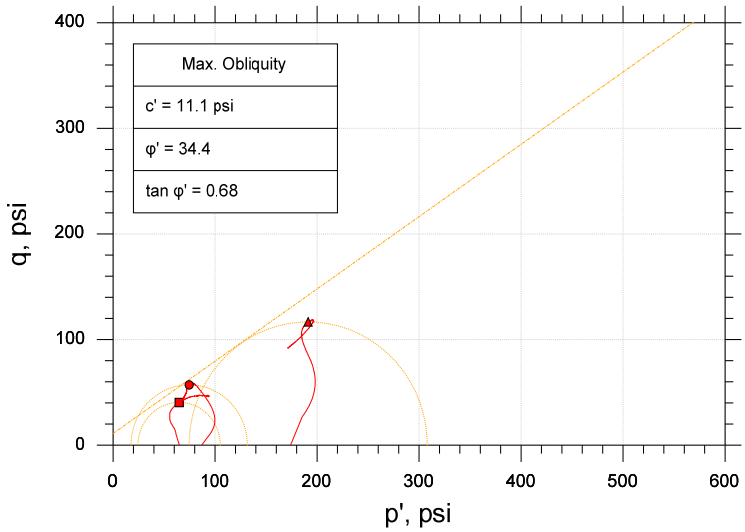
Remarks: System X

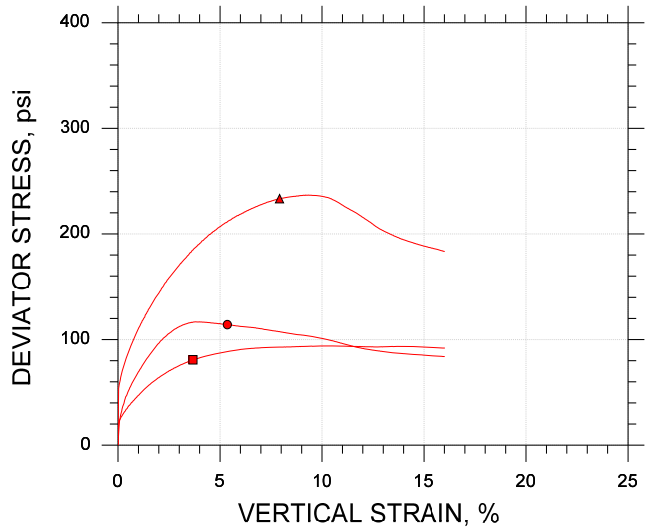
Phase calculations based on start and end of test.

Wed, 20-JUL-2016 13:19:47

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB1	
Preparation: intact	
Description: Moist, brown clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 40	Plastic Limit: 21
Plasticity Index: 19	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

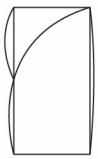




Symbol		■	●	▲	
Sample ID		U2	U2	U2	
Depth, ft		49-51	49-51	49-51	
Test Number		CU-1-1	CU-1-2	CU-1-3	
Initial	Height, in	4.700	4.390	4.700	
	Diameter, in	2.030	2.030	2.030	
	Moisture Content (from Cuttings), %	15.8	17.2	18.3	
	Dry Density, pcf	110.	110.	106.	
	Saturation (Wet Method), %	80.5	88.2	82.8	
	Void Ratio	0.529	0.527	0.596	
Before Shear	Moisture Content, %	13.9	3.9	6.3	
	Dry Density, pcf	122.	152.	144.	
	Cross-sectional Area (Method A), in²	2.955	2.385	2.432	
	Saturation, %	100.0	100.0	100.0	
	Void Ratio	0.376	0.107	0.171	
	Back Pressure, psi	90.99	43.01	40.98	
Vertical Effective Consolidation Stress, psi		64.91	86.85	173.8	
Horizontal Effective Consolidation Stress, psi		65.01	86.98	174.0	
Vertical Strain after Consolidation, %		1.360	1.708	2.396	
Volumetric Strain after Consolidation, %		9.836	27.65	26.64	
Time to 50% Consolidation, min		144.0	144.0	361.0	
Shear Strength, psi		40.39	57.05	116.7	
Strain at Failure, %		3.67	5.35	7.92	
Strain Rate, %/min		0.01600	0.01600	0.01600	
Deviator Stress at Failure, psi		80.77	114.1	233.4	
Effective Minor Principal Stress at Failure, psi		24.42	17.54	74.53	
Effective Major Principal Stress at Failure, psi		105.2	131.6	307.9	
B-Value		0.95	0.97	1.01	

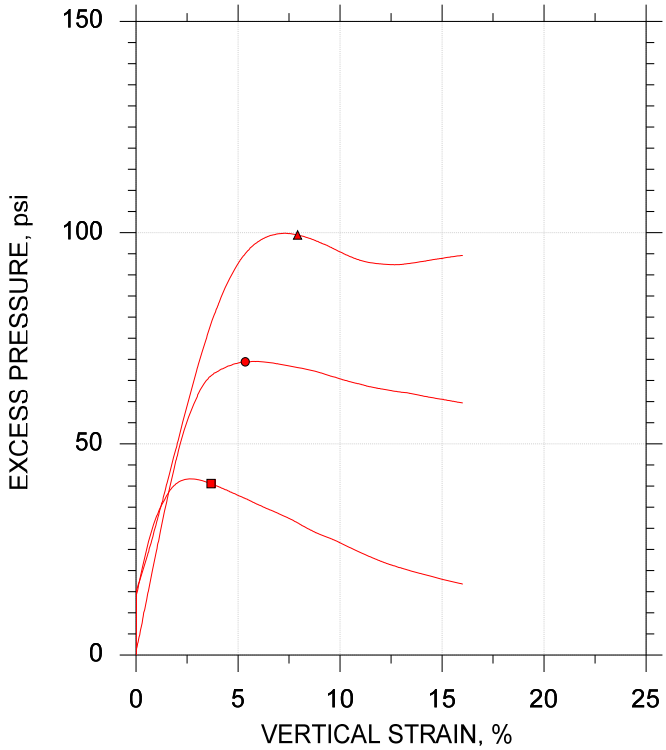
Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

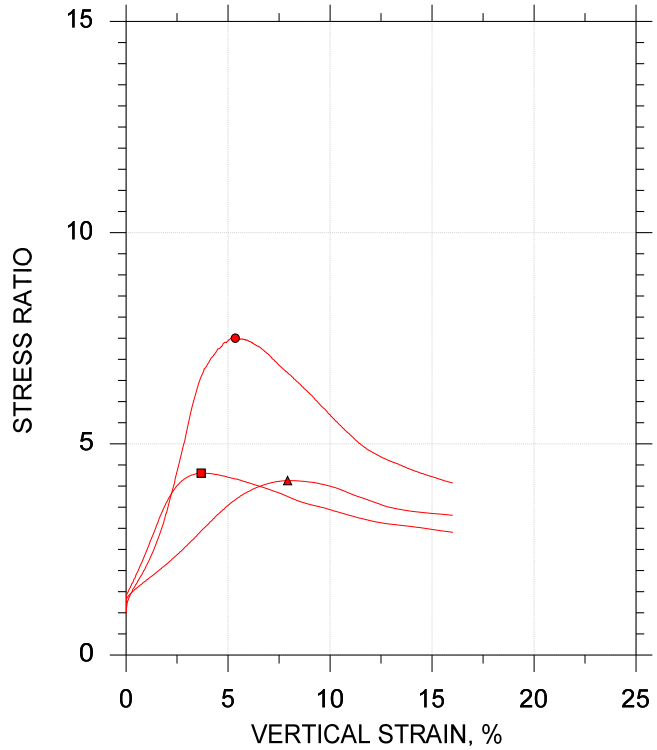
Remarks:

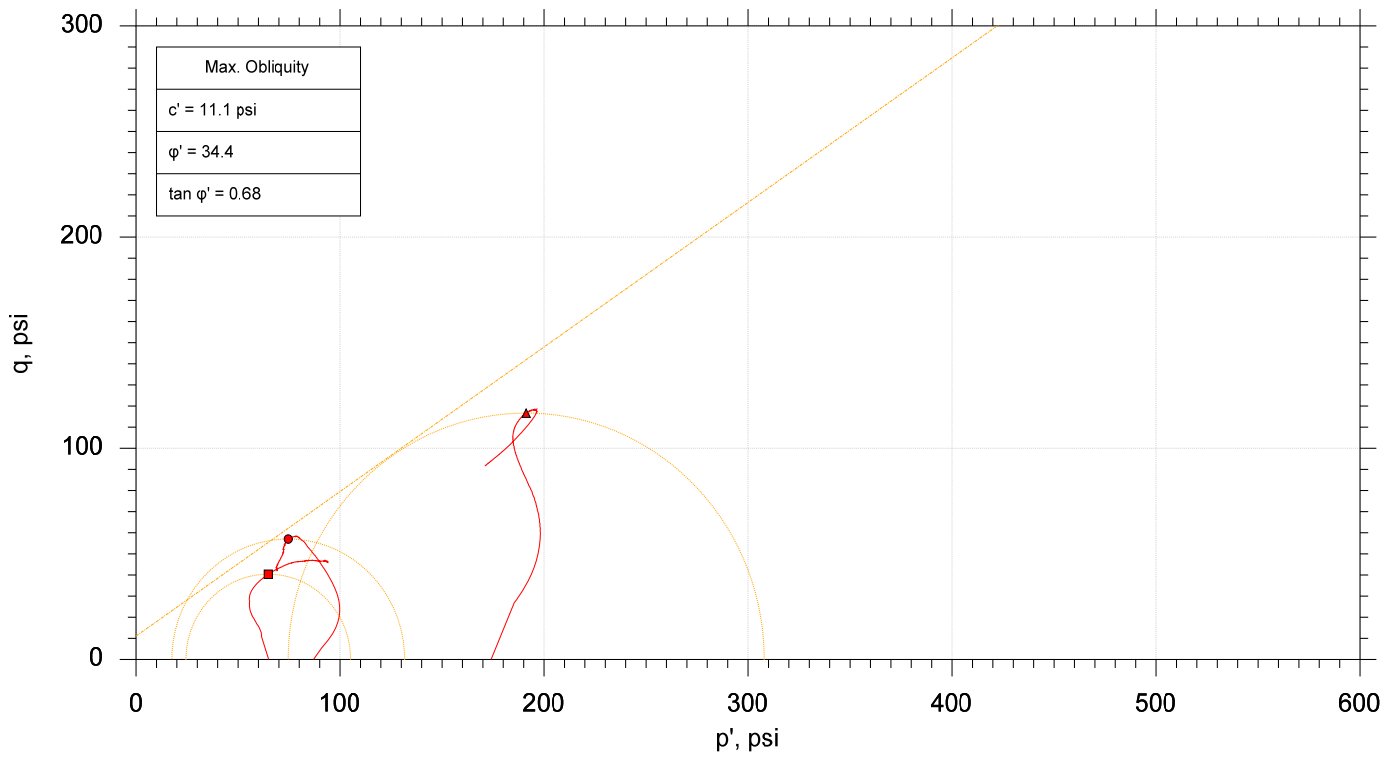


System X

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767







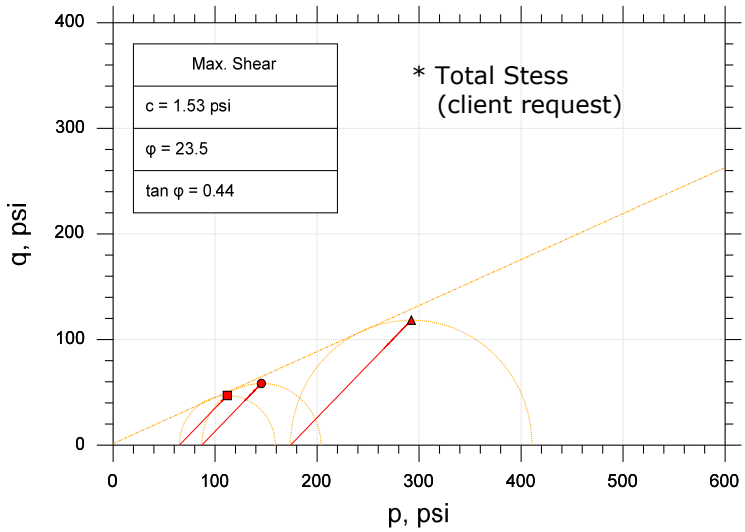
	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
■	U2	CU-1-1	49-51	md	07/01/16	njh	7/19/16	304927-CU-1-1n.dat
●	U2	CU-1-2	49-51	md	07/01/16	njh	7/19/16	304927-CU-1-2n.dat
▲	U2	CU-1-3	49-51	md	07/01/16	njh	7/19/16	304927-CU-1-3n.dat

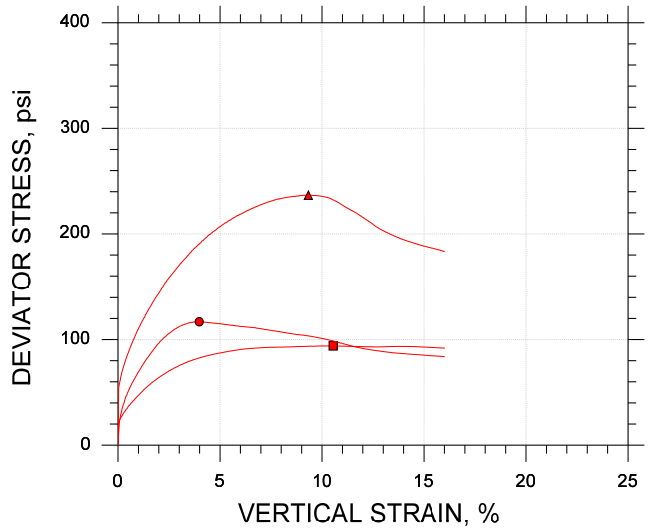
GeoTesting EXPRESS

Project: Killen Station - DP&L	Location: Manchester, OH	Project No.: GTX-304927
Boring No.: HAB1	Sample Type: intact	
Description: Moist, brown clay		
Remarks: System X		

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB1	
Preparation: intact	
Description: Moist, brown clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 40	Plastic Limit: 21
Plasticity Index: 19	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767





Symbol		■	●	▲
Sample ID		U2	U2	U2
Depth, ft		49-51	49-51	49-51
Test Number		CU-1-1	CU-1-2	CU-1-3
Initial	Height, in	4.700	4.390	4.700
	Diameter, in	2.030	2.030	2.030
	Moisture Content (from Cuttings), %	15.8	17.2	18.3
	Dry Density, pcf	110.	110.	106.
	Saturation (Wet Method), %	80.5	88.2	82.8
	Void Ratio	0.529	0.527	0.596
Before Shear	Moisture Content, %	13.9	3.9	6.3
	Dry Density, pcf	122.	152.	144.
	Cross-sectional Area (Method A), in²	2.955	2.385	2.432
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.376	0.107	0.171
	Back Pressure, psi	90.99	43.01	40.98
Vertical Effective Consolidation Stress, psi		64.91	86.85	173.8
Horizontal Effective Consolidation Stress, psi		65.01	86.98	174.0
Vertical Strain after Consolidation, %		1.360	1.708	2.396
Volumetric Strain after Consolidation, %		9.836	27.65	26.64
Time to 50% Consolidation, min		144.0	144.0	361.0
Shear Strength, psi		46.99	58.41	118.4
Strain at Failure, %		10.5	3.98	9.33
Strain Rate, %/min		0.01600	0.01600	0.01600
Deviator Stress at Failure, psi		93.98	116.8	236.7
Effective Minor Principal Stress at Failure, psi		39.69	19.89	76.98
Effective Major Principal Stress at Failure, psi		133.7	136.7	313.7
B-Value		0.95	0.97	1.01

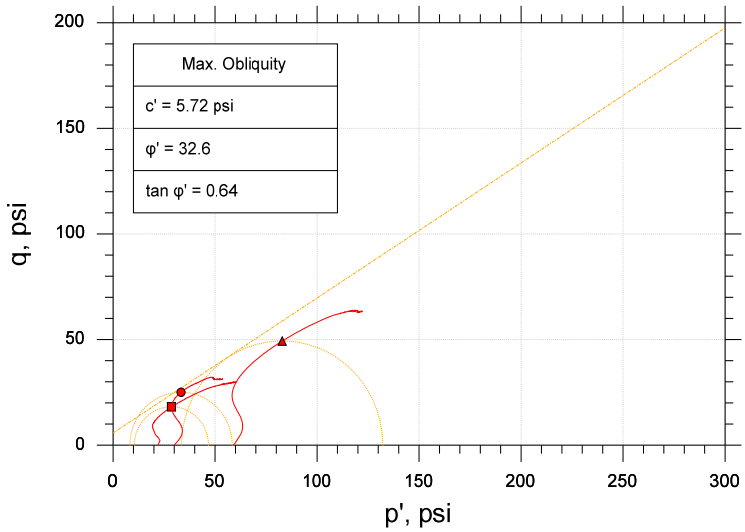
Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

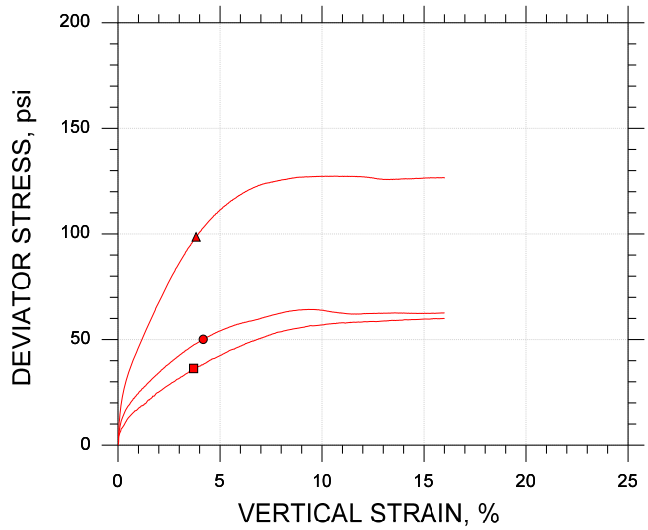
Remarks:

System X

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB2	
Preparation: intact	
Description: Moist, yellowish brown clay with sand	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 28	Plastic Limit: 16
Plasticity Index: 12	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

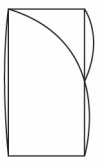


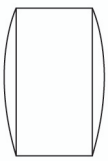


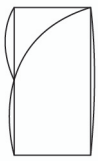
Symbol		■	●	▲
Sample ID		U1	U1	U1
Depth, ft		16-18	16-18	16-18
Test Number		CU-2-1	CU-2-2A	CU-2-3
Initial	Height, in	4.730	4.740	4.680
	Diameter, in	2.030	2.020	2.030
	Moisture Content (from Cuttings), %	15.0	14.7	13.9
	Dry Density, pcf	112.	116.	116.
	Saturation (Wet Method), %	80.0	87.8	83.5
	Void Ratio	0.507	0.452	0.450
Before Shear	Moisture Content, %	15.4	11.2	14.6
	Dry Density, pcf	119.	129.	121.
	Cross-sectional Area (Method A), in²	3.069	2.897	3.151
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.417	0.304	0.395
	Back Pressure, psi	150.5	45.00	131.0
Vertical Effective Consolidation Stress, psi		21.97	29.96	58.91
Horizontal Effective Consolidation Stress, psi		22.00	29.99	58.99
Vertical Strain after Consolidation, %		0.5238	0.6864	1.306
Volumetric Strain after Consolidation, %		5.122	10.24	4.129
Time to 50% Consolidation, min		289.0	484.0	100.0
Shear Strength, psi		18.16	25.05	49.29
Strain at Failure, %		3.70	4.18	3.83
Strain Rate, %/min		0.01600	0.01600	0.01600
Deviator Stress at Failure, psi		36.32	50.10	98.57
Effective Minor Principal Stress at Failure, psi		10.47	8.286	33.63
Effective Major Principal Stress at Failure, psi		46.79	58.39	132.2
B-Value		0.96	0.95	0.96

Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

Remarks:

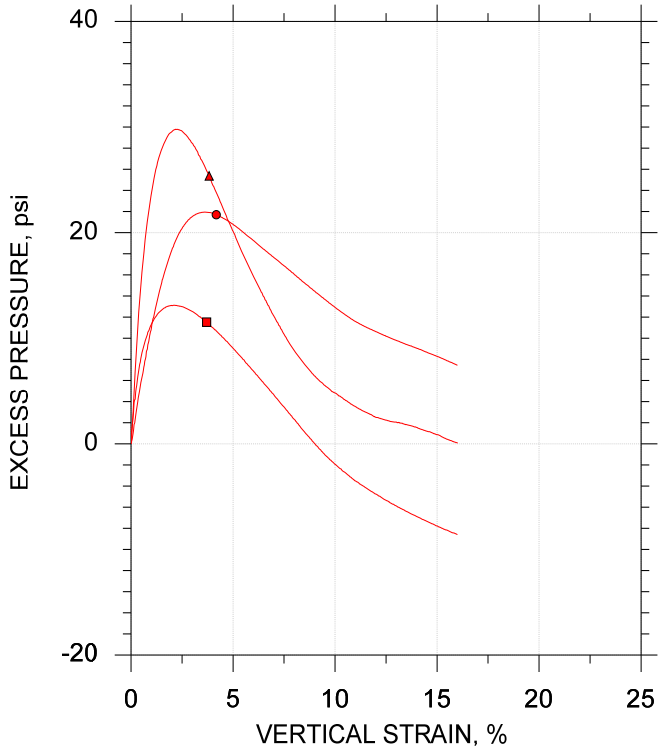


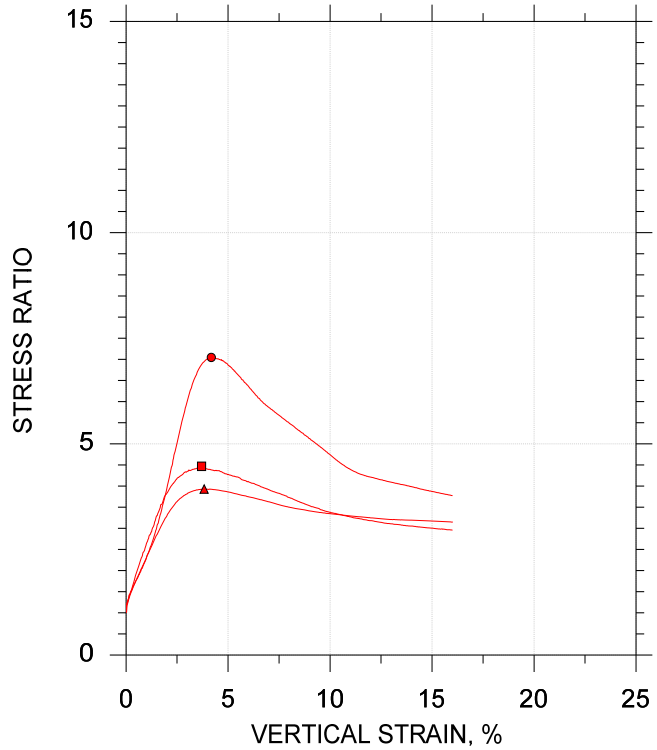


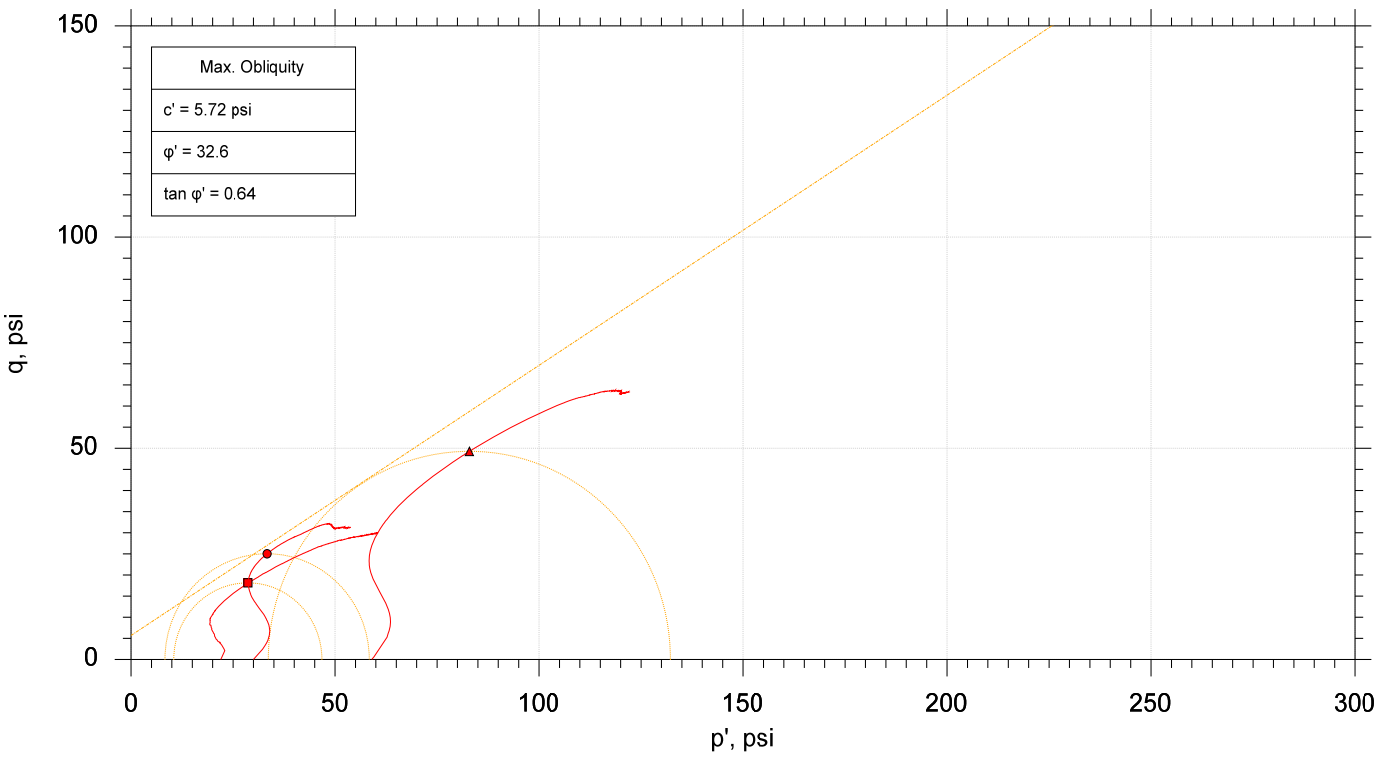


System S

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767







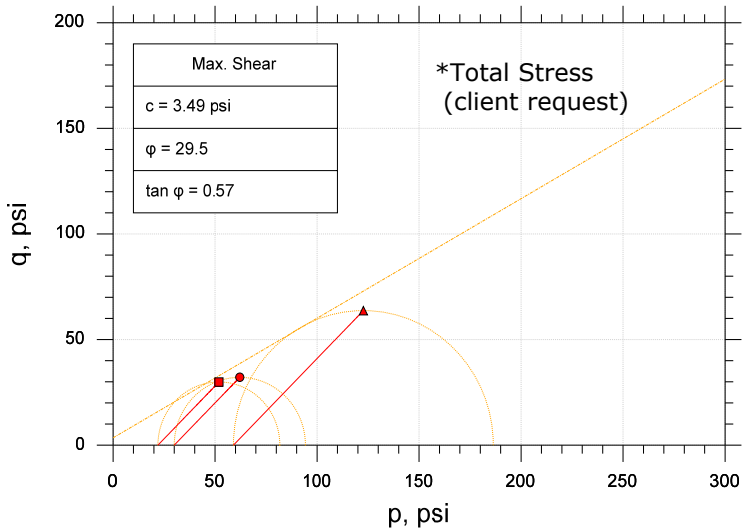
	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
■	U1	CU-2-1	16-18	md	07/01/16	njh	7/19/16	304927-CU-2-1n.dat
●	U1	CU-2-2A	16-18	md	07/20/16	njh	7/25/16	304927-CU-2-2An.dat
▲	U1	CU-2-3	16-18	md	07/01/16	njh	7/19/16	304927-CU-2-3n.dat

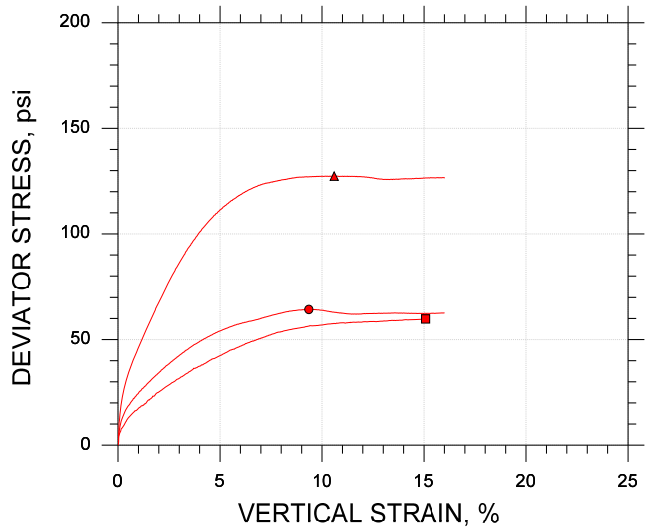
GeoTesting EXPRESS

Project: Killen Station - DP&L	Location: Manchester, OH	Project No.: GTX-304927
Boring No.: HAB2	Sample Type: intact	
Description: Moist, yellowish brown clay with sand		
Remarks: System S		

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB2	
Preparation: intact	
Description: Moist, yellowish brown clay with sand	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 28	Plastic Limit: 16
Plasticity Index: 12	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767





Symbol		■	●	▲	
Sample ID		U1	U1	U1	
Depth, ft		16-18	16-18	16-18	
Test Number		CU-2-1	CU-2-2A	CU-2-3	
Initial	Height, in	4.730	4.740	4.680	
	Diameter, in	2.030	2.020	2.030	
	Moisture Content (from Cuttings), %	15.0	14.7	13.9	
	Dry Density, pcf	112.	116.	116.	
	Saturation (Wet Method), %	80.0	87.8	83.5	
	Void Ratio	0.507	0.452	0.450	
Before Shear	Moisture Content, %	15.4	11.2	14.6	
	Dry Density, pcf	119.	129.	121.	
	Cross-sectional Area (Method A), in²	3.069	2.897	3.151	
	Saturation, %	100.0	100.0	100.0	
	Void Ratio	0.417	0.304	0.395	
	Back Pressure, psi	150.5	45.00	131.0	
Vertical Effective Consolidation Stress, psi		21.97	29.96	58.91	
Horizontal Effective Consolidation Stress, psi		22.00	29.99	58.99	
Vertical Strain after Consolidation, %		0.5238	0.6864	1.306	
Volumetric Strain after Consolidation, %		5.122	10.24	4.129	
Time to 50% Consolidation, min		289.0	484.0	100.0	
Shear Strength, psi		29.88	32.14	63.69	
Strain at Failure, %		15.1	9.35	10.6	
Strain Rate, %/min		0.01600	0.01600	0.01600	
Deviator Stress at Failure, psi		59.76	64.28	127.4	
Effective Minor Principal Stress at Failure, psi		29.85	16.09	54.97	
Effective Major Principal Stress at Failure, psi		89.61	80.37	182.3	
B-Value		0.96	0.95	0.96	

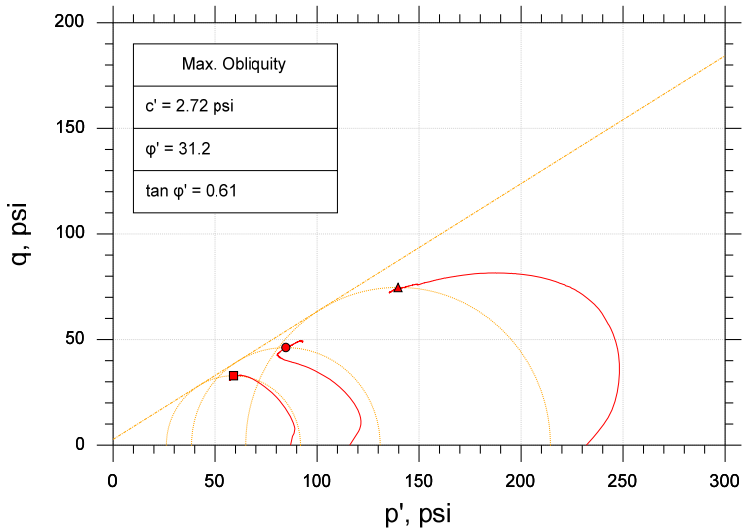
Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

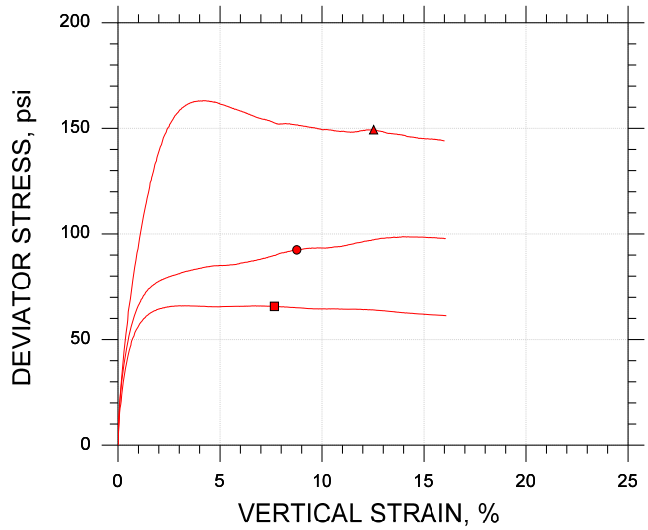
Remarks:

System S

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB2	
Preparation: intact	
Description: Moist, brown sandy clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 26	Plastic Limit: 17
Plasticity Index: 9	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

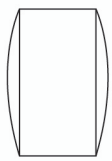


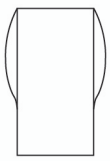


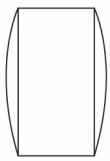
Symbol		■	●	▲
Sample ID		U3	U3	U3
Depth, ft		66-68	66-68	66-68
Test Number		CU-5-1	CU-5-2	CU-5-3A
Initial	Height, in	4.150	4.200	4.280
	Diameter, in	1.930	1.930	1.930
	Moisture Content (from Cuttings), %	15.1	14.7	15.2
	Dry Density, pcf	108.	105.	94.9
	Saturation (Wet Method), %	72.2	64.8	52.9
	Void Ratio	0.565	0.611	0.776
Before Shear	Moisture Content, %	17.4	18.9	21.7
	Dry Density, pcf	115.	112.	106.
	Cross-sectional Area (Method A), in²	2.790	2.789	2.700
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.469	0.510	0.587
	Back Pressure, psi	150.8	154.7	150.6
Vertical Effective Consolidation Stress, psi		86.87	115.9	231.7
Horizontal Effective Consolidation Stress, psi		86.98	116.0	232.0
Vertical Strain after Consolidation, %		1.327	1.586	3.068
Volumetric Strain after Consolidation, %		5.431	6.091	10.36
Time to 50% Consolidation, min		0.6400	0.3600	0.3600
Shear Strength, psi		32.87	46.23	74.68
Strain at Failure, %		7.67	8.76	12.5
Strain Rate, %/min		0.01600	0.01600	0.01600
Deviator Stress at Failure, psi		65.74	92.46	149.4
Effective Minor Principal Stress at Failure, psi		26.15	38.44	65.02
Effective Major Principal Stress at Failure, psi		91.89	130.9	214.4
B-Value		0.96	0.95	0.94

Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

Remarks:

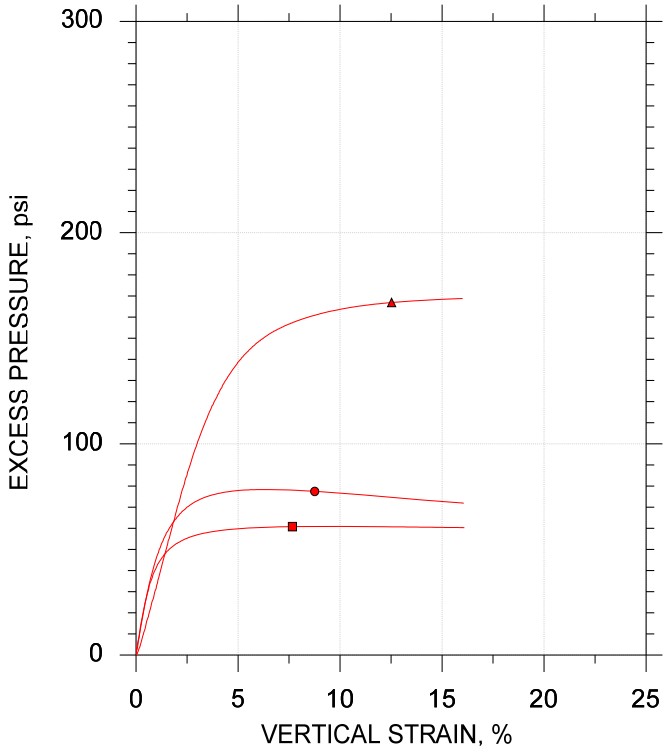


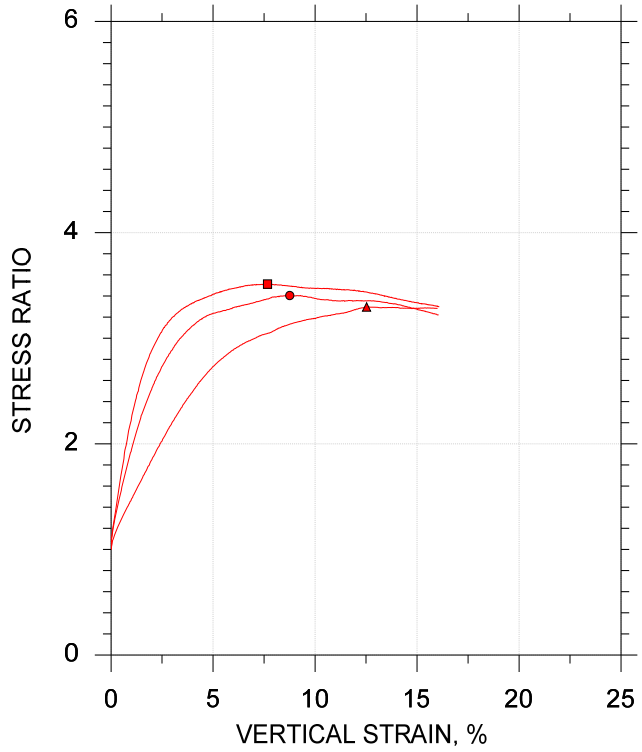


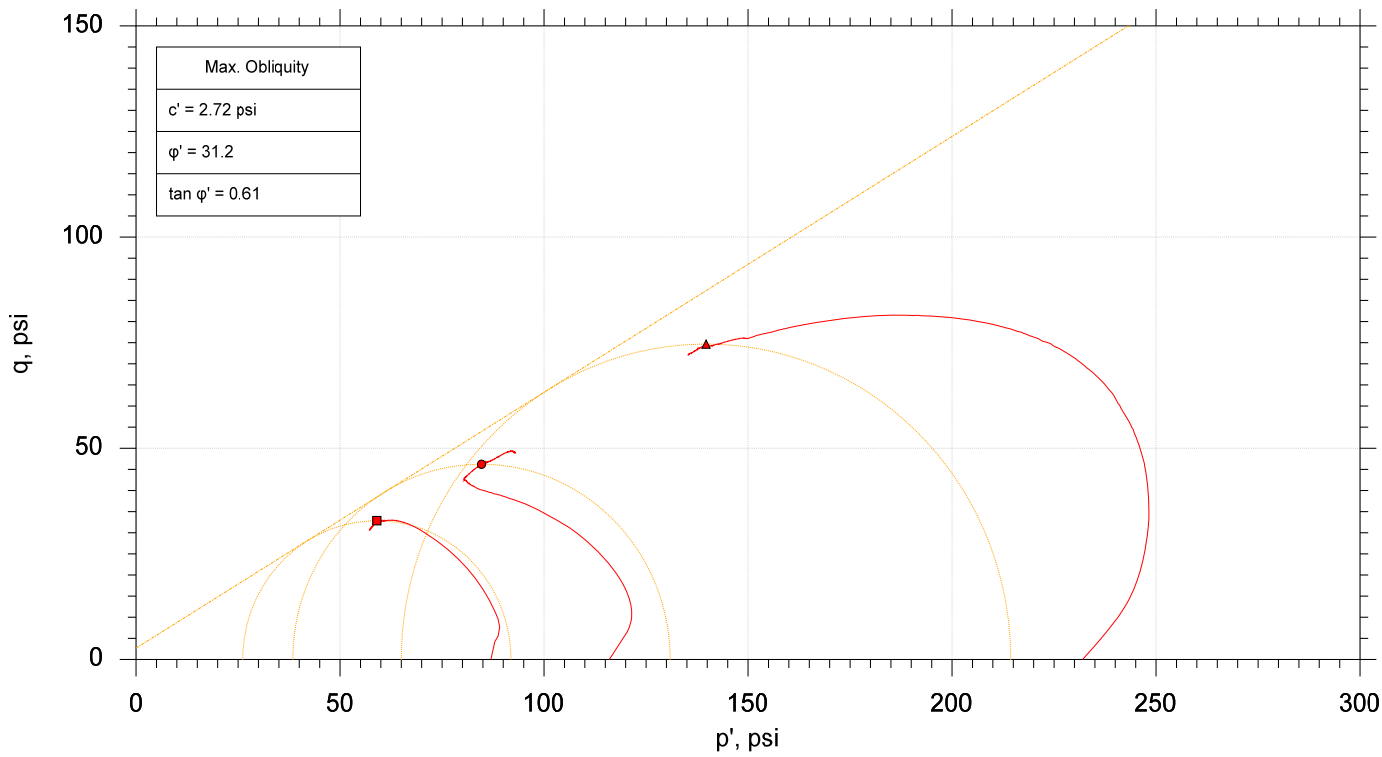


System Q

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767







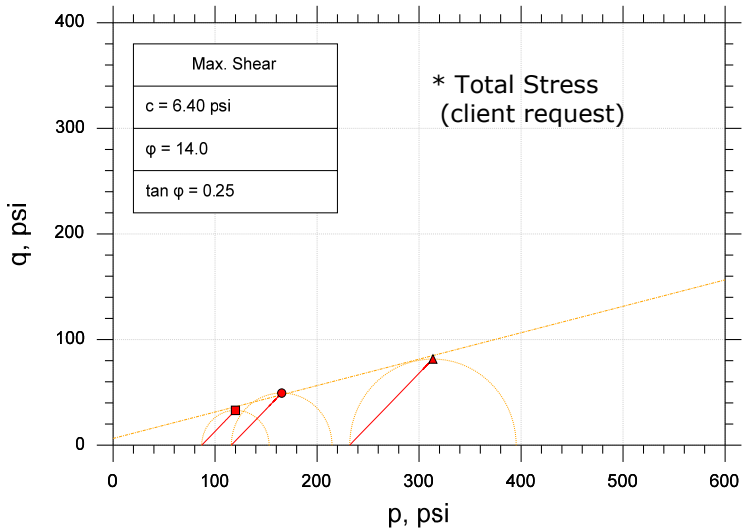
	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
■	U3	CU-5-1	66-68	md	07/07/16	njh	7/21/16	304927-CU-5-1n.dat
●	U3	CU-5-2	66-68	md	07/08/16	njh	7/21/16	304927-CU-5-2n.dat
▲	U3	CU-5-3A	66-68	md	07/06/16	njh	7/21/16	304927-CU-5-3An.dat

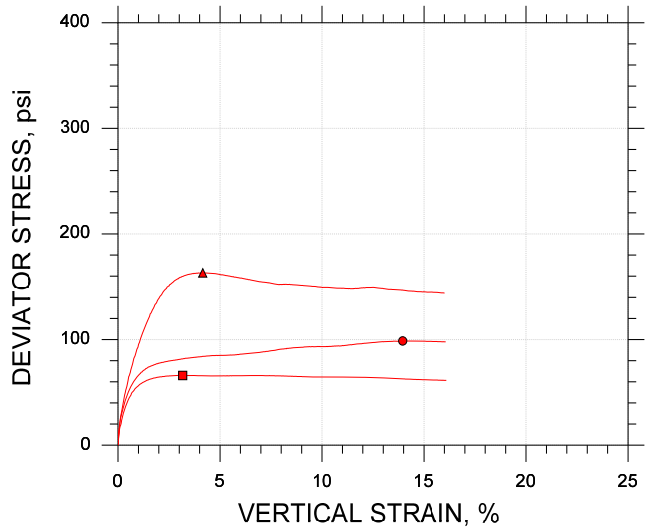
GeoTesting EXPRESS

Project: Killen Station - DP&L	Location: Manchester, OH	Project No.: GTX-304927
Boring No.: HAB2	Sample Type: intact	
Description: Moist, brown sandy clay		
Remarks: System Q		

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB2	
Preparation: intact	
Description: Moist, brown sandy clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 26	Plastic Limit: 17
Plasticity Index: 9	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767





Symbol		■	●	▲
Sample ID		U3	U3	U3
Depth, ft		66-68	66-68	66-68
Test Number		CU-5-1	CU-5-2	CU-5-3A
Initial	Height, in	4.150	4.200	4.280
	Diameter, in	1.930	1.930	1.930
	Moisture Content (from Cuttings), %	15.1	14.7	15.2
	Dry Density, pcf	108.	105.	94.9
	Saturation (Wet Method), %	72.2	64.8	52.9
	Void Ratio	0.565	0.611	0.776
Before Shear	Moisture Content, %	17.4	18.9	21.7
	Dry Density, pcf	115.	112.	106.
	Cross-sectional Area (Method A), in²	2.790	2.789	2.700
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.469	0.510	0.587
	Back Pressure, psi	150.8	154.7	150.6
Vertical Effective Consolidation Stress, psi		86.87	115.9	231.7
Horizontal Effective Consolidation Stress, psi		86.98	116.0	232.0
Vertical Strain after Consolidation, %		1.327	1.586	3.068
Volumetric Strain after Consolidation, %		5.431	6.091	10.36
Time to 50% Consolidation, min		0.6400	0.3600	0.3600
Shear Strength, psi		33.00	49.34	81.56
Strain at Failure, %		3.17	14.0	4.15
Strain Rate, %/min		0.01600	0.01600	0.01600
Deviator Stress at Failure, psi		66.00	98.67	163.1
Effective Minor Principal Stress at Failure, psi		29.61	42.41	106.0
Effective Major Principal Stress at Failure, psi		95.61	141.1	269.1
B-Value		0.96	0.95	0.94

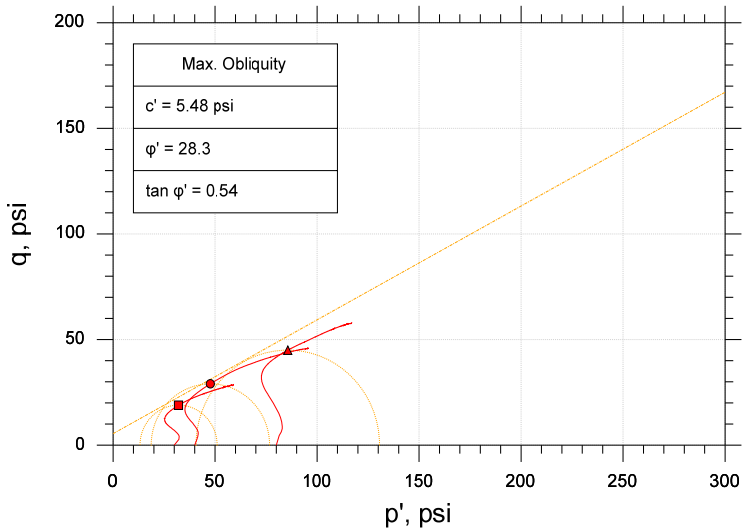
Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

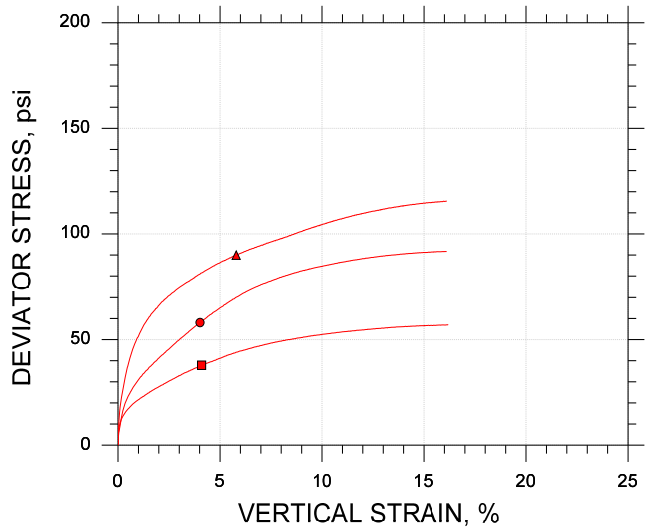
Remarks:

System Q

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB3	
Preparation: intact	
Description: Moist, brown clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 29	Plastic Limit: 16
Plasticity Index: 13	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

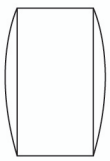


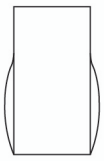


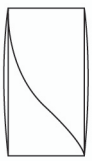
Symbol		■	●	▲
Sample ID		U2	U2	U2
Depth, ft		22-24	22-24	22-24
Test Number		CU-6-1	CU-6-2	CU-6-3
Initial	Height, in	4.020	4.010	4.020
	Diameter, in	2.020	2.010	2.010
	Moisture Content (from Cuttings), %	18.8	13.7	13.1
	Dry Density, pcf	105.	118.	119.
	Saturation (Wet Method), %	84.7	86.3	84.8
	Void Ratio	0.599	0.430	0.418
Before Shear	Moisture Content, %	20.7	14.5	13.3
	Dry Density, pcf	108.	121.	124.
	Cross-sectional Area (Method A), in²	3.164	3.118	3.075
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.560	0.392	0.359
	Back Pressure, psi	152.6	141.0	154.7
Vertical Effective Consolidation Stress, psi		29.90	39.92	79.89
Horizontal Effective Consolidation Stress, psi		30.00	39.99	79.98
Vertical Strain after Consolidation, %		1.136	1.065	1.354
Volumetric Strain after Consolidation, %		2.258	3.047	4.746
Time to 50% Consolidation, min		121.0	64.00	16.00
Shear Strength, psi		18.92	29.04	44.98
Strain at Failure, %		4.10	4.02	5.79
Strain Rate, %/min		0.01600	0.01600	0.01600
Deviator Stress at Failure, psi		37.83	58.08	89.96
Effective Minor Principal Stress at Failure, psi		13.17	18.65	40.67
Effective Major Principal Stress at Failure, psi		51.01	76.74	130.6
B-Value		0.95	0.95	0.96

Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

Remarks:

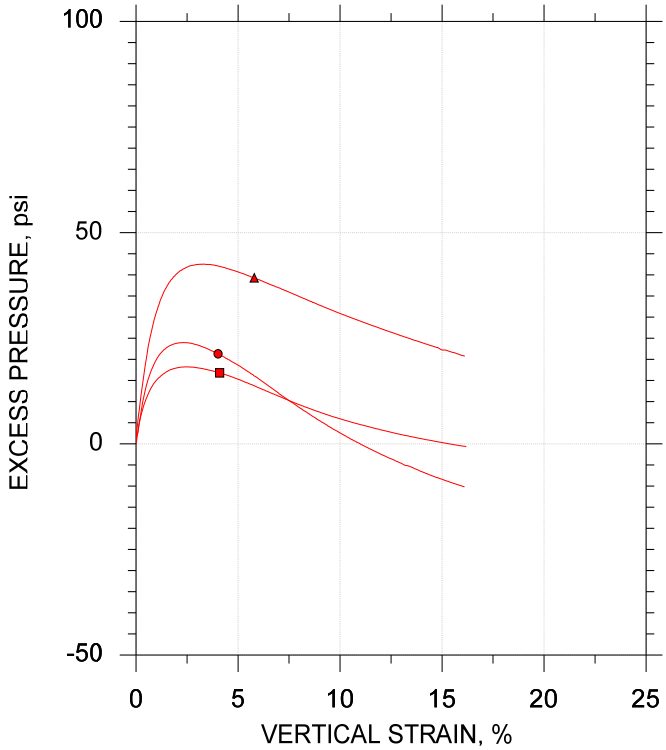


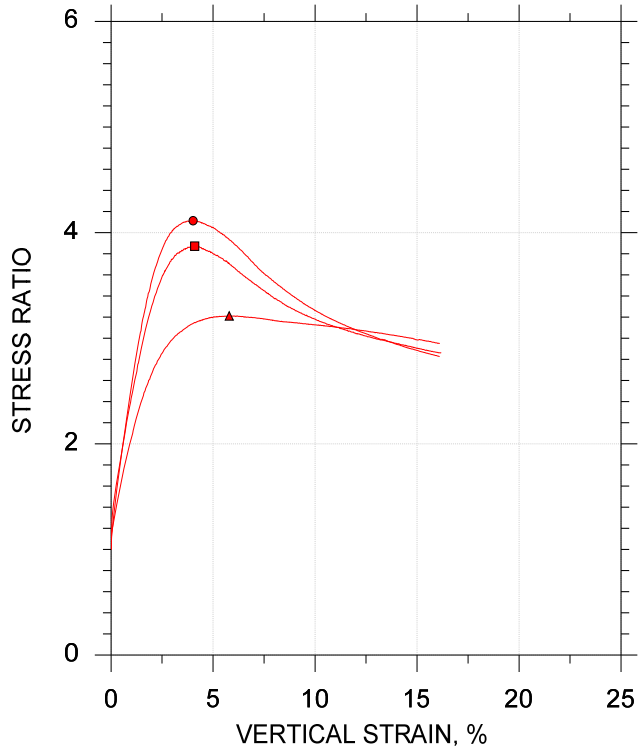


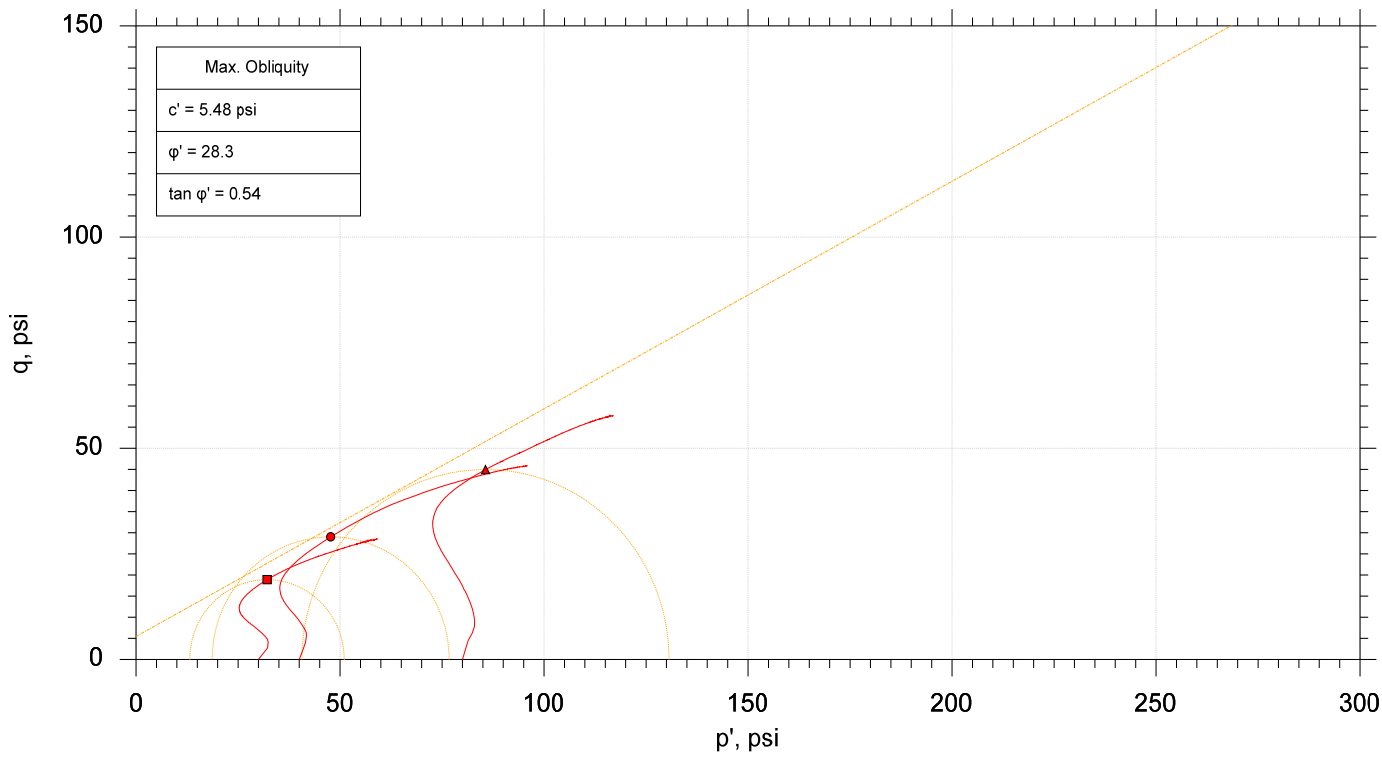


System R

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767







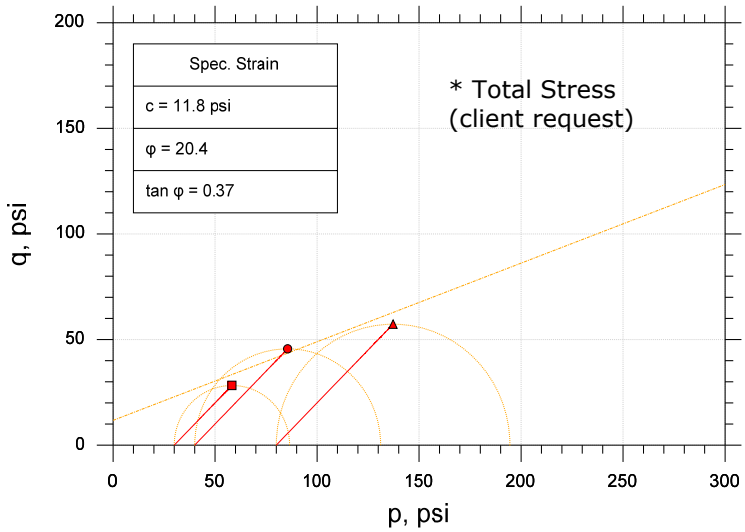
	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
■	U2	CU-6-1	22-24	md	07/07/16	njh	7/21/16	304927-CU-6-1n.dat
●	U2	CU-6-2	22-24	md	07/07/16	njh	7/21/16	304927-CU-6-2n.dat
▲	U2	CU-6-3	22-24	md	07/07/16	njh	7/21/16	304927-CU-6-3n.dat

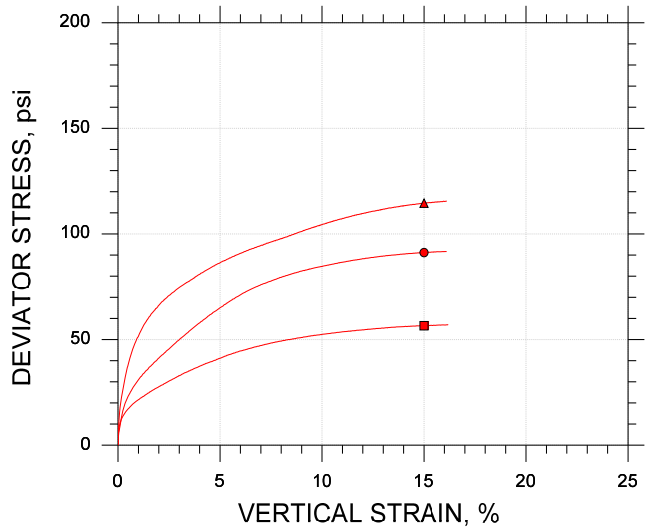
GeoTesting EXPRESS

Project: Killen Station - DP&L	Location: Manchester, OH	Project No.: GTX-304927
Boring No.: HAB3	Sample Type: intact	
Description: Moist, brown clay		
Remarks: System R		

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB3	
Preparation: intact	
Description: Moist, brown clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 29	Plastic Limit: 16
Plasticity Index: 13	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767





Symbol		■	●	▲	
Sample ID		U2	U2	U2	
Depth, ft		22-24	22-24	22-24	
Test Number		CU-6-1	CU-6-2	CU-6-3	
Initial	Height, in	4.020	4.010	4.020	
	Diameter, in	2.020	2.010	2.010	
	Moisture Content (from Cuttings), %	18.8	13.7	13.1	
	Dry Density, pcf	105.	118.	119.	
	Saturation (Wet Method), %	84.7	86.3	84.8	
	Void Ratio	0.599	0.430	0.418	
Before Shear	Moisture Content, %	20.7	14.5	13.3	
	Dry Density, pcf	108.	121.	124.	
	Cross-sectional Area (Method A), in²	3.164	3.118	3.075	
	Saturation, %	100.0	100.0	100.0	
	Void Ratio	0.560	0.392	0.359	
	Back Pressure, psi	152.6	141.0	154.7	
Vertical Effective Consolidation Stress, psi		29.90	39.92	79.89	
Horizontal Effective Consolidation Stress, psi		30.00	39.99	79.98	
Vertical Strain after Consolidation, %		1.136	1.065	1.354	
Volumetric Strain after Consolidation, %		2.258	3.047	4.746	
Time to 50% Consolidation, min		121.0	64.00	16.00	
Shear Strength, psi		28.27	45.59	57.28	
Strain at Failure, %		15.0	15.0	15.0	
Strain Rate, %/min		0.01600	0.01600	0.01600	
Deviator Stress at Failure, psi		56.55	91.19	114.6	
Effective Minor Principal Stress at Failure, psi		29.69	48.36	57.74	
Effective Major Principal Stress at Failure, psi		86.24	139.6	172.3	
B-Value		0.95	0.95	0.96	

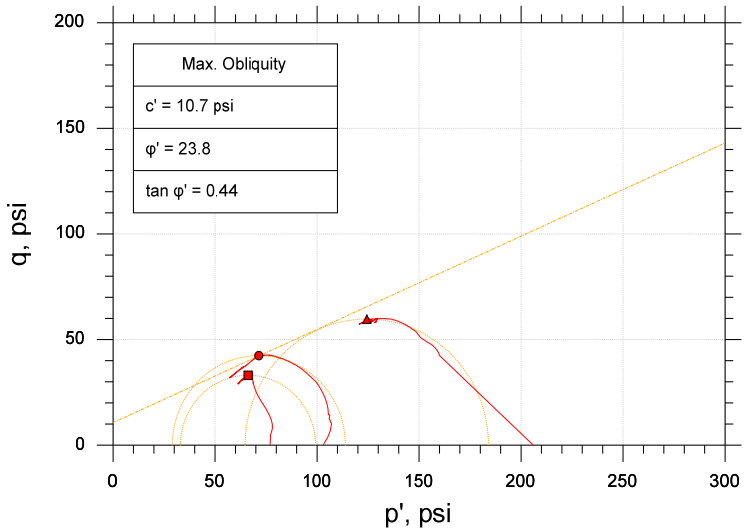
Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

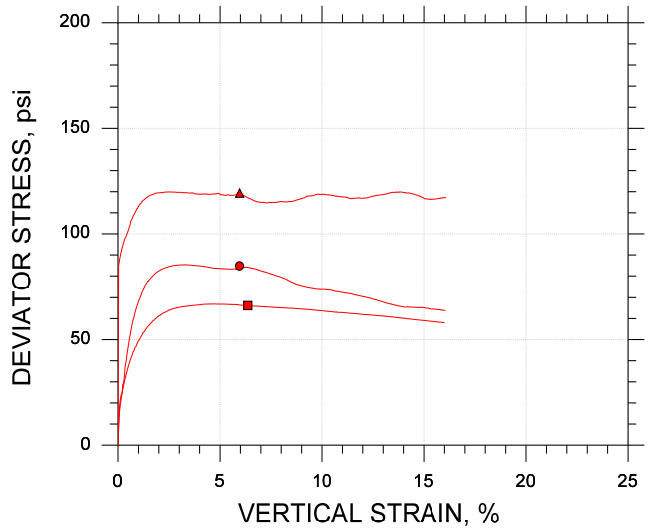
Remarks:

System R

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB3	
Preparation: intact	
Description: Moist, brown clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 31	Plastic Limit: 18
Plasticity Index: 13	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

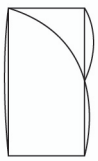


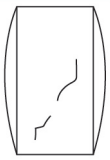


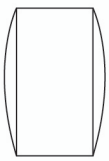
Symbol		■	●	▲
Sample ID		U3	U3	U3
Depth, ft		59-61	59-61	59-61
Test Number		CU-3-1	CU-3-2	CU-3-3A
Initial	Height, in	4.700	4.610	4.740
	Diameter, in	2.020	2.020	2.030
	Moisture Content (from Cuttings), %	19.5	19.8	20.1
	Dry Density, pcf	103.	99.2	100.
	Saturation (Wet Method), %	82.4	76.2	79.6
	Void Ratio	0.639	0.700	0.682
Before Shear	Moisture Content, %	22.2	11.9	17.3
	Dry Density, pcf	105.	128.	115.
	Cross-sectional Area (Method A), in²	3.180	2.560	2.913
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.598	0.321	0.466
	Back Pressure, psi	150.8	50.99	150.7
Vertical Effective Consolidation Stress, psi		76.82	102.8	205.7
Horizontal Effective Consolidation Stress, psi		76.96	103.0	206.0
Vertical Strain after Consolidation, %		1.689	2.485	2.972
Volumetric Strain after Consolidation, %		2.397	21.71	12.29
Time to 50% Consolidation, min		0.2500	0.0000	0.0000
Shear Strength, psi		33.07	42.41	59.66
Strain at Failure, %		6.36	5.95	5.96
Strain Rate, %/min		0.01600	0.01600	0.01600
Deviator Stress at Failure, psi		66.15	84.81	119.3
Effective Minor Principal Stress at Failure, psi		33.07	29.06	64.73
Effective Major Principal Stress at Failure, psi		99.22	113.9	184.1
B-Value		0.96	0.96	0.95

Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

Remarks:

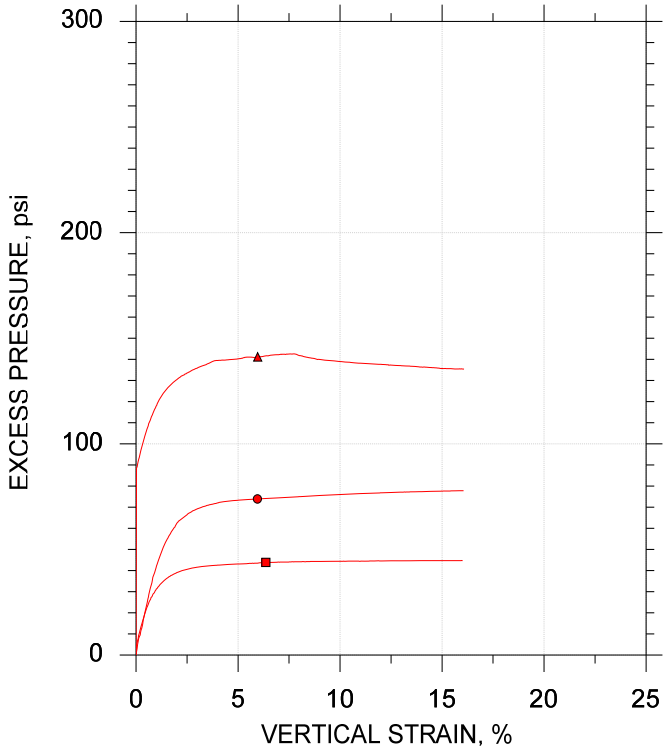


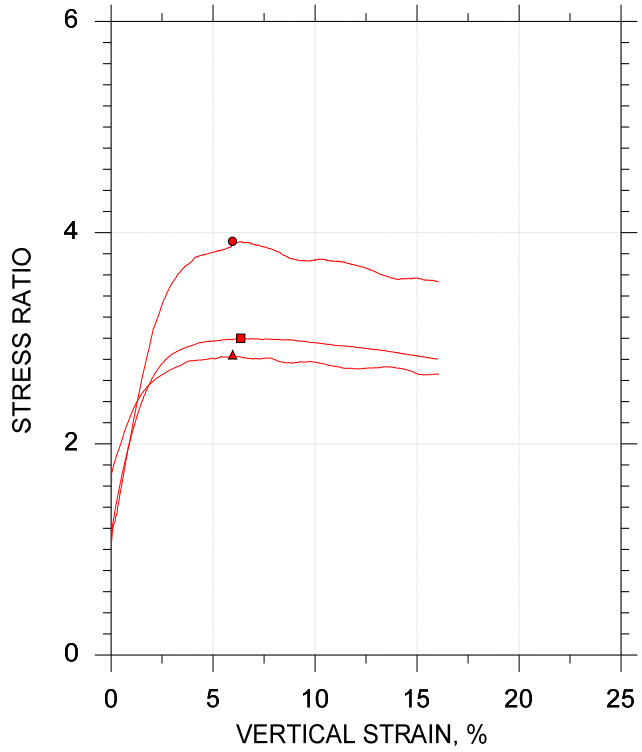


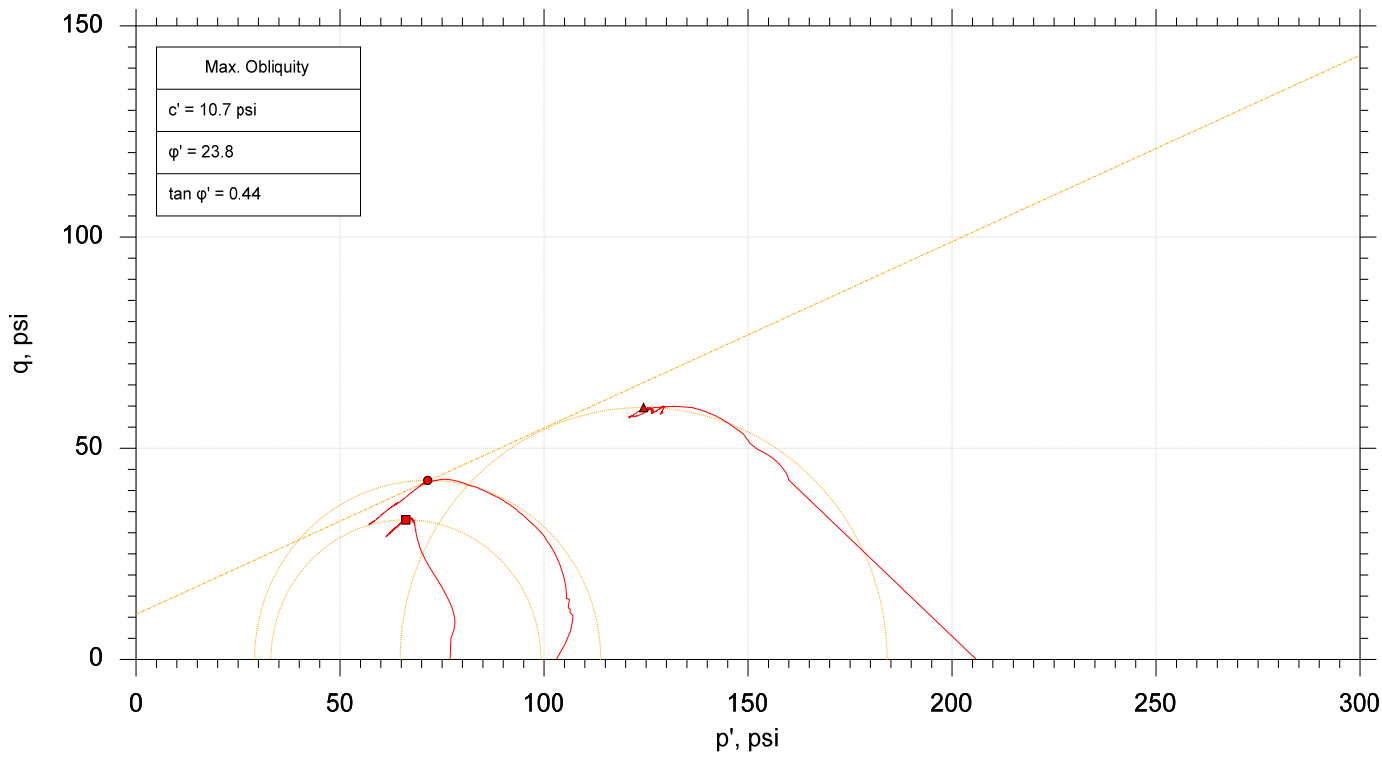


System K

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767







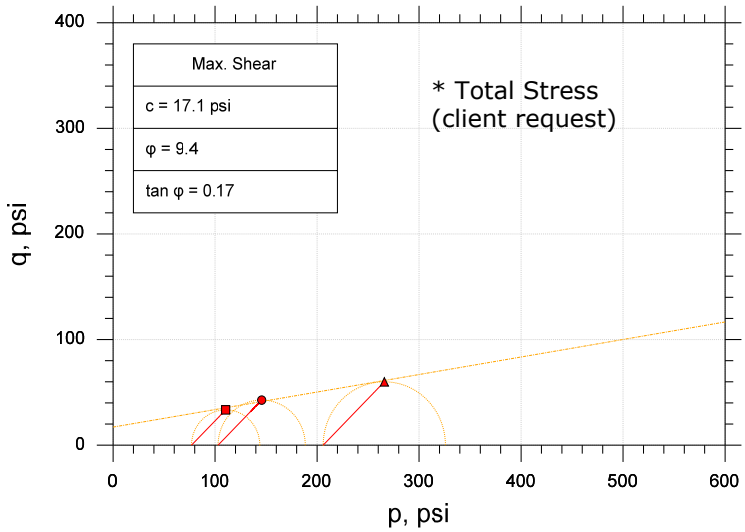
	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
■	U3	CU-3-1	59-61	md	07/01/16	njh	7/19/16	304927-CU-3-1n.dat
●	U3	CU-3-2	59-61	md	07/01/16	njh	7/19/16	304927-CU-3-2n.dat
▲	U3	CU-3-3A	59-61	md	07/05/16	njh	7/19/16	304927-CU-3-3An.dat

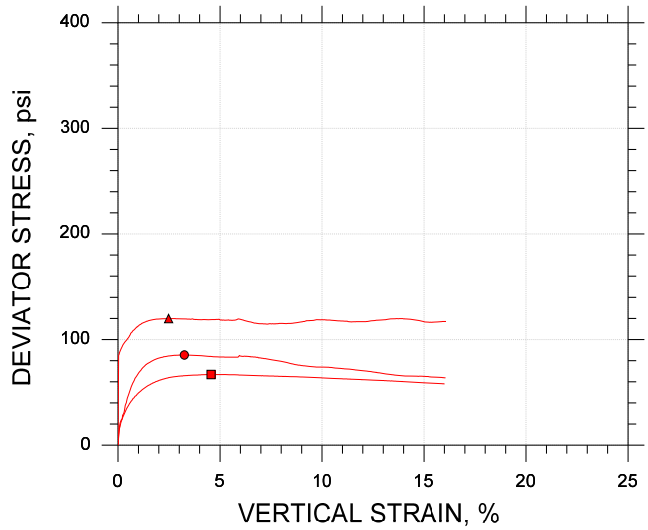
GeoTesting EXPRESS

Project: Killen Station - DP&L	Location: Manchester, OH	Project No.: GTX-304927
Boring No.: HAB3	Sample Type: intact	
Description: Moist, brown clay		
Remarks: System K		

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB3	
Preparation: intact	
Description: Moist, brown clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 31	Plastic Limit: 18
Plasticity Index: 13	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767





Symbol		■	●	▲	
Sample ID		U3	U3	U3	
Depth, ft		59-61	59-61	59-61	
Test Number		CU-3-1	CU-3-2	CU-3-3A	
Initial	Height, in	4.700	4.610	4.740	
	Diameter, in	2.020	2.020	2.030	
	Moisture Content (from Cuttings), %	19.5	19.8	20.1	
	Dry Density, pcf	103.	99.2	100.	
	Saturation (Wet Method), %	82.4	76.2	79.6	
	Void Ratio	0.639	0.700	0.682	
Before Shear	Moisture Content, %	22.2	11.9	17.3	
	Dry Density, pcf	105.	128.	115.	
	Cross-sectional Area (Method A), in²	3.180	2.560	2.913	
	Saturation, %	100.0	100.0	100.0	
	Void Ratio	0.598	0.321	0.466	
	Back Pressure, psi	150.8	50.99	150.7	
Vertical Effective Consolidation Stress, psi		76.82	102.8	205.7	
Horizontal Effective Consolidation Stress, psi		76.96	103.0	206.0	
Vertical Strain after Consolidation, %		1.689	2.485	2.972	
Volumetric Strain after Consolidation, %		2.397	21.71	12.29	
Time to 50% Consolidation, min		0.2500	0.0000	0.0000	
Shear Strength, psi		33.45	42.69	59.95	
Strain at Failure, %		4.55	3.25	2.48	
Strain Rate, %/min		0.01600	0.01600	0.01600	
Deviator Stress at Failure, psi		66.90	85.39	119.9	
Effective Minor Principal Stress at Failure, psi		34.02	32.85	72.55	
Effective Major Principal Stress at Failure, psi		100.9	118.2	192.5	
B-Value		0.96	0.96	0.95	

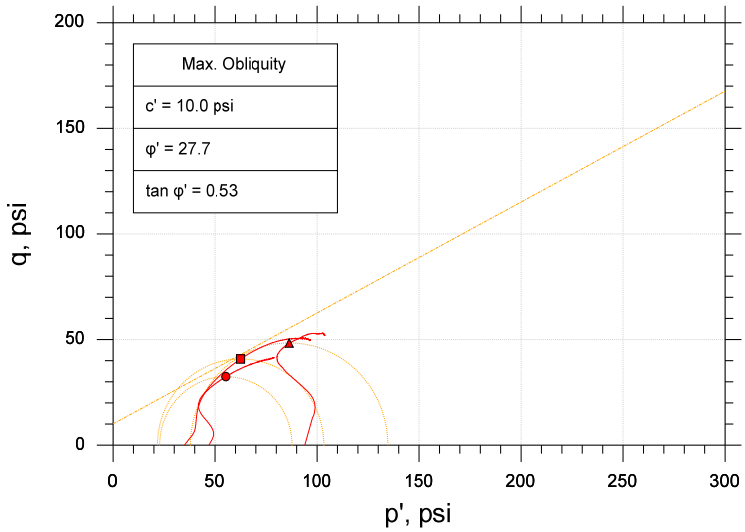
Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

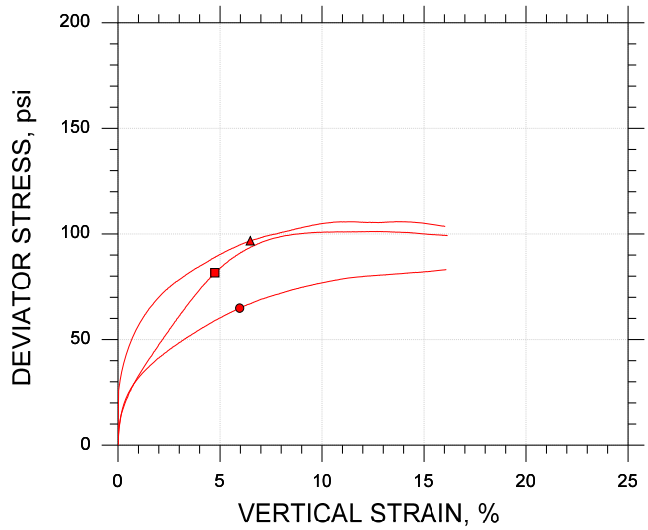
Remarks:

System K

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB4	
Preparation: intact	
Description: Moist, brown clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 41	Plastic Limit: 23
Plasticity Index: 18	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

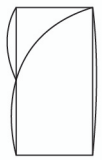


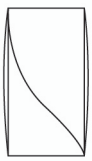


Symbol		■	●	▲
Sample ID		U1	U1	U1
Depth, ft		26-28	26-28	26-28
Test Number		CU-7-1	CU-7-2	CU-7-3
Initial	Height, in	4.610	4.680	4.770
	Diameter, in	2.030	2.020	2.020
	Moisture Content (from Cuttings), %	18.0	23.0	23.6
	Dry Density, pcf	111.	96.3	97.5
	Saturation (Wet Method), %	92.8	82.7	87.4
	Void Ratio	0.523	0.750	0.728
Before Shear	Moisture Content, %	15.9	25.3	21.3
	Dry Density, pcf	118.	100.	107.
	Cross-sectional Area (Method A), in²	3.064	3.126	2.997
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.429	0.683	0.575
	Back Pressure, psi	64.99	129.0	56.99
Vertical Effective Consolidation Stress, psi		34.93	46.91	93.81
Horizontal Effective Consolidation Stress, psi		35.00	47.00	94.01
Vertical Strain after Consolidation, %		0.8857	1.311	2.436
Volumetric Strain after Consolidation, %		6.166	3.654	8.539
Time to 50% Consolidation, min		256.0	64.00	144.0
Shear Strength, psi		40.80	32.43	48.37
Strain at Failure, %		4.74	5.96	6.48
Strain Rate, %/min		0.01600	0.01600	0.01600
Deviator Stress at Failure, psi		81.61	64.86	96.74
Effective Minor Principal Stress at Failure, psi		21.72	22.85	37.93
Effective Major Principal Stress at Failure, psi		103.3	87.71	134.7
B-Value		0.95	0.95	0.95

Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

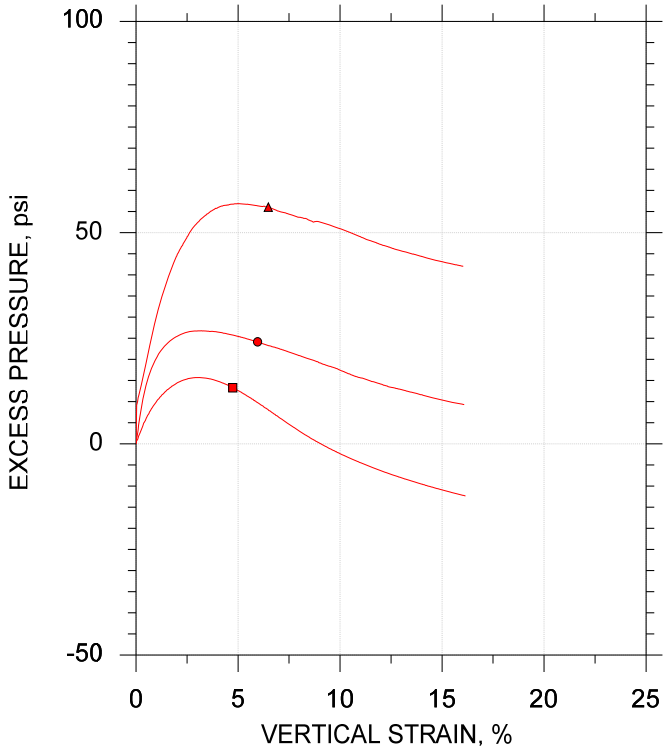
Remarks:

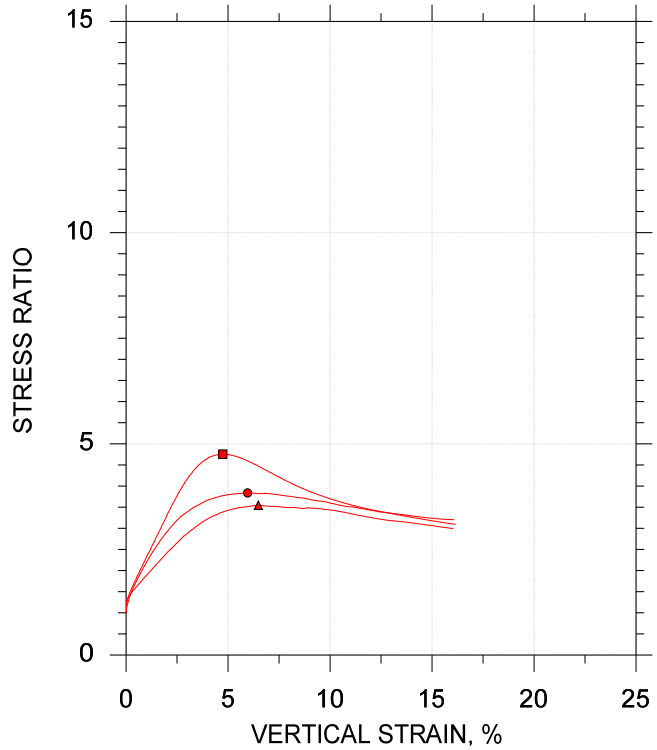


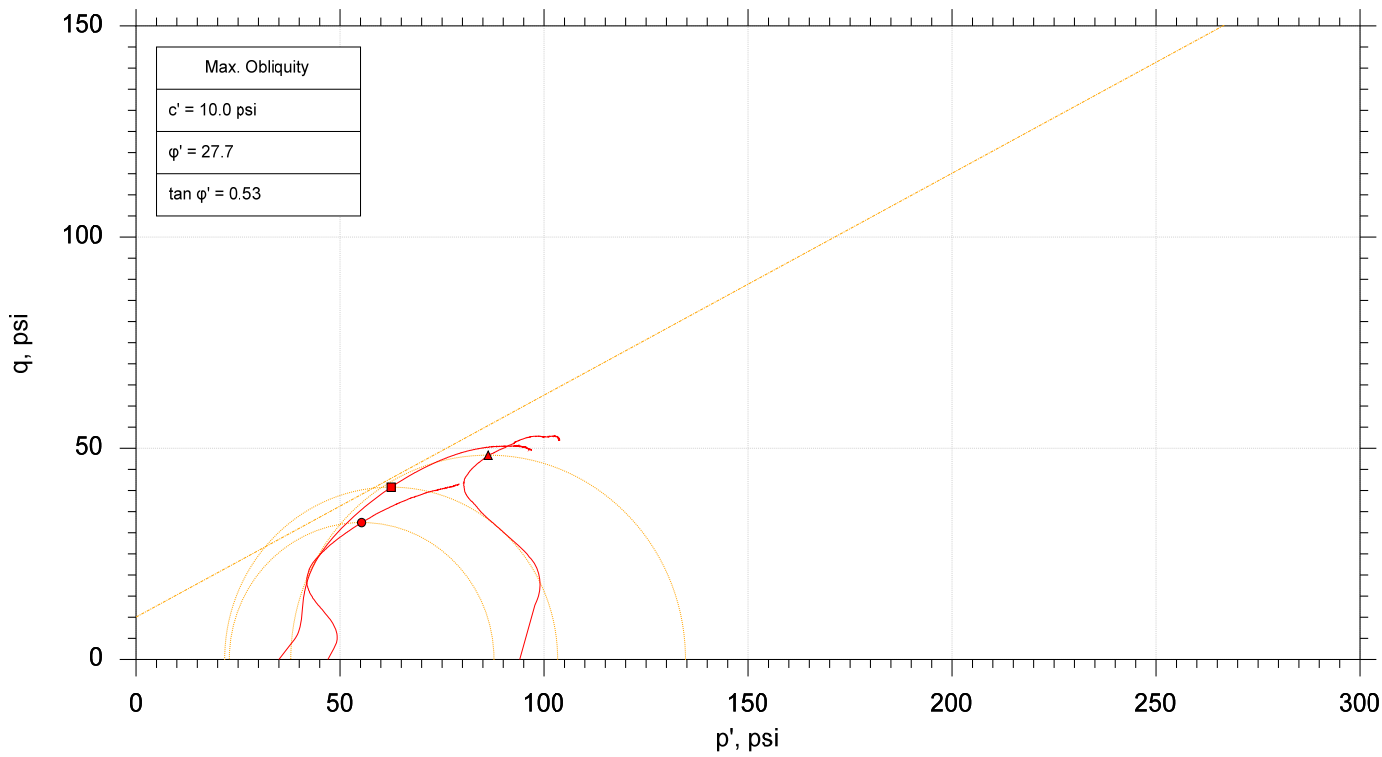


System S

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767







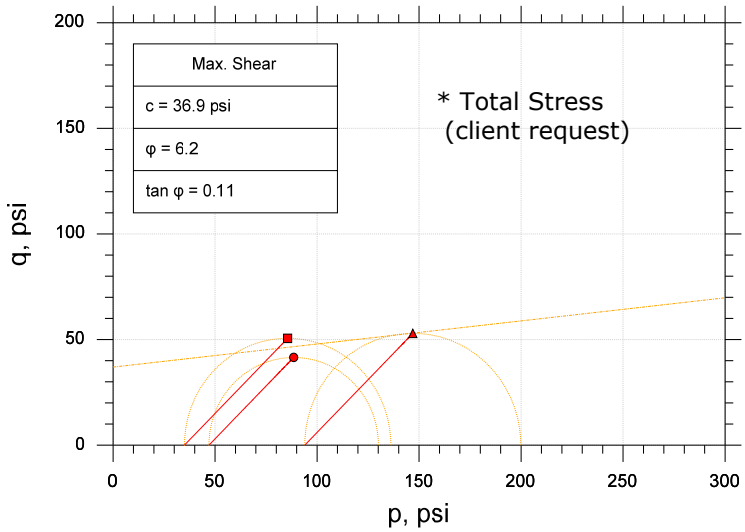
	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
■	U1	CU-7-1	26-28	md	07/18/16	njh	7/22/16	304927-CU-7-1n.dat
●	U1	CU-7-2	26-28	md	07/18/16	njh	7/22/16	304927-CU-7-2n.dat
▲	U1	CU-7-3	26-28	md	07/18/16	njh	7/22/16	304927-CU-7-3n.dat

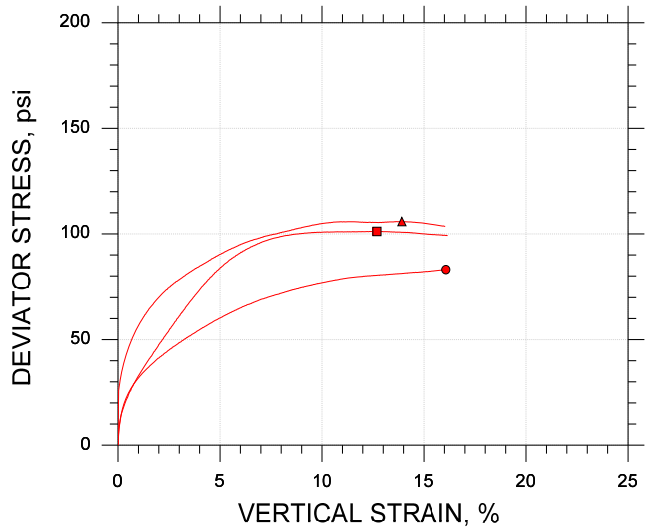
GeoTesting EXPRESS

Project: Killen Station - DP&L	Location: Manchester, OH	Project No.: GTX-304927
Boring No.: HAB4	Sample Type: intact	
Description: Moist, brown clay		
Remarks: System S		

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB4	
Preparation: intact	
Description: Moist, brown clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 41	Plastic Limit: 23
Plasticity Index: 18	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767





Symbol		■	●	▲	
Sample ID		U1	U1	U1	
Depth, ft		26-28	26-28	26-28	
Test Number		CU-7-1	CU-7-2	CU-7-3	
Initial	Height, in	4.610	4.680	4.770	
	Diameter, in	2.030	2.020	2.020	
	Moisture Content (from Cuttings), %	18.0	23.0	23.6	
	Dry Density, pcf	111.	96.3	97.5	
	Saturation (Wet Method), %	92.8	82.7	87.4	
	Void Ratio	0.523	0.750	0.728	
Before Shear	Moisture Content, %	15.9	25.3	21.3	
	Dry Density, pcf	118.	100.	107.	
	Cross-sectional Area (Method A), in²	3.064	3.126	2.997	
	Saturation, %	100.0	100.0	100.0	
	Void Ratio	0.429	0.683	0.575	
	Back Pressure, psi	64.99	129.0	56.99	
Vertical Effective Consolidation Stress, psi		34.93	46.91	93.81	
Horizontal Effective Consolidation Stress, psi		35.00	47.00	94.01	
Vertical Strain after Consolidation, %		0.8857	1.311	2.436	
Volumetric Strain after Consolidation, %		6.166	3.654	8.539	
Time to 50% Consolidation, min		256.0	64.00	144.0	
Shear Strength, psi		50.59	41.53	52.92	
Strain at Failure, %		12.7	16.1	13.9	
Strain Rate, %/min		0.01600	0.01600	0.01600	
Deviator Stress at Failure, psi		101.2	83.07	105.8	
Effective Minor Principal Stress at Failure, psi		42.53	37.67	49.51	
Effective Major Principal Stress at Failure, psi		143.7	120.7	155.4	
B-Value		0.95	0.95	0.95	

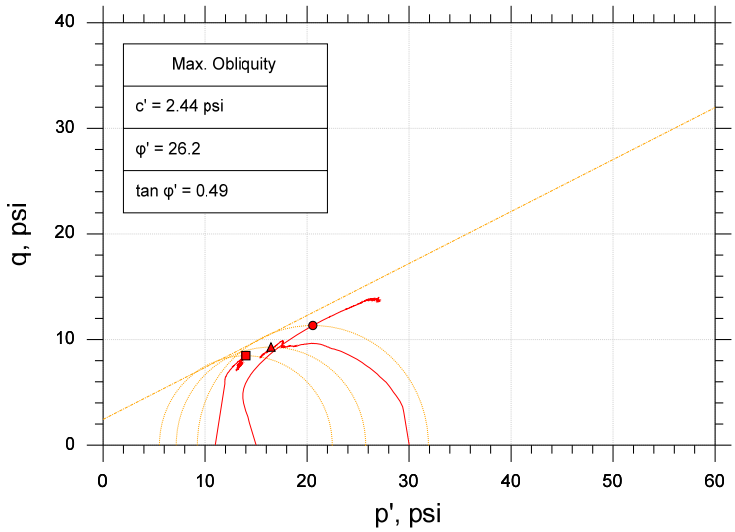
Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

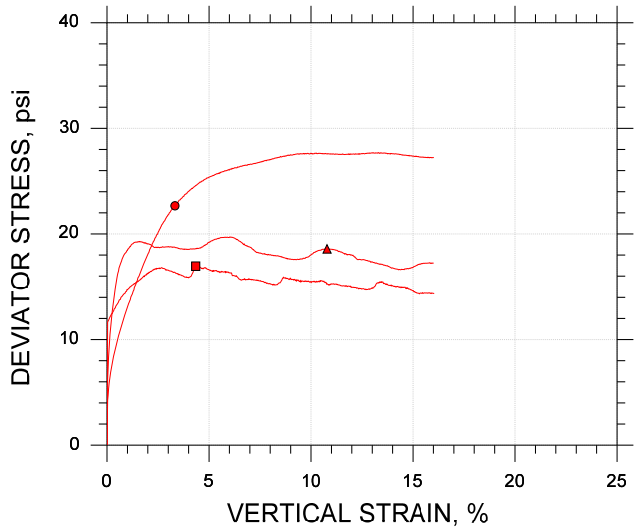
Remarks:

System S

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB5	
Preparation: intact	
Description: Moist, brown sandy clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 28	Plastic Limit: 16
Plasticity Index: 12	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

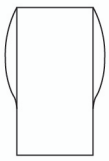


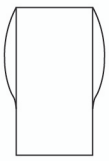


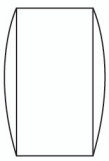
Symbol		■	●	▲
Sample ID		U3	U3	U3
Depth, ft		8-10	8-10	8-10
Test Number		CU-4-1	CU-4-2	CU-4-3
Initial	Height, in	4.480	4.580	4.080
	Diameter, in	2.030	2.030	2.030
	Moisture Content (from Cuttings), %	17.1	20.3	13.3
	Dry Density, pcf	100.	101.	93.9
	Saturation (Wet Method), %	68.1	82.4	45.1
	Void Ratio	0.679	0.664	0.794
Before Shear	Moisture Content, %	24.3	21.4	25.2
	Dry Density, pcf	102.	107.	100.
	Cross-sectional Area (Method A), in²	3.211	3.097	3.079
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.655	0.579	0.681
	Back Pressure, psi	160.8	152.9	150.8
Vertical Effective Consolidation Stress, psi		10.96	14.94	29.90
Horizontal Effective Consolidation Stress, psi		10.99	15.00	29.99
Vertical Strain after Consolidation, %		0.5548	0.8878	1.450
Volumetric Strain after Consolidation, %		1.128	5.272	6.048
Time to 50% Consolidation, min		0.2500	70.00	0.2500
Shear Strength, psi		8.472	11.33	9.291
Strain at Failure, %		4.35	3.33	10.8
Strain Rate, %/min		0.01600	0.01600	0.01600
Deviator Stress at Failure, psi		16.94	22.66	18.58
Effective Minor Principal Stress at Failure, psi		5.528	9.237	7.169
Effective Major Principal Stress at Failure, psi		22.47	31.90	25.75
B-Value		0.95	0.95	0.95

Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

Remarks:

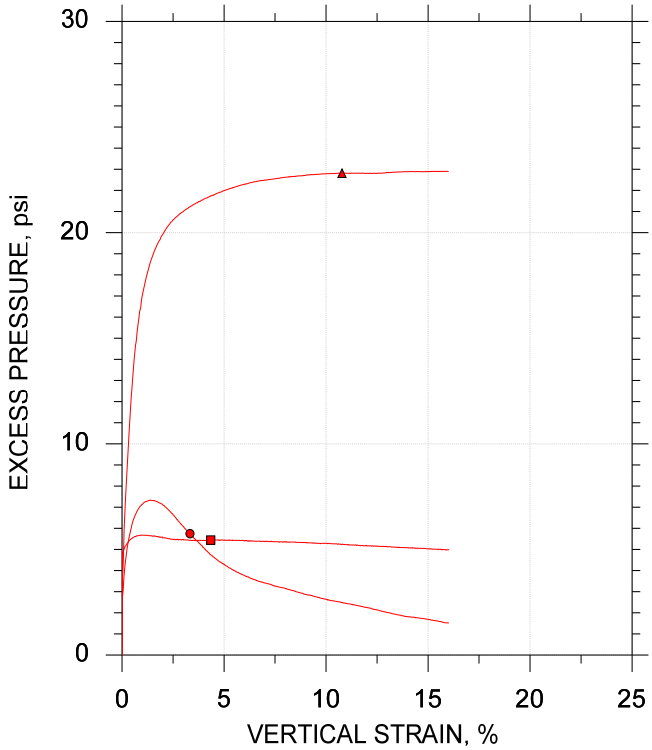


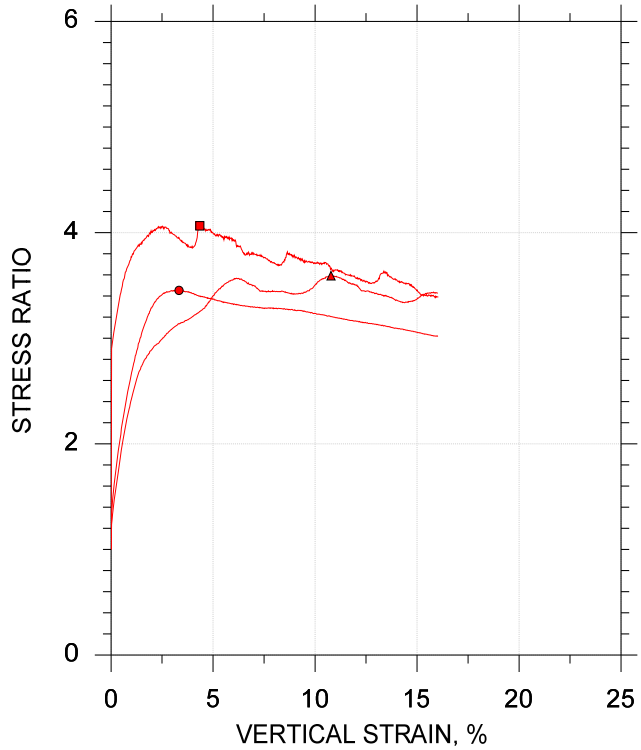


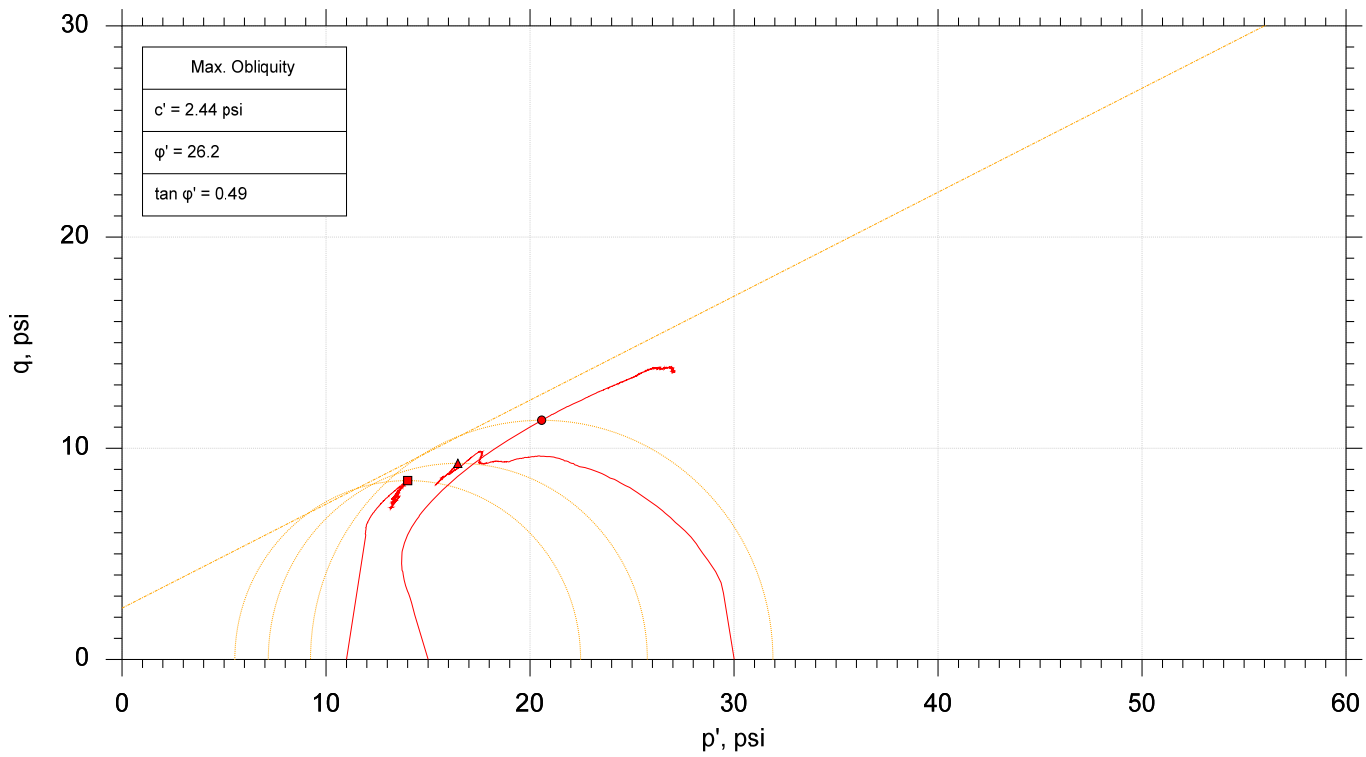


System E

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767







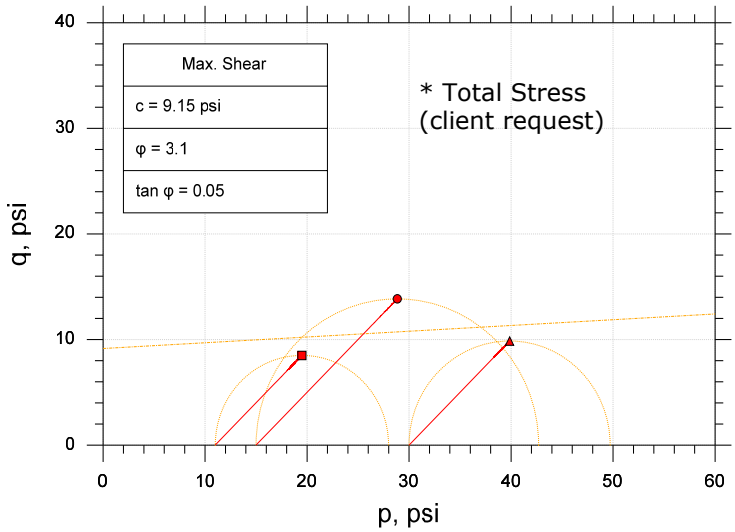
	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
■	U3	CU-4-1	8-10	md	07/05/16	njh	7/19/16	304927-CU-4-1n.dat
●	U3	CU-4-2	8-10	md	07/05/16	njh	7/19/16	304927-CU-4-2n.dat
▲	U3	CU-4-3	8-10	md	07/05/16	njh	7/19/16	304927-CU-4-3n.dat

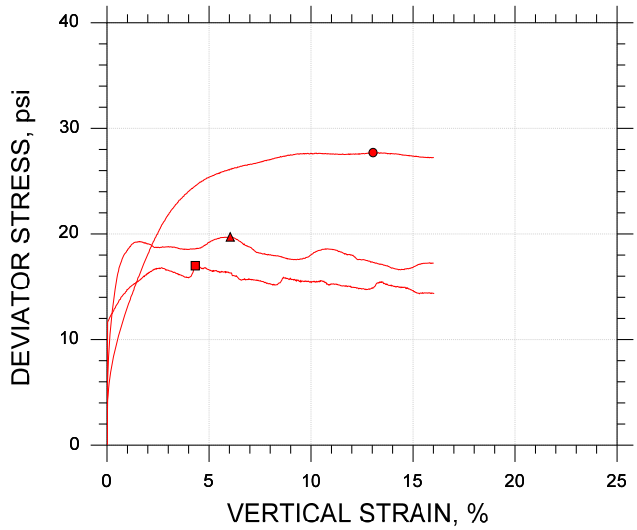
GeoTesting EXPRESS

Project: Killen Station - DP&L	Location: Manchester, OH	Project No.: GTX-304927
Boring No.: HAB5	Sample Type: intact	
Description: Moist, brown sandy clay		
Remarks: System E		

Client: Haley & Aldrich, Inc.	
Project Name: Killen Station - DP&L	
Project Location: Manchester, OH	
Project Number: GTX-304927	
Tested By: md	Checked By: njh
Boring ID: HAB5	
Preparation: intact	
Description: Moist, brown sandy clay	
Classification: ---	
Group Symbol: ---	
Liquid Limit: 28	Plastic Limit: 16
Plasticity Index: 12	Estimated Specific Gravity: 2.7

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767





Symbol		■	●	▲	
Sample ID		U3	U3	U3	
Depth, ft		8-10	8-10	8-10	
Test Number		CU-4-1	CU-4-2	CU-4-3	
Initial	Height, in	4.480	4.580	4.080	
	Diameter, in	2.030	2.030	2.030	
	Moisture Content (from Cuttings), %	17.1	20.3	13.3	
	Dry Density, pcf	100.	101.	93.9	
	Saturation (Wet Method), %	68.1	82.4	45.1	
	Void Ratio	0.679	0.664	0.794	
Before Shear	Moisture Content, %	24.3	21.4	25.2	
	Dry Density, pcf	102.	107.	100.	
	Cross-sectional Area (Method A), in²	3.211	3.097	3.079	
	Saturation, %	100.0	100.0	100.0	
	Void Ratio	0.655	0.579	0.681	
	Back Pressure, psi	160.8	152.9	150.8	
Vertical Effective Consolidation Stress, psi		10.96	14.94	29.90	
Horizontal Effective Consolidation Stress, psi		10.99	15.00	29.99	
Vertical Strain after Consolidation, %		0.5548	0.8878	1.450	
Volumetric Strain after Consolidation, %		1.128	5.272	6.048	
Time to 50% Consolidation, min		0.2500	70.00	0.2500	
Shear Strength, psi		8.496	13.85	9.859	
Strain at Failure, %		4.32	13.0	6.04	
Strain Rate, %/min		0.01600	0.01600	0.01600	
Deviator Stress at Failure, psi		16.99	27.70	19.72	
Effective Minor Principal Stress at Failure, psi		5.544	12.99	7.684	
Effective Major Principal Stress at Failure, psi		22.54	40.69	27.40	
B-Value		0.95	0.95	0.95	

Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Atterberg Limits determined by ASTM D4318.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

Remarks:

System E

APPENDIX C

Analyses

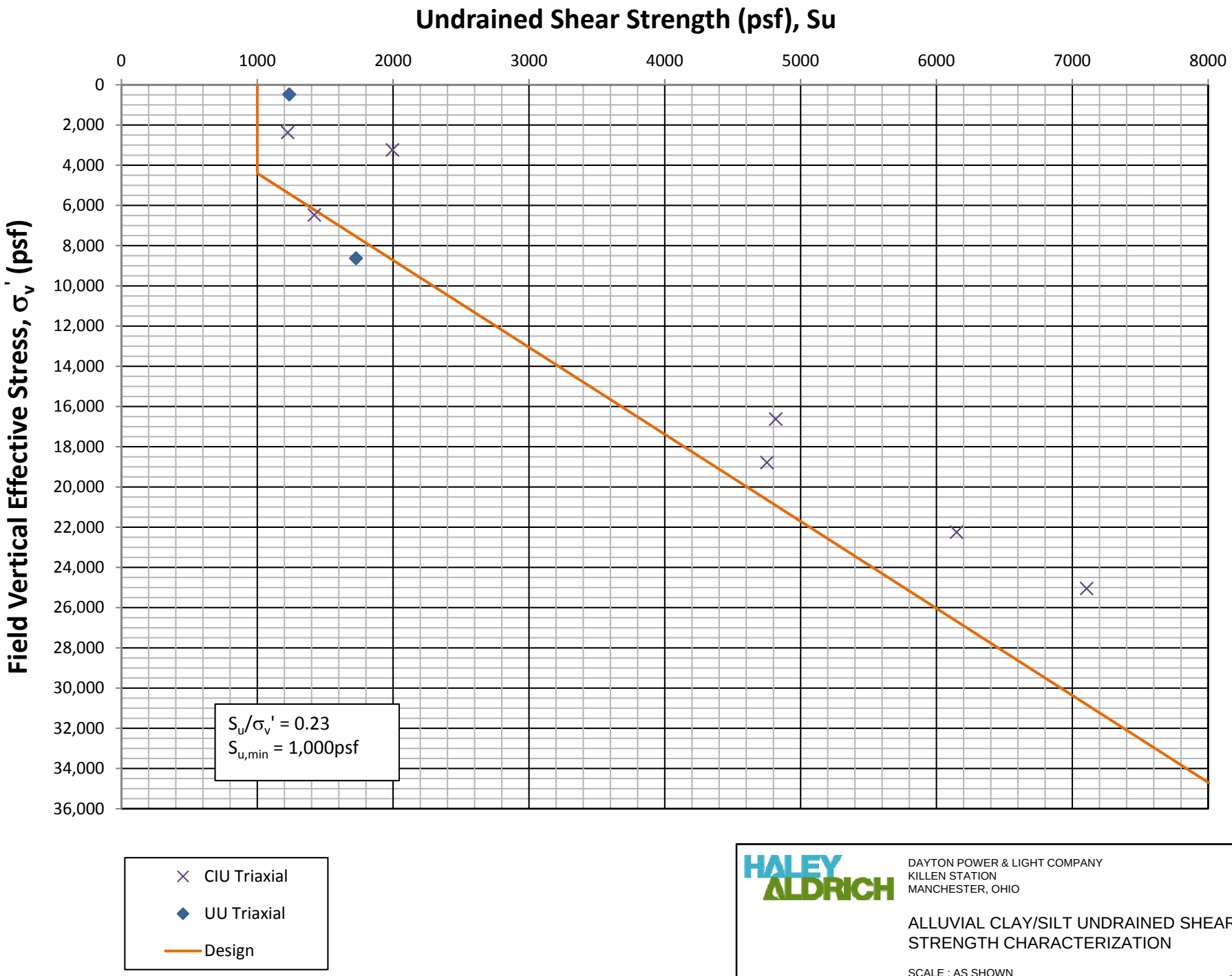
Design Soil Properties

SOIL PROPERTY CHARACTERIZATION - KILLEN ASH POND

Material	Total Unit Weight, γ_T					Undrained Shear Strength, S_u								Drained Shear Strength													
	CPT	Laboratory		Historic	Current	SPT		CPT		Lab Torvane	Lab UU and CIU Trx	Historic	Current	SPT		CPT Correlations		Laboratory CIU Trx						Historic		Current	
	avg	Test Avg.	Tube Avg.	Design	Design	avg	avg - 1σ	avg	avg - 1σ	avg	avg	Design	Design	avg	avg - 1σ	avg	avg - 1σ	avg		min.		max.		Design		Design	
	γ_T	γ_T	γ_T		γ_T	S_u	S_u	S_u	S_u	S_u	S_u		S_u	ϕ'		ϕ'	ϕ'	c'	ϕ'	c'	ϕ'	c'	ϕ'	c'	ϕ'	c'	ϕ'
Embankment Core Cohesive Fill	118 pcf	131 psf	131 psf	133 psf	**130 pcf**	3,286 psf	2,161 psf	6,600 psf	3,860 psf	2,400 psf	S_u/p' = 0.45 min = 1,500 psf	1,400 psf	**S_u/p' = 0.45 min = 1,500 psf**	--	--	--	--	1070°	32°	789 psf	28°	1598°	34°	250 psf	35°	**800**	**28°**
Shell Cohesive Fill	--	123 psf	123 psf	--	**125 pcf**	2,194 psf	1,396 psf	--	--	--	5,980 psf	--	**2,000 psf**	--	--	--	--	1440°	28°	--	--	--	--	--	--	**1000**	**28°**
Shell Granular Fill	--	--	--	130 psf	**130 pcf**	--	--	--	--	--	--	38°	**38°**	42°	41°	--	--	--	--	--	--	--	--	--	38°	**--**	**38°**
Sluiced Fly Ash[1]	--	--	--	--	**80 pcf**	--	--	--	--	--	--	--	**750 psf**	--	--	--	--	--	--	--	--	--	--	--	--	**--**	**30°**
Alluvial Clay/Silt	115 pcf	118 psf	118 psf	126 psf	**120 pcf**	1,026 psf	554 psf	4,560 psf	2,440 psf	1,000 psf	S_u/p' = 0.23 min = 1,000 psf	1,300 psf	**S_u/p' = 0.23 min = 1,000 psf**	--	--	--	--	761 psf	27°	351 psf	24°	1541 psf	31°	0 to 200 psf	32° to 36°	**750**	**28°**
Alluvial Sand	122 pcf	--	--	120 psf	**120 pcf**	--		--	--	--	--	35°	**32°**	33°	31°	38°	35°	--	--	--	--	--	--	--	35°	**--**	**32°**

Notes:

1. Based on historic analyses performed at nearby J.M. Stuart Station



HALEY ALDRICH

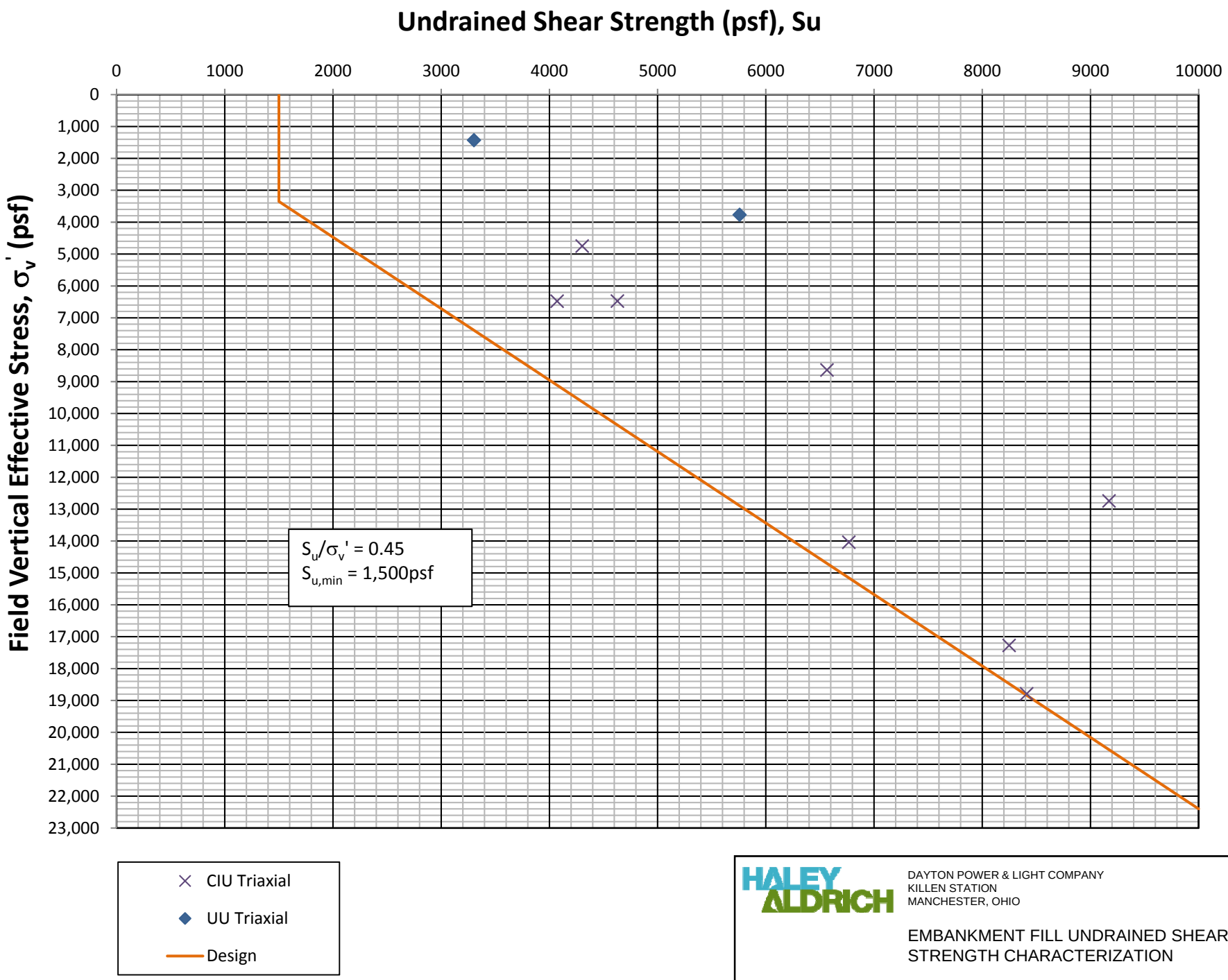
DAYTON POWER & LIGHT COMPANY
KILLEN STATION
MANCHESTER, OHIO

ALLUVIAL CLAY/SILT UNDRAINED SHEAR STRENGTH CHARACTERIZATION

SCALE : AS SHOWN
SEPTEMBER 2016

FIGURE C1

40373-447_FIG D1.PPT



HALEY ALDRICH

DAYTON POWER & LIGHT COMPANY
KILLEN STATION
MANCHESTER, OHIO

EMBANKMENT FILL UNDRAINED SHEAR STRENGTH CHARACTERIZATION

SCALE : AS SHOWN
SEPTEMBER 2016

FIGURE C2

40373-447_FIG D2.PPT

Seismic Documents

PSH Deaggregation on NEHRP BC rock
Killen_Station 83.467° W, 38.684 N.

Peak Horiz. Ground Accel.>=0.08342 g
Ann. Exceedance Rate .402E-03. Mean Return Time 2475 years
Mean (R,M,ε_0) 84.7 km, 5.80, -0.01
Modal (R,M,ε_0) = 17.2 km, 4.80, -0.62 (from peak R,M bin)
Modal (R,M,ε*) = 17.9 km, 4.80, 0 to 1 sigma (from peak R,M,ε bin)
Binning: DeltaR 25. km, deltaM=0.2, Deltaε=1.0

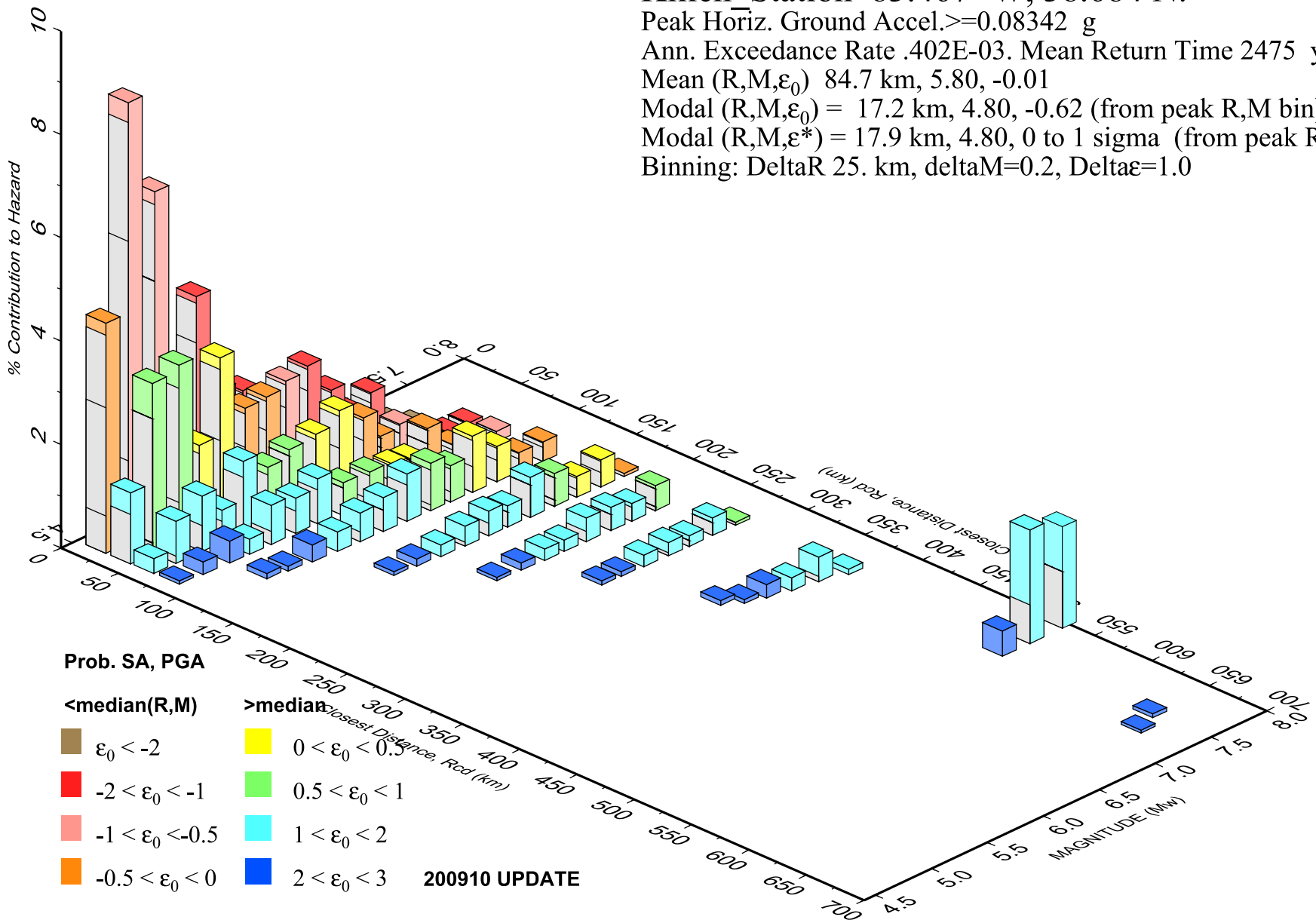


FIGURE C3

GMT 2016 Mar 10 13:40:33 Distance (R), magnitude (M), epsilon (E0,E) deaggregation for a site on rock with average vs= 760. m/s top 30 m. USGS CGHT PSHA2008 UPDATE Bins with lt 0.05% contrib. omitted

Design Maps Detailed Report

ASCE 7-10 Standard (38.6836°N, 83.4675°W)

Site Class D – "Stiff Soil", Risk Category IV (e.g. essential facilities)

Section 11.4.1 — Mapped Acceleration Parameters

Note: Ground motion values provided below are for the direction of maximum horizontal spectral response acceleration. They have been converted from corresponding geometric mean ground motions computed by the USGS by applying factors of 1.1 (to obtain S_S) and 1.3 (to obtain S_1). Maps in the 2010 ASCE-7 Standard are provided for Site Class B. Adjustments for other Site Classes are made, as needed, in Section 11.4.3.

From Figure 22-1 [1] S_S = 0.168 g

From Figure 22-2 [2] S_1 = 0.077 g

Section 11.4.2 — Site Class

The authority having jurisdiction (not the USGS), site-specific geotechnical data, and/or the default has classified the site as Site Class D, based on the site soil properties in accordance with Chapter 20.

Table 20.3–1 Site Classification

Site Class	$\bar{v}_s$	$\bar{N}$ or $\bar{N}_{ch}$	$\bar{s}_u$
A. Hard Rock	>5,000 ft/s	N/A	N/A
B. Rock	2,500 to 5,000 ft/s	N/A	N/A
C. Very dense soil and soft rock	1,200 to 2,500 ft/s	>50	>2,000 psf
D. Stiff Soil	600 to 1,200 ft/s	15 to 50	1,000 to 2,000 psf
E. Soft clay soil	<600 ft/s	<15	<1,000 psf
	Any profile with more than 10 ft of soil having the characteristics: • Plasticity index PI > 20, • Moisture content w ≥ 40%, and • Undrained shear strength $\bar{s}_u$ < 500 psf		
F. Soils requiring site response analysis in accordance with Section 21.1	See Section 20.3.1		

For SI: 1ft/s = 0.3048 m/s 1lb/ft² = 0.0479 kN/m²

Section 11.8.3 — Additional Geotechnical Investigation Report Requirements for Seismic Design Categories D through F

PGA FROM 2014 HAZARD MAP = 0.086 g

Equation (11.8–1): $PGA_M = F_{PGA}PGA = 1.600 \times 0.086 = 0.1386$ g

Table 11.8–1: Site Coefficient F_{PGA}

Site Class	Mapped MCE Geometric Mean Peak Ground Acceleration, PGA				
	PGA ≤ 0.10	PGA = 0.20	PGA = 0.30	PGA = 0.40	PGA ≥ 0.50
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of PGA

For Site Class = D and PGA = 0.086 g, F_{PGA} = 1.600

Section 21.2.1.1 — Method 1 (from Chapter 21 – Site-Specific Ground Motion Procedures for Seismic Design)

From Figure 22-17 [5] $C_{RS} = 0.922$

From Figure 22-18 [6] $C_{R1} = 0.897$

Liquefaction Analysis

LIQUEFACTION POTENTIAL EVALUATIONS

The soils observed in the cone penetrometer test (CPT) soundings were evaluated for liquefaction potential since the degree of saturation is unknown and research has shown that materials with degrees of saturation as low as 90 percent can potentially liquefy. The liquefaction potential of these materials was evaluated using the following three methods:

1) CPT-Based Liquefaction Triggering Evaluation
2) CPT-Based State Parameter Evaluation
3) Normalized Shear Wave Velocity Evaluation

A summary of each evaluation method is further described below. Note that in our overall evaluation of liquefaction potential, we have given the greatest consideration to the results of the CPT-based liquefaction triggering evaluation and the least consideration to the results of the normalized shear wave velocity evaluations.

CPT-Based Liquefaction Triggering Evaluations

Simplified CPT-based liquefaction triggering evaluations were performed using the methods described in Idriss & Boulanger (2008). Triggering evaluations were performed to evaluate the liquefaction potential of the soils for an earthquake with a return period of 2,500-years. The earthquake magnitude used in this analysis was 4.8 g and the PGA used in this analysis was 0.14 g.

Based on guidance from Idriss and Boulanger (2008), clay-like soil behavior is defined in a material having over 35% fines and having a PI value of greater than 7. If both of these criteria are not met, the soil is then anticipated to have sand-like behavior. Soils used to construct the impoundment embankment generally meet these criteria based on the results of laboratory tests completed on samples collected in test borings performed at the impoundment embankment. The soil behavior can also be estimated based on the Soil Behavior Type Index, I_c, which is a function of the normalized CPT tip resistance and the normalized friction ratio. Soil Behavior Type Index, I_c, values of less than 2.5 are anticipated to have sand-like behavior and I_c values of greater than 2.7 are anticipated to have clay-like behavior. Based on the I_c method, a portion of the embankment fill soils are anticipated to have sand-like behavior. Therefore, we took a conservative approach and performed liquefaction triggering evaluations using both “sand-like” and “clay-like” soil behavior methods.

Results of the CPT-Based liquefaction triggering evaluations are presented graphically in Figures C4 through C8. The embankment fill soils encountered by the CPTs have Factors of Safety of greater than 1.2 against liquefaction using both sand-like and clay-like evaluations and conservative estimations of the fines contents. This indicates that the embankment materials are not anticipated to liquefy and lose strength during the design earthquake event. It should be noted that a N_{kt} value of 35 was used in the evaluation of the clay-like material, which was assumed based on a comparison between the embankment fill design undrained shear strength and the CPT-measured undrained strengths with depth.

CPT-Based State Parameter Evaluation

The state parameter (ψ) is defined as the difference between the current void ratio and the critical state void ratio. Jefferies and Been (2006) suggested that soils with a state parameter value of less than -0.05

are dilative at large strains and are less likely to be prone to liquefaction. Robertson (2009) developed state parameter contours for the SBT_n Q_{tn}-F_R for uncemented, Holocene-age soils.

Data points from the embankment fill materials encountered in each of the CPT soundings were plotted on the SBT_n Q_{tn}-F_R chart and were compared to the state parameter contours developed by Robertson as shown in Figures C9 through C13. As shown on these figures, the estimated state parameter difference for the fill soils at each of the sites is less than -0.05, indicating that the embankment fill materials are dilative and not prone to liquefaction.

Normalized Shear Wave Velocity Evaluation

Normalized shear wave velocity threshold values for the liquefaction resistance of the soil have been developed by Andrus and Stokoe (2000). Three threshold normalized shear wave have been identified based on the fines content of the soils as indicated below:

- Soils with fines contents of less than 5%: 220 m/sec
- Soils with fines contents of approximately 20%: 210 m/sec
- Soils with fines content of greater than 35%: 200 m/sec

Normalized shear wave velocities lower than the threshold values shown above are more susceptible to liquefaction while normalized shear wave velocities higher than the threshold values are less susceptible to liquefaction.

Shear wave velocities measured by the CPT were normalized using the following equation:

$$V_{s1} = V_s \left(\frac{P_a}{\sigma'_{vo}}\right)^{0.25}$$

Where: v_s = CPT measured shear wave velocity
P_a = 1 atmosphere of pressure
σ'_{vo} = effective overburden pressure at average interval depth

The effective overburden pressure at the average interval depth was calculated assuming an average soil unit weight of 130 pcf and assuming that the soil profile is partially saturated above the depth at which water was encountered at each CPT location. Normalized shear wave velocities measured in the CPT soundings relative to the threshold shear wave velocities are shown in Figure C14.

Fill material within the impoundment embankment at CPT soundings at HAC1 and HAC4 is estimated to have fines contents greater than 35 percent based the results of laboratory tests performed on samples collected from adjacent soil borings. Normalized shear wave velocities of embankment fill soils measured in the CPTs are greater than the threshold value for 35 percent fines. As a result, the embankment fill soils are not anticipated to be liquefiable.

Conclusions

The following conclusions are made based on the results of the liquefaction evaluations described above:

1) CPT-based liquefaction triggering evaluations indicate the embankment fill soils have calculated factors of safety greater than 1.2 indicating that these soils are not prone to liquefaction.

2) CPT-based state parameter evaluations indicate the embankment fill soils encountered at each of the CPT locations are dilative and not prone to liquefaction.

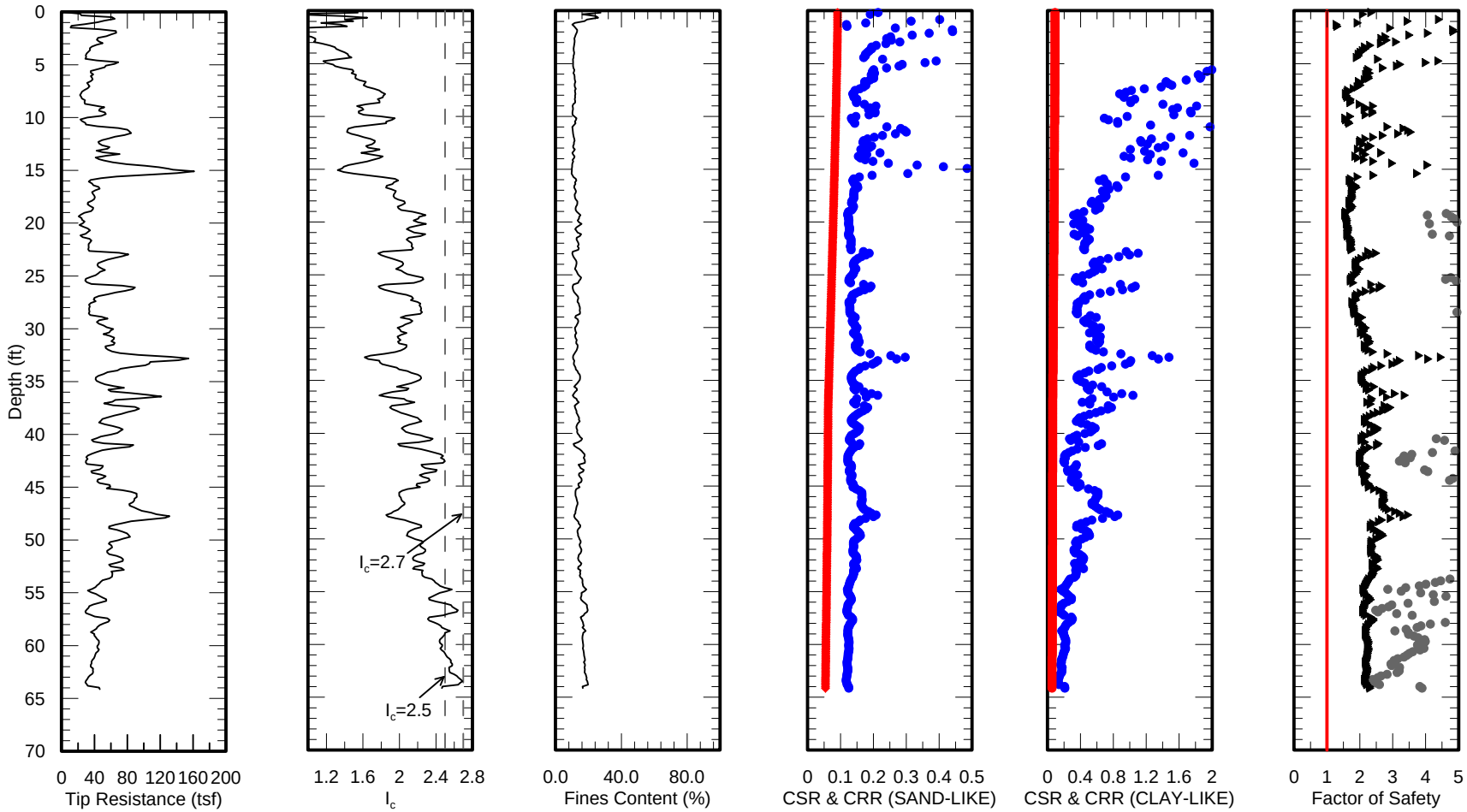
3) Normalized shear wave velocities of embankment fill soils measured in soundings HAC1 and HAC4 are greater than the threshold value for soils with greater than 35 percent fines, indicating that these soils are not liquefiable.

In consideration of the results of the three evaluations mentioned above, the "sand-like" portions of the materials used to construct the embankment do not appear to be prone to liquefaction. As a result, a post-liquefaction stability analysis is not required.

References

a. Andrus, R.D. and Stokoe, K.H., II, (2000). "Liquefaction Resistance of Soils from Shear-Wave Velocity," Journal of Geotechnical and Geoenvironmental Engineering, American Society of Civil Engineers, Vol. 126, No. 11, November, pp. 1015-1025.
b. Idriss, I. M., and Boulanger, R. W. (2008). "Soil Liquefaction during Earthquakes," EERI Monograph, MNO-12, Richmond, CA
c. Jefferies, M.G. and Been, K., (2006). Soil Liquefaction – A critical state approach. Taylor & Francis, ISBN 0-419-16170-8 478 pages.
d. Robertson, P.K., (2009a). Interpretation of cone penetration tests – a unified approach. Canadian Geotechnical Journal, 46:1337-1355.

\\was\Common\Projects\40373 DP&L\-445 Killen Station\Analyses\CPT Based Liquefacation Potential\CPT Based Triggering Plots\16-CPT-C1_Liquefaction Triggering_2500.grf



LEGEND

- Cyclic Stress Ratio$_{M,\sigma'vc}$
- Cyclic Resistance Ratio$_{M,\sigma'vc}$
- Clay-Like Factor of Safety
- Sand-Like Factor of Safety

NOTES:
1) Cyclic Stress Ratio (CSR), Cyclic Resistance Ratio (CRR) and Factor of Safety (FS) values calculated using methods described in EERI's "Soil Liquefaction during Earthquakes" [Idriss & Boulanger, 2008].
2) Effective stresses used in CRR equations calculated based on depth to water at time of CPT sounding. Effective stresses used in CSR equations based on depth to water at maximum storage.
3) CSR values calculated for an earthquake having a PGA of 0.14g and a magnitude of 4.8.
4) Sand-like CRR values were calculated using corrected tip resistances (qt). Fines contents estimated using correlations developed by Syms (2001).
5) Clay-like CRR values were calculated using an Nkt value of 35.
6) Clay-like factors of safety exceeding 5 are not shown.

HALEY ALDRICH

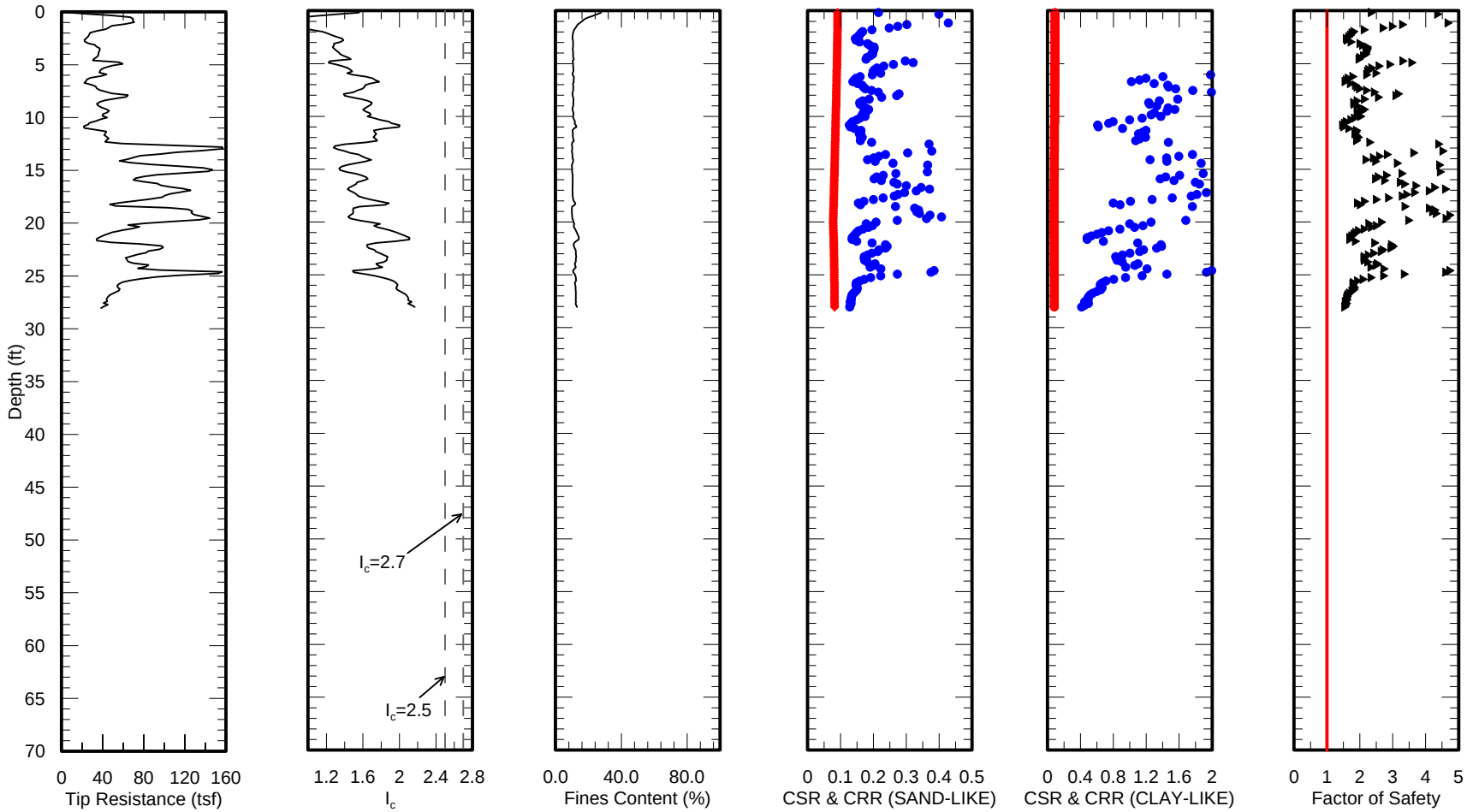
DP&L Killen Station

Liquefaction Triggering Evaluation
HAC1
2,500-Year Return Period

September 2016

FIGURE NO. C4

\\was\Common\Projects\40373 DP&L\-445 Killen Station\Analyses\CPT Based Liquefacation Potential\CPT Based Triggering Plots\16-CPT-C3_Liquefaction Triggering_2500.grf



LEGEND

- Cyclic Stress Ratio$_{M,\sigma'vc}$
- Cyclic Resistance Ratio$_{M,\sigma'vc}$
- Clay-Like Factor of Safety
- Sand-Like Factor of Safety

NOTES:
1) Cyclic Stress Ratio (CSR), Cyclic Resistance Ratio (CRR) and Factor of Safety (FS) values calculated using methods described in EERI's "Soil Liquefaction during Earthquakes" [Idriss & Boulanger, 2008].
2) Effective stresses used in CRR equations calculated based on depth to water at time of CPT sounding. Effective stresses used in CSR equations based on depth to water at maximum storage.
3) CSR values calculated for an earthquake having a PGA of 0.14g and a magnitude of 4.8.
4) Sand-like CRR values were calculated using corrected tip resistances (qt). Fines contents estimated using correlations developed by Syms (2001).
5) Clay-like CRR values were calculated using an Nkt value of 35.
6) Clay-like factors of safety exceeding 5 are not shown.

HALEY ALDRICH

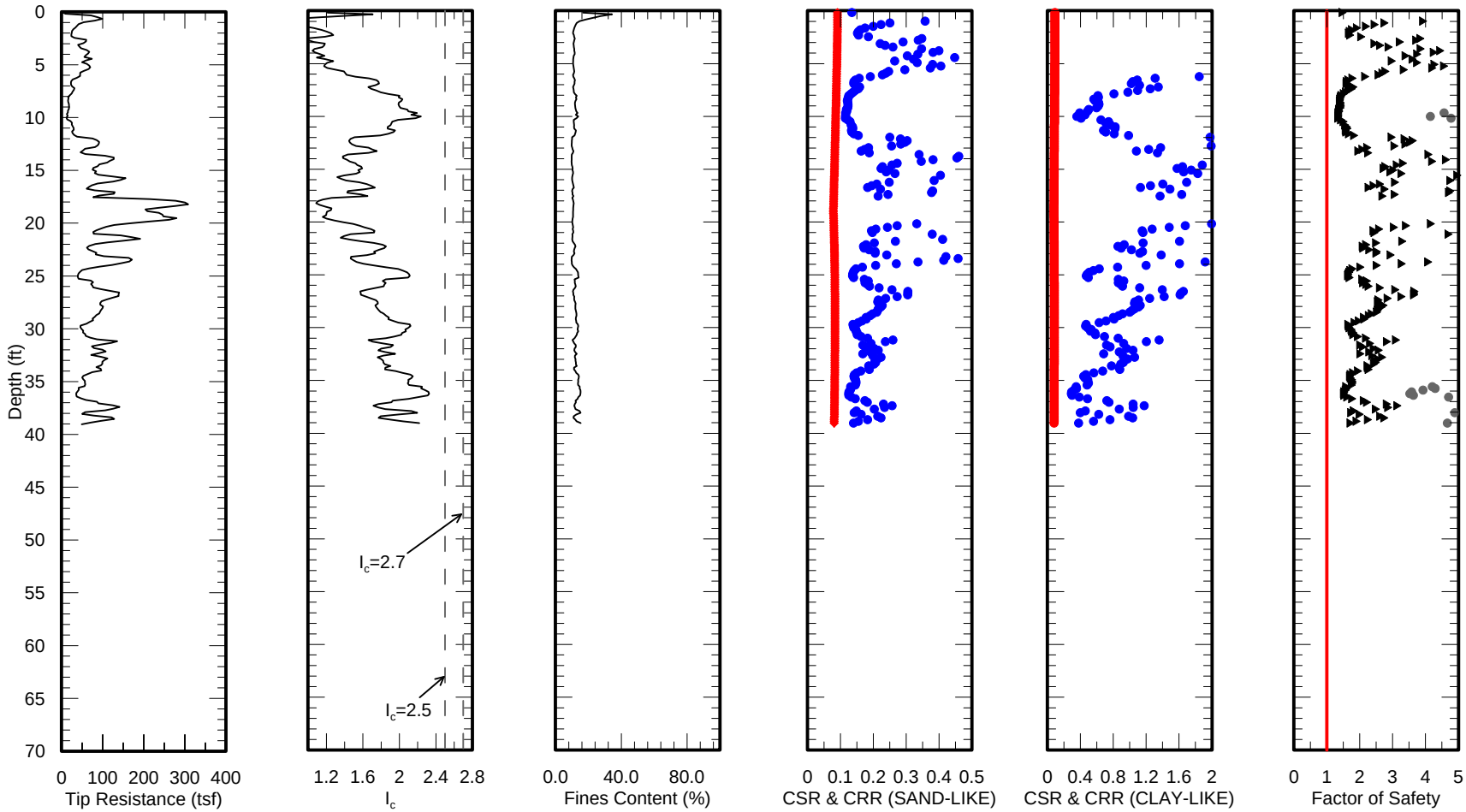
DP&L Killen Station

Liquefaction Triggering Evaluation
HAC3
2,500-Year Return Period

September 2016

FIGURE NO. C5

\\was\Common\Projects\40373 DP&L\-445 Killen Station\Analyses\CPT Based Liquefacation Potential\CPT Based Triggering Plots\16-CPT-C4_Liquefaction Triggering_2500.grf



LEGEND

- Cyclic Stress Ratio$_{M,\sigma'vc}$
- Cyclic Resistance Ratio$_{M,\sigma'vc}$
- Clay-Like Factor of Safety
- Sand-Like Factor of Safety

NOTES:
1) Cyclic Stress Ratio (CSR), Cyclic Resistance Ratio (CRR) and Factor of Safety (FS) values calculated using methods described in EERI's "Soil Liquefaction during Earthquakes" [Idriss & Boulanger, 2008].
2) Effective stresses used in CRR equations calculated based on depth to water at time of CPT sounding. Effective stresses used in CSR equations based on depth to water at maximum storage.
3) CSR values calculated for an earthquake having a PGA of 0.14g and a magnitude of 4.8.
4) Sand-like CRR values were calculated using corrected tip resistances (qt). Fines contents estimated using correlations developed by Syms (2001).
5) Clay-like CRR values were calculated using an Nkt value of 35.
6) Clay-like factors of safety exceeding 5 are not shown.

HALEY ALDRICH

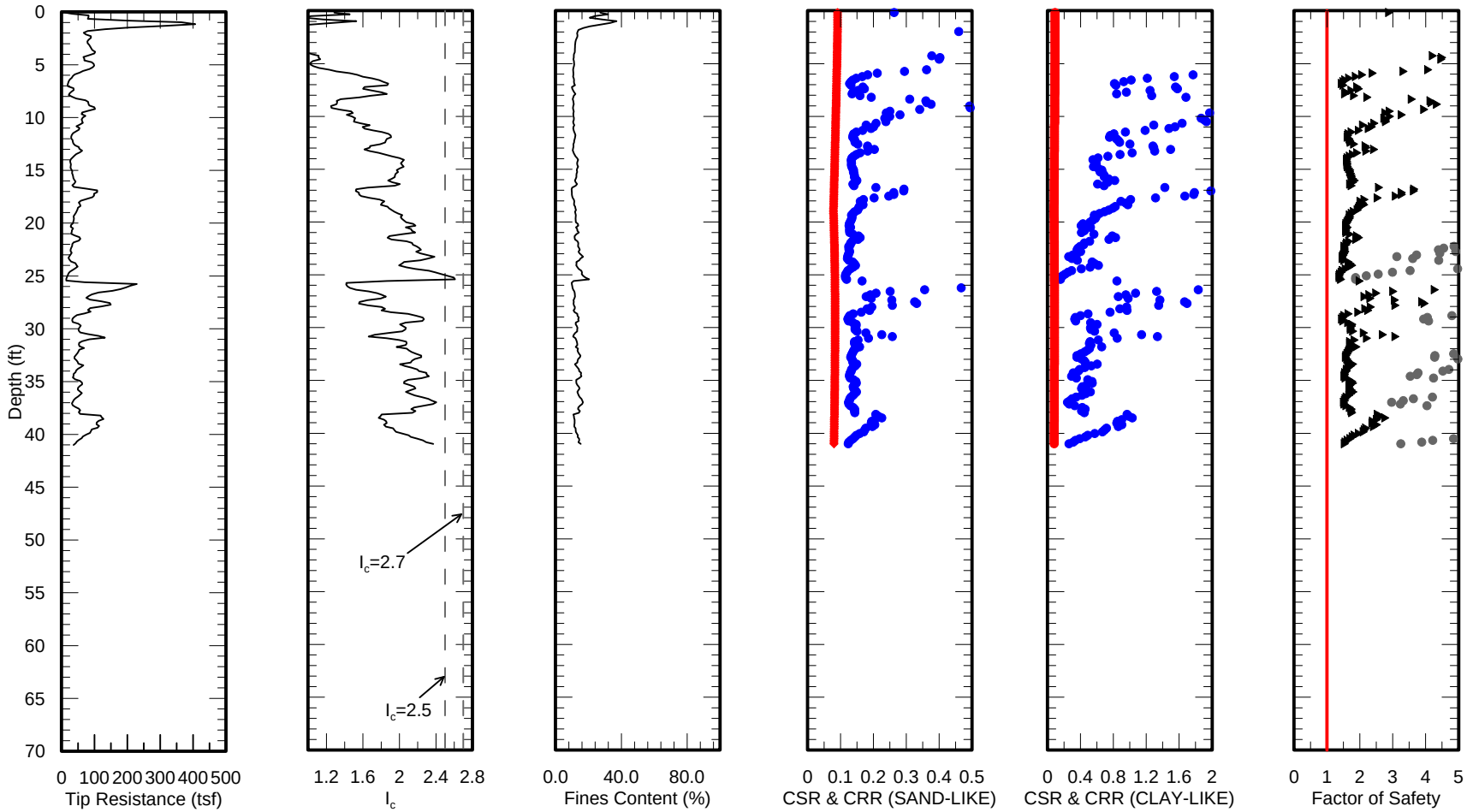
DP&L Killen Station

Liquefaction Triggering Evaluation
HAC4
2,500-Year Return Period

September 2016

FIGURE NO. C6

\\was\Common\Projects\40373 DP&L\-445 Killen Station\Analyses\CPT Based Liquefacation Potential\CPT Based Triggering Plots\16-CPT-C5_Liquefaction Triggering_2500.grf



LEGEND

- Cyclic Stress Ratio$_{M,\sigma'vc}$
- Cyclic Resistance Ratio$_{M,\sigma'vc}$
- Clay-Like Factor of Safety
- Sand-Like Factor of Safety

NOTES:
1) Cyclic Stress Ratio (CSR), Cyclic Resistance Ratio (CRR) and Factor of Safety (FS) values calculated using methods described in EERI's "Soil Liquefaction during Earthquakes" [Idriss & Boulanger, 2008].
2) Effective stresses used in CRR equations calculated based on depth to water at time of CPT sounding. Effective stresses used in CSR equations based on depth to water at maximum storage.
3) CSR values calculated for an earthquake having a PGA of 0.14g and a magnitude of 4.8.
4) Sand-like CRR values were calculated using corrected tip resistances (qt). Fines contents estimated using correlations developed by Syms (2001).
5) Clay-like CRR values were calculated using an Nkt value of 35.
6) Clay-like factors of safety exceeding 5 are not shown.

HALEY ALDRICH

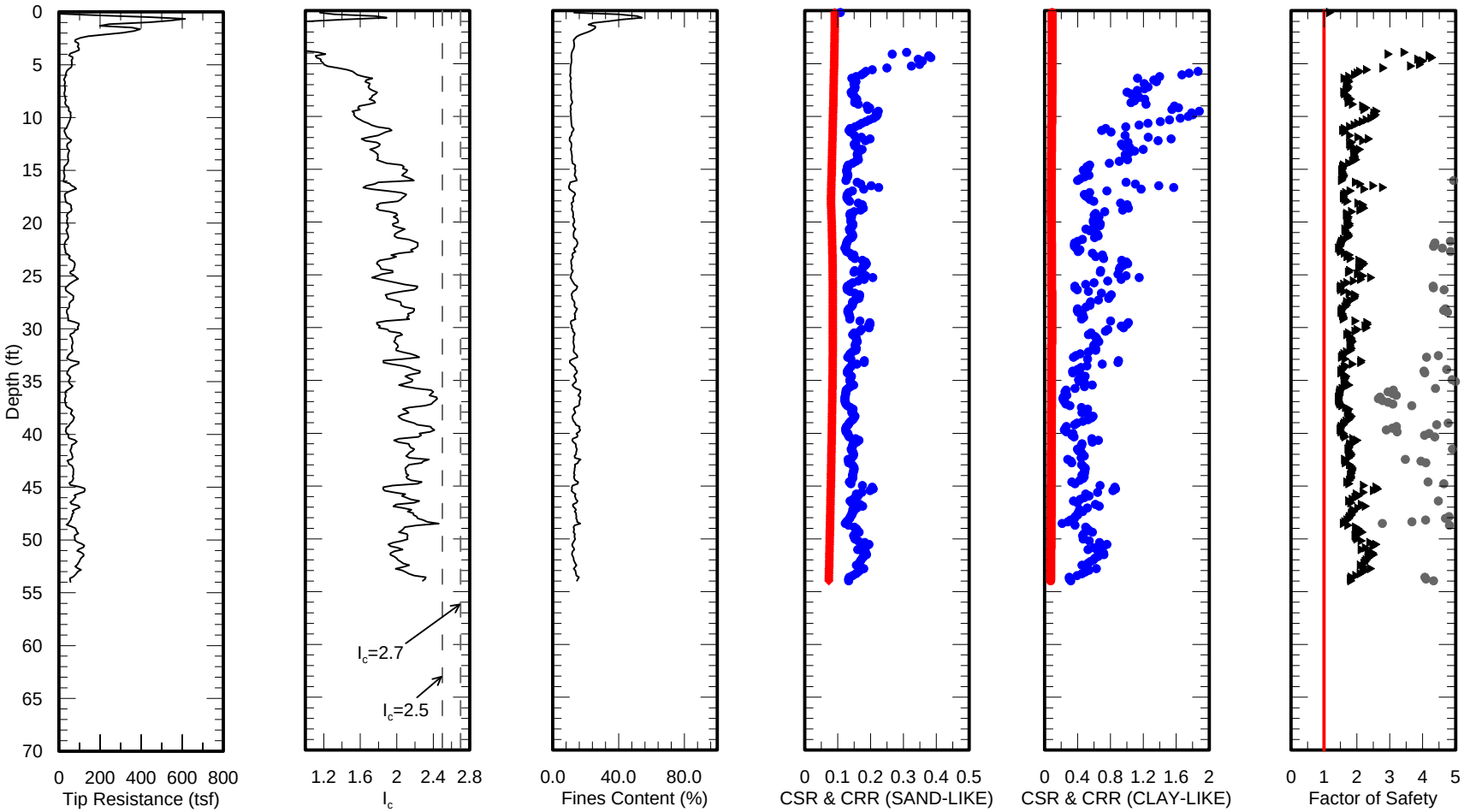
DP&L Killen Station

Liquefaction Triggering Evaluation
HAC5
2,500-Year Return Period

September 2016

FIGURE NO. C7

\\was\Common\Projects\40373 DP&L\-445 Killen Station\Analyses\CPT Based Liquefacation Potential\CPT Based Triggering Plots\16-CPT-C6_Liquefaction Triggering_2500.grf



LEGEND

- Cyclic Stress Ratio$_{M,\sigma'vc}$
- Cyclic Resistance Ratio$_{M,\sigma'vc}$
- Clay-Like Factor of Safety
- Sand-Like Factor of Safety

NOTES:
1) Cyclic Stress Ratio (CSR), Cyclic Resistance Ratio (CRR) and Factor of Safety (FS) values calculated using methods described in EERI's "Soil Liquefaction during Earthquakes" [Idriss & Boulanger, 2008].
2) Effective stresses used in CRR equations calculated based on depth to water at time of CPT sounding. Effective stresses used in CSR equations based on depth to water at maximum storage.
3) CSR values calculated for an earthquake having a PGA of 0.14g and a magnitude of 4.8.
4) Sand-like CRR values were calculated using corrected tip resistances (qt). Fines contents estimated using correlations developed by Syms (2001).
5) Clay-like CRR values were calculated using an Nkt value of 35.
6) Clay-like factors of safety exceeding 5 are not shown.

HALEY ALDRICH

DP&L Killen Station

Liquefaction Triggering Evaluation
HAC6
2,500-Year Return Period

September 2016

FIGURE NO. C8

HALEY ALDRICH

DP&L Killen Station
Manchester, Ohio
Project Number :40373-445

SBT Q_t vs F_r

Northing: 249161.5 **Date:** May. 17, 2016
Easting: 1691282.9 **Test ID:** HAC1
Project Number: 40373-445 **Elevation:** 572.0 **Estimated Water Depth:** Not Encountered

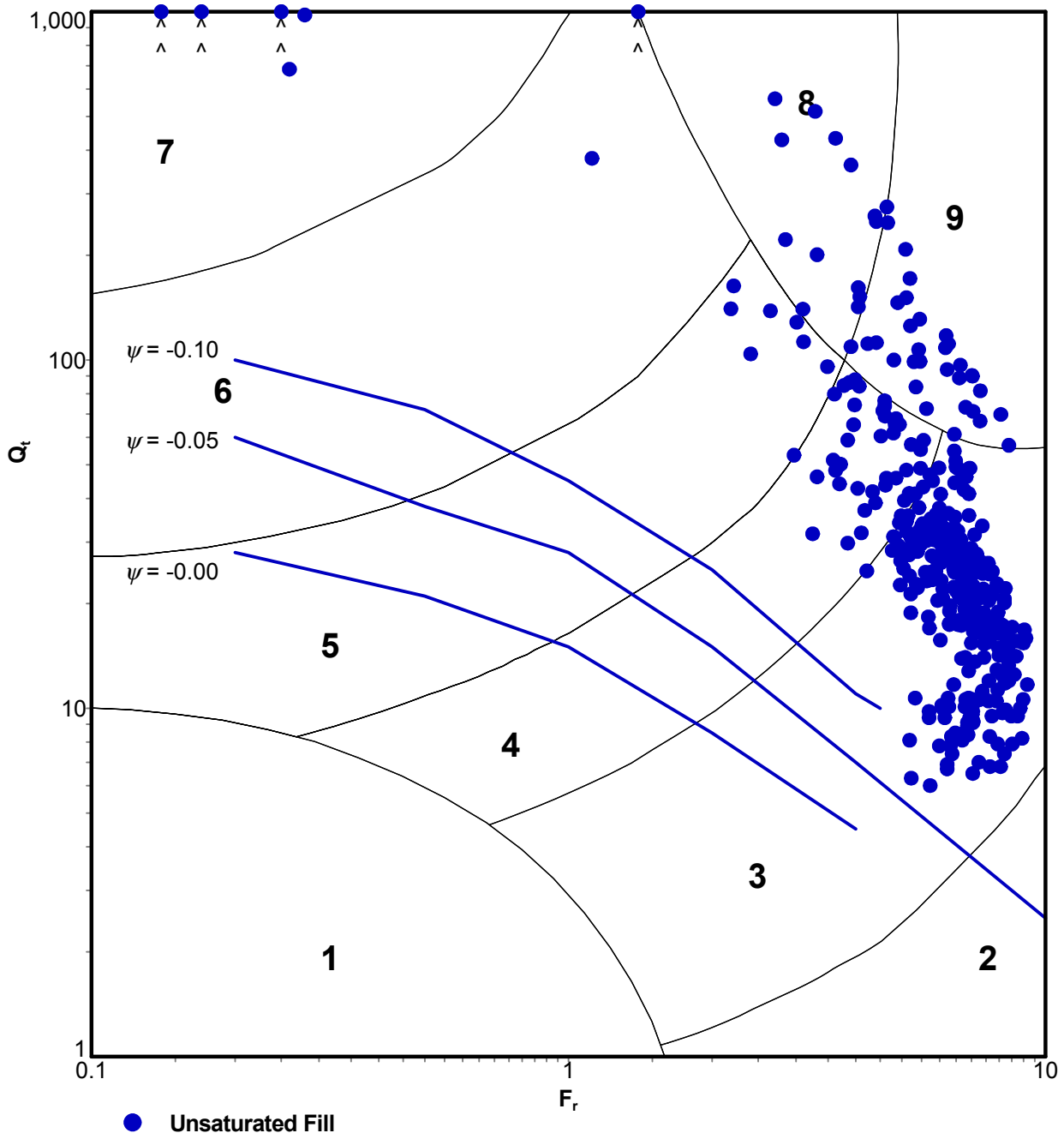


Figure C9 - HAC1

Electronic File Name: 16-53042_SPHAC1.COR

H&A_CPT_DF_STD_20160405.GLB CPT - SBT QT FR NORM INTERPRETED \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\ANALYSES\GINT\40373-445 KILLEN STATION.GPJ Sep 8, 16

HALEY ALDRICH

DP&L Killen Station
Manchester, Ohio
Project Number :40373-445

SBT Q_t vs F_r

Northing: 251457.6 **Date:** May. 17, 2016
Easting: 1693487.6 **Test ID:** HAC3
Project Number: 40373-445 **Elevation:** 572.4 **Estimated Water Depth:** Not Encountered

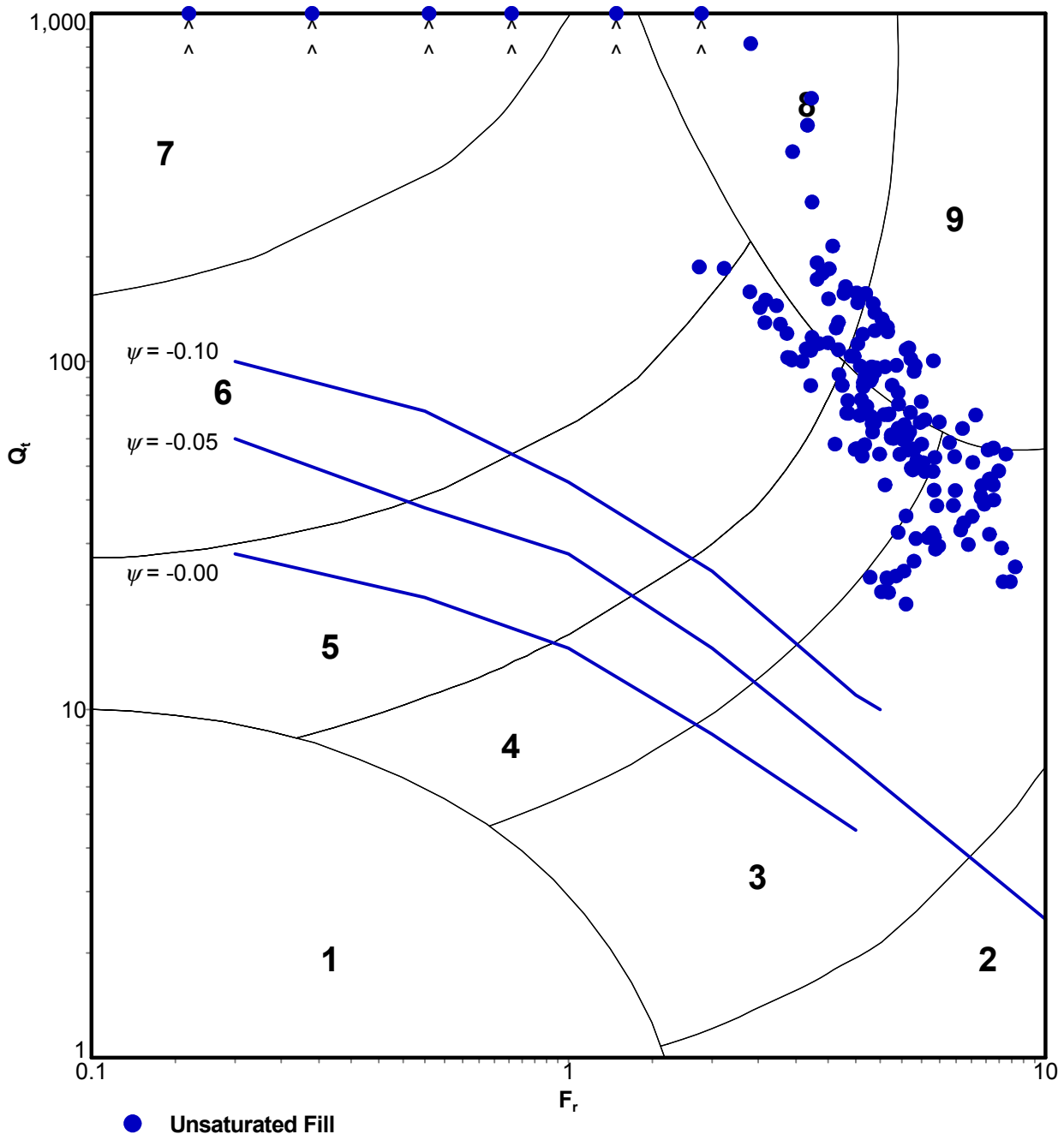


Figure C10 - HAC3

Electronic File Name: 16-53042_CPHAC3.COR

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HALEY ALDRICH

DP&L Killen Station
Manchester, Ohio
Project Number :40373-445

SBT Q_t vs F_r

Northing: 253152.0 **Date:** May. 18, 2016
Easting: 1691562.9 **Test ID:** HAC4
Project Number: 40373-445 **Elevation:** 572.1 **Estimated Water Depth:** Not Encountered

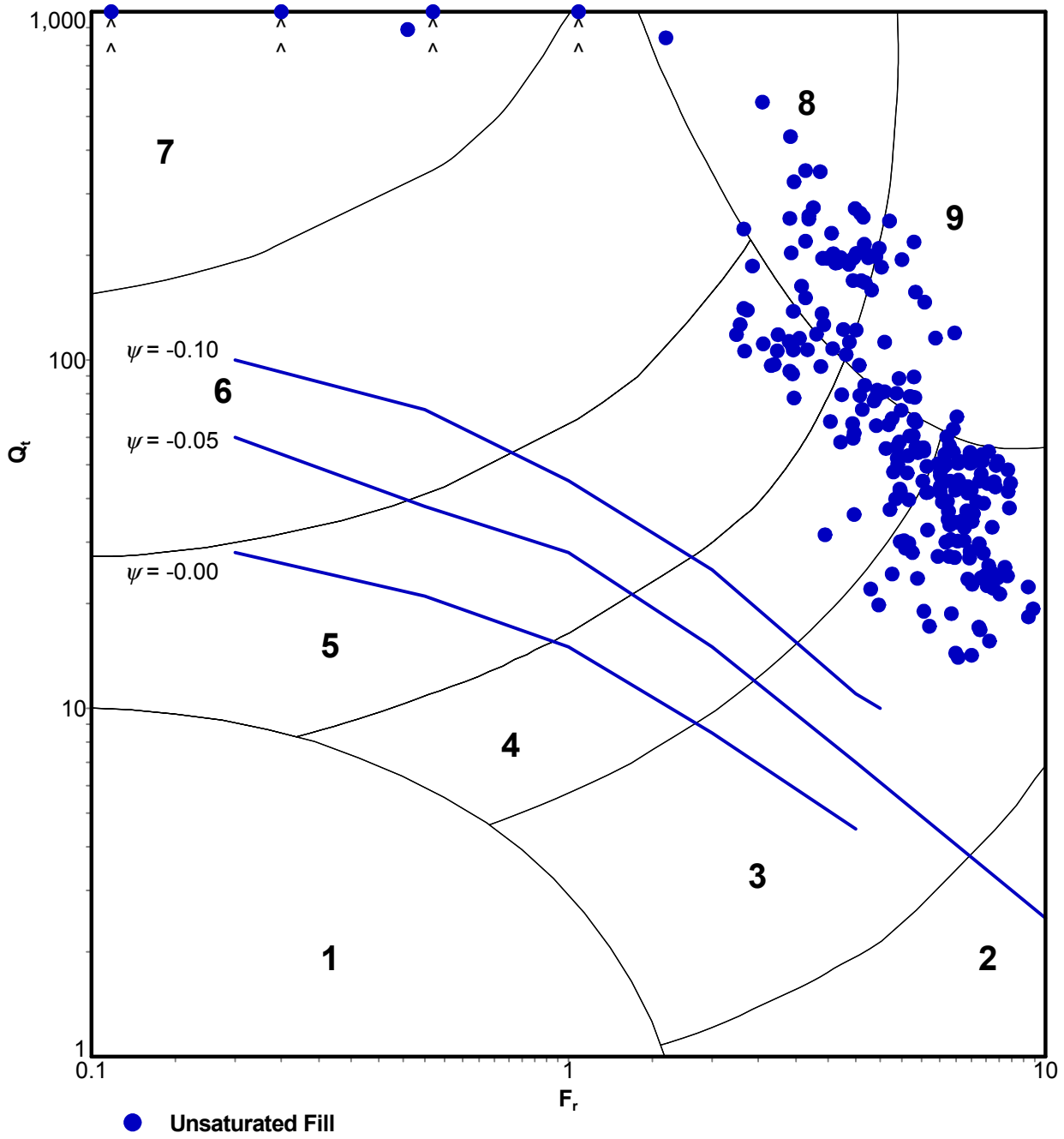

Figure C11 - HAC4

Electronic File Name: 16-53042_SPHAC4.COR

H&A_CPT_DF_STD_20160405.GLB CPT - SBT QT FR NORM INTERPRETED \\WAS\COMMON\PROJECTS\40373 DP&L\-445 KILLEN STATION\ANALYSES\GINT\40373-445 KILLEN STATION.GPJ Sep 8, 16

HALEY ALDRICH

DP&L Killen Station
Manchester, Ohio
Project Number :40373-445

SBT Q_t vs F_r

Northing: 253104.2 **Date:** May. 17, 2016
Easting: 1690695.0 **Test ID:** HAC5
Project Number: 40373-445 **Elevation:** 572.6 **Estimated Water Depth:** Not Encountered

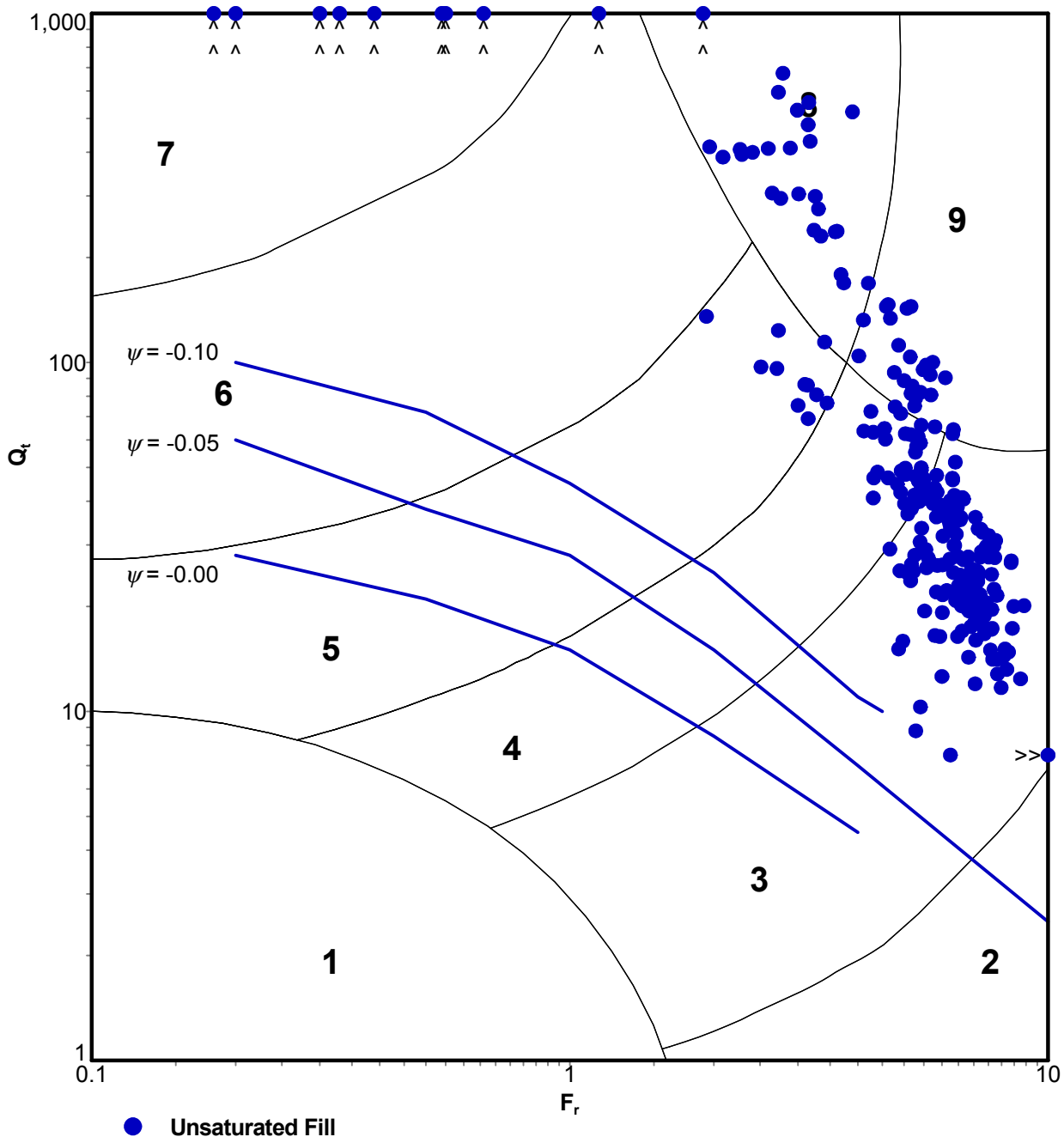

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Figure C12 - HAC5

Electronic File Name: 16-53042_CPHAC5.COR

HALEY ALDRICH

DP&L Killen Station
Manchester, Ohio
Project Number :40373-445

SBT Q_t vs F_r

Northing: 252006.6 **Date:** May. 16, 2016
Easting: 1691104.8 **Test ID:** HAC6
Project Number: 40373-445 **Elevation:** 572.2 **Estimated Water Depth:** 52 ft

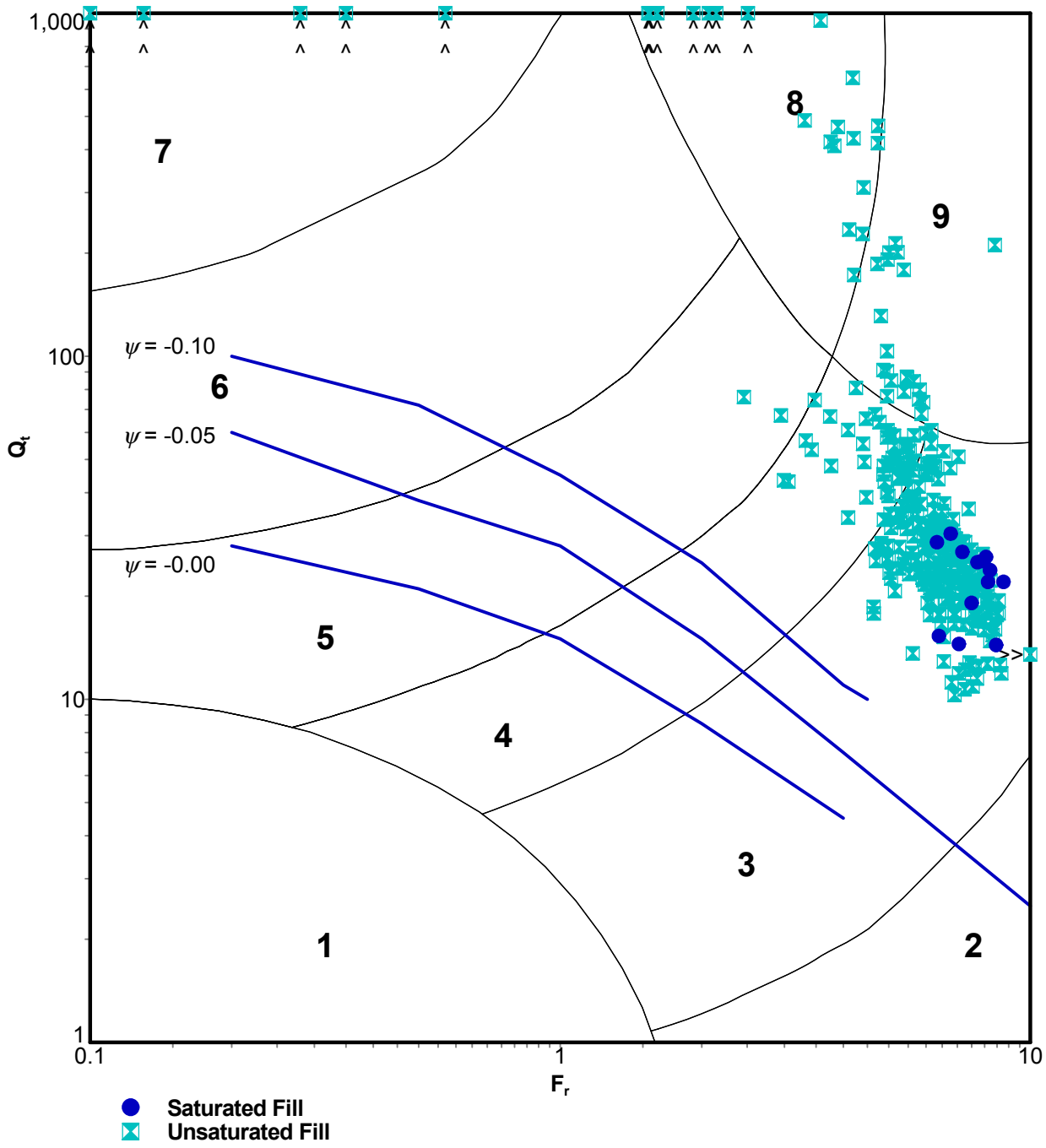

Figure C13 - HAC6

Electronic File Name: 16-53042_CPHAC6.COR

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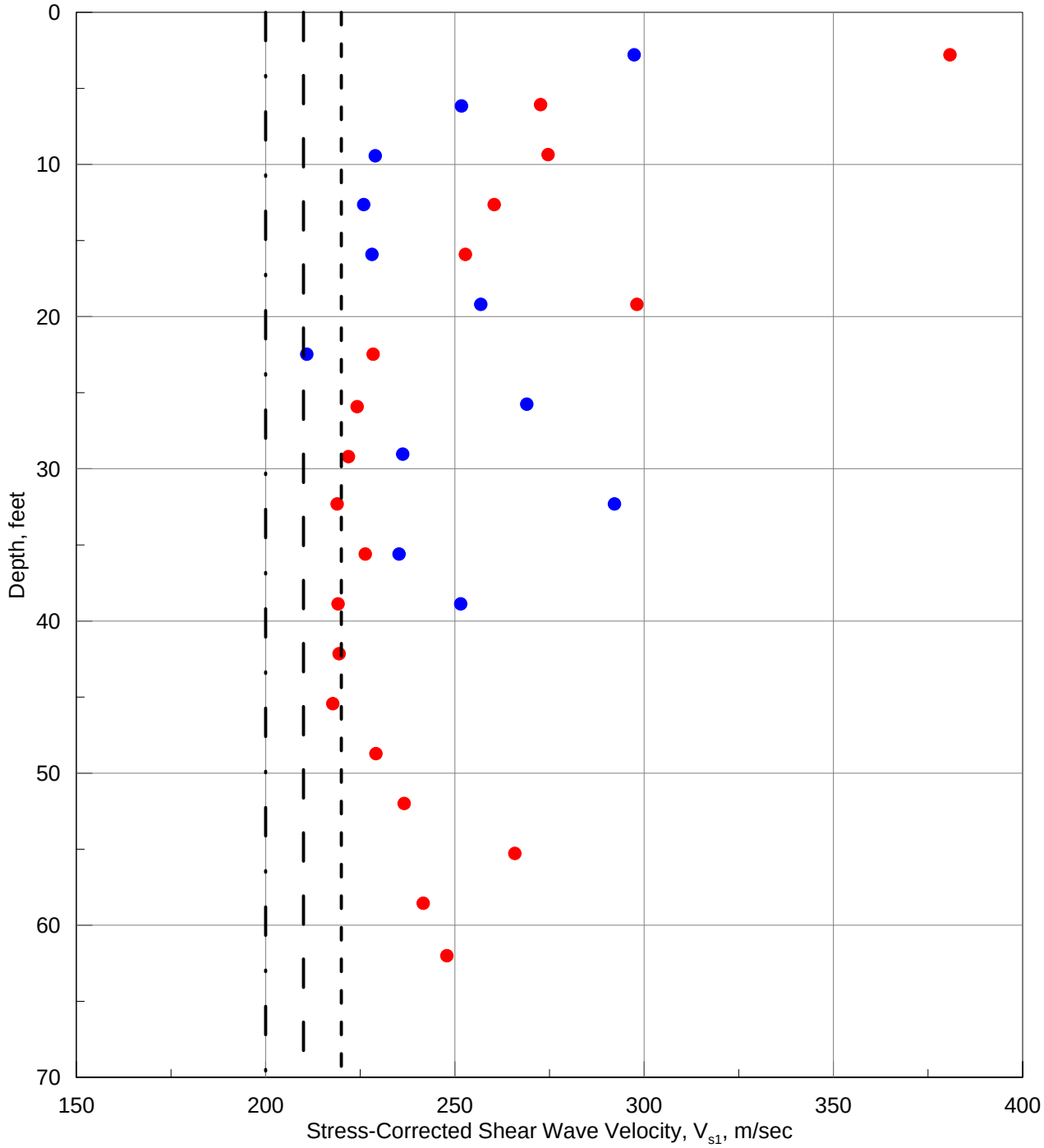


NOTES:
1) Liquefaction thresholds based on data developed by Andrus and Stokoe (2000)
2) Shear wave velocities normalized using equations developed by Andurs and Stokoe (2000).
3) Shear wave velocites normalized assuming 100% hydrostatic pore pressures at depth to water identified by ConeTec.

LEGEND

- SCPT16-HA-C1
- SCPT16-HA-C4
- Liquefaction Threshold; FC<5%
- Liquefaction Threshold; FC=20%
- Liquefaction Threshold; FC>35%

HALEY ALDRICH

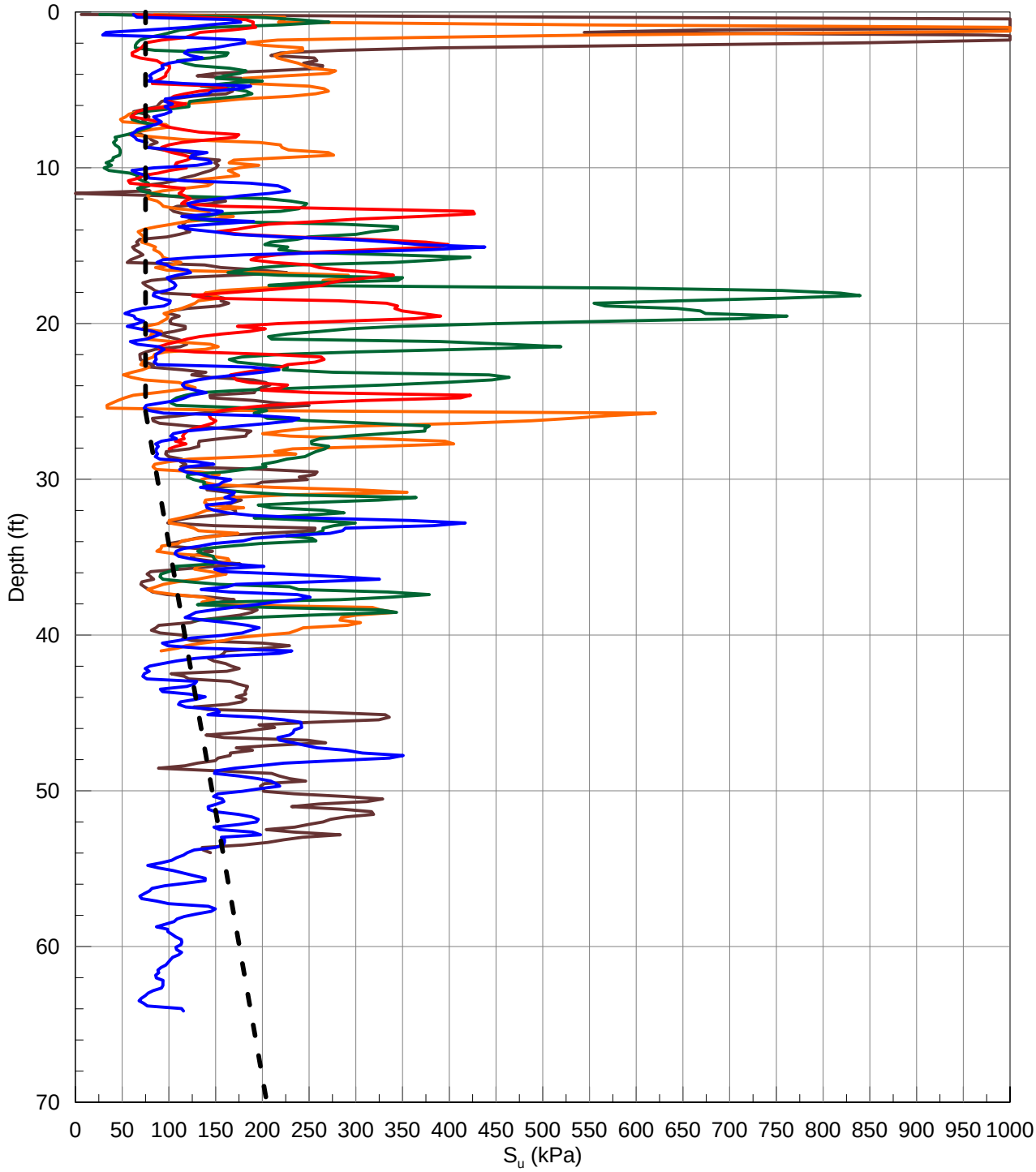
DP&L Killen Station

Normalized Shear Wave Velocity vs. Liqufaction Resistance

SEPTEMBER 2016

FIGURE NO. C14

\\was\Common\Projects\40373 DP&L\-445 Killen Station\Analyses\CPT Based Liquefacation Potential\Shear Wave Velocity Plots\DP&L_Killen_Normalized Shear Wave Velocity Profile.grf



LEGEND

- Design Su
- HAC1
- HAC3
- HAC4
- HAC5
- HAC6

NOTES:

1) CPT measured undrained strengths shown on this figured estimated using a Nkt value of 35.
2) Assumed design undrained shear strength based on a constant 1500 psf undrained strength to a vertical effective stress of 3333 psf and an undrained strength ratio of 0.45 for vertical effective stress greater than 3333 psf.

HALEY ALDRICH

DP&L Killen Station

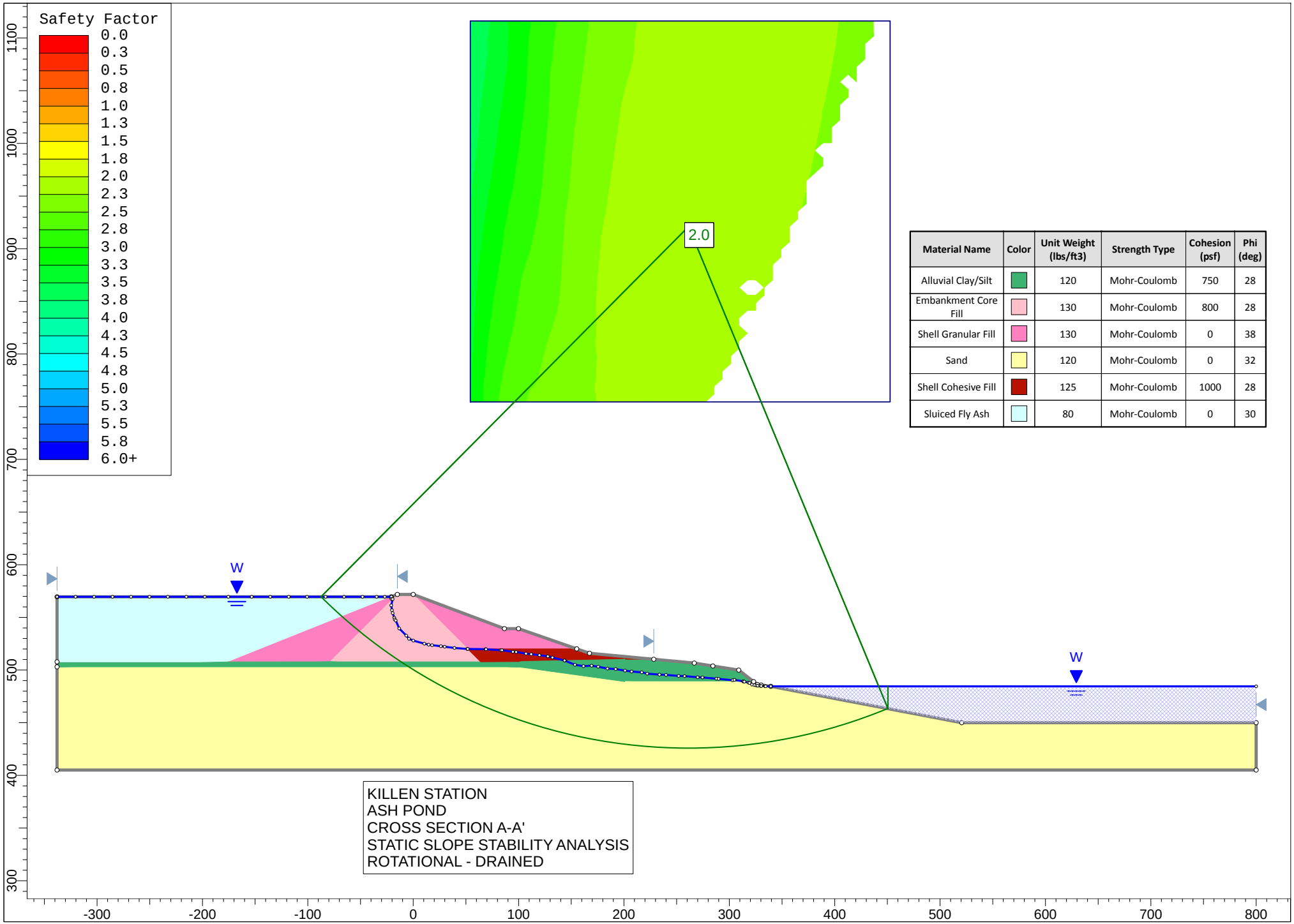
ASSUMED DESIGN VERSUS FIELD MEASURED UNDRAINED SHEAR STRENGTH

SEPTEMBER 2016

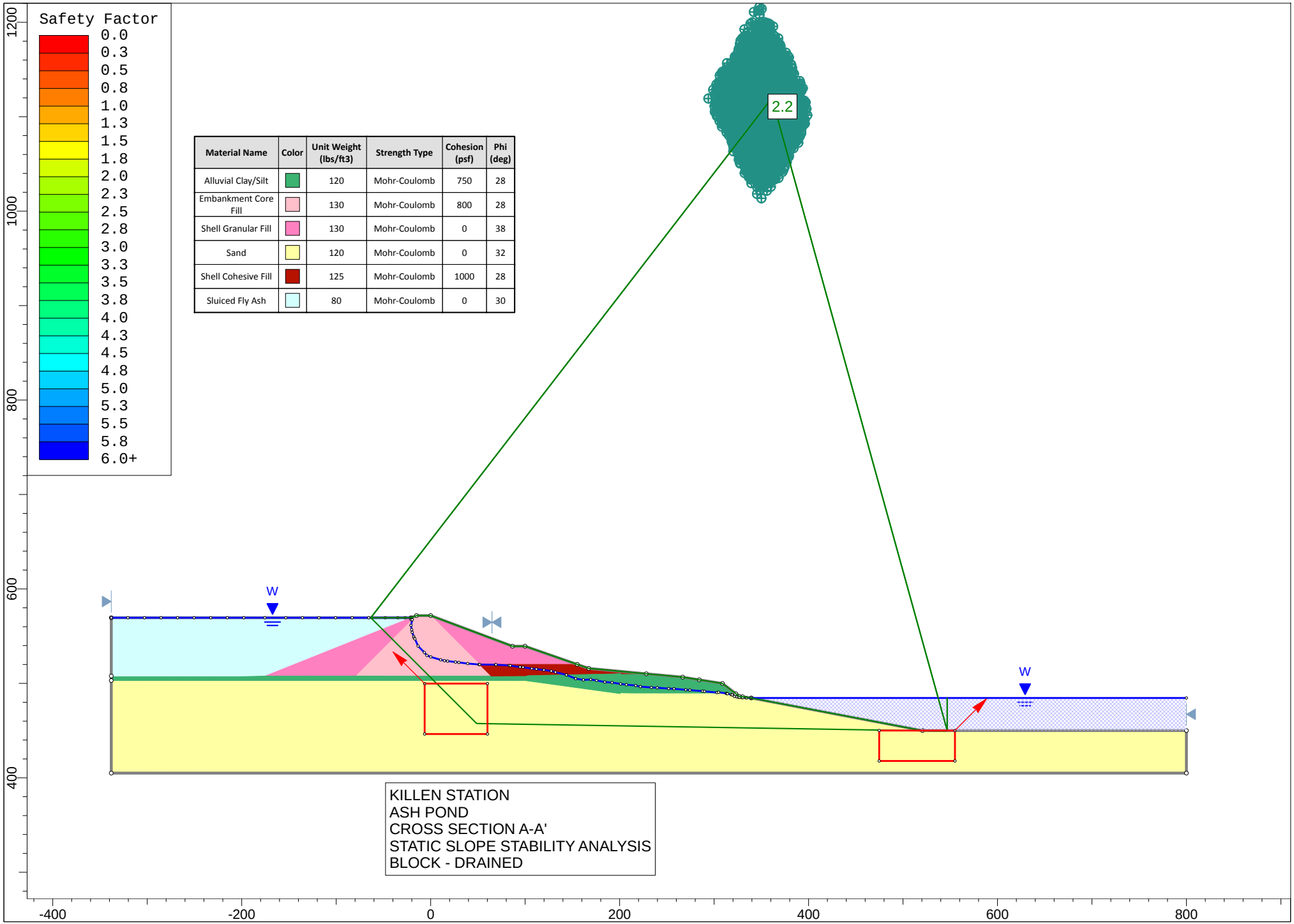
FIGURE NO. C15

\\was\Common\Projects\40373 DP&L\-445 Killen Station\Analyses\CPT Based Liquefacation Potential\CPT Based Triggering Plots\CPT su versus lab su.grf

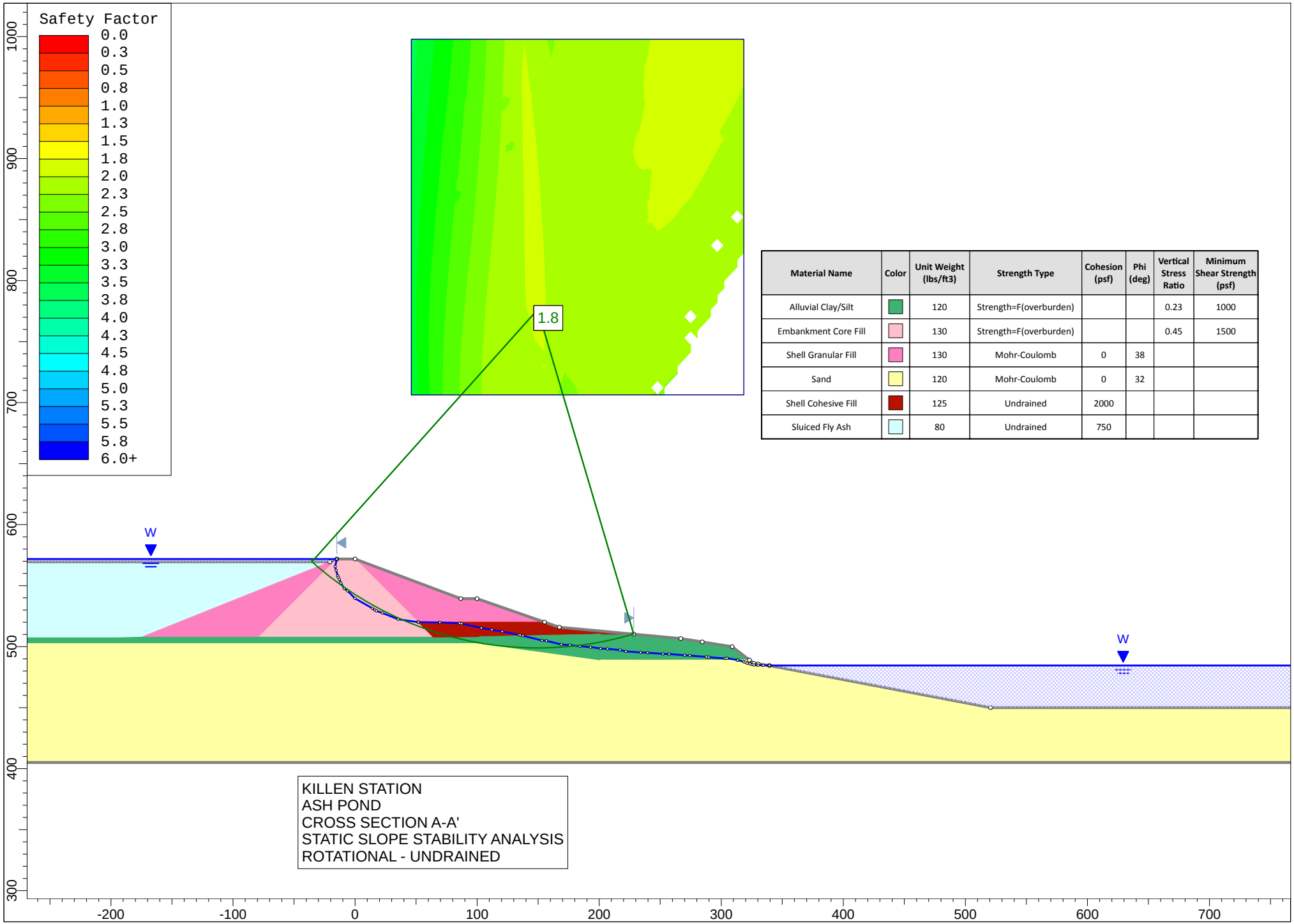
Slope Stability



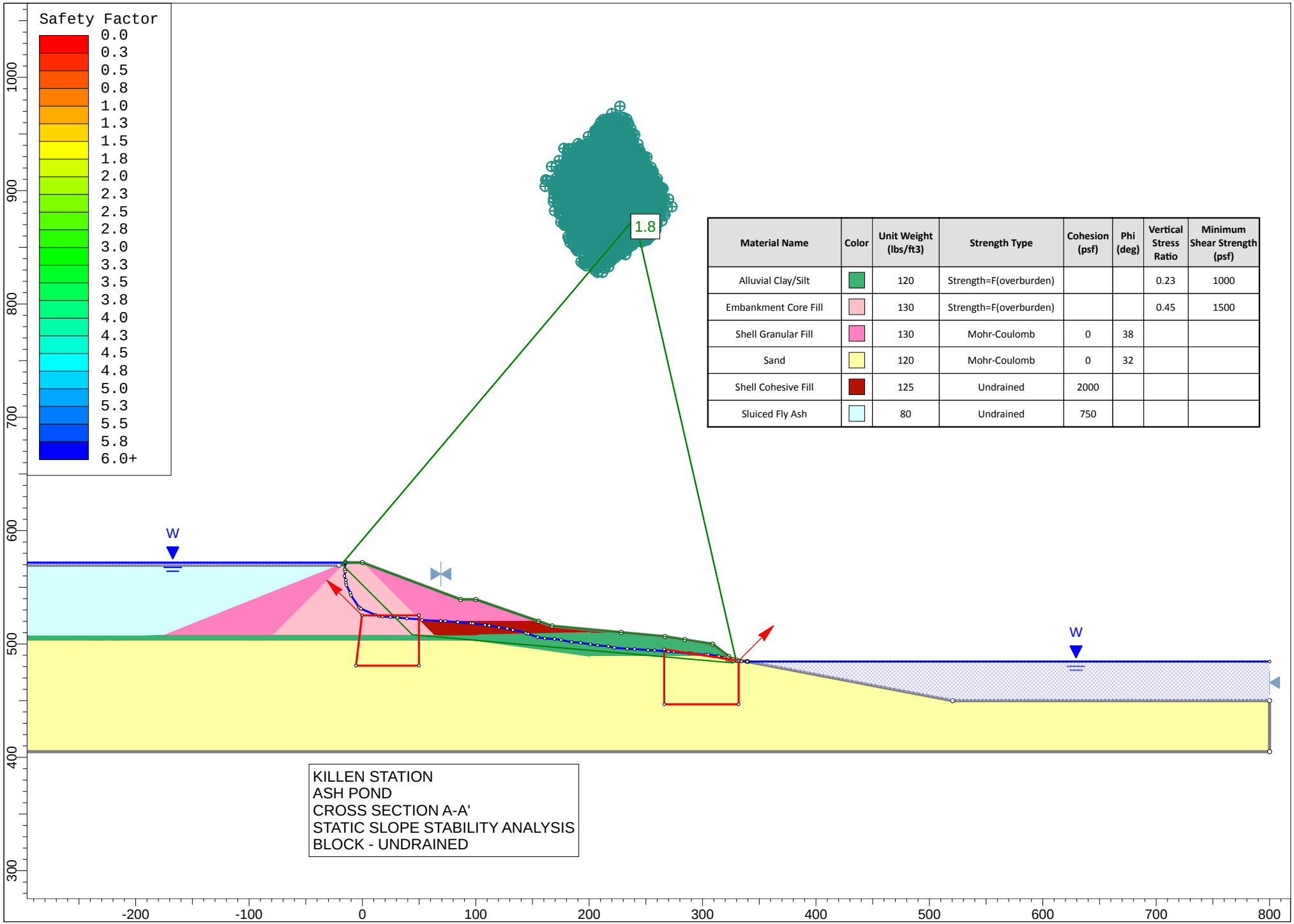
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)
Alluvial Clay/Silt		120	Mohr-Coulomb	750	28
Embankment Core Fill		130	Mohr-Coulomb	800	28
Shell Granular Fill		130	Mohr-Coulomb	0	38
Sand		120	Mohr-Coulomb	0	32
Shell Cohesive Fill		125	Mohr-Coulomb	1000	28
Sluiced Fly Ash		80	Mohr-Coulomb	0	30



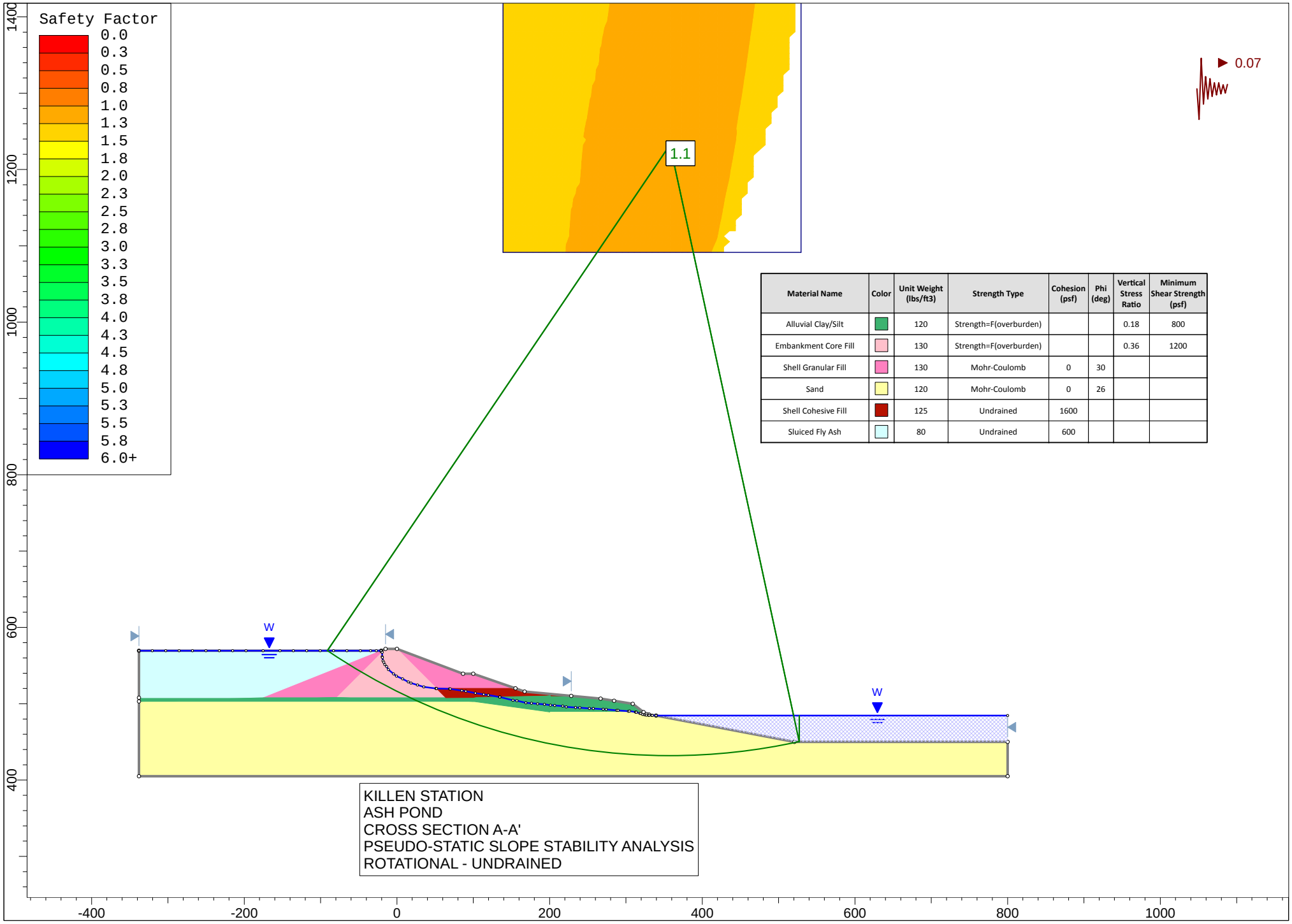
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)
Alluvial Clay/Silt		120	Mohr-Coulomb	750	28
Embankment Core Fill		130	Mohr-Coulomb	800	28
Shell Granular Fill		130	Mohr-Coulomb	0	38
Sand		120	Mohr-Coulomb	0	32
Shell Cohesive Fill		125	Mohr-Coulomb	1000	28
Sluiced Fly Ash		80	Mohr-Coulomb	0	30



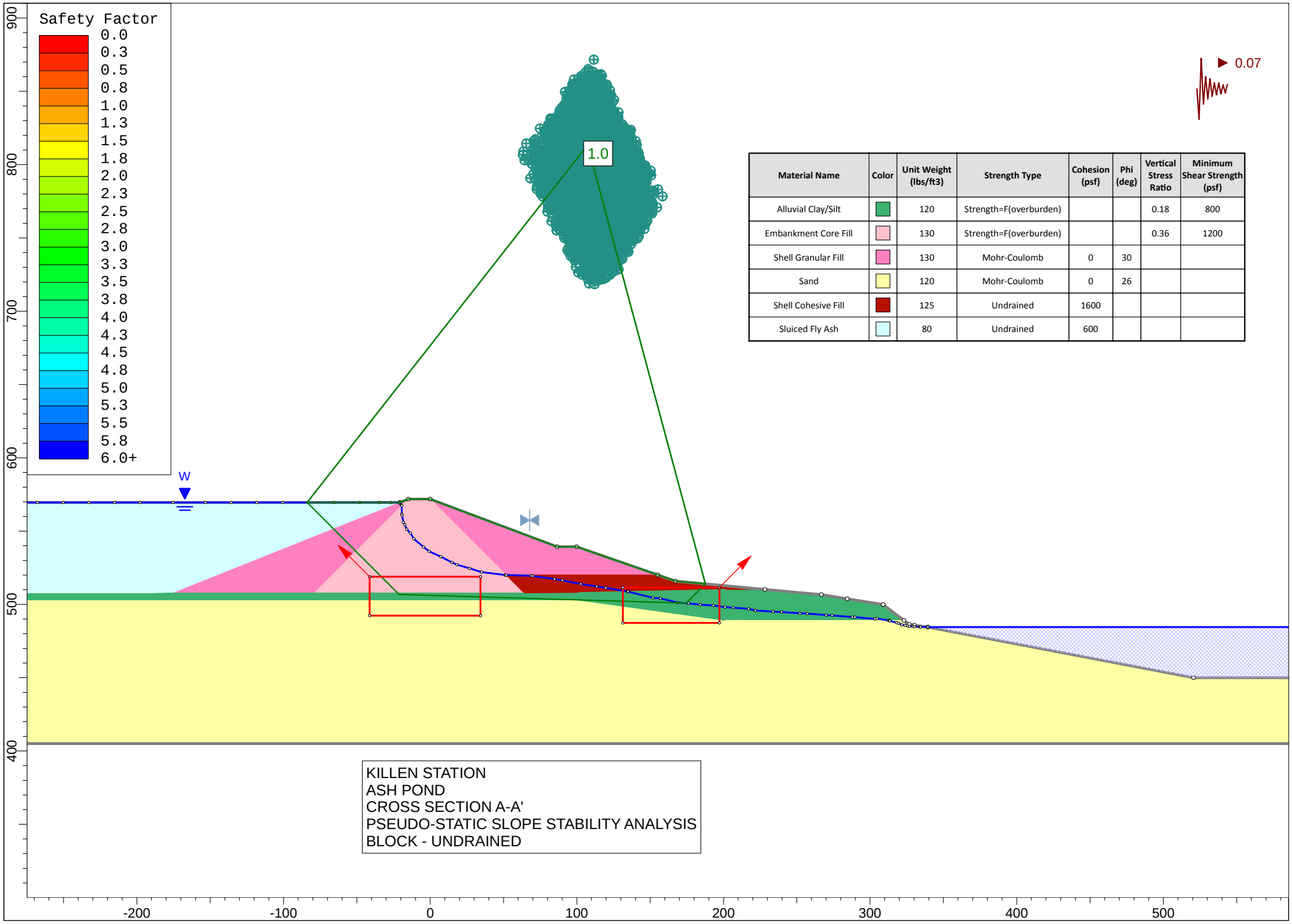
Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Vertical Stress Ratio	Minimum Shear Strength (psf)
Alluvial Clay/Silt		120	Strength=F(overburden)			0.23	1000
Embankment Core Fill		130	Strength=F(overburden)			0.45	1500
Shell Granular Fill		130	Mohr-Coulomb	0	38		
Sand		120	Mohr-Coulomb	0	32		
Shell Cohesive Fill		125	Undrained	2000			
Sluiced Fly Ash		80	Undrained	750			



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Vertical Stress Ratio	Minimum Shear Strength (psf)
Alluvial Clay/Silt		120	Strength=F(overburden)			0.23	1000
Embankment Core Fill		130	Strength=F(overburden)			0.45	1500
Shell Granular Fill		130	Mohr-Coulomb	0	38		
Sand		120	Mohr-Coulomb	0	32		
Shell Cohesive Fill		125	Undrained	2000			
Sluiced Fly Ash		80	Undrained	750			



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Vertical Stress Ratio	Minimum Shear Strength (psf)
Alluvial Clay/Silt		120	Strength=F(overburden)			0.18	800
Embankment Core Fill		130	Strength=F(overburden)			0.36	1200
Shell Granular Fill		130	Mohr-Coulomb	0	30		
Sand		120	Mohr-Coulomb	0	26		
Shell Cohesive Fill		125	Undrained	1600			
Sluiced Fly Ash		80	Undrained	600			



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Vertical Stress Ratio	Minimum Shear Strength (psf)
Alluvial Clay/Silt		120	Strength=F(overburden)			0.18	800
Embankment Core Fill		130	Strength=F(overburden)			0.36	1200
Shell Granular Fill		130	Mohr-Coulomb	0	30		
Sand		120	Mohr-Coulomb	0	26		
Shell Cohesive Fill		125	Undrained	1600			
Sluiced Fly Ash		80	Undrained	600			

APPENDIX D

Historic Subsurface Explorations and Laboratory Test Results

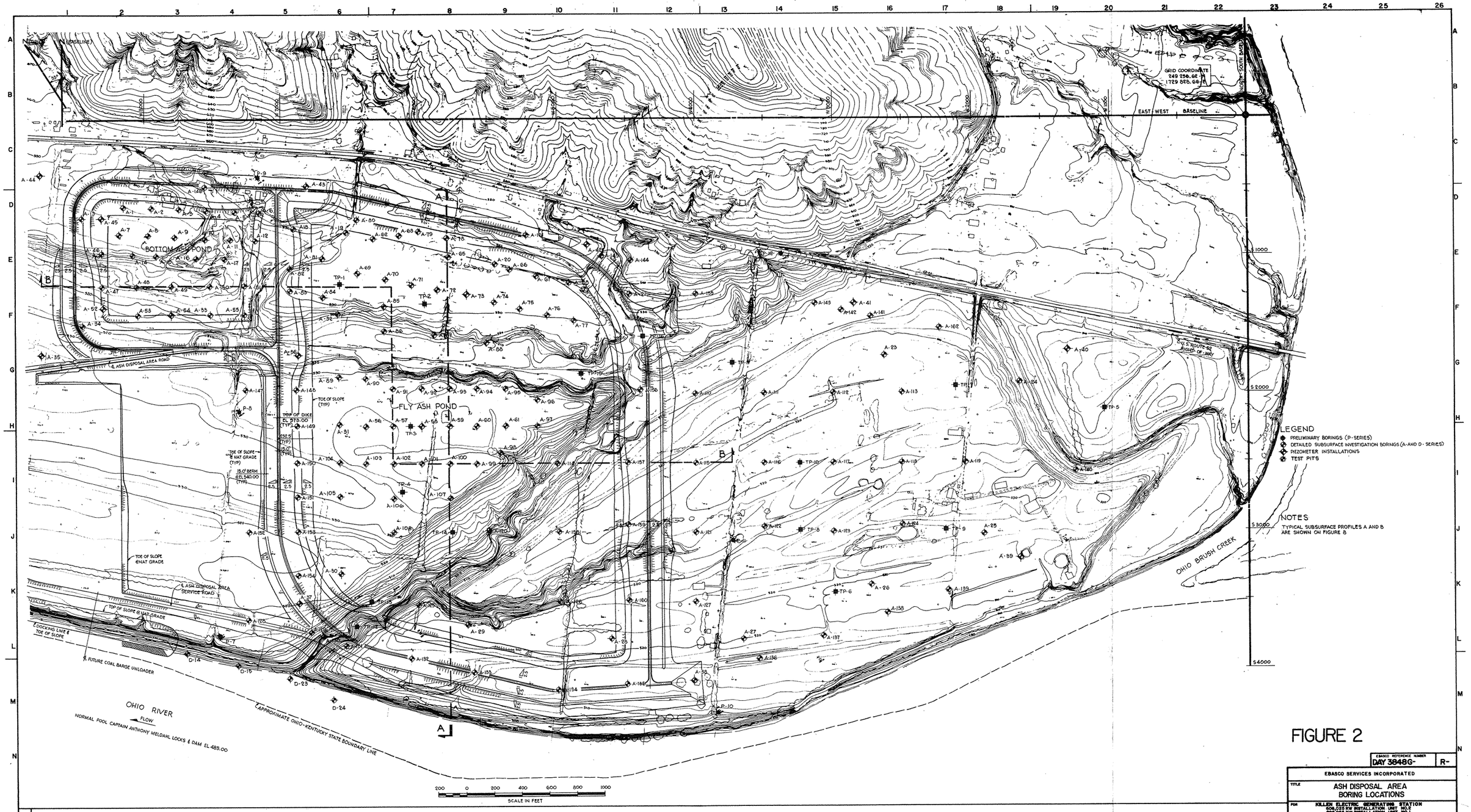


FIGURE 2

EBASCO REFERENCE NUMBER DAY 3848G- R-

EBASCO SERVICES INCORPORATED

TITLE: ASH DISPOSAL AREA BORING LOCATIONS

FOR: KILLEN ELECTRIC GENERATING STATION
500,000 KW INSTALLATION UNIT NO. 1
500,000 KW INSTALLATION UNIT NO. 2

SCALE AS SHOWN	DIV. CONC-HYD	PROJECT	
DRAWN T. SCHWARTZ	1-20-70	APPROVED	
CHECKED		APPROVED	
ENGINEER		APPROVED	

THE DAYTON POWER AND LIGHT COMPANY
THE CINCINNATI GAS & ELECTRIC CO.

SHEET OF SHEETS
FILE

REVISIONS

LOG OF BORING NO. P-7

SOIL INVESTIGATION AT BRUSH CREEK, OHIO

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 12-12-73

SURFACE ELEVATION: 516.4' — DATE COMPLETED: 12-13-73

STRATUM Depth	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt, some Clay, some Sand - Moist	1A	1.0-2.5	4-6-9	15
		2A	3.5-5.0	3-6-6	12
7.0'	Medium Stiff Brown Silt and Sand, some Clay - Moist	3A	8.5-10.0	3-3-4	7
10.0'		4A	13.5-15.0	3-4-3	7
20.0'		5A	18.5-20.0	2-3-3	6
		6A	23.5-25.0	3-3-4	7
27.0'	(1" to 6" Sand Seams 18.5-27.0')				
30.0'	Medium Stiff Gray Silt and Sand, trace of Clay - Moist	7A	28.5-30.0	2-3-3	6
		8A	33.5-35.0	3-4-4	8
37.0'	(1" to 6" Sand Seams 27.0 to 37.0')				
40.0'	Dense Brown Sand, some Gravel, trace of Silt - Wet	9A	38.5-40.0	24-14-16	30
42.0'	Dense Brown Sand, trace of Gravel, trace of Silt - Wet	10A	43.5-45.0	11-24-22	46
	(Becomes Medium Dense at 48.5')				
50.0'		11A	48.5-50.0	8-11-10	21
		12A	53.5-55.0	12-12-14	26
60.0'	(Continued on Next Page)	13A	58.5-60.0	9-12-14	26

METHOD: Hollow Auger
TECHNICIAN: GW-BC
JOB NO.: 00718

WATER OBSERVATIONS
INITIAL DEPTH: 23.5-37.0' trace
COMPLETION DEPTH: 37.0'
DEPTH AFTER: ____ HRS: ____

TYPE SAMPLER:
X A. SPLIT SPOON
X B. "AX" Core
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. P-7

SOIL INVESTIGATION AT BRUSH CREEK, OHIO

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 12-12-73

SURFACE ELEVATION: 516.4' — DATE COMPLETED: 12-13-73

STRATUM Depth	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
60.0'	(Continued)				
		14A	63.5-65.0	8-10-11	21
70.0'	(Becomes Dense at 68.5')	15A	68.5-70.0	12-11-33	44
		16A	73.5-75.0	16-18-21	39
77.0'	Very Dense Brown Sand and Gravel, trace of Silt - Wet	17A	78.5-79.0	100/3"	100+
80.0'		18A	83.5-84.0	100/5"	100+
87.0'	Gray Shale, Limestone Layers				
90.0'		1B	89.0-91.0		15"
		2B	91.0-93.0		23"
		3B	93.0-95.5		26"
		4B	95.5-100.0		54"
	Bottom of Boring at 100.0'				
	Note: PVC Water Pipe installed				
	R.Q.D. 21.2 %				

METHOD: Hollow Auger
TECHNICIAN: GW-BC
JOB NO.: 00718

WATER OBSERVATIONS
INITIAL DEPTH: 23.5-37.0' trace
COMPLETION DEPTH: 37.0'
DEPTH AFTER: ____ HRS: ____

TYPE SAMPLER:
X A. SPLIT SPOON
X B. "AX" Core
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. P-8

SOIL INVESTIGATION AT BRUSH CREEK, OHIO

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 12-6-73

SURFACE ELEVATION: 536.1' — DATE COMPLETED: 12-18-73

STRATUM Depth	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS FT. OR CORE REC.
0.0'	Topsoil				
0.5'	Very Stiff Brown Clay, some Silt, trace of Sand - Moist	1A	0.5-2.0	6-11-15	26
		2A	3.5-5.0	6-9-12	21
9.0'					
10.0'	Medium Stiff Brown Silt and Clay, some Sand, trace of Gravel - Moist	3A	8.5-10.0	4-5-7	12
		4A	13.5-15.0	6-9-10	19
18.5'					
20.0'	Medium Dense Brown Silt and Sand, trace of Clay - Moist	5A	18.5-20.0	5-9-9	18
24.0'	Dense Brown Sand - Moist	6A	23.5-25.0	15-17-18	35
30.0'		7A	28.5-30.0	14-18-20	38
		8A	33.5-35.0	16-17-17	34
40.0'		9A	38.5-40.0	14-18-22	40
	Dense Brown Sand, some Gravel - Wet	10A	43.5-45.0	16-17-19	36
50.0'		11A	48.5-50.0	18-22-26	48
		12A	53.5-55.0	17-21-24	45
	(Becomes Very Dense at 58.5')				
60.0'	(Continued on Next Page)	13A	58.5-60.0	14-31-33	64

METHOD: Hollow Auger
TECHNICIAN: RG-GK
JOB NO.: 00718

WATER OBSERVATIONS
INITIAL DEPTH: 49.0'
COMPLETION DEPTH:
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
X B. "AX" Core
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. P-8

SOIL INVESTIGATION AT BRUSH CREEK, OHIO

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 12-6-73

SURFACE ELEVATION: 536.1' — DATE COMPLETED: 12-6-73

STRATUM Depth	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS FT. OR CORE REC.
60.0'	(Continued)				
		14A	63.5-65.0	17-27-36	63
70.0'		15A	68.5-70.0	21-23-30	53
		16A	73.5-75.0	27-31-30	61
80.0'		17A	78.5-80.0	26-30-30	60
		18A	83.5-85.0	19-21-29	50
90.0'		19A	88.5-90.0	21-33-35	68
93.0'	Very Dense Brown Sand and Gravel - Wet	20A	93.5-94.0	100/4"	100+
		21A	98.5-99.0	105	105
100.0'					
103.0'	Gray Shale, Limestone Layers	1B	103.0-105.5		26"
		2B	105.5-106.5		12"
		3B	106.5-108.5		19"
110.0'		4B	108.5-110.0		14"
		5B	110.0-112.0		22"
		6B	112.0-113.0		12"
	Bottom of Boring at 113.0'				
	Note: PVC Water Pipe installed R.Q.D. 10.8 %				

METHOD: Hollow Auger
TECHNICIAN: GW-BC
JOB NO.: 00718

WATER OBSERVATIONS
INITIAL DEPTH: 49.0'
COMPLETION DEPTH:
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
X B. "AX" Core
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO.P-9

SOIL INVESTIGATION AT BRUSH CREEK, OHIO

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 12-4-73

SURFACE ELEVATION: 544.4' — DATE COMPLETED: 12-5-73

STRATUM Depth	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Very Stiff Brown and Gray Clay, some Silt, trace of Sand - Moist				
		1A	1.5-3.0	3-6-13	19
		2A	3.5-5.0	4-5-4	9
6.0'	Stiff Brown Silt and Clay, some Sand - Moist				
10.0'		3A	8.5-10.0	4-6-9	15
12.0'					
14.0'	Medium Dense Alternating Layers of Sand, Silt and Clay - Moist	4A	13.5-15.0	12-13-16	29
18.0'	Dense Brown Sand - Wet				
20.0'	Very Dense Brown Sand, some Gravel, trace of Silt - Wet (Becomes Dense at 23.5')	5A	18.5-19.5	32-32	64
		6A	23.5-25.0	4-17-20	37
29.5'					
30.0'	Very Loose Brown Sand - Wet	7A	28.5-30.0	3-2-3	5
34.0'					
34.5'	Medium Stiff Brown and Gray Clay, trace of Silt, trace of Sand - Moist	8A	33.5-35.0	5-8-13	21
40.0'	Gray Shale, with Limestone Layers - Moist				
40.5'					
43.5'	Brown Sand and Gravel - Wet	1B	39.5-40.5		12"
	Hard Gray Shale (Eden Shale)	9A	43.5-44.0	100/2"	100+
50.0'		2B	45.0-50.0		43"
		3B	50.0-55.0		58"
	Bottom of Boring at 55.0'				
	Note: PVC Water Pipe installed R.Q.D. 21.7 %				

METHOD: Hollow Auger
TECHNICIAN: RG-CK
JOB NO.: 00718

WATER OBSERVATIONS
INITIAL DEPTH: 14.5'
COMPLETION DEPTH: 17.5'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
X B. "AX" Core
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO.P-10

SOIL INVESTIGATION AT BRUSH CREEK, OHIO

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 12-5-73

SURFACE ELEVATION: 511.7' — DATE COMPLETED: 12-5-73

STRATUM Depth	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
2.0'					
	Very Stiff Brown Clay, some Silt, trace of sand - Moist	1A	1.0-2.5	3-8-12	20
		2A	3.5-5.0	6-9-12	21
10.0'		3A	9.0-10.5	5-7-9	16
		4A	14.0-15.5	5-7-10	17
18.0'					
20.0'	Medium Stiff Brown Clay and Sand, some Silt - Moist (Becomes Soft 24.0')	5A	19.0-20.5	3-4-5	9
		6A	24.0-25.5	2-2-2	4
30.0'	(1" to 6" Sand Seams 19.0 to 31.0')	7A	29.0-30.5	1-2-2	4
31.0'					
	Medium Dense Brown Sand, trace of Silt - Wet	8A	34.0-35.5	5-7-7	14
40.0'		9A	39.0-40.5	4-7-8	15
		10A	44.0-45.5	4-6-10	16
50.0'		11A	4910-50.0	11-11-3	14
	(Becomes Dense 54.0')	12A	54.0 55.5	14-19-23	42
60.0'	(Continued on Next Page)	13A	59.0-60.5	10-17-25	42

METHOD: Hollow Auger
TECHNICIAN: GW-BC
JOB NO.: 00718

WATER OBSERVATIONS
INITIAL DEPTH: 24.0-31.0'
COMPLETION DEPTH: ____
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
X B. "AX" Core
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. P-10

SOIL INVESTIGATION AT BRUSH CREEK, OHIO

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 12-5-73

SURFACE ELEVATION: 511.7' — DATE COMPLETED: 12-5-73

STRATUM Depth	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
60.0'	(Continued)				
67.0'		14A	64.0-65.5	12-16-22	38
70.0'	Very Dense Brown Sand and Gravel, trace of Silt - Wet	15A	69.0-69.5	114	114
76.0'		16A	74.0-74.5	103	103
80.0'	Gray Shale, limestone Layers, (Eden Shale)	17A	77.5-78.0	100/1"	100+
		1B	78.0-80.0		17"
		2B	80.0-83.0		27"
		3B	83.0-84.5		18"
		4B	84.5-87.5		36"
	Bottom of Boring 87.5'				
	Note: PVC Water Pipe installed				
	R.Q.D. 13.6 %				

METHOD: Hollow Auger
TECHNICIAN: GW-BC
JOB NO.: 00718

WATER OBSERVATIONS
INITIAL DEPTH: 24.0-31.0'
COMPLETION DEPTH:
DEPTH AFTER: ____ HRS.

TYPE SAMPLER:
X A. SPLIT SPOON
X B. "AX" Core
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. P-11

SOIL INVESTIGATION AT BRUSH CREEK, OHIO

BORING LOCATION: As Shown on Boring Location Plan (Offset 25.0' West from Stake) — DATE STARTED: 12-6-73

SURFACE ELEVATION: 517.2' — DATE COMPLETED: 12-7-73

STRATUM Depth	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Very Stiff Brown Clay, some Silt, trace of Sand - Moist	1A	4.0-5.5	5-9-12	21
7.0'	Hard Brown Silt, some Sand, some Clay - Moist	2A	9.0-10.5	9-15-18	33
10.0'					
12.0'	Very Stiff Brown Silt and Sand, some Clay - Moist	3A	14.0-15.5	7-12-13	25
20.0'		4A	19.0-20.5	9-13-17	30
		5A	24.0-25.5	10-11-11	22
29.0'	(1" to 4" Sand Seams 19.0-29.0')				
30.0'	Dense Brown Sand and Gravel, trace of Silt - Wet	6A	29.0-30.5	9-15-21	36
	(Becomes Medium Dense 34.0')	7A	34.0-35.5	7-9-12	21
38.0'					
40.0'	Dense Brown Sand, trace of Silt - Wet	8A	39.0-40.5	10-15-25	40
		9A	44.0-45.5	12-18-26	44
	(Becomes Medium Dense 49.0')				
50.0'		10A	49.0-50.5	7-6-7	13
	(Becomes Dense 54.0')	11A	54.0-55.5	20-25-23	48
60.0'	(Becomes Very Dense 59.0')	12A	59.0-60.5	23-24-27	51
	(Continued on Next Page)				

METHOD: Hollow Auger
TECHNICIAN: GW-BC
JOB NO.: 00718

WATER OBSERVATIONS
INITIAL DEPTH: 29.0'
COMPLETION DEPTH: 29.0'
DEPTH AFTER: ____ HRS.

TYPE SAMPLER:
X A. SPLIT SPOON
X B. "AX" Core
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. P-11

SOIL INVESTIGATION AT BRUSH CREEK, OHIO

BORING LOCATION: As Shown on Boring Location Plan (Offset 25.0' West from Stake)

DATE STARTED: 12-6-73

SURFACE ELEVATION: 517.2'

DATE COMPLETED: 12-7-73

STRATUM Depth	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
60.0'	(Continued)				
	(Becomes Dense at 64.0')	13A	64.0-65.5	10-19-23	42
70.0' 71.0'		14A	69.0-70.5	7-12-18	30
	Dense Brown Sand, some Gravel, trace of Silt - Wet	15A	74.0-75.5	11-13-22	35
80.0'	(Becomes Very Dense at 79.0')	16A	79.0-79.5	100	100+
	Gray Shale				
		1B	83.0-88.0		30"
90.0'		2B	88.0-90.5		24"
		3B	90.5-93.5		36"
	Bottom of Boring 93.5'				
	Note: PVC Water Pipe installed				
	R.Q.D. 10.0 %				

METHOD: Hollow Auger

TECHNICIAN: GW-BC

JOB NO.: 00718

WATER OBSERVATIONS

INITIAL DEPTH: 29.0'

COMPLETION DEPTH: 29.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

X B. "AX" Core

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. P-12

SOIL INVESTIGATION AT BRUSH CREEK, OHIO

BORING LOCATION: As Shown on Boring Location Plan

DATE STARTED: 11-27-73

SURFACE ELEVATION: 544.3'

DATE COMPLETED: 11-27-73

STRATUM Depth	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0' 0.8'	Topsoil				
3.0'	Hard Brown Clay, some Silt, trace of Sand with Rock Fragments - Moist	1A	1.0-2.5	8-18-26	44
10.0'	Brown and Gray Shale, 1" to 3" Limestone Layers	2A	3.5-5.0	18-40-60	100
		3A	8.5-9.5	50-50/4"	100+
		1B	9.5-19.5		113"
	Bottom of Boring 19.5'				
	R.Q.D. 85.0 %				

METHOD: Hollow Auger

TECHNICIAN: GW-BC

JOB NO.: 00718

WATER OBSERVATIONS

INITIAL DEPTH 9.0'

COMPLETION DEPTH 8.5'

DEPTH AFTER ____ HRS ____

TYPE SAMPLER:

X A. SPLIT SPOON

X B. "AX" Core

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-110

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services Inc. Prints #SK3848 CH-117, & SK3848 CH-118

DATE STARTED: 9-13-74

SURFACE ELEVATION: 506.1'

DATE COMPLETED: 9-13-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Clay, trace of Sand, trace of Organic Material - Damp	1A	1.0- 2.5'	3-7-10	17
5.0'		2A	3.5- 5.0'	4-8-10	18
8.5'					
10.0'	Very Stiff Brown Silt, some Clay, trace of Sand - Damp	3A	8.5-10.0'	4-8-10	18
	(Becomes Stiff at 13.5')	4A	13.5-15.0'	6-6-5	11
15.0'					
18.5'					
20.0'	Stiff Brown Silt, some Sand, some Clay - Moist	5A	18.5-20.0'	9-10-5	15
21.0'	Medium Stiff Gray Silt and Sand, some Clay - Moist	6A	23.5-25.0'	2-3-3	6
25.0'					
28.5'	Medium Dense Gray Sand, some Silt, trace of Clay - Moist	7A	28.5-30.0'	8-8-6	14
30.0'	(Continued Next Page)				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 28.5'

COMPLETION DEPTH: 17.0'

DEPTH AFTER: * HRS.

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 17.5'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-110

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services Inc. Prints #SK3848 CH-117, & SK3848 CH-118

DATE STARTED: 9-13-74

SURFACE ELEVATION: 506.1'

DATE COMPLETED: 9-13-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
34.5'					
35.0'	Dense Gray Sand and Gravel, trace of Silt - Moist	8A	33.5-35.0'	3-13-27	40
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 28.5'

COMPLETION DEPTH: 17.0'

DEPTH AFTER: * HRS.

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 17.5'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-111

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & SK3848 CH-118

DATE STARTED: 9-13-74

SURFACE ELEVATION: 519.8'

DATE COMPLETED: 9-13-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt, some Clay, trace of Organic Material, trace of Sand - Damp	1A	1.0- 2.5'	3-5-10	15
5.0'		2A	3.5- 5.0'	5-6-7	13
7.0'	Medium Stiff Brown Silt and Sand, trace of Clay - Moist	3A	8.5-10.0'	2-3-4	7
10.0'					
15.0'		4A	13.5-15.0'	3-3-4	7
18.5'					
20.0'	Medium Dense Brown Sand, some Silt, trace of Clay - Moist	5A	18.5-20.0'	5-6-8	14
	(Becomes loose at 23.5')				
25.0'		6A	23.5-25.0'	3-3-5	8
28.5'					
30.0'	Loose Brown Sand, some Silt, trace of Clay - Wet	7A	28.5-30.0'	5-4-4	8

(Continued Next Page)

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 28.5'

COMPLETION DEPTH: 29.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-111

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Servies, Inc. Prints #SK3848 CH-117, & SK3848 CH-118

DATE STARTED: 9-13-74

SURFACE ELEVATION: 519.8'

DATE COMPLETED: 9-13-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
34.5'	Medium Dense Brown Sand and Gravel, trace of Silt - Wet	8A	33.5-35.0'	2-6-8	14
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 28.5'

COMPLETION DEPTH: 29.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-112

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117 & SK3848 CH-118

DATE STARTED: 9-24-74

SURFACE ELEVATION: 522.4'

DATE COMPLETED: 9-24-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown and Gray Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	3.5- 5.0'	6-9-14	23
5.0'					
8.0'	Stiff Brown Silt and Sand, trace of Clay - Damp	2A	8.5-10.0'	4-5-7	12
10.0'		3A	13.5-15.0'	4-6-9	15
	(1 to 3" sand seams)				
15.0'					
	(Becomes medium stiff at 18.5')	4A	18.5-20.0'	5-4-6	10
20.0'					
	(Becomes very stiff at 23.5')	5A	23.5-25.0'	8-8-10	18
25.0'					
29.0'	Medium Dense Brown Sand, trace of Silt - Damp	6A	28.5-30.0'	5-10-20	30
30.0'	(Continued Next Page)				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH 14.0 & 34.5' (tr)

COMPLETION DEPTH: *

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 28.0'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-112

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & SK3848 CH-118

DATE STARTED: 9-24-74

SURFACE ELEVATION: 522.4'

DATE COMPLETED: 9-24-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
33.0'	Very Dense Brown and Gray Sand and Gravel, trace of Silt - Moist	7A	33.5-35.0'	20-27-40	67
35.0'	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH 14.0 & 34.5' (tr)

COMPLETION DEPTH: *

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 28.0'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-113
PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118 DATE STARTED: 9-23-74

SURFACE ELEVATION: 522.9' DATE COMPLETED: 9-23-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Clay, some Sand - Damp	1A	3.5- 5.0'	2-9-15	24
5.0'					
8.0'	Stiff Brown Silt and Sand, trace of Clay - Moist	2A	8.5-10.0'	4-6-8	14
10.0'	(1 to 4" sand seams)	3A	13.5-15.0'	7-5-9	14
15.0'					
20.0'	(Becomes very stiff at 18.5')	4A	18.5-20.0'	8-9-11	20
21.0'	Medium Dense Brown Sand, some Silt - Moist	5A	23.5-25.0'	7-8-12	20
25.0'					
28.0'	Very Dense Brown Sand and Gravel, trace of Silt - Moist	6A	28.5-30.0'	21-36-52	88
30.0'	(Continued Next Page)				

METHOD: Hollow Auger
TECHNICIAN: BC-RK
JOB NO.: 03952

WATER OBSERVATIONS
INITIAL DEPTH: 32.0'
COMPLETION DEPTH: 34.5'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-113
PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118 DATE STARTED: 9-23-74

SURFACE ELEVATION: 522.9' DATE COMPLETED: 9-23-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
35.0'	(Becomes dense at 33.5')	7A	33.5-35.0'	20-21-17	38
37.0'	Medium Dense Brown Sand, trace of Silt - Wet	8A	38.5-40.0'	7-9-12	21
40.0'					
45.0'		9A	43.5-45.0'	5-9-14	23
48.5'					
50.0'	Medium Dense Brown Sand, some Silt - Wet	10A	48.5-50.0'	5-8-10	18
54.5'					
55.0'	Medium Dense Gray Sand, trace of Silt - Wet	11A	53.5-55.0'	14-10-13	23
	(Becomes loost at 58.5')				
60.0'	Bottom of Boring at 60.0'	12A	58.5-60.0'	11-4-5	9

METHOD: Hollow Auger
TECHNICIAN: BC-RK
JOB NO.: 03952

WATER OBSERVATIONS
INITIAL DEPTH: 32.0'
COMPLETION DEPTH: 34.5'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-114

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-2-74

SURFACE ELEVATION: 503.3'

DATE COMPLETED: 10-2-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt, some Clay, trace of Sand, trace of Organic Material - Damp	1A	1.0- 2.5'	4-6-8	14
5.0'	(Becomes very stiff at 3.5')	2A	2.5- 5.0'	6-8-11	19
8.5'					
10.0'	Stiff Brown Silt and Clay, trace of Sand - Damp	3A	8.5-10.0'	4-5-10	15
15.0'	(Becomes very stiff at 13.5')	4A	13.5-15.0'	5-8-14	22
20.0'	(Becomes medium stiff at 18.5')	5A	18.5-20.0'	4-4-5	9
24.0'					
25.0'	Dense Brown Sand, trace of Silt, trace of Decomposed Wood - Moist	6A	23.5-25.0'	11-13-18	31
28.5'					
30.0'	Medium Dense Brown Sand, trace of Silt - Wet	7A	28.5-30.0'	4-9-11	20

(Continued Next Page)

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 24.0', 20.0'(tr)

COMPLETION DEPTH: 16.5'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-114

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-2-74

SURFACE ELEVATION: 503.3'

DATE COMPLETED: 10-2-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
33.5'					
35.0'	Medium Dense Brown Sand, trace of Silt, trace of Gravel - Wet	8A	33.5-35.0'	7-11-14	25
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 24.0, 20.0'(tr)

COMPLETION DEPTH: 16.5'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-115

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-12-74

SURFACE ELEVATION: 521.8'

DATE COMPLETED: 9-12-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	1.0- 2.5'	4-8-10	18
5.0'	(Becomes hard at 3.5')	2A	3.5- 5.0'	9-17-26	43
8.5'					
10.0'	Medium Dense Brown Sand, some Silt - Damp	3A	8.5-10.0'	9-8-7	15
	(1 to 3" clay seams)				
15.0'	(Becomes dense at 13.5')	4A	13.5-15.0'	10-12-19	31
17.0'					
20.0'	Very Stiff Brown Silt and Sand, trace of Clay - Damp	5A	18.5-20.0'	10-13-15	28
	(1 to 3" sand seams)				
25.0'		6A	23.5-25.0'	9-10-16	26
30.0'		7A	28.5-30.0'	7-9-12	21
	(Continued Next Page)				

METHOD: Hollow Auger

TECHNICIAN: BC-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: None

COMPLETION DEPTH: None

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-115

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-12-74

SURFACE ELEVATION: 521.8'

DATE COMPLETED: 9-12-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
32.5'	Very Dense Brown Sand and Gravel, trace of Silt - Damp	8A	33.5-35.0'	25-30-33	63
35.0'	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: None

COMPLETION DEPTH: None

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-116

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-12-74

SURFACE ELEVATION: 522.8'

DATE COMPLETED: 9-12-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Medium Stiff Brown Silt, some Clay, some Sand - Damp	1A	1.0- 2.5'	2-2-4	6
5.0'	(Becomes very stiff at 3.5')	2A	3.5- 5.0'	5-11-15	26
7.5'	Stiff Brown Silt, some Sand, trace of Clay - Moist	3A	8.5-10.0'	3-6-8	14
10.0'					
12.0'	Very Stiff Brown Silt and Sand - Moist	4A	13.5-15.0'	8-8-8	16
15.0'					
20.0'	(Becomes stiff at 18.5')	5A	18.5-20.0'	8-5-6	11
25.0'	(Becomes very stiff at 23.5')	6A	23.5-25.0'	7-8-8	16
27.5'	Dense Brown Sand, trace of Gravel, trace of Silt - Damp	7A	28.5-30.0'	15-19-21	40
30.0'	(Continued Next Page)				

METHOD: Hollow Auger

TECHNICIAN: BC-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: None

COMPLETION DEPTH: None

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-116

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-12-74

SURFACE ELEVATION: 522.8'

DATE COMPLETED: 9-12-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
	(Becomes very dense at 33.8')	8A	33.5-35.0'	17-30-33	63
35.0'	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: None

COMPLETION DEPTH: None

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-117

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-12-74

SURFACE ELEVATION: 522.3'

DATE COMPLETED: 9-12-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Medium Stiff Brown Silt, some Sand - Damp	1A	1.0- 2.5'	2-3-5	8
	(Becomes very stiff at 3.5')	2A	3.5- 5.0'	10-10-13	23
5.0'					
8.5'					
10.0'	Stiff Brown Silt, some Sand, trace of Clay - Damp	3A	8.5-10.0'	4-5-7	12
13.5'					
15.0'	Stiff Brown Silt, some Sand, trace of Clay - Moist	4A	13.5-15.0'	3-5-8	13
		5A	18.5-20.0'	6-6-9	15
20.0'					
	(Becomes very stiff at 23.5')	6A	23.5-25.0'	6-8-9	17
25.0'					
27.0'					
30.0'	Medium Dense Brown Sand, some Silt, - Moist	7A	28.5-30.0'	9-10-14	24

(Continued Next Page)

METHOD: Hollow Auger

TECHNICIAN: BC-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: None

COMPLETION DEPTH: None

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-117

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-12-74

SURFACE ELEVATION: 522.3'

DATE COMPLETED: 9-12-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
32.0'	Medium Dense Brown Sand and Gravel, trace of Silt - Dry	8A	33.5-35.0'	10-13-12	25
35.0'	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: None

COMPLETION DEPTH: None

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-118

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-1-74

SURFACE ELEVATION: 522.8'

DATE COMPLETED: 10-1-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Medium Stiff Brown Silt, some Sand, some Clay, trace of Organic Material - Damp	1A	1.0- 2.5'	3-4-6	10
5.0'	(Becomes stiff at 3.5')	2A	3.5- 5.0'	3-4-7	11
8.5'					
10.0'	Very Stiff Silt and Sand, trace of Clay - Damp (1 - 3" sand seams)	3A	8.5-10.0'	5-6-10	16
15.0'	(Becomes stiff at 13.5')	4A	13.5-15.0'	3-5-6	11
20.0'	(Becomes medium stiff at 18.5')	5A	18.5-20.0'	5-5-5	10
25.0'		6A	23.5-25.0'	5-4-5	9
29.0'					
30.0'	Dense Brown Sand and Gravel, trace of Silt - Moist	7A	28.5-30.0'	8-20-26	46
	(Continued Next Page)				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH 34.0, 28.5'(tr)

COMPLETION DEPTH: *

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 27.0'

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-118

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-1-74

SURFACE ELEVATION: 522.8'

DATE COMPLETED: 10-1-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
		8A	33.5-35.0'	14-18-19	37
35.0'	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH 34.0, 28.5'(tr)

COMPLETION DEPTH: *

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 27.0'

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-119

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118 **DATE STARTED:** 10-1-74

SURFACE ELEVATION: 525.2' **DATE COMPLETED:** 10-1-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	1.0- 2.5'	4-6-8	14
		2A	3.5- 5.0'	5-7-12	19
5.0'					
8.5'					
10.0'	Loose Brown Sand, trace of Silt - Moist	3A	8.5-10.0'	3-4-6	10
	(Becomes medium dense at 13.5')	4A	13.5-15.0'	6-6-6	12
15.0'					
		5A	18.5-20.0'	4-5-7	12
20.0'					
24.5'					
25.0'	Dense Brown Sand and Gravel, trace of Silt - Moist	6A	23.5-29.0'	7-9-21	30
	(Becomes dense at 28.5')	7A	28.5-30.0'	14-20-27	47
30.0'					

(Continued Next Page)

METHOD: Hollow Auger
TECHNICIAN: BC-RK
JOB NO.: 03952

WATER OBSERVATIONS
INITIAL DEPTH: 34.5'
COMPLETION DEPTH: 34.5'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-119

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118 **DATE STARTED:** 10-1-74

SURFACE ELEVATION: 525.2' **DATE COMPLETED:** 10-1-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
	(Becomes very dense at 33.5')	8A	33.5-35.0'	17-21-31	52
35.0'	Bottom of Boring at 35.0'				

METHOD: Hollow Auger
TECHNICIAN: BC-RK
JOB NO.: 03952

WATER OBSERVATIONS
INITIAL DEPTH: 34.5'
COMPLETION DEPTH: 34.5'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-120

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118 **DATE STARTED:** 10-2-74

SURFACE ELEVATION: 494.9' **DATE COMPLETED:** 10-2-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Soft Brown Silt, some Clay, trace of Sand, trace of Organic Material - Damp	1A	1.0- 2.5'	1-1-2	3
3.5'	Medium Stiff Brown Silt, some Clay, trace of Sand - Damp	2A	3.5- 5.0'	3-3-5	8
5.0'		3A	8.5-10.0'	2-3-5	8
10.0'	(Becomes stiff at 13.5')	4A	13.5-15.0'	4-5-7	12
15.0'	(Becomes medium stiff at 18.5')	5A	18.5-20.0'	2-3-4	7
20.0'	Stiff Gray Silt and Clay, trace of Sand - Moist	6A	23.5-25.0'	5-5-8	13
25.0'					
27.0'	Medium Dense Brown Sand, trace of Silt - Wet	7A	28.5-30.0'	3-7-9	16
30.0'	(Continued Next Page)				

METHOD: Hollow Auger
TECHNICIAN: BC-RK
JOB NO.: 03952

WATER OBSERVATIONS
INITIAL DEPTH: 5.0'-27.0'
COMPLETION DEPTH: 11.0'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-120

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118 **DATE STARTED:** 10-2-74

SURFACE ELEVATION: 494.9' **DATE COMPLETED:** 10-2-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
		8A	33.5-35.0'	9-12-15	27
35.0'	Bottom of Boring at 35.0'				

METHOD: Hollow Auger
TECHNICIAN: BC-RK
JOB NO.: 03952

WATER OBSERVATIONS
INITIAL DEPTH: 5.0-27.0'
COMPLETION DEPTH: 11.0'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-121

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-30-74

SURFACE ELEVATION: 516.9'

DATE COMPLETED: 10-1-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown and Gray Silt, some Clay, trace of Sand, trace of Organic Material - Damp	1A	1.0- 2.5'	3-4-8	12
	(Becomes very stiff at 3.5')	2A	3.5- 5.0'	5-11-16	27
5.0'					
8.0'	Medium Stiff Brown Silt, some Sand, trace of Decomposed Wood - Damp	3A	8.5-10.0'	3-4-5	9
10.0'	(1 - 3" sand seams)				
15.0'	(Becomes very stiff at 13.5')	4A	13.5-15.0'	8-9-12	21
17.0'	Medium Dense Brown Sand, some Silt - Damp	5A	18.5-20.0'	4-6-8	14
20.0'					
23.0'	Medium Dense Brown Sand, trace of Silt - Damp	6A	23.5-25.0'	6-8-11	19
25.0'					
29.0'	Medium Dense Brown Sand, some Gravel, trace of Silt - Damp	7A	28.5-30.0'	6-11-12	23
30.0'	(Continued Next Page)				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 33.0'

COMPLETION DEPTH: 32.5'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-121

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Service, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-30-74

SURFACE ELEVATION: 516.9'

DATE COMPLETED: 10-1-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
33.0'	Medium Dense Gray and Brown Sand and Gravel, trace of Silt - Wet	8A	33.5-35.0'	8-6-5	11
35.0'					
40.0'		9A	38.5-40.0'	3-7-13	20
44.0'	Very Dense Gray and Brown Sand, trace of Gravel, trace of Silt - Wet	10A	43.5-45.0'	18-24-28	52
45.0					
50.0'		11A	48.5-50.0'	20-30-38	68
55.0'	(Becomes dense at 53.5')	12A	53.5-55.0'	15-18-20	38
60.0	(Becomes very dense at 58.5')	13A	58.5-60.0'	20-26-29	55
	Bottom of Boring at 60.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 33.0'

COMPLETION DEPTH: 32.5'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-122

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-1-74

SURFACE ELEVATION: 517.7'

DATE COMPLETED: 10-1-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Medium Stiff Gray and Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	1.0- 2.5'	3-3-4	7
3.5'	Very Stiff Brown Silt, some Clay, some Sand - Damp	2A	3.5- 5.0'	5-10-12	22
5.0'					
8.5'	Medium Stiff Brown Silt and Sand, trace of Clay - Damp	3A	8.5-10.0'	4-4-6	10
10.0'					
	(Becomes stiff at 13.5')	4A	13.5-15.0'	5-6-7	13
15.0'					
	(Becomes medium stiff at 18.5')	5A	18.5-20.0'	4-5-5	10
20.0'					
		6A	23.5-25.0'	12-20-22	44
25.0'	Dense Brown Sand, trace of Silt - Moist				
	(Becomes medium dense at 28.5')	7A	28.5-30.0'	10-12-14	26
30.0'					

(Continued Next Page)

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 34.0'

COMPLETION DEPTH: 34.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-122

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-1-74

SURFACE ELEVATION: 517.7'

DATE COMPLETED: 10-1-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
33.5'					
35.0'	Medium Dense Brown Sand, trace of Gravel, trace of Silt - Wet	8A	33.5-35.0'	5-7-10	17
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 34.0'

COMPLETION DEPTH: 34.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-123

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-3-74

SURFACE ELEVATION: 525± 517

DATE COMPLETED: 10-3-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt and Sand, trace of Clay - Moist	1A	1.0- 2.5'	3-6-9	15
5.0'	(1 - 3" sand seams at 3.5')	2A	3.5- 5.0'	4-6-9	15
10.0'		3A	8.5-10.0'	5-6-8	14
15.0'		4A	13.5-15.0'	4-6-8	14
20.0'	(Becomes very stiff at 18.5')	5A	18.5-20.0'	4-7-9	16
25.0'	(Becomes stiff at 23.5')	6A	23.5-25.0'	3-5-8	13
31.0'	(Becomes very stiff at 28.5')	7A	28.5-30.0'	5-7-10	17
	Medium Dense Brown Sand and Gravel, trace of Silt - Moist	8A	33.5-35.0'	25-11-11	22
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: _____

COMPLETION DEPTH: _____

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-124

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-27-74

SURFACE ELEVATION: 527.3'

DATE COMPLETED: 9-28-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt and Sand, trace of Clay - Damp	1A	1.0- 2.5'	3-4-7	11
5.0'		2A	3.5- 5.0'	4-5-8	13
10.0'	(Becomes very stiff at 8.5')	3A	8.5-10.0'	5-7-11	18
15.0'	(Becomes medium stiff at 13.5')	4A	13.5-15.0'	3-3-6	9
20.0'	(Becomes stiff at 18.5')	5A	18.5-20.0'	5-6-9	15
25.0'	(Becomes medium stiff at 23.5')	6A	23.5-25.0'	3-3-3	6
30.0'		7A	28.5-30.0'	3-4-4	8

(Continued Next Page)

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 37.0-34.0(tr)

COMPLETION DEPTH: 22.0'

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-124

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-27-74

SURFACE ELEVATION: 527.3'

DATE COMPLETED: 9-28-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
32.0'	Very Stiff Gray Silt and Sand - Moist				
34.5'					
35.0	Dense Brown Sand, trace of Silt - Moist	8A	33.5-35.0'	19-22-22	44
38.5'					
40.0'	Medium Dense Brown Sand, trace of Silt, trace of Gravel - Wet (With 1" Gray Clay Seam at 39.5')	9A	38.5-40.0'	7-8-10	18
44.5'					
45.0'	Dense Brown Sand and Gravel, trace of Silt - Wet	10A	43.5-45.0'	3-18-19	37
49.0'					
50.0'	Dense Gray and Brown Sand, trace of Silt, trace of Sand - Wet	11A	48.5-50.0'	17-24-22	46
55.0'		12A	53.5-55.0'	15-23-27	50
		13A	58.5-60.0'	20-24-26	50
		14A	63.5-65.0'	18-23-24	47
	Bottom of Boring at 65.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 34.0'(tr)/37.0'

COMPLETION DEPTH: 22.0'

DEPTH AFTER _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-125

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-2-74

SURFACE ELEVATION: 515.0'

DATE COMPLETED: 10-2-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Clay, trace of Sand, trace of Organic Material - Damp	1A	1.0- 2.5'	6-8-9	17
		2A	3.5- 5.0'	4-8-12	20
5.0'					
8.5'					
10.0'	Stiff Brown Silt, some Clay, trace of Sand - Damp	3A	8.5-10.0'	3-5-6	11
		4A	13.5-15.0'	3-4-9	13
15.0'					
		5A	18.5-20.0'	6-5-7	12
20.0'					
23.5'					
25.0'	Stiff Gray and Brown Silt, some Clay, trace of Sand - Damp	6A	23.5-25.0'	4-6-8	14
28.5'					
30.0'	Stiff Gray Silt, some Sand, trace of Clay - Damp	7A	28.5-30.0'	6-6-5	11

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 33.0'

COMPLETION DEPTH: *

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 27.0'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-125

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-2-74

SURFACE ELEVATION: 515.0'

DATE COMPLETED: 10-2-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
33.5'					
35.0'	Very Stiff Gray Silt and Sand, trace of Clay, trace of Decomposed Wood - Damp	8A	33.5-35.0'	9-13-10	23
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 33.0'

COMPLETION DEPTH: *

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 27.0'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-126

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-2-74

SURFACE ELEVATION: 508.7'

DATE COMPLETED: 10-2-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt, some Clay, trace of Sand, trace of Organic Material - Damp	1A	1.0- 2.5'	3-5-7	12+
3.5'		2A	3.5- 5.0'	4-5-9	14
5.0'	Stiff Gray Silt, some Clay, trace of Sand - Damp				
8.	(Becomes very stiff at 8.5')	3A	8.5-10.0'	5-7-10	17
10.0'					
15.0'	(1 - 3" sand seams at 13.5')	4A	13.5-15.0'	5-8-12	20
18.5'					
20.0'	Stiff Brown Silt, some Sand, trace of Clay - Damp	5A	18.5-20.0'	4-6-8	14
		6A	23.5-25.0'	5-7-7	14
25.0'					
26.0'	Stiff Gray Silt, trace of Sand, trace of Clay - Moist	7A	28.5-30.0'	3-6-6	12
29.5'	Medium Dense Brown Sand and Gravel, some Silt - Wet	8A	33.5-35.0'	5-5-7	12
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 29.5'

COMPLETION DEPTH: 22.5'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-127

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118 DATE STARTED: 9-26-74

SURFACE ELEVATION: 521.3' DATE COMPLETED: 9-26-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
0.5'	Medium Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	1.0- 2.5'	2-2-6	8
	(Becomes very stiff at 3.5')	2A	3.5- 5.0'	5-13-17	30
5.0'					
7.5'	Medium Stiff Brown Silt and Sand, trace of Clay - Damp	3A	8.5-10.0'	3-4-5	9
10.0'	(1 - 6" sand seams)				
		4A	13.5-15.0'	4-4-5	9
15.0'					
		5A	18.5-20.0'	5-8-13	21
20.0'					
		6A	23.5-25.0'	6-8-11	19
25.0'					
26.0'	Very Dense Brown Sand and Gravel, trace of Silt - Damp	7A	28.5-30.0'	20-38-42	80
		8A	33.5-35.0'	19-28-22	50
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger
TECHNICIAN: BC-RK
JOB NO.: 03952

WATER OBSERVATIONS
INITIAL DEPTH: 34.5-19.0' (tr)
COMPLETION DEPTH: *
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

* Filled in to 27.5'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-128

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services Inc. Prints #SK3848 CH-117, & SK3848 CH-118 DATE STARTED: 12-11-74

SURFACE ELEVATION: 518.7' DATE COMPLETED: 12-11-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Clay, trace of Sand, trace of Gravel - Damp	1A	1.0- 2.5'	5-7-9	16
5.0'	(Becomes Stiff at 3.5')	2A	3.5- 5.0'	5-6-8	14
8.5'	Stiff Brown Clay and Sand, trace of Silt - Moist	3A	8.5-10.0'	2-4-8	12
10.0'	(Becomes Medium Stiff at 13.5')				
15.0'		4A	13.5-15.0'	2-4-6	10
20.0'	(Becomes Soft at 18.5')	5A	18.5-20.0'	1-2-3	5
25.0'		6A	23.5-25.0'	2-2-2	4
27.0'	Very Loose Gray Sand, some Clay, trace of Silt - Wet				
30.0'		7A	28.5-30.0'	1-2-2	4
	(Continued Next Page)				

METHOD: Hollow Auger
TECHNICIAN: BC-WH
JOB NO.: 03952

WATER OBSERVATIONS
INITIAL DEPTH: 27.0'
COMPLETION DEPTH: 21.0'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-128

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services Inc. Prints #SK3848 CH-117, & SK3848 CH-118

DATE STARTED: 12-11-74

SURFACE ELEVATION: 518.7'

DATE COMPLETED: 12-11-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
35.0'	(Becomes Medium Stiff and Moist at 33.5') (With trace of Wood at 34.5')	8A	33.5-35.0'	6-3-3	6
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-WH

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 27.0'

COMPLETION DEPTH: 21.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-129

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-11-74

SURFACE ELEVATION: 506±

DATE COMPLETED: 9-11-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1C	0.0- 2.0'		10"
		1A	2.0- 3.5'	3-4-8	12
5.0'		2C	5.0- 7.0'		24"
7.0'	Stiff Brown Silt, some Clay, trace of Sand - Moist	2A	7.0- 8.5'	4-6-9	15
10.0'		3C	10.0-12.0'		24"
		3A	12.0-13.5'	4-5-7	12
15.0'		4C	15.0-17.0'		22"
17.0'	Medium Stiff Brown Silt and Sand, trace of Clay - Moist	4A	17.0-18.5'	3-3-3	6
20.0'		5C	20.0-22.0'		20"
	Soft Mottled Gray and Brown Silt and Sand, trace of Clay - Moist	5A	22.0-23.5'	2-2-2	4
25.0'		6C	25.0-27.0'		0"
27.0'	Dense Gray Sand and Gravel, trace of Silt - Wet	6A	27.0-28.5'	12-14-22	36
	Bottom of Boring at 28.5'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 10.0'

COMPLETION DEPTH: 25.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

X C. SHELBY TUBE

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-130

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-16-74

SURFACE ELEVATION: 501.1'

DATE COMPLETED: 10-16-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	(Fill) Medium Stiff Brown and Gray Silt, some Clay, some Sand, trace of Topsoil - Damp	1A	1.0- 2.5'	3-2-5	7
3.5'					
5.0'	(Original) Stiff Brown Silt, some Clay, trace of Sand - Damp	2A	3.5- 5.0'	6-8-7	15
7.0'	Hard Brown Clay, some Silt, some Sand - Damp	3A	8.5-10.0'	11-15-20	35
10.0'					
13.5'					
15.0'	Hard Brown Clay, some Silt, some Sand - Moist	4A	13.5-15.0'	3-6-5	11
	(1 - 3" sand seams)	5A	18.5-20.0'	5-6-7	13
20.0'					
23.0'					
25.0'	Medium Stiff Gray Clay, some Silt, trace of Sand - Moist (1 - 3" sand seams)	6A	23.5-25.0'	2-3-3	6
		7A	28.5-30.0'	2-3-3	6
	(Becomes soft and wet at 34.5')	8A	33.5-35.0'	1-1-3	4
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-MF

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 34.5'

COMPLETION DEPTH: 22.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-131

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-17-74

SURFACE ELEVATION: 508.1'

DATE COMPLETED: 9-17-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
0.5'	Very Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	3.5- 5.0'	6-8-15	23
5.0'					
		2A	8.5-10.0'	5-8-12	20
10.0'					
13.5'					
15.0'	Very Stiff Brown Silt, some Clay, trace of Sand - Damp	3A	13.5-15.0'	5-7-10	17
17.0'	Medium Stiff Brown Silt and Sand, trace of Clay - Damp	4A	18.5-20.0'	3-3-4	7
20.0'					
23.5'					
25.0'	Soft Gray Silt and Sand, trace of Clay, trace of Decomposed Wood - Damp	5A	23.5-25.0'	3-2-3	5
30.0'	(Becomes Medium Stiff with 1" to 3" Sand Seams at 28.5')	6A	28.5-30.0'	2-3-3	6
	(Continued Next Page)				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: Unknown

COMPLETION DEPTH: 15.0'

DEPTH AFTER: 24 HRS. 10.5'

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-131

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-17-74

SURFACE ELEVATION: 508.1'

DATE COMPLETED: 9-17-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
33.5'					
35.0'	Very Dense Brown and Gray Sand and Gravel, trace of Silt - Wet	7A	33.5-35.0'	5-20-38	58
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger	WATER OBSERVATIONS	TYPE SAMPLER:
TECHNICIAN: BC-RK	INITIAL DEPTH: Unknown	X A. SPLIT SPOON
JOB NO.: 03952	COMPLETION DEPTH: 15.0'	B.
	DEPTH AFTER: 24 HRS. 10.5'	C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-132

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-17-74

SURFACE ELEVATION: 516.2'

DATE COMPLETED: 9-17-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	3.5- 5.0'	4-6-10	16
5.0'					
	(Becomes stiff at 8.5')	2A	8.5-10.0'	3-5-8	13
10.0'					
12.0'	Stiff Brown Silt and Sand, trace of Clay - Damp	3A	13.5-15.0'	4-5-9	14
15.0'					
		4A	18.5-20.0'	5-7-8	15
20.0'					
	(Becomes medium stiff at 23.5')	5A	23.5-25.0'	3-4-5	9
25.0'					
28.0'	Dense Brown Sand and Gravel, trace of Silt - Wet	6A	28.5-30.0'	18-21-19	40
	(Becomes medium dense at 33.5')	7A	33.5-35.0'	7-8-15	23
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger	WATER OBSERVATIONS	TYPE SAMPLER:
TECHNICIAN: BC-RK	INITIAL DEPTH: 28.0'	X A. SPLIT SPOON
JOB NO.: 03952	COMPLETION DEPTH: *	B.
	DEPTH AFTER: ____ HRS. ____	C. SHELBY TUBE

* Filled in to 27.0'

Note: Permeability Tests Made at This Location

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-133

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-3-74

SURFACE ELEVATION: 512.0'

DATE COMPLETED: 10-3-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Brown Clay, some Silt, trace of Sand - Damp	1C	3.0- 5.0'		19"
5.0'	Very Stiff Brown Silt and Sand, trace of Clay - Moist	1A	5.0- 6.5'	6-7-9	16
		2C	8.0-10.0'		23"
10.0'	(Becomes medium stiff with 1 - 6" sand seams at 10.0')	2A	10.0-11.5'	4-4-6	10
		3C	13.0-15.0'		24"
15.0'		3A	15.0-16.5'	7-4-4	8
		4C	18.0-20.0'		24"
20.0'	(Becomes stiff at 20.0')	4A	20.0-21.5'	5-6-7	13
		5C	23.0-25.0'		16"
25.0'	(Becomes very stiff at 25.0')	5A	25.0-26.5'	8-10-9	19
29.0'		6C	28.0-29.0'		12"
	Very Dense Brown and Gray Sand and Gravel, trace of Silt - Wet (Becomes dense at 33.5')	6A	29.0-30.5'	30-33-42	75
		7A	33.5-35.0'	13-16-19	35
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 29.0'

COMPLETION DEPTH: 29.5'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

X C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-134

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-17-74

SURFACE ELEVATION: 515.9' ~ 517

DATE COMPLETED: 9-17-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Clay, some Samd - Damp	1A	3.5- 5.0'	6-8-9	17
5.0'					
8.5'					
10.0'	Very Stiff Brown Silt and Sand, trace of Clay - Damp	2A	8.5-10.0'	7-9-10	19
		3A	13.5-15.0'	5-8-13	21
15.0'					
	(Becomes stiff at 18.5')	4A	18.5-20.0'	3-4-7	11
20.0'					
23.5'					
25.0'	Medium Dense Brown Sand, some Silt, trace of Clay, - Damp	5A	23.5-25.0'	7-8-10	18
27.0'					
	Very Dense Sand and Gravel, trace of Silt - Wet (Becomes dense at 33.5')	6A	28.5-30.0'	12-30-44	74
		7A	33.5-35.0'	14-19-24	43
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 27.0'

COMPLETION DEPTH: *

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

* Filled in to 27.0'

Note: Permeability Tests Made at This Location

LOG OF BORING NO. A-135

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-18-74

SURFACE ELEVATION: 516.7'

DATE COMPLETED: 9-18-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1C	3.0- 5.0'		24"
5.0'		1A	5.0- 6.5'	6-8-11	19
10.0'		2C	8.0-10.0'		12"
	Medium Stiff Brown Silt and Sand, trace of Clay - Damp	2A	10.0-11.5'	2-4-6	18
		3C	13.0-15.0'		24"
15.0'	(1 - 3" sand seams at 15.0')	3A	15.0-16.5'	3-4-5	18
		4C	18.0-20.0'		24"
20.0'		4A	20.0-21.5'	3-4-5	9
		5C	23.0-25.0'		20"
25.0'		5A	25.0-26.5'	3-4-4	8
29.0'		6C	28.0-29.0'		12
	Very Dense Sand and Gravel, trace of Silt - Wet	6A	29.0-30.5'	32-36-37	73
	(Becomes medium dense at 33.5')	7A	33.5-35.0'	12-12-17	29
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 28.0'

COMPLETION DEPTH: 31.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

X C. SHELBY TUBE

Note: Permeability Test Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-136

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-18-74

SURFACE ELEVATION: 518.2'

DATE COMPLETED: 9-18-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Very Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	3.5- 5.0'	5-8-12	20
5.0'					
10.0'		2A	8.5-10.0'	6-9-12	21
	(Becomes stiff at 13.5')	3A	13.5-15.0'	6-7-7	14
15.0'	Stiff Silt and Sand, trace of Clay - Damp				
	(1 - 2" sand seams)	4A	18.5'20.0'	4-4-7	11
20.0'					
		5A	23.5-25.0'	6-5-7	12
25.0'					
28.0'	Very Dense Brown Sand and Gravel, trace of Silt - Wet	6A	28.5-29.5'	55-70	125
33.5'	Medium Dense Gray Sand and Gravel, trace of Silt - Wet	7A	33.5-35.0'	7-12-14	26
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 28.0'

COMPLETION DEPTH: *

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 30.0'

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-137

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-24-74

SURFACE ELEVATION: 518.5'

DATE COMPLETED: 9-24-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Very Stiff Brown Silt, some Sand, some Clay - Damp	1C	3.0- 5.0'		18"
5.0'		1A	5.0- 6.5'	7-9-12	21
		2C	8.0-10.0'		24"
10.0'	Stiff Brown Silt and Sand, trace of Clay - Moist (1 - 4" sand seams)	2A	10.0-11.5'	3-7-7	14
		3C	15.0-16.5'		24"
15.0'		3A	15.0-16.5'	5-6-7	13
		4C	18.0-20.0'		24"
20.0'		4A	20.0-21.5'	3-5-6	11
		5C	23.0-25.0'		24"
25.0'					
25.5'	Dense Brown Sand and Gravel, trace of Silt - Moist (Becomes medium dense at 33.5')	5A	25.0-26.5'	7-18-22	40
		6A	28.5-30.0'	18-22-17	39
		7A	33.5-35.0'	7-12-10	22
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 21' (tr) 33.0'

COMPLETION DEPTH: *

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

X C. SHELBY TUBE

* Filled into 26.5'

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-138

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-18-74

SURFACE ELEVATION: 520.8'

DATE COMPLETED: 9-18-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Hard Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	3.5- 5.0'	11-14-17	31
5.0'					
8.5'					
10.0'	Very Stiff Brown Silt, some Clay, trace of Sand - Moist	2A	8.5-10.0'	5-7-10	17
15.0'	Stiff Brown Silt and Sand, trace of Clay - Damp (1 - 4" sand seams)	3A	13.5-15.0'	3-5-6	11
20.0'	(Becomes very stiff at 18.5')	4A	18.5-20.0'	6-9-8	17
		5A	23.5-25.0'	5-9-15	24
25.0'					
28.5'	Very Dense Brown Sand and Gravel, trace of Silt - Set	6A	28.5-30.0'	21-27-29	56
33.5'	Medium Dense Brown and Gray Sand and Gravel, trace of Silt - Wet	7A	33.5-35.0'	15-15-14	29
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 35.0'

COMPLETION DEPTH: 35.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-139

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-24-74

SURFACE ELEVATION: 521.8'

DATE COMPLETED: 9-24-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Very Stiff Brown Clay, some Silt, some Sand - Damp	1C	3.0- 5.0'		24"
5.0'		1A	5.0- 6.5'	10-13-16	29
		2C	8.0-10.0'		24"
10.0'	Medium Stiff Silt and Sand, trace of Clay - Moist (1 - 3" sand seams)	2A	10.0-11.5'	3-4-6	10
		3C	13.0-15.0'		24"
15.0'		3A	15.0-16.5'	3-4-5	9
		4C	18.0-20.0'		24"
20.0'		4A	20.0-21.5'	3-4-6	10
		5C	23.0-25.0'		24"
25.0'					
26.0'	Dense Brown Sand and Gravel, trace of Silt - Moist (Becomes very dense at 28.5') (1 - 6" sand seams) (Becomes medium dense at 33.5')	5A	25.0-26.5'	7-10-35	45
		6A	28.5-30.0'	22-24-28	52
		7A	33.5-35.0'	10-12-7	19
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: _____

COMPLETION DEPTH: *

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

X C. SHELBY TUBE

* Filled in to 27.0'

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-140

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-18-74

SURFACE ELEVATION: 506.1'

DATE COMPLETED: 9-18-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Very Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	3.5- 5.0'	5-8-13	21
5.0'		2A	8.5-10.0'	4-9-13	22
10.0'					
13.5'					
15.0'	Stiff Brown Silt and Clay, trace of Sand - Damp (Becomes stiff at 17.0')	3A	13.5-15.0'	4-6-9	15
20.0'		4A	18.5-20.0'	4-6-8	14
24.5'					
25.0'	Stiff Gray Silt, some Clay, some Sand - Damp	5A	23.5-25.0'	3-4-7	11
27.0'	Medium Dense Gray Sand and Gravel, trace of Silt - Wet	6A	28.5-30.0'	12-11-10	21
30.0'					

(Continued Next Page)

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 27.0'

COMPLETION DEPTH: 20.0'

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-140

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-18-74

SURFACE ELEVATION: 506.1'

DATE COMPLETED: 9-18-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
33.5'					
35.0'	Medium Dense Brown Sand and Gravel, trace of Silt - Wet	7A	33.5-35.0'	3-6-9	15
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 27.0'

COMPLETION DEPTH: 20.0'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-141

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-16-74

SURFACE ELEVATION: 509.0'

DATE COMPLETED: 9-16-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	3.5- 5.0'	5-7-8	15
5.0'					
10.0'	(Becomes medium stiff at 8.5')	2A	8.5-10.0'	2-3-6	9
13.5'					
15.0'	Soft Brown Silt and Clay, some Sand - Moist	3A	13.5-15.0'	2-2-3	5
20.0'	(Becomes medium stiff at 18.5')	4A	18.5-20.0'	4-5-5	10
23.5'					
25.0'	Medium Stiff Gray Silt, some Sand, some Clay - Damp	5A	23.5-25.0'	2-3-4	7
28.5'					
30.0'	Medium Stiff Gray Silt and Sand, trace of Clay - Wet (Continued Next Page)	6A	28.5-30.0'	2-4-6	10

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 27.0&34.0'

COMPLETION DEPTH: 8.5'

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-141

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-16-74

SURFACE ELEVATION: 509.0'

DATE COMPLETED: 9-16-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
34.0'					
35.0'	Dense Brown Sand, trace of Gravel, trace of Silt - Wet	7A	33.5-35.0'	13-23-27	50
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger	WATER OBSERVATIONS	TYPE SAMPLER:
TECHNICIAN: BC-RK-DM	INITIAL DEPTH: 27.0 & 34.0'	X A. SPLIT SPOON
JOB NO.: 03952	COMPLETION DEPTH: 8.5'	B.
	DEPTH AFTER: ____ HRS. ____	C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-142

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-20-74

SURFACE ELEVATION: 504.8'

DATE COMPLETED: 9-20-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
2.0'					
	Medium Stiff Brown and Gray Clay, some Silt, trace of Sand - Moist	1C	3.0- 5.0'		18"
5.0'					
		1A	5.0- 6.5'	3-4-5	9
		2C	8.0-10.0'		0 "
10.0'	(Becomes stiff at 10.0')				
		3C	10.0-12.0'		19"
		2A	12.0-13.5'	3-4-7	11
		4C	14.5-16.5'		20"
15.0'					
	(Becomes medium stiff at 16.5')	3A	16.5-18.0'	3-4-4	8
		5C	18.5-20.5'		20"
20.0'					
20.5'					
	Soft Gray Clay and Silt, some Sand, trace of Organic Material - Moist	4A	20.5-22.0'	1-1-3	4
	(1 - 3" sand seams)	6C	23.5-25.5'		24"
25.0'					
26.5'					
	Stiff Silt and Sand, trace of Clay - Moist	5A	25.5-27.0'	3-5-7	12
28.0'					
30.0'	Gray Shale	6A	29.0-30.0'	70-50	120
	Bottom of Boring at 30.0'				

METHOD: Hollow Auger	WATER OBSERVATIONS	TYPE SAMPLER:
TECHNICIAN: BC-RK	INITIAL DEPTH: 18.5'	X A. SPLIT SPOON
JOB NO.: 03952	COMPLETION DEPTH: 17.0'	B.
	DEPTH AFTER: ____ HRS. ____	X C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-143

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-16-74

SURFACE ELEVATION: 508.6'

DATE COMPLETED: 9-16-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Medium Stiff Brown Silt, some Clay, trace of Sand, trace of Organic Material - Dry	1A	3.5- 5.0'	2-2-4	6
5.0'					
8.5'					
10.0'	Very Stiff Brown Silt, some Clay, trace of Sand - Damp	2A	8.5-10.0'	7-10-13	23
13.5'					
15.0'	Medium Stiff Brown Silt, trace of Clay, trace of Sand, trace of Organic Material - Moist	3A	13.5-15.0'	4-5-5	10
19.0'					
20.0	Soft Brown and Gray Silt, trace of Clay, trace of Sand - Moist	4A	18.5-20.0'	2-2-2	4
25.0'		5A	23.5-25.0'	2-2-2	4
29.0'		6A	28.5-29.0'	45+	45+
	Shale				
	Bottom of Boring at 29.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: _____

COMPLETION DEPTH: 22.5'

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-144

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-19-74

SURFACE ELEVATION: 546.1'

DATE COMPLETED: 9-19-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Very Stiff Brown Silt and Sand, trace of Clay, trace of Organic Material - Moist (1 - 3" sand seams)	1A	3.5- 5.0'	5-8-9	17
5.0'					
8.5'					
10.0'	Medium Stiff Brown Silt and Sand, trace of Clay - Damp	2A	8.5-10.0'	4-5-5	10
11.5'	Very Loose Brown Sand, some Silt, trace of Gravel - Wet	3A	13.5-15.0'	2-2-2	4
15.0'					
18.5'					
20.0'	Very Dense Brown and Gray Sand and Gravel, trace of Silt - Wet (1' seam of coarse gravel at 22.5')	4A	18.5-20.0'	20-33-47	80
23.5'					
25.0'	Medium Dense Brown Sand, trace of Silt - Wet	5A	23.5-25.0'	14-10-11	21
29.5'	Very Dense Brown Sand and Gravel, trace of Silt - Moist	6A	28.5-30.0'	33-35-56	91
30.0'					

(Continued Next Page)

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 11.5'

COMPLETION DEPTH: *

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 31.0'

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-144

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-19-74

SURFACE ELEVATION: 546.1'

DATE COMPLETED: 9 19-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(Continued)				
33.5'					
35.0	Hard Brown Clay, some Sand, some Silt (with Rock Fragments) - Moist	7A	33.5-35.0'	29-29-30	59
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 11.5'

COMPLETION DEPTH: *

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 31.0'

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-144 (A)

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: Approximately 5' from Boring A-144

DATE STARTED: 9-19-74

SURFACE ELEVATION: 546±'

DATE COMPLETED: 9-19-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Brown Clay, some Silt, some Sand - Moist				
5.0'					
8.5'	Brown Clay and Sand, trace of Silt - Moist				
10.0'					
11.5'	Very Dense Brown Sand, some Silt, trace of Gravel - Wet				
15.0'					
		1A	16.0-17.5'	35-32-27	59
	Bottom of Boring at 17.5'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: ____

COMPLETION DEPTH: ____

DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

Note: Permeability Test Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-144 (B)

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: Approximately 5' from Boring A-144 DATE STARTED: 9-20-74

SURFACE ELEVATION: 546±' DATE COMPLETED: 9-20-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Brown Clay, some Silt, some Sand - Moist				
5.0'					
8.5'	Brown Clay and Sand, trace of Silt - Moist				
10.0'					
11.5'	Brown Sand, some Silt, trace of Gravel - Wet				
15.0'	Bottom of Boring at 15.0'				

METHOD: Hollow Auger	WATER OBSERVATIONS	TYPE SAMPLER:
TECHNICIAN: BC-RK	INITIAL DEPTH _____	___ A. SPLIT SPOON
JOB NO.: 03952	COMPLETION DEPTH: _____	___ B.
	DEPTH AFTER ___ HRS ___	___ C. SHELBY TUBE

Note: Permeability Test Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-144 (C)

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: Approximately 5' from Boring A-144 DATE STARTED: 9-20-74

SURFACE ELEVATION: 546±' DATE COMPLETED: 9-20-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Brown Clay, some Silt, some Sand - Moist				
5.0'					
8.5'	Brown Clay and Sand, trace of Silt - Moist				
10.0'					
11.5'	Loose Brown Sand, some Silt, trace of Gravel - Wet				
15.0'		1A	13.5-15.0'	2-3-3	6
	Bottom of Boring at 15.0'				

METHOD: Hollow Auger	WATER OBSERVATIONS	TYPE SAMPLER:
TECHNICIAN: BC-RK	INITIAL DEPTH _____	X A. SPLIT SPOON
JOB NO.: 03952	COMPLETION DEPTH: _____	___ B.
	DEPTH AFTER ___ HRS ___	___ C. SHELBY TUBE

Note: Permeability Test Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-145

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services Inc. Prints #SK3848 CH-117, & SK3848 CH-118

DATE STARTED: 10-16-74

SURFACE ELEVATION: 532.3'

DATE COMPLETED: 10-16-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
0.5'					
1.0'	Medium Dense Brown Sand and Gravel, some Silt - Damp	1A	1.0- 2.5'	6-6-7	13
		2A	3.5- 5.0'	6-8-8	16
5.0'					
		3A	8.5-10.0'	10-8-5	13
10.0'					
		4A	13.5-15.0'	7-7-12	19
15.0'					
		5A	18.5-20.0'	8-7-13	20
20.0'					
22.0'	Medium Dense Brown Sand, trace of Gravel, trace of Silt - Dry	6A	23.5-25.0'	10-12-15	27
25.0'					
27.5'	Weathered Shale	7A	28.5-30.0'	20-27-27	54
		8A	34.5-35.0'	35+	35+
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-BK-MF

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: _____

COMPLETION DEPTH: _____

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-146

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-19-74

SURFACE ELEVATION: 511.4' 530±

DATE COMPLETED: 9-19-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Moist (2" sand seams at 2.5')	1A	3.5- 5.0'	4-5-6	11
5.0'					
9.0'					
10.0'	Very Stiff Brown Silt, some Gravel, trace of Clay, trace of Organic Material - Moist	2A	8.5-10.0'	5-9-7	16
13.0'					
15.0'	Medium Dense Brown Sand and Gravel, trace of Silt - Moist	3A	13.5-15.0'	4-6-7	13
		4A	18.5-20.0'	8-6-9	15
20.0'					
21.5'	Medium Dense Brown Sand, trace of Gravel, trace of Silt - Wet	5A	23.5-25.0'	7-9-15	24
25.0'					
		6A	28.5-30.0'	6-8-12	20
		7A	33.5-35.0'	8-10-11	21
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 2.5'

COMPLETION DEPTH: *

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 29.5'

Note: Permeability Tests Made at This Location

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-147

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118 DATE STARTED: 9-9-74

SURFACE ELEVATION: 535.9' DATE COMPLETED: 9-9-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt, trace of Clay, trace of Sand - Damp	1A	3.5- 5.0'	4-6-9	15
5.0'					
8.5'					
10.0'	Soft Brown Silt and Sand, trace of Clay - Damp	2A	8.5-10.0'	2-2-2	4
	(Becomes stiff at 13.5')	3A	13.5-15.0'	2-4-7	11
15.0'					
17.0'	Medium Dense Brown Sand, trace of Silt, trace of Gravel - Damp	4A	18.5-20.0'	3-5-8	13
20.0'					
	(Becomes dense at 23.5')	5A	23.5-25.0'	17-21-25	46
25.0'					
	(Becomes medium dense at 28.5')	6A	28.5-30.0'	8-10-13	23
	(Becomes very dense at 33.5')	7A	33.5-35.0'	6-21-37	58
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger
TECHNICIAN: BC-RK-DM
JOB NO.: 03952

WATER OBSERVATIONS
INITIAL DEPTH: ____
COMPLETION DEPTH: ____
DEPTH AFTER: 24 HRS. 0'

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-148

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118 DATE STARTED: 9-9-74

SURFACE ELEVATION: 537.3' DATE COMPLETED: 9-9-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.5'	Stiff Brown Silt, some Clay, trace of Sand, trace of Organic Material - Damp	1A	3.5- 5.0'	4-6-9	15
5.0'					
8.5'					
10.0'	Stiff Brown Silt, some Clay, trace of Sand - Moist	2A	8.5-10.0'	4-6-6	12
11.0'	Stiff Brown Silt and Sand, trace of Clay - Damp	3A	13.5-15.0'	4-7-8	15
15.0'					
		4A	18.5-20.0'	4-6-8	14
20.0'					
22.0'	Dense Brown Sand, trace of Silt, trace of Gravel - Damp	5A	23.5-25.0'	11-15-20	35
25.0'					
		6A	28.5-30.0'	9-14-23	37
		7A	33.5-35.0'	9-18-24	42
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger
TECHNICIAN: BC-RK-DM
JOB NO.: 03952

WATER OBSERVATIONS
INITIAL DEPTH: ____
COMPLETION DEPTH: ____
DEPTH AFTER: 24 HRS. 0'

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-149

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-10-74

SURFACE ELEVATION: 536.3'

DATE COMPLETED: 9-10-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Sand, some Clay, trace of Organic Material - Damp	1A	3.5- 5.0'	4-7-10	17
5.0'					
8.0'	Medium Stiff Brown Silt and Sand, trace of Clay - Damp	2A	8.5-10.0'	2-3-3	6
10.0'					
13.0'	Medium Dense Brown Sand, some Silt, trace of Gravel - Damp	3A	13.5-15.0'	2-6-7	13
15.0'					
20.0'	Medium Dense Brown Sand, trace of Silt, trace of Gravel	4A	18.5-20.0'	5-7-10	17
25.0'		5A	23.5-25.0'	10-12-15	27
		6A	28.5-30.0'	10-8-13	21
	(Becomes dense at 33.5')	7A	33.5-35.0'	10-13-21	34
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: _____

COMPLETION DEPTH: _____

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-150

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-10-74

SURFACE ELEVATION: 531.1'

DATE COMPLETED: 9-10-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Clay, some Sand, trace of Organic Material - Damp	1A	3.5- 5.0'	5-8-11	19
5.0'					
9.0'					
10.0'	Medium Stiff Brown Sand, some Silt - Moist	2A	8.5-10.0'	2-4-4	8
	(Becomes stiff at 13.5')	3A	13-5-15.0'	5-7-8	15
15.0'					
19.5'					
20.0'	Dense Brown Sand, trace of Gravel, trace of Silt - Moist	4A	18.5-20.0'	10-15-16	31
24.0'					
25.0'	Very Dense Brown and Black Sand, trace of Gravel, trace of Silt - Moist	5A	23.5-25.0'	13-37-42	79
29.5'					
	Medium Dense Brown Sand and Gravel, trace of Silt - Moist	6A	28.5-30.0'	6-6-8	14
		7A	33.5-35.0'	4-6-11	17
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 26.0'

COMPLETION DEPTH: 26.0'

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-151

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-10-74

SURFACE ELEVATION: 532.0'

DATE COMPLETED: 9-10-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Stiff Brown Silt, some Clay, some Sand, trace of Gravel, trace of Organic Material - Damp	1A	1.0- 2.5'	2-4-7	11
		2A	3.5- 5.0'	4-5-10	15
5.0'					
8.0'					
10.0'	Stiff Brown Silt and Sand, some Clay, trace of Gravel - Damp (1 - 3" sand seams)	3A	8.5-10.0'	5-7-7	14
		4A	13.5-15.0'	3-5-8	13
15.0'					
		5A	18.5-20.0'	5-5-7	12
20.0'					
24.5'					
25.0'	Medium Dense Brown Sand, trace of Gravel, trace of Silt - Wet	6A	23.5-25.0'	7-7-8	15
29.0'					
	Medium Dense Brown Sand and Gravel, trace of Silt - Wet	7A	28.5-30.0'	7-7-7	14
		8A	33.5-35.0'	5-5-7	12
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 24.5'

COMPLETION DEPTH: 24.5'

DEPTH AFTER ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-152

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 10-16-74

SURFACE ELEVATION: 533.2' 519.0

DATE COMPLETED: 10-16-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
0.5'	Stiff Brown Silt, some Clay, trace of Sand - Damp	1A	1.0- 2.5'	3-6-8	14
3.0'	Very Stiff Brown Silt and Sand, trace of Clay - Damp	2A	3.5- 5.0'	12-13-16	29
5.0'					
	(Becomes stiff at 8.5') (1 - 4" sand seams)	3A	8.5-10.0'	4-4-8	12
10.0'					
		4A	13.5-15.0'	5-6-9	15
15.0'					
		5A	18.5-20.0'	3-5-6	11
20.0'					
22.0'	Very Dense Brown Sand and Gravel, trace of Silt - Damp	6A	23.5-25.0'	11-26-52	78
25.0'					
		7A	28.5-30.0'	25-39-63	102
		8A	33.5-35.0'	28-28-35	63
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-BK-MF

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: ____

COMPLETION DEPTH: ____

DEPTH AFTER ____ HRS. ____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER TESTING LABORATORIES, INC.

LOG OF BORING NO. A-153

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-10-74

SURFACE ELEVATION: 524.6'

DATE COMPLETED: 9-10-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Medium Stiff Brown Silt, some Clay, some Sand, trace of Gravel, trace of Organic Material - Damp	1A	1.0- 2.5'	2-3-5	8
3.0'	Very Stiff Brown Silt and Sand, trace of Clay - Damp	2A	3.5-5.0'	6-9-10	19
5.0'	(Becomes stiff at 8.5')	3A	8.5-10.0'	4-6-7	13
10.0'	(Becomes very stiff at 13.5')	4A	13.5-15.0'	6-8-11	19
15.0'	Medium Dense Brown Sand and Gravel, trace of Silt - Moist	5A	18.5-20.0'	7-7-10	17
18.0'		6A	23.5-25.0'	12-12-17	29
20.0'		7A	28.5-30.0'	5-6-7	13
25.0'		8A	33.5-35.0'	6-6-9	15
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: _____

COMPLETION DEPTH: _____

DEPTH AFTER: _____ HRS. _____

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-154

PROPOSED ASH DISPOSAL AREA - KILLEN STATION

BORING LOCATION: As Shown on Ebasco Services, Inc. Prints #SK3848 CH-117, & #SK3848 CH-118

DATE STARTED: 9-11-74

SURFACE ELEVATION: 522.4'

DATE COMPLETED: 9-11-74

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Sand, trace of Clay - Damp	1A	1.0- 2.5'	4-6-11	17
		2A	3.5- 5.0'	6-7-10	17
5.0'					
8.5'	Very Stiff Brown Silt, trace of Sand, trace of Clay - Damp	3A	8.5-10.0'	8-7-9	16
10.0'					
12.5'	Stiff Brown Silt, some Sand, some Clay - Moist	4A	13.5-15.0'	4-5-8	13
15.0'					
20.0'		5A	18.5-20.0'	5-5-6	11
24.5'					
25.0	Loose Brown Sand, some Silt, trace of Gravel - Moist (Becomes medium dense at 28.5')	6A	23.5-25.0'	4-5-5	10
34.5'		7A	28.5-30.0'	3-5-10	15
	Medium Stiff Gray Clay, some Silt, trace of Sand - Moist	8A	33.5-35.0'	4-5-5	10
	Bottom of Boring at 35.0'				

METHOD: Hollow Auger

TECHNICIAN: BC-RK-DM

JOB NO.: 03952

WATER OBSERVATIONS

INITIAL DEPTH: 34.5'

COMPLETION DEPTH: *

DEPTH AFTER: 24 HRS 25'

TYPE SAMPLER:

X A. SPLIT SPOON

___ B.

___ C. SHELBY TUBE

* Filled in to 25.0'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-155

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/19/75

SURFACE ELEVATION: 536.0' — DATE COMPLETED: 11/19/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
0.7'	Very Stiff Brown and Gray Silt, some Clay, trace of Sand, trace of Organic Material, trace of Gravel - Damp	1A	1.0-2.5'	6-6-11	17
4.0'	Hard Brown Silt, some Sand, some Clay, trace of Gravel - Damp	2A	4.0-5.5'	8-13-20	33
9.0'	Medium Dense Brown Sand, some Silt, trace of Clay - Moist	3A	9.0-10.5'	5-6-8	14
12.5'	Medium Dense Brown Silt and Sand, trace of Clay, trace of Gravel - Moist	4A	14.0-15.5'	6-10-13	23
17.0'	Medium Dense Brown Sand, some Clay, some Gravel, trace of Silt - Moist				
20.0'	Dense Brown Sand, trace of Silt, trace of Gravel - Moist	5A	19.0-20.5'	8-11-5	16
22.0'	Very Dense Brown Sand, trace of Gravel, trace of Silt - Damp	6A	24.0-25.5'	36-40-35	75
28.5'	Dense Brown Fine to Coarse Sand, some Gravel, trace of Silt - Damp	7A	29.0-30.5'	12-16-23	39
30.0					

METHOD: Hollow Auger
TECHNICIAN: BC-TA
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: 14.0' (trace)
COMPLETION DEPTH: None
DEPTH AFTER: 24 HRS. *

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

* Boring caved in to 22.5'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-155 (2nd Sheet)

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/19/75

SURFACE ELEVATION: 536.0' — DATE COMPLETED: 11/19/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'					
31.0'	Very Dense Brown Fine to Coarse Sand and Gravel, trace of Silt - Damp				
35.0'		8A	34.0-35.5'	25-23-33	56
	Bottom of Boring at 35.5'				

METHOD: Hollow Auger
TECHNICIAN: BC-TA
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: 14.0' (trace)
COMPLETION DEPTH: None
DEPTH AFTER: 24 HRS. *

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

* Boring caved in to 22.5'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-156

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/20/75

SURFACE ELEVATION: 511.0' — DATE COMPLETED: 11/20/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
0.7'	Medium Stiff Brown Silt, trace of Clay, trace of Sand, trace of Organic Material - Moist	1A	1.0-2.5'	3-3-4	7
5.0'		2A	4.5-6.0'	3-4-5	9
9.5'					
10.0	Medium Stiff Brown Silt, some Clay, some Sand, trace of Gravel - Moist	3A	9.5-11.0'	3-4-6	10
14.5'					
15.0	Very Stiff Brown Silt, some Clay, trace of Sand, trace of Organic Material - Moist	4A	14.5-16.0'	5-6-10	16
20.0					
20.5'	Medium Dense Brown Fine to Medium Sand, some Silt - Wet	5A	19.5-21.0'	5-7-13	20
25.0'		6A	24.5-26.0'	5-12-16	28
30.0'		7A	29.5-31.0'	5-7-9	16
	Bottom of Boring at 31.0'				

METHOD: Hollow Auger
TECHNICIAN: BC-TA-BF
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: 20.5'
COMPLETION DEPTH: 19.0'
DEPTH AFTER: 24 HRS. 11.5'

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-157

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/19/75

SURFACE ELEVATION: 515.0' — DATE COMPLETED: 11/19/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
0.5'	Very Stiff Brown Silt and Clay, trace of Sand, trace of Gravel - Damp	1A	1.0-2.5'	7-9-13	22
4.5'					
5.0	Very Stiff Brown Silt, some Clay, trace of Sand, trace of Gravel, trace of Organic Material - Damp	2A	4.5-6.0'	7-11-14	25
9.5'					
10.0'	Stiff Brown Silt, some Clay, trace of Sand, trace of Gravel - Moist	3A	9.5-11.0'	7-6-9	15
15.0'	(Becomes Very Stiff and Moist at 14.5')	4A	14.5-16.0'	8-8-12	20
20.0'		5A	19.5-21.0'	7-7-9	16
24.5'					
25.0'	Medium Stiff Brown Silt and Clay, trace of Sand - Moist	6A	24.5-26.0'	5-4-5	9
29.5'					
30.0	Medium Dense Brown Sand, some Silt, trace of Clay, with ½" - 1" Fine Sand Seams - Moist	7A	29.5-31.0'	4-9-12	21

METHOD: Hollow Auger
TECHNICIAN: BC-TA
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: *
COMPLETION DEPTH: 33.5'
DEPTH AFTER: 24 HRS. 23.0'

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

* Trace at 29.5' & 34.5'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-157 (2nd Sheet)

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/19/75

SURFACE ELEVATION: 515.0' — DATE COMPLETED: 11/19/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'					
34.5'					
35.0	Loose Brown Fine to Medium Sand, some Silt, trace of Clay - Wet	8A	34.5-36.0'	4-4-3	7
39.5'					
39.9'	Hard Gray Silt, some Sand, trace of Gravel, trace of Clay - Moist				
40.0	Dense Brown Fine to Medium Sand, some Silt - Wet	9A	39.5-41.0'	12-17-15	32
45.0		10A	44.0-45.5'	5-7-9	16
	Bottom of Boring at 45.5'				

METHOD: Hollow Auger
TECHNICIAN: BC-TA
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: *
COMPLETION DEPTH: 33.5'
DEPTH AFTER: 24 HRS. 23.0'

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

* Trace at 29.5' & 34.5'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-158

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/19/75

SURFACE ELEVATION: 521.0' — DATE COMPLETED: 11/20/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
0.7'	Very Stiff Brown Silt and Clay, trace of Sand, trace of Gravel - Damp	1A	1.0-2.5'	6-12-15	27
5.0'		2A	4.5-6.0'	7-12-16	28
9.5'					
10.0	Medium Stiff Brown Silt, some Sand, trace of Clay - Moist	3A	9.5-11.0'	3-4-6	10
15.0'		4A	14.5-16.0'	4-5-8	13
19.5'					
20.0	Very Stiff Brown Silt, some Sand, trace of Clay - Moist	5A	19.5-21.0'	7-9-9	18
25.0'	(With 1" to 2" Sand Seams at 25.0')	6A	24.5-26.0'	9-11-12	23
30.0'	(Becomes Hard and Very Dense at 30.0')	7A	29.5-31.0'	13-25-47	72

METHOD: Hollow Auger
TECHNICIAN: BC-TA-BF
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: 33.5'
COMPLETION DEPTH: 33.5'
DEPTH AFTER: 24 HRS. *

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

* Boring caved in to 30.5'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-158 (2nd Sheet)

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/19/75

SURFACE ELEVATION: 521.0' — DATE COMPLETED: 11/20/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'	(With 4" Sand Seam at 30.5')				
33.5'					
35.0'	Dense Brown Gravel, some Sand, trace of Silt, trace of Peat, with Interbedded Sand Seam - Wet	8A	34.5-36.0'	15-17-18	35
39.5'					
40.0	Very Loose Brown Fine to Medium Sand, trace of Silt - Wet	9A	39.5-41.0'	5-2-2	4
45.0'	(Becomes Medium Dense at 45.0')	10A	44.5-46.0'	5-10-12	22
	Bottom of Boring at 46.0'				

METHOD: Hollow Auger
TECHNICIAN: BC-TA-BF
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: 33.5'
COMPLETION DEPTH: 33.5'
DEPTH AFTER: 24 HRS. *

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

* Boring caved in to 30.5'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-159

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/19/75

SURFACE ELEVATION: 516.0' — DATE COMPLETED: 11/19/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
0.5'					
3.5'	Medium Stiff Brown and Gray Silt and Clay, trace of Sand, trace of Gravel - Damp	1A	1.0-2.5'	3-3-5	8
5.0'	Hard Brown Silt, some Clay, trace of Sand, trace of Gravel - Damp	2A	4.5-6.0'	10-19-25	44
9.5'					
10.0	Hard Brown Silt, some Sand, trace of Clay, trace of Gravel - Damp	3A	9.5-11.0'	15-25-30	55
15.0'		4A	14.5-16.0'	23-30-32	62
19.0'					
20.0	Medium Dense Brown Silt and Sand, trace of Clay - Damp (With 2" Sand Seam at 20.5')	5A	19.5-21.0'	7-8-10	18
25.0'					
	Very Stiff Brown Silt and Clay, some Sand, with 1" to 3" Sand Seams - Damp	6A	24.5-26.0'	7-13-13	26
29.5'	Hard Brown Silt and Clay, trace of Sand, trace of Silt, with Interbedded Brown Sand - Moist	7A	29.5-31.0'	8-18-18	36
30.0'					

METHOD: Hollow Auger
TECHNICIAN: BC-TA-BF
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: 33.5'
COMPLETION DEPTH: 33.5'
DEPTH AFTER: 24 HRS. *

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

* Boring caved in to 31.0'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-159 (2nd Sheet)

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan DATE STARTED: 11/19/75

SURFACE ELEVATION: 516.0' DATE COMPLETED: 11/19/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'					
33.5'					
35.0	Medium Dense Brown Fine to Coarse Sand and Gravel, trace of Silt - Wet	8A	34.5-36.0'	12-13-15	28
39.5'					
40.0	Medium Dense Brown Fine to Medium Sand, trace of Silt, trace of Gravel - Wet	9A	39.5-41.0'	5-9-17	26
45.0'		10A	44.0-45.5'	10-10-11	21
	Bottom of Boring at 45.5'				

METHOD: Hollow Auger	WATER OBSERVATIONS	TYPE SAMPLER:
TECHNICIAN: BC-TA-BF	INITIAL DEPTH: 33.5'	X A. SPLIT SPOON
JOB NO.: 05256	COMPLETION DEPTH: 33.5'	B.
	DEPTH AFTER: 24 HRS. *	C. SHELBY TUBE

* Boring caved in to 31.0'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NOA-160

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan DATE STARTED: 11/20/75

SURFACE ELEVATION: 521.0' DATE COMPLETED: 11/20/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
0.8'	Stiff Brown and Gray Silt and Clay, trace of Sand, trace of Gravel - Damp	1A	1.0-2.5'	3-4-11	15
4.5'					
5.0	Hard Brown Silt, some Clay, some Sand - Damp	2A	4.5-6.0'	7-14-21	35
9.5'					
10.0	Stiff Brown Silt, some Sand, trace of Clay - Moist	3A	9.5-11.0'	3-6-8	14
14.5'					
15.0	Medium Dense Brown Silt and Sand, trace of Clay - Moist	4A	14.5-16.0'	6-8-8	16
20.0'	(Interbedded Sand Seams from 20.5')	5A	19.5-21.0'	6-6-10	16
24.5'					
25.0	Very Stiff Brown Silt and Sand, trace of Clay - Moist	6A	24.5-26.0'	6-7-13	20
29.5'	Very Stiff Brown Silt and Clay, trace of Sand, with Sand Seams - Moist (Continued)	7A	29.5-31.0'	6-9-13	22
30.0					

METHOD: Hollow Auger	WATER OBSERVATIONS	TYPE SAMPLER:
TECHNICIAN: BC-TA-BF	INITIAL DEPTH: 37.0'	X A. SPLIT SPOON
JOB NO.: 05256	COMPLETION DEPTH: 35.5'	B.
	DEPTH AFTER: 24 HRS. *	C. SHELBY TUBE

* Boring caved in to 29.0'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-160 (2nd Sheet)

PROPOSED ASH DISPOSAL POND – KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/20/75

SURFACE ELEVATION: 521.0' — DATE COMPLETED: 11/20/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'					
34.5' 35.0'	Hard Brown Silt, some Clay, some Sand, with interbedded Sand Seams – Moist	8A	34.5-36.0'	14-18-20	38
37.0'	Medium Dense Brown Fine to Medium Sand, trace of Silt, trace of Gravel – Wet (With 4" Gray Clay and Silt Seam at 40.5')				
40.0' 40.8'	Medium Dense Brown Fine to Coarse Sand, trace of Gravel, some Silt – Wet	9A	39.5-41.0'	8-10-14	24
44.5' 45.0 45.8'	Medium Dense Brown Fine to Medium Sand, trace of Silt – Wet				
	Medium Dense Brown Fine to Coarse Sand, trace of Gravel, trace of Silt – Wet	10A	44.5-46.0'	11-10-8	18
	Bottom of Boring at 46.0'				

METHOD: Hollow Auger
TECHNICIAN: BC-TA-BF
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: 37.0'
COMPLETION DEPTH: 35.5'
DEPTH AFTER: 24 HRS. *

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

* Boring caved in to 29.0'

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-161

PROPOSED ASH DISPOSAL POND – KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/20/75

SURFACE ELEVATION: 544.0' — DATE COMPLETED: 11/20/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0' 1.0'	Topsoil				
4.5'	Very Stiff Brown Silt, some Clay, trace of Sand – Moist	1A	1.0-2.5'	5-8-11	19
5.0 9.5'	Stiff Brown Silt, some Sand, trace of Clay – Moist	2A	4.5-6.0'	3-4-8	12
10.0 15.0'	Medium Stiff Brown Silt and Sand – Moist	3A	9.5-11.0'	4-4-6	10
15.5' 17.0'	Loose Brown Fine to Coarse Sand, some Gravel, trace of Silt – Moist	4A	14.5-16.0'	2-3-4	7
20.0' 24.5'	Very Dense Brown Fine to Coarse Sand and Gravel, trace of Silt – Moist	5A	19.5-21.0'	25-30-40	70
25.0 30.0'	Very Dense Brown Fine to Coarse Sand and Gravel, trace of Silt – Moist	6A	24.5-26.0'	30-40-35+	75+
		7A	29.5-30.5'	45-55	100
	Bottom of Boring at 30.5'				

METHOD: Hollow Auger
TECHNICIAN: BC-TA-BF
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: None
COMPLETION DEPTH: None
DEPTH AFTER: 24 HRS. None

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

BOWSER – MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. A-162

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/21/75

SURFACE ELEVATION: 514.0' — DATE COMPLETED: 11/21/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Topsoil				
1.0'	Very Stiff Brown Silt, some Clay, trace of Sand - Damp	1A	1.0-2.5'	5-10-11	21
5.0'		2A	4.5-6.0'	4-7-11	18
	(Becomes Stiff at 9.5')				
10.0'		3A	9.5-11.0'	5-6-8	14
14.5'					
15.0	Medium Stiff Brown Silt, some Clay, some Sand - Moist	4A	14.5-16.0'	4-4-4	8
	(Becomes Soft at 19.5')				
20.0'		5A	19.5-21.0'	2-1-3	4
	(Becomes Wet at 22.0')				
	(Becomes Medium Stiff at 24.5')				
25.0'		6A	24.5-26.0'	3-3-3	6
30.0'	(Continued on 2nd Sheet)	7A	29.5-31.0'	3-2-3	5

METHOD: Hollow Auger
TECHNICIAN: BC-TA-BF
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: 22.0'
COMPLETION DEPTH: 18.0'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOC
___ B.
___ C. SHELP

BOWSER - TESTING LA

LOG OF BORING NO. A-162 (2nd Sheet)

PROPOSED ASH DISPOSAL POND - KILLEN ELECTRIC GENERATING STATION

BORING LOCATION: As Shown on Boring Location Plan — DATE STARTED: 11/21/75

SURFACE ELEVATION: 514.0' — DATE COMPLETED: 11/21/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
30.0'					
30.7'	Soft Brown Silt and Sand, some Clay - Wet				
34.0'					
35.0	Medium Stiff Gray Clay and Silt, some Sand - Wet	8A	34.5-36.0'	3-3-3	6
39.5'					
40.0	Dense Brown Fine to Medium Sand, some Silt, trace of Gravel - Wet	9A	39.5-41.0'	15-15-24	39
44.5'					
45.0	Medium Dense Brown Sand, trace of Silt - Wet	10A	44.5-46.0'	8-15-15	30
	Bottom of Boring at 46.0'				

METHOD: Hollow Auger
TECHNICIAN: BC-TA-BF
JOB NO.: 05256

WATER OBSERVATIONS
INITIAL DEPTH: 22.0'
COMPLETION DEPTH: 18.0'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

BOWSER - MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. D-14

KILLEN ELECTRIC GENERATING STATION - OHIO RIVER BORINGS

BORING LOCATION: As Shown on Boring Location Plan DATE STARTED: 7/23/75

SURFACE ELEVATION: 475.7' DATE COMPLETED: 7/23/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Soft Brown Silt and Sand, trace of Clay, trace of Organic Material - Wet	1A	0.0-1.5'	1-1-3	4
3.0'	Very Loose Brown Sand, trace of Silt, trace of Gravel - Wet (Becomes Medium Dense at 10.0')	2A	2.0-3.5'	2-2-2	4
		3A	7.0-8.5'	9-14-12	26
10.0'		4A	12.0-13.5'	7-11-14	25
17.0'	Medium Dense Gray Sand, trace of Silt, some Gravel - Wet	5A	17.0-18.5'	6-8-11	19
20.0		6A	22.0-23.5'	6-7-7	14
30.0'		7A	27.0-28.5'	8-12-14	26
	(Becomes Dense at 32.0')	8A	32.0-33.5'	9-17-21	38
35.0'	Very Dense Gray Sand and Gravel, trace of Silt, trace of Cobbles, trace of Rock Fragments - Wet	9A	37.0-38.5'	29-50-50/5"	100+/11"
40.0'		10A	42.0-42.5'	120	120+
43.5'	Gray Soft Shale	11A	44.5-45.0'	100+/2"	100+/2"
	Bottom of Boring at 45.0'				

METHOD: Hollow Auger & Mud
TECHNICIAN: DH-BK
JOB NO.: 04752

WATER OBSERVATIONS
INITIAL DEPTH: 0.0'
COMPLETION DEPTH: 0.0'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

Note: River Depth at Boring D-14 was 9.0'

BOWSER - MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. D-15

KILLEN ELECTRIC GENERATING STATION - OHIO RIVER BORINGS

BORING LOCATION: As Shown on Boring Location Plan DATE STARTED: 7/23/75

SURFACE ELEVATION: 475.7' DATE COMPLETED: 7/23/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Very Soft Brown Silt, some Sand, trace of Clay, trace of Organic Material - Wet	1A	0.0-1.5'	1-1-1	2
3.0'	Very Loose Brown Sand, some Silt, trace of Clay, trace of Organic Material - Wet	2A	2.0-3.5'	2-2-2	4
8.0'	Medium Dense Gray Sand, some Gravel, trace of Silt - Wet	3A	7.0-8.5'	8-7-8	15
10.0'		4A	12.0-13.5	5-7-12	19
		5A	17.0-18.5'	4-5-7	12
20.0'		6A	22.0-23.5'	7-7-8	15
		7A	27.0-28.5'	8-10-11	21
30.0'		8A	32.0-33.5'	7-13-15	28
35.0'	Very Dense Gray Sand and Gravel, trace of Silt, trace of Cobbles - Wet	9A	37.0-38.5'	25-50-50/2"	100+/8"
40.0'		10A	42.0-43.0'	70-30+/3"	100+/9"
43.0'	Gray Soft Shale, trace of Rock Fragments - Wet	11A	43.0-43.5'	100+/1"	100+/1"
	Bottom of Boring at 43.5'				

METHOD: Hollow Auger & Mud
TECHNICIAN: DH-BK
JOB NO.: 04752

WATER OBSERVATIONS
INITIAL DEPTH: 0.0'
COMPLETION DEPTH: 0.0'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

Note: River Depth at Boring D-15 was 9.0'

BOWSER - MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. D-23

KILLEN ELECTRIC GENERATING STATION - OHIO RIVER BORINGS

BORING LOCATION: As Shown on Boring Location Plan DATE STARTED: 7/24/75

SURFACE ELEVATION: 477.2' DATE COMPLETED: 7/24/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Very Soft Brown Sand, some Silt, trace of Clay, trace of Organic Material - Wet	1A	0.0-1.5'	1-1-1	2
3.5'	Very Soft Brown Silt, some Sand, trace of Clay, trace of Organic Material - Wet	2A	3.5-5.0'	1-1-2	3
10.0'		3A	8.5-10.0'	2-3-4	7
14.5'	Medium Dense Brown Sand, some Gravel trace of Silt - Wet	4A	13.5-15.0'	5-8-10	18
20.0'		5A	18.5-20.0'	5-5-6	11
		6A	23.5-25.0'	6-8-8	16
30.0'	(Becomes Dense at 33.5')	7A	28.5-30.0'	9-10-15	25
38.5'		8A	33.5-35.0'	9-11-22	33
40.0	Very Dense Brown Sand and Gravel, trace of Cobbles, trace of Silt - Wet	9A	38.5-39.5'	37-63	100+/12'
45.0'		10A	43.5-44.0'	100+/3"	100+/3"
	Gray Soft Shale, with Rock Fragments - Moist	11A	45.5-46.0'	100+	100+
	Bottom of Boring at 46.0'				

METHOD: Hollow Auger & Mud
TECHNICIAN: DH-BK
JOB NO.: 04752

WATER OBSERVATIONS
INITIAL DEPTH: 0.0'
COMPLETION DEPTH: 0.0'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

Note: River Depth at Boring D-23 was 7.5'

BOWSER - MORNER
TESTING LABORATORIES, INC.

LOG OF BORING NO. D-24

KILLEN ELECTRIC GENERATING STATION - OHIO RIVER BORINGS

BORING LOCATION: As Shown on Boring Location Plan DATE STARTED: 7/24/75

SURFACE ELEVATION: 464.2' DATE COMPLETED: 7/24/75

STRATUM DEPTH	DESCRIPTION OF MATERIAL	SAMPLE NO. & TYPE	SAMPLE DEPTH	BLOWS PER 6" ON SAMPLER	"N" BLOWS /FT. OR CORE REC.
0.0'	Loose Stiff Gray Sand, some Silt, trace of Clay, some Organic Material - Wet	1A	0.0-1.5'	5-4-6	10
6.0'	Medium Dense Brown Sand, trace of Silt - Wet	2A	5.5-7.0'	3-10-13	23
10.0		3A	10.5-12.0'	4-7-10	17
16.5'	Dense Gray Sand, trace of Silt, trace of Gravel - Wet	4A	15.5-17.0'	12-14-17	31
20.0		5A	20.5-22.0'	10-13-17	30
	(Becomes Very Dense at 25.5')	6A	25.5-26.5'	72-28+/2"	100+/8"
30.0'		7A	30.5-31.0'	100+	100+
31.5'	Gray Soft Shale - Moist	8A	32.0-32.5'	100+/4"	100+/4"
	Bottom of Boring at 32.5'				

METHOD: Hollow Auger & Mud
TECHNICIAN: DH-BK
JOB NO.: 04752

WATER OBSERVATIONS
INITIAL DEPTH: 0.0'
COMPLETION DEPTH: 0.0'
DEPTH AFTER: ____ HRS. ____

TYPE SAMPLER:
X A. SPLIT SPOON
___ B.
___ C. SHELBY TUBE

Note: River Depth at Boring D-24 was 20.5'

BOWSER - MORNER
TESTING LABORATORIES, INC.

BOCARTE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 2-23-74
HOLE NO. A-1
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 545.8

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Augered		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-23-74	
COMPLETE	2-23-74	
TOTAL HRS.		
BORING FOREMAN	D. Fequette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc	SAMPLE No	Pen	Rec
		0'-1'						1'0"	Top Soil			
		1'-18'6	A	Bag	#1			18'6"	Red Clay and Brown Silty Clay			
		18'6-24'	A	Bag	#2			24'0"	Brown F-C Sand, Little F-M Gravel, Little Silt			
		24'-29'	A	Bag	#3			29'0"	Brown F-C Sand, Some F-M Gravel, Little Silt			
		29'-38'	A	Bag	#4			38'0"	Brown F-C Sand, Some F-M Gravel			
		38'-60'	A	Bag	#5				Brown F Sand			
									Bottom Of Boring 60'0"			

GROUND SURFACE TO ____ USED ____ CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring
Samples 5 Jars

HOLE NO. A-1

TOWN PRESS – EAST TROY.

2860 FISHER ROAD COLUMBUS, OHIO

DATE 2-23-74
HOLE NO. A-2
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 545.8

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Augered		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-23-74	
COMPLETE	2-23-74	
TOTAL HRS.		
BORING FOREMAN	D. Fequette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc	SAMPLE No	Pen	Rec
		0'-1'						1'0"	Top Soil			
		1'-13'	A	Bag	#1			13'0"	Brown Silty Clay			
		13'-23'6	A	Bag	#2			23'6"	Brown F-C Sand, Some F Gravel and Silty Clay			
		23'6-30'	A	Bag	#3			30'0"	Brown F-C Sand and F-M Gravel, Trace of Silt			
		30'-50'	A	Bag	#4				Brown F-C Sand, Little F Gravel			
									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-2

TOWN PRESS – EAST TROY.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 2-23-74
HOLE NO. A-3
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 544.6

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
None at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Augered		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-23-74	a.m. p.m.
COMPLETE	2-25-74	a.m. p.m.
TOTAL HRS.
BORING FOREMAN D. Faquette
INSPECTOR
SOILS ENGR.

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc	SAMPLE No.	Pen	Rec
		0'-1'						1'0"	Top Soil			
		1'-12'6	A	Bag	#1				Red Clay, Brown Silt Clay			
		12'6-18'	A	Bag	#2			12'6"	Brown Silty Clay and F-C Sand, Trace of F Gravel			
		18'-34'	A	Bag	#3			18'0"				
									Brown F-C Sand, Little F Gravel			
		34'-40'	A	Bag	#4			34'0"				
									Brown F-C Sand, Trace of F Gravel			
									Bottom Of Boring 40'0"			

GROUND SURFACE TO _____ USED _____ "CASING" THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring _____
Rock Coring _____
Samples _____

HOLE NO. A-3

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 2-27-74
HOLE NO. A-4
LINE & STA. 665 South
OFFSET 8250 West
SURF. ELEV. 534.

GROUND WATER OBSERVATIONS
At 41'4" after ½ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-27-74	a.m. p.m.
COMPLETE	2-27-74	a.m. p.m.
TOTAL HRS.
BORING FOREMAN D. Faquette
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
								6"	Top Soil			
		0'6-8'	A	Bag	#1			8'0"	Red Clay			
		8'-19'	A	Bag	#2			19'0"	Brown C Silty Sand, F-M Gravel			
		19'-33'	A	Bag	#3			33'0"	Brown M-C Silty Sand and F Gravel			
		33'-55'	A	Bag	#4				Brown F Sand			
									Bottom Of Boring 55'0"			

GROUND SURFACE TO _____ USED _____ "CASING" THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 55'
Rock Coring —
Samples 4

HOLE NO. A-4

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 2-27-74
HOLE NO. A-5
LINE & STA. 675 South
OFFSET 7350 West
SURF. ELEV. 528.7

TO The Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Station LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
34'9" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-27-74	a.m. p.m.
COMPLETE	2-27-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
		0'-0'6"						6"	Top Soil			
		0'6-9'	A	Bag	#1			9'0"	Red Clay			
		9'-13'6	A	Bag	#2			13'6"	Dark Gray Silty Clay and Red Sand			
		13'6-19'	A	Bag	#3			19'0"	Brown M-C Silty Sand, Some F-M Gravel			
		19'-40'	A	Bag	#4				Brown M Sand and F Gravel			
									Bottom Of Boring 40'0"			

GROUND SURFACE TO ____ USED ____ "CASING:" THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY
Earth Boring 40'0
Rock Coring —
Samples 4

HOLE NO. A-5

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-1-74
HOLE NO. A-6
LINE & STA. [illegible]
OFFSET 7152 W
SURF. ELEV. 535.0

TO The Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Station LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
38'6" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type		S.S.	
Size I.D.	N.W.	1½	
Hammer Wt.	300	140	BIT
Hammer Fall	24	30	

	Date	Time
START	3-1-74	a.m. p.m.
COMPLETE	3-2-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
		0'-0'6'						6"	Top Soil			
		0'6-2'6	D	2	6	6	Moist Stiff	4'6"	Sandy Silt	1	24	14
5'		5'-7'	D	8 / 12	12	16			Brown M-C Sand and F Gravel	2	24	8
		7'-9'	D	16 / 20	32	32				3	24	12
10'		9'-11'	D	24 / 30	36	48		11'0"		4	24	17
		11'-13'	D	16 / 20	18	18				5	24	6
15'		13'-15'	D	22 / 32	30	28			Brown Silty Sand and Little Gravel	6	24	8
		15'-17'	D	8 / 10	16	16		17'0"		7	24	6
20'		17'-19'	D	12 / 18	22	26	Moist Very Stiff		Brown M Sand, Trace of Gravel	8	24	6
		19'-21'	D	22 / 32	36	41		21'0"		9	24	6
25'		21'-23'	D	26 / 24	40	36			Brown F-C Silty Sand and F Gravel	10	24	7
		23'-25'	D	50 / 59	50	52				11	24	8
		25'-27'	D	10 / 12	14	14		27'0"		12	24	6
30'		27'-29'	D	10 / 14	14	14			Brown M Sand, F Gravel, Trace of Coal	13	24	7
		29'-31'	D	14 / 20	18	18		33'0"		14	24	1
35'		31'-33'	D	6 / 12	18	22		35'0"	Brown M Sand, Trace of F Gravel	15	24	8
		33'-35'	D	12 / 26	34	50				16	24	6
		35'-37'	D	12 / 14	16	20			Brown F Sand	17	24	
40'		37'-39'	D	16 / 24	24	32				18	24	8

GROUND SURFACE TO 53'0" USED N W "CASING: THEN Sampled To 55'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY
Earth Boring 55'0
Rock Coring —
Samples 26

HOLE NO. A-6

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-6
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Station
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		39'-41'	D	18	22	28				19	24	8
				8								
		41'-43'	D	12	12	18				20	24	0
				14								
45		43'-45'	D	18	22	30				21	24	8
				26								
		45'-47'	D	24	34	34				22	24	8
				22			Moist Very Stiff					
		47'-49'	D	27	34	38			Brown F Sand	23	24	9
				18								
50		49'-51'.	D	24	24	30				24	24	8
				26								
		51'-53'	D	24	34	34				25	24	12
				20								
		53'-55'	D	26	30	30				26	24	10
55									Bottom Of Boring 55'0"			
60												
65'												
70'												
75'												
80'												

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense

Cohesive Consistency
0-4 Soft
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff
30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-6

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

DATE 2-22-74
HOLE NO. A-7
LINE & STA. 835 South
OFFSET 8190 West
SURF. ELEV. 549.5

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Station
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type	Auger		
Size I.D.	3 3/4		
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-22-74	a.m. p.m.
COMPLETE	2-22-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Faquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
		1'-19'6	A	Bag	#1			19'6"	Red Clay			
		19'6-28'6	A	Bag	#2				Silty Sand and Gravel			
		28'6-40'	A	Bag	#3			28'6"	Gray Sand and Gravel			
									Bottom Of Boring 40'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense

Cohesive Consistency
0-4 Soft
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff
30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-7

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 2-21-74
HOLE NO. A-8
LINE & STA. 845 South
OFFSET 7975 West
SURF. ELEV. 550.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Station
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
None at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger		
Size I.D.	3 3/4		
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-21-74	a.m. p.m.
COMPLETE	2-22-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
		1'-20'6	A	Bag	#1				Red Clay			
								20'6"				
		20'6-33'	A	Bag	#2				Silty Sand and Gravel			
								33'0"				
		33'-40'	A	Bag	#3				Dark Gray Sand and Gravel			
									Bottom Of Boring 40'0"			

GROUND SURFACE TO _____ USED _____ "CASING: THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring _____
Rock Coring _____
Samples _____

HOLE NO. A-8

2860 FISHER ROAD COLUMBUS, OHIO

DATE 2-21-74
HOLE NO. A-9
LINE & STA. 855 South
OFFSET 7785 West
SURF. ELEV. 549.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Station
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
None at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger		
Size I.D.	3 3/4		
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-21-74	a.m. p.m.
COMPLETE	2-21-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'						1'0"	Top Soil			
		1'-19'	A	Bag	#1				Red Clay			
								19'0"				
		19'-34'	A	Bag	#2				Gravel and Sand			
								34'				
		34'-50'	A	Bag	#3				Sand and Gravel			
									Bottom Of Boring 50'0"			

GROUND SURFACE TO _____ USED _____ "CASING: THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring _____
Rock Coring _____
Samples _____

HOLE NO. A-9

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO 45,099

SHEET 1 OF 1
DATE 2-21-74
HOLE NO. A-10
LINE & STA. 865 South
OFFSET 9580 West
SURF. ELEV. 513.2

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
None at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger		
Size I.D.	3 3/4		
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-21-74	a.m. p.m.
COMPLETE	2-21-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
		0'-7'	A	Bag	#1				Sand and Gravel			
								7'0"				
		7'-30'	A	Bag	#2				F Sand			
									Bottom Of Boring 30'0"			

GROUND SURFACE TO _____ USED _____ "CASING: THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring _____
Rock Coring _____
Samples _____

HOLE NO. A-10

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 2-21-74
HOLE NO. A-11
LINE & STA. 875 South
OFFSET 7380 West
SURF. ELEV. 529.0

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
None at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger		
Size I.D.	3 3/4		
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-21-74	a.m. p.m.
COMPLETE	2-21-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
		0'-6'	A	Bag	#1				Sand and Gravel			
								6'0"				
		6'-24'	A	Bag	#2				Sand and Gravel			
								24'0"				
		24'-45'	A	Bag	#3				F Sand			
									Bottom Of Boring 45'0"			

GROUND SURFACE TO _____ USED _____ "CASING: THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring _____
Rock Coring _____
Samples _____

HOLE NO. A-11

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 2-27-74
HOLE NO. A-12
LINE & STA. 885 South
OFFSET 7190 West
SURF. ELEV. 526.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Station
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
35'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type	Auger		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-27-74	a.m. p.m.
COMPLETE	2-27-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Fequette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-0'6"						6"	Top Soil			
		0'6-14'	A	Bag	#1			14'0"	Red Clay			
		14'-23'	A	Bag	#2			23'0"	Brown F Silty Clayey Sand and F Gravel			
		23'-28'	A	Bag	#3			28'0"	Brown C Silty Sand and F Gravel			
		28'-50'	A	Bag	#4				Brown M Sand			
									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING" THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0
Rock Coring —
Samples 4

HOLE NO. A-12

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

DATE
HOLE NO. A-13
LINE & STA.
OFFSET
SURF. ELEV. 549.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Station
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type	Augered		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-23-74	a.m. p.m.
COMPLETE	2-23-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Fequette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
		1'-19'6	A	Bag	#1			19'6"	Brown Silty Clay			
		19'6-40'	A	Bag	#2				Brown F-C Sand, Little F Gravel, Trace of Silt			
									Bottom Of Boring 40'0"			

GROUND SURFACE TO ____ USED ____ "CASING" THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-13

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. FO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE
HOLE NO. A-14
LINE & STA.
OFFSET
SURF. ELEV. 543.2

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Augered		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-25-74	a.m. p.m.
COMPLETE	2-25-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
		0'-1'						1'0"	Top Soil			
		1'-12'6	A	Bag	#1			12'6"	Red Clay and Brown Silty Clay			
		12'6-15'	A	Bag	#2			15'0"	Brown F Sand and Silt, Trace of F Gravel			
		15'-28'6	A	Bag	#3			28'6"	Brown F-C Sand, Some F Gravel			
		28'6-40'	A	Bag	#4				Brown F Sand, Trace of F Gravel			
									Botton Of Boring 40'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-14

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. FO 96096
SAMPLES SENT TO Dr. Davisson | OUR JOB NO. 45,099

DATE 2-25-74
HOLE NO. A-15
LINE & STA.
OFFSET
SURF. ELEV. 546.2

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Augered		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-25-74	a.m. p.m.
COMPLETE	2-25-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
		0'-1'						1'0"	Top Soil			
		1'-13'6	A	Bag	#1			13'6"	Brown Silt and Clay			
		13'6-18'6	A	Bag	#2			18'6"	Brown F-C Sand, Some F-M Gravel, Little Silt			
		18'6-23'	A	Bag	#3			23'0"	Brown F-C Sand, Some F Gravel			
		23'-29'	A	Bag	#4			29'0"	Brown F-C Sand, Little F-M Gravel			
		29'-40'	A	Bag	#5				Sand and Little Gravel			
									Bottom Of Boring 40'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-15

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 2-26-74
HOLE NO. A-16
LINE & STA. 1010South
OFFSET 7700 West
SURF. ELEV. 7625 518.2

GROUND WATER OBSERVATIONS
At 30'0" after 1/2 Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-26-74	a.m. p.m.
COMPLETE	2-26-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-8'	A	Bag	#1			8'0"	Sand and Gravel			
		8'-12'6	A	Bag	#2			12'6"	Sand and Gravel, Silt			
		12'6-14'6	A	Bag	#3			14'6"	Sand and Gravel			
		14'6-35'	A	Bag	#4				Fine Sand			
									Bottom Of Boring 35'0"			

GROUND SURFACE TO _____ USED _____ "CASING" THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 35'0
Rock Coring —
Samples 4

HOLE NO. A-16

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 2-26-74
HOLE NO. A-17
LINE & STA. 1020South
OFFSET 7625 West
SURF. ELEV. 526.2

GROUND WATER OBSERVATIONS
At 36'6" after 1/2 Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	2-26-74	a.m. p.m.
COMPLETE	2-26-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-2'							Sand and Gravel Fill			
		2'-18'6	A	Bag	#1			18'6"	Red Clay			
		18'6-23'6	A	Bag	#2			23'6"	Sand, Gravel and Clay			
		23'6-45'	A	Bag	#3				F Sand			
									Bottom Of Boring 45'0"			

GROUND SURFACE TO _____ USED _____ "CASING:- THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 45
Rock Coring —
Samples 3

HOLE NO. A-17

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 2-28-74
HOLE NO. A-18
LINE & STA. 800 S
OFFSET 6910 W
SURF. ELEV. 530.0

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D. 50'	N.W.	1 1/8	
Hammer Wt.	300	140	BIT
Hammer Fall	24	30	

	Date	Time
START	2-28-74	a.m. p.m.
COMPLETE	3-1-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'						1'0"	Top Soil			
5'		5'-6'6	D	6	6	8				1	18	18
									Brown Silty Clay			
10'							Moist Stiff					
								14'0"				
15'				2								
		15'-17'	D	4	4	6				2	24	16
				2					Silty Clay, Trace of Sand Layers			
		17'-19'	D	4	6	6				3	24	15
				2								
20'		19'-21'	D	4	4	6				4	24	14
				12				21'0"				
		21'-23'	D	12	10	12	Moist Medium Dense		C Silty Sand, Trace of F Gravel and Coal	5	24	10
				12				23'0"				
		23'-25'	D	12	14	12			Brown C Sand, Trace of F Gravel	6	24	7
25'								25'0"				
				2					Brown M-C Sand			
		25'-27'	D	2	4	4	Loose	27'0"		7	24	6
				2					Brown C Sand, Trace of Gravel			
		27'-29'	D	6	6	8		29'0"		8	24	10
30'				8								
		29'-31'	D	12	10	10				9	24	12
				12								
		31'-33'	D	14	18	14	Moist Medium Dense		Brown M Sand	10	24	12
				10								
35'		33'-35'	D	12	12	16				11	24	10
				2								
		35'-37'	D	4	4	4				12	24	0
				6								
		37'-39'	D	6	8	10				13	24	10
40'		39'-41'	D	14	12	14				14	24	12

GROUND SURFACE TO 50'0" USED RW "CASING: THEN Sampled To 51'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 51'0
Rock Coring —
Samples 19

HOLE NO. A-18

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO | PROJ. NO. PO 96095
SAMPLES SENT TO | OUR JOB NO. 45,099

DATE
HOLE NO. A-18
LINE & STA.
OFFSET
SURF. ELEV.

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		41'-43'	D	4	6	6				15	24	[illegible]
				4								
		43'-45'	D	4	8	10				16	24	6
				4								
5'		45'-47'	D	6	9	11	Moist Medium Dense		Brown F Sand	17	24	[illegible]
				4								
		47'-49'	D	4	8	8				18	24	12
				6								
		49'-51'	D	9	10	9				19	24	1[illegible]
10'												
									Bottom Of Boring 51'0"			
15'												
20'												
25'												
30'												
35'												
40'												

GROUND SURFACE TO _____ USED _____ "CASING: THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-18

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE
HOLE NO. A-19
LINE & STA.
OFFSET
SURF. ELEV. 523.7

GROUND WATER OBSERVATIONS
At 38'6" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-15-74	
COMPLETE	3-15-74	
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Per.	Re.
		0'-1'						1'0"	Top Soil			
		1'-15'		Bag #1				15'0"	Brown Silty Clay	1		
		15'-25'		Bag #2				25'0"	Brown Clayey Silt	2		
		25'-35'		Bag #3				35'0"	Gray Silt	3		
		35'-37'	D	4 7	6	9	Moist M. Dense		Brown F Sand	1	24	9
		37'-39'	D	9 10	13	17				2	24	8
		39'-41'	D	12 14	19	19	Moist Dense			3	24	
		41'-43'	D	12 12	16	20				4	24	
		43'-45'	D	12 17	15	19				5	24	
		45'-47'	D	21 13	24	29	Moist V. Dense			6	24	8
		47'-49'	D	17 17	23	27				7	24	1
		49'-51'	D	17 10	22	25	Moist Dense			8	24	
		51'-53'	D	14 16	19	23				9	24	
		53'-55'	D	16 8	23	28	V. Dense			10	24	
		55'-57'	D	12 9	15	19	Moist Dense			11	24	
		57'-59'	D	13 10	17	23				12	24	1
		59'-61'	D	14	19	26				13	24	
									Bottom Of Boring 61'0"			

GROUND SURFACE TO 61'0" USED Auger "CASING: THEN ____ Begs-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-19

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-16-74
HOLE NO. A-20
LINE & STA. South 1050
OFFSET West 555
SURF. ELEV. 523.5

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 28'4" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-16-74	
COMPLETE	3-18-74	
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Per.	Re.
		0'0-0'6						0'6"	Top Soil			
		0'6-13'	A	Bag #1				13'0"	Brown Clay	1		
		13'-33'	A	Bag #2				33'0"	Brown Clayey Silt	2		
		35'-37'	D	4 6	6	8	Moist Medium Dense	38'0"	Brown F-M Sand and Gravel	1	24	9
		37'-38'	D	10 12						2	12	8
		38'-39'	D	8 12				40'0"	Gray Clay	3	12	3
		40'-42'	D	6 7	9	9			Brown M-F Sand	4	24	3
		42'-44'	D	12 17	23	29	Moist Very Dense			5	24	7
		44'-46'	D	21 27	33	38				6	24	7
		46'-48'	D	17 24	28	31				7	24	8
		48'-50'	D	23 27	34	40				8	24	7
		50'-52'	D	21 29	33	39				9	24	6
		52'-54'	D	17 24	29	33				10	24	7
		54'-56'	D	14 21	25	29				11	24	7
		56'-58'	D	23 29	33	39				12	24	10
		58'-60'	D	21 27	31	40				13	24	10
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 58'0" USED Auger "CASING: THEN Sampled To 60'0" Begs-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0
Rock Coring —
Samples 13

HOLE NO. A-20

2860 FISHER ROAD COLUMBUS, OHIO

TO Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

DATE 3-18-74
HOLE NO. A-21
LINE & STA. South 1[illegible]
OFFSET West [illegible]
SURF. ELEV. 535.1 [illegible]

GROUND WATER OBSERVATIONS
At 36'0" after ½ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR
Type	Auger	S.S.	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-18-74	[illegible]
COMPLETE	3-19-74	[illegible]
TOTAL HRS.		
BORING FOREMAN	D. [illegible]	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Re.
		0'-1'						1'0"	Top Soil			
		1'-23'	A	Bag	#1				Brown Silty Clay	1		
		23'-36'	A	Bag	#2			23'0"		2		
		36'-40'	A	Bag	#3		Moist Stiff	36'0"	Brown Silty Clay, Sand and Gravel	3		
		40'-42'	D	4 / 4	6	6		40'0"	Brown F Sand	1	24	[illegible]
		42'-44'	D	9 / 13	13	17		42'0"	Brown and Gray Clay	2	24	[illegible]
		44'-46'	D	9 / 11	10	15	Moist Medium Dense		Brown M Sand	3	24	[illegible]
		46'-48'	D	10 / 10	13	17				4	[illegible]	[illegible]
		48'-50'	D	13 / 17	23	28	Moist Very Dense			5	24	[illegible]
		50'-52'	D	15 / 19	23	29				6	24	[illegible]
		52'-54'	D	13 / 13	17	20	Moist Dense			7	24	[illegible]
		54'-56'	D	10 / 14	19	23				8	24	[illegible]
		56'-58'	D	16 / 19	23	29	Moist Very Dense			9	24	[illegible]
		58'-60'	D	17 / 23	27	27				10	24	[illegible]
		60'-62'	D	19 / 23	29	33				11	24	[illegible]
		62'-64'	D	21 / 19	23	28				12	24	[illegible]
		64'-66'	D	19 / 23	27	32				13	24	[illegible]
									Bottom Of Boring 66'0"			

GROUND SURFACE TO 66'0" USED Auger "CASING: THEN Sampled To 66'0" Bags-1

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY
Earth Boring 66'0"
Rock Coring —
Samples 13

HOLE NO. A-21

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

SHEET 1 OF 1
DATE 3-25-74
HOLE NO. A-22
LINE & STA. South 160
OFFSET West 36
SURF. ELEV. 510.3

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
13'4" at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR
Type	Auger		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-25-74	a.m.
COMPLETE	3-25-74	p.m.
TOTAL HRS.		
BORING FOREMAN	J. Morris	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Re.
								0'6"	Top Soil			
		0'6-12'	A	Bag	#1			12'0"	Brown Silty Clay	1		
		12'-35'	A	Bag	#2			35'0"	Brown Sand, Some Silt; Sandy Shale at 34'9"; Top of Rock	2		
		35'-50'	A	Bag	#3				Bag #3 from Ground Up Sandy Shale	3		
									Bottom Of Boring 50'0"			

GROUND SURFACE TO 50'0" USED Auger "CASING: THEN Bags-3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY
Earth Boring 50'0"
Rock Coring —
Samples —

HOLE NO. A-22

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-25-74
HOLE NO. A-23
LINE & STA. South 170
OFFSET West 263
SURF. ELEV. 521.4

TO The Dayton Power & Light Co.
ADDRESS
PROJECT NAME Killen Elec. Gen. Sta.
LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co.
PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
29'8" at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-25-74	a.m. p.m.
COMPLETE	3-26-74	a.m. p.m.
TOTAL HRS.		

BORING FOREMAN J. Morris
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
								1'0"	Top Soil			
									Brown Silty Clay			
		1'-35'	A	Bag	#1			35'0"		1		
									Brown Sand			
		35'-55'	A	Bag	#2					2		
									Bottom Of Boring 55'0"			

GROUND SURFACE TO 55'0" USED Auger "CASING: THEN _____ Bags-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 55'0"
Rock Coring —
Samples —

HOLE NO. A-23

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-26-74
HOLE NO. A-24
LINE & STA. South 107
OFFSET West 166
SURF. ELEV. 506.1

TO The Dayton Power & Light Co.
ADDRESS
PROJECT NAME Killen Elec. Gen. Sta.
LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co.
PROJ. NO PO 96096
SAMPLES SENT TO Dr. Tom Davisson
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
15'2" at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type		Auger	
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-26-74	a.m. p.m.
COMPLETE	3-27-74	a.m. p.m.
TOTAL HRS.		

BORING FOREMAN J. Morris
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'						1'0"	Top Soil			
		1'-13'	A	Bag	#1			13'0"	Brown Silty Clay	1		
		13'-27'	A	Bag	#2			27'0"	Brown Silty Sandy Clay	2		
		27'-38'	A	Bag	#3			38'0"	Gray-Brown Silty Sandy Clay	3		
		38'-60'	A	Bag	#4				Gray-Brown F-M Sand, Trace of F Gravel & Silt	4		
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 60'0" USED Auger "CASING: THEN _____ Bags-4

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring —
Samples —

HOLE NO. A-24

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 3-27-74
HOLE NO. A-25
LINE & STA. South 30
OFFSET West 192
SURF. ELEV. 524.0

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
23'7" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		Auger	
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-27-74	a.m. p.m.
COMPLETE	3-28-74	a.m. p.m.

TOTAL HRS.
BORING FOREMAN J. Moorie
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
								1'6"	Top Soil			
		1'6-16'	A	Bag	#1				Brown Silty Clay	1		
								16'0"				
		16'-23'	A	Bag	#2				Brown Silty Sandy Clay	2		
								23'0"				
		23'-32'	A	Bag	#3				Brown F Sand and Silty Clay	3		
								32'0"				
		32'-40'	A	Bag	#4				Brown F Sand, Little Silt, Trace of F Gravel	4		
		40'-55'	A	Bag	#5			40'0"		5		
									Brown F-M Sand, Trace of Silt and F Gravel			
									Bottom Of Boring 55'0"			

GROUND SURFACE TO 55'0" USED Auger "CASING: THEN Page-5

Sample Type:
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY
Earth Boring 55'0"
Rock Coring —
Samples —

HOLE NO A-25

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 3-28-74
HOLE NO. A-26
LINE & STA. South 330
OFFSET West 270
SURF. ELEV. 521.7

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
27'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		Auger	
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-28-74	a.m. p.m.
COMPLETE	3-28-74	a.m. p.m.

TOTAL HRS.
BORING FOREMAN J. Cornwell
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
								1'0"	Top Soil			
		1'-10'	A	Bag	#1				Brown Sandy Silty Clay	1		
		10'-27'	A	Bag	#2					2		
								27'0"				
		27'-31'	A	Bag	#3				Brown F Sand and Silt Trace of F Gravel	3		
								31'0"				
		31'-35'	A	Bag	#4				Brown F Sand, Some Silt, Trace of F Gravel	4		
								35'0"				
		35'-55'	A	Bag	#5				Brown F Sand, Trace of Gravel	5		
									Bottom Of Boring 55'0"			

GROUND SURFACE TO 55'0" USED Auger "CASING: THEN Page-5

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY
Earth Boring 55'0"
Rock Coring —
Samples —

HOLE NO. A-26

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-28-74
HOLE NO. A-27
LINE & STA. South 3775
OFFSET West 3665
SURF. ELEV. 521.7

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
30'6" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-28-74	
COMPLETE	3-29-74	

TOTAL HRS.
BORING FOREMAN J. Cornwell
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
								1'0"	Top Soil			
									Brown Silty Sandy Clay			
		1'-10'	A	Bag	#1			10'0"		1		
									Brown Sandy Silty Clay			
		10'-30'6	A	Bag	#2			30'6"	Water at 30'6"	2		
									Brown Silty F-C Sand and F Gravel			
		30'6-36'	A	Bag	#3			36'0"		3		
									Brown F-M Sand, Some Silt			
		36'-56'	A	Bag	#4					4		
									Bottom Of Boring 56'0"			

GROUND SURFACE TO 56'0" USED Auger "CASING: THEN ____ Bags-4

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 56'0"
Rock Coring —
Samples —

HOLE NO. A-27

2860 FISHER ROAD COLUMBUS OHIO

DATE 4-2-74
HOLE NO. A-28
LINE & STA. N 3775
OFFSET W/ 4645
SURF. ELEV. 521.7

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
34'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-2-74	
COMPLETE	4-2-74	

TOTAL HRS.
BORING FOREMAN J. Cornwell
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		1'-1'6	D	1	1	6	Loose		Top Soil 0'7"	1	18	12
5'		5'-6'6	D	15	15	21	Moist Dense		Brown Sandy Silt Clay	2	18	18
10'		10'-11'6	D	7	8	11				3	18	18
15'		15'-16'6	D	5	6	12				4	18	[illegible]
		0'-19'	A	Bag	#1			19'0"		1		
20'		20'-21'6	D	5	7	10	Moist Medium Dense			5	18	[illegible]
25'		25'-26'6	D	7	12	12			Brown Sand	6	18	[illegible]
30'		30'-31'6	D	8	12	13				7	18	1[illegible]
								34'0"	Water at 34'0"			
35'		35'-36'6	D	14	20	27	Moist Dense		Grayish Brown Sand	8	18	[illegible]
40'												

GROUND SURFACE TO 40'0" USED Auger "CASING: THEN Sampled To 41'6" Bags-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 41'
Rock Coring —
Samples —

HOLE NO. A-28

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45.099

DATE
HOLE NO. A-28
LINE & STA.
OFFSET
SURF. ELEV.

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		19'-41'6	A	Bag	#2				Grayish Brown Sand	2		
		40'-41'6	D	9	16	20			Bottom Of Boring 41'6"	9	18	13
45'												

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-28

TOWN PRESS – EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45.099

DATE 4-1-74
HOLE NO. A-28
LINE & STA. South
OFFSET West 566'
SURF. ELEV. 519.3

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
30'2" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-1-74	a.m. p.m.
COMPLETE	4-1-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	S. Perry	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	1	5	Moist V/Stiff		0'9" Top Soil	1	18	18
5'		5'-6'6	D	9	13	16				2	18	18
10'		10'-11'6	D	5	8	11			Brown Sandy Silty Clay	3	18	18
		1'-15'6	A	Bag	#1					1		
15'		15'-16'6	D	6	8	12	Moist V/Stiff			4	18	18
20'		20'-21'6	D	5	8	12				5	18	18
		15'6-27'6	A	Bag	#2					2		
25'		25'-26'6	D	5	8	12		27'6"		6	18	19
30'								30'6"	Brown Sand — Water at 30'6"			
		30'-31'6	D	3	5	10	Moist Stiff			7 / 8	6 / 12	8 / 12
35'		35'-36'6	D	3	5	8			Gray Silty Sandy Clay with Sand Streak	9	18	16
		38'-39'	A	Bag	#3			38'0"		3		
40'							V/Stiff	39'0"	Layer of Organic Sandy Silt			

GROUND SURFACE TO 70'0" USED Auger "CASING: THEN Sampled To 71'6" Barrel-5

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 71'6
Rock Coring
Samples 21

HOLE NO. A-27

TOWN PRESS – EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-29
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. LOCATION Wrightsville, Ohio
REPORT SENT TO PROJ. NO. PO 96096
SAMPLES SENT TO OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		

BORING FOREMAN
INSPECTOR
SOILS ENGR.

LOCATION OF BORING

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		40'-41'6	D	7	15	18	V/Stiff	42'10"	Gray Silty Sandy Clay with Sand Streak	10	18	18
		31'6-42'	A	Bag	#4				Brown Sand and Gravel	4		
45'		45'-46'6	D	20	16	18		47'0"		11	18	18
50'		50'-51'6	D	12	16	14				12	18	18
55'		55'-56'6	D	5	7	12				13	18	18
60'		60'-61'6	D	9	11	12	Moist Dense		Brown Silty Sand	14	18	18
65'		65'-66'6	D	10	16	18				15	18	14
		47'-70'	A	Bag	#5					5		
70'		70'-71'6	D	10	18	21				16	18	18
									Bottom Of Boring 71'6"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO A-29

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-7-74
HOLE NO. A-30
LINE & STA. 3305 South
OFFSET 6590 West
SURF. ELEV. 521.8

TO The Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
38'0" at Completion.
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger		
Size I.D.	3 3/4		
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-7-74	a.m. p.m.
COMPLETE	3-7-74	a.m. p.m.
TOTAL HRS.		

BORING FOREMAN G. Brouillotte
INSPECTOR
SOILS ENGR.

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-0'8"						0'8"	Top Soil			
		0'8-9'	A	Bag	#1			9'0"	Brown Silt, Some Clay	1		
		9'-38'	A	Bag	#2			38'0"	Brown F Sandy Silt	2		
								58'0"	Gray Silt, Some F Sand			
		38'-58'	A	Bag	#3				Light Brown Silt, Trace of M Sand and Coal Pieces	3		
									Bottom Of Boring 60'0"			
		60'	A	Jar	4					4		

GROUND SURFACE TO 60'0" USED Auger "CASING: THEN – Bags-4

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'6
Rock Coring –
Samples 4

HOLE NO. A-30

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 3-5-74
HOLE NO. A-31
LINE & STA. 2325 Fwall
OFFSET 6590 West
SURF. ELEV. 532.1

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
40' at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.	3 3/4	1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-5-74	a.m. p.m.
COMPLETE	3-7-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	G. Brouillette	
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc	SAMPLE No.	Pen	Rec
		0'-0'6"	A					6"	Top Soil			
		0'6"-8'	A	Bag #1						B1		
									Gray Silt, Some Clay			
5'												
								8'0"				
		8'-19'	A	Bag #2						B2		
10'												
									Gray Silt			
15'												
								19'0"				
20'		19'-35'	A	Bag #3						B3		
25'									Brown F-M Sand and Silt			
30'												
								33'0"				
35'				6								
		35'-37'	D	6	8	12			Brown F-C Sand, Little Gravel	1	2'	6"
				19								
		37'-39'	D	20	25	29				2	2'	7"
				20								
40'		39'-41'	D	22	27	28				3	2'	6"

GROUND SURFACE TO 55'0" USED Auger "CASING: THEN Sampled To 55'0" Bags – 3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 55'0
Samples 10

HOLE NO. A-31

TOWN PRESS – EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-31
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		41'-43'	D	14				39'6"				
		41'-43'	D	23	20	16				4	2	9
				17					Brown F-C Sand			
		43'-45'	D	14	15	20				5	2	1
45'				25								
		45'-47'	D	14	21	27				6	2	11
				24				46'6"				
		47'-49'	D	22	23	26			Orange F Sand			
				29				49'0"				
50'		49'-51'	D	17	19	30				8	2	
				23								
		51'-53'	D	19	22	27			Orange Brown F-M Sand	9	2	1
				23								
		53'-55'	D	20	22	36				10	2	1
55'									Bottom Of Boring 55'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-31

TOWN PRESS – EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 3-4-74
HOLE NO. A-32
LINE & STA. 1420 S
OFFSET 6590 W
SURF. ELEV. 520.8

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
34'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type	3 3/4 Auger		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-4-74	a.m. p.m.
COMPLETE	3-4-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	G. Brouillette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
		1'-4'	A	Bag	#1				Dark Brown Clay and Silt	1		
								4'0"				
		4'-23'	A	Bag	#2				Brown Silt, Trace of F Sand	2		
								23'0"				
		23'-28'	A	Bag	#3		Moist		Light Brown F Sand and Silt	3		
								28'0"				
		28'-34'	A	Bag	#4				Light Brown F Sand, Little C Sand, Some Silt	4		
								34'0"				
		34'-55'	A	Bag	#5		(Very Wet)		Light Brown F-C Sand	5		
									Bottom Of Boring 55'0"			

GROUND SURFACE TO 55'0" USED A "CASING: THEN

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 55'0
Rock Coring —
Samples 5

HOLE NO. A-32

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Station | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 3-2-74
HOLE NO. A-33
LINE & STA. 1420 S
OFFSET 7530 W
SURF. ELEV. 522.3

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
35'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type	3 3/4 Auger		
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-2-74	a.m. p.m.
COMPLETE	3-2-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	G. Brouillette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-0'6						6"	Top Soil	1		
		0'6-22'	A	Bag	#1				Brown Clay and Silt			
		22'-33'	A	Bag	#2		Moist	22'0"		2		
		33'-36'	A	Bag	#3			33'0"	Brownish Gray Sandy Silt	3		
		36'-60'	A	Jar			(Very Wet)	36'0"	Gray F Sand, Trace of Silt	4		
									Brown F-M Sand			
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 60'0" USED A "CASING: THEN

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0
Rock Coring —
Samples 4

HOLE NO. A-33

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-4-74
HOLE NO. A-34
LINE & STA. South 142
OFFSET West 8400
SURF. ELEV. 519.8

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 46'4" after 1/2 Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		SS	
Size I.D.	Auger	1 1/2	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-4-74	a.m. p.m.
COMPLETE	4-4-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
				1								
		1'-2'	D	1	2	2				1	24	18
				2								
5'		5'-7'	D	6	6	8				2	24	20
				4								
10'		10'-12'	D	4	6	6	Moist Soft		Silty Clay	3	24	10
				3								
15'		15'-17'	D	5	5	4				4	24	9
				10								
20'		20'-22'	D	14	14	16		22'0"		5	24	8
				14			Moist Dense		Medium Brown Sand and F Gravel			
25'		25'-27'	D	17	22	26		27'0"		6	24	7
				11								
30'		30'-32'	D	16	12	10				7	24	6
				10			Moist M/Dense		Medium Brown Sand			
		32'-34'	D	12	16	14				8	24	6
				8								
35'		34'-35'	D	10	13	15				9	24	8
				7								
		36'-38'	D	9	9	8				10	24	8
				10								
40'		38'-40'	D	10	14	13				11	24	8

GROUND SURFACE TO 48'0" USED Auger "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 20'0
Rock Coring —
Samples 10

HOLE NO. A-34

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-34
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Re
				12	15							
		40'-42'	D	15	14	17				12	24	8
				13								
		42'-44'	D	17	17	22				13	24	9
45'				17			Moist Dense		Brown F Sand			
		44'-46'	D	19	23	23				14	24	9
				13								
		46'-48'	D	20	27	24				15	24	10
				18								
50'		48'-50'	D	17	24	29				16	24	10
									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-34

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-4-74
HOLE NO. A-35
LINE & STA. 1710 South
OFFSET 8760 West
SURF. ELEV. 525.4

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 38'0" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type	Auger	S.S.	
Size I.D.	3 3/4	1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-4-74	a.m. p.m.
COMPLETE	3-5-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
								0'6"	Top Soil			
		0'-28'	A	Bag #1				8'0"	Brown Silty Clay	1		
		5'6-6'		Shelby					Brown Clayey Silt	S1	18	14
		6'6-8'	D	6	8	10	Moist Very Stiff	14'0"		1	18	18
		10'-12'		Shelby				19'0"	Brown F Sand and Clayey Silt	S2	24	[illegible]
		12'-13'6	D	4	4	6	Moist Stiff	25'0"	Brown F Sand, Some Silt	2	18	16
		15'-17'		Shelby					Brown F-C Sand, Some F Gravel	S3	24	22
		17'-18'6	D	2	4	4	Moist Loose	31'0"		3	18	12
		20'-22'		Shelby				41'0"	Brown F-C Sand, Some F-C Gravel, Trace of Silt	S4	24	21
		22'-23'6	D	4	4	6	Moist Dense		Brown F Sand	4	18	12
		25'-26'6	D	26	24	26			Bottom Of Boring 75'0"	5	18	12
		28'-32'6	A	Bag #2						2		
		32'6-41'	A	Bag #3						3		
		41'-75'	A	Bag #4						4		

GROUND SURFACE TO 75'0" USED Auger "CASING: THEN Bags-4 Shelbys-4

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 75'0"
Rock Coring —
Samples 5

HOLE NO. A-35

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

DATE 3-28-74
HOLE NO. A-36
LINE & STA. South 22[illegible]
OFFSET West 6[illegible]
SURF. ELEV. 516.5

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 34'0" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type		SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-28-74	a.m. p.m.
COMPLETE	4-1-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	W. Smith	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
5'							Damp M/Stiff -Stiff		Brown Silty Clay, Little to Some F-C Sand, Trace of F Gravel			
10'		0'-11'		Bag #1				11'0"		1		
15'									Brown Silt and F Sand			
		11'-20'		Bag #2						2		
20'							Moist M/Dense	20'0"				
		20'-31'		Bag #3						3		
25'									Brown F-M Sand, Some Silt			
30'								31'0"				
35'		35'-36'6	D	15	16	23	Moist-Wet Dense		Brown F-C Sand, Trace of F-M Gravel	1	18	13
40'												

GROUND SURFACE TO 22'0" USED HS "CASING: THEN Sampled To 36'6" Bags-3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 36'6"
Rock Coring —
Samples 5

HOLE NO. A-36

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-36
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. FO 96096
OUR JOB NO. 45.099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc	SAMPLE No.	Pen	Rec
		40'-41'6	D	13	15	17				2	18	18
45'		45'-46'6	D	15	15	17	Moist -Wet Dense		Brown F-C Sand, Trace of F-M Gravel	3	18	18
50'		50'-51'6	D	16	15	17				4	18	10
								53'0"				
55'		55'-56'6	D	17	18	19			Brown F-C Sand, Little to Some F-C Gravel	5	18	17
									Bottom Of Boring 56'6"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 30 + Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 4-3-74
HOLE NO. A-37
LINE & STA. South 3620
OFFSET West 6890
SURF. ELEV. 520.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. FO 96096
OUR JOB NO. 45.099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
2'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	NW	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-3-74	a.m. p.m.
COMPLETE	4-3-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornwell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	3	7			0'10" Top Soil	1	18	16
5'									Brown Sandy Silt Clay			
		5'-7'	Shelby							31	24	23
		7'-8'6	D	4	5	7				2	18	18
10'								10'0"				
		10'-12'	Shelby							32	24	22
		12'-13'6	D	4	4	7				3	18	19
15'		15'-17'	Shelby				Moist Stiff			33	24	22
		17'-18'6	D	5	5	6			Light Brown Silt and Clay, Some F Sand	4	18	16
20'		20'-22'	Shelby							34	24	24
		22'-23'6	D	3	3	5				5	18	18
25'		25'-27'	Shelby							35	24	24
								27'4"				
		27'-28'6	D	3	3	4				6	18	14
30'		30'-32'	Shelby	No Recovery								
		32'-33'6	D	4	4	7			Grey Silty Clay, Some F Sand	7	18	17
35'		35'-37'	Shelby							36	24	23
								37'6"	Water at 37'6"			
		37'-38'6	D	17	21	27	Moist Dense		Grayish Brown Sand and Gravel	8	18	13
40'												

GROUND SURFACE TO 35'0" USED N.A. "CASING: THEN Sampled To 76'0" Shelbys-6

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50 + Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30 + Hard

SUMMARY:
Earth Boring 76'0"
Rock Coring —
Samples 16

HOLE NO. A-37

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-37
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45.099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
		40'-41'6	D	19	21	28			Grayish Brown Sand and Gravel	9	18	8
								44'0"				
45		45'-46'6	D	11	15	15				10	18	10
50		50'-51'6	D	14	18	24				11	18	9
							Moist Dense					
55		55'-56'6	D	16	18	27				12	18	7
60		60'-61'6	D	16	19	25			Grayish Brown Sand, Little Silt	13	18	11
65		65'-66'6	D	15	25	39				14	18	7
70		70'-71'6	D	20	28	46	Moist V/Dense			15	18	6
75		75'-76'	D	27	50					16	12	5
									Bottom Of Boring 76'0"			
									Installed Well Point and Cap at 70'0"			
80												

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-37

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-1-74
HOLE NO. A-38
LINE & STA. South 4075
OFFSET West 4030
SURF. ELEV. 518.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45.099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
23'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	NW	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-1-74	a.m. p.m.
COMPLETE	4-2-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornwell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
		0'-1'6	D	1	2	4		1'0"	Top Soil	1	18	12
5'		5'-6'6	D	8	15	17			Brown Silty Sandy Clay	2	18	18
								9'0"				
10'		10'-12'	Shelby							S1	24	[illegible]
		12'-13'6	D	6	7	11	Moist			3	18	16
15'		15'-17'	Shelby						Brown Silty Sand, Trace of Clay	S2	24	24
		17'-18'6	D	6	8	12		18'3"		4	18	11
20'		20'-22'	Shelby							S3	24	2[illegible]
		22'-23'6	D	11	11	12			Brown Sand, Some Silt	5	18	9
25'		25'-26'6	D	5	10	10				6	18	17
									Water at 27'0"			
30'		30'-31'6	D	3	3	5	Wet		Brown Sand, Some Silt	7	18	[illegible]
								33'0"				
35'		35'-36'6	D	5	8	10	Wet		Brown F-C Sand, Trace of F Gravel	8	18	1[illegible]
40'												

GROUND SURFACE TO 65'0" USED RW "CASING: THEN Sampled to 60'0" Shelby=3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring —
Samples 14

HOLE NO. A-38

BUCKEYE DRILLING CORPORATION
2060 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-38
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		
COMPLETE		
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		40'-41'6	D	19	26	23				9	18	12
45'		45'-46'6	D	14	20	24				10	18	12
50'		50'-51'6	D	16	24	30	Wet		Brown Sand, Trace of Grnvel	11	18	8
55'		55'-56'6	D	17	29	40				12	18	10
60'		60'-61'5	D	19	30	50/5"				13	17	10
65'		65'-66'	D	27	50			66'		14	12	9
									Bottom Of Boring 66'0"			
									Installed Well Point and Cap at 55'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO A-38

BUCKEYE DRILLING CORPORATION
2060 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 3-28-74
HOLE NO. A-39
LINE & STA. South 12
OFFSET West 166'
SURF. ELEV. 522.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
29'7" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-28-74	
COMPLETE	3-29-74	
TOTAL HRS.		
BORING FOREMAN	S. Perry	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
									Top Soil 0'7"			
		5'-7'	Shelby							S1	24	16
		7'-8'6	D	13	18	28				1	18	1
		10'-12'	Shelby				Moist V/Stiff		Brown Sandy Silty Clay	S2	24	24
		12'-13'6	D	3	7	9				2	18	1
		15'-17'	Shelby							S3	24	2[illegible]
		17'-18'6	D	4	7	10				3	18	1
		19'-19'	A	Bag #1				19'0"		1		
		20'-22'	Shelby							S4	24	2
		22'-23'6	D	5	8	10				4	18	1
									Brown Sand, Trace of Silt			
								28'6"				
		28'6-35'	A	Bag #2			Moist M/Dense		Brown Silty Sand, Trace of C Sand	2		
								35'0"	Water 35'0"			
									Brown F-M Sand, Trace of Silt and F Gravel			
		35'-70'	A	Bag #3						3		
									Bottom Of Boring 70'0"			
									Installed Well Point and Cap at 70'0"			
									Run Permeability Test 5 Hours			

GROUND SURFACE TO 35'0" USED BS "CASING: THEN Sampled To 70'0" Shelbys-4 Bags-

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 70'0
Rock Coring —
Samples 4

HOLE NO. A-39

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-27-74
HOLE NO. A-40
LINE & STA. South 1692
OFFSET West 1330
SURF. ELEV. 511.9

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
19'2" at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	N.W.	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-27-74	a.m. p.m.
COMPLETE	3-27-74	a.m. p.m.
TOTAL HRS.		

BORING FOREMAN J. Morris
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
		0'-1'6	D	0	4	8		1'6"	Brown Silty Top Soil	1	18	12
		5'-7'	Shelby							S1	24	23
		7'-8'6	D	3	3	5				2	18	16
		10'-12'	Shelby							S2	24	18
		12'-13'6	D	2	3	7			Brown Silty Sandy Clay	3	18	18
		15'-17'	Shelby							S3	24	24
		17'-18'6	D	2	4	7				4	18	17
		20'-22'	Shelby					20'0"		S4	24	24
		22'-23'6	D	2	3	5				5	18	18
		25'-27'	Shelby						Gray Sandy Silt	S5	24	23
								27'0"				
		27'-28'6	D	3	7	9				6	18	17
		30'-31'6	D	2	5	11			Brown F Sand, Trace of Silt	7	18	17
		35'-36'6	D	4	11	13				8	18	17
								37'0"				
		40'-41'6	D	7	21	31			Brown F-C Sand, Little F-M Gravel	9	18	14
								45'0"				
		45'-46'6	D	16	25	33			Brown F Sand, Trace of F Gravel and Silt	10	18	17
									Bottom Of Boring 46'6"			
									Installed Well Point and Cap at 45'0"			

GROUND SURFACE TO 45'0" USED HW "CASING: THEN Sampled To 46'6" Shelbys-5

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 45'0"
Rock Coring —
Samples 10

HOLE NO. A-40

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

DATE 3-26-74
HOLE NO. A-41
LINE & STA. South 1330
OFFSET West 2850
SURF. ELEV. 506.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
18'0" at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	3 3/4	S.S.	3"
Size I.D.	Auger		Shelby
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-26-74	a.m. p.m.
COMPLETE	3-26-74	a.m. p.m.
TOTAL HRS.		

BORING FOREMAN J. Morris
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
		0'-1'6	D	7	7	9			Brown Sandy Clayey Silt with Root Fibers	1	18	1
		5'-7'	Shelby					7'0"				
		7'-8'6	D	3	3	7				2	18	16
		10'-12'	Shelby				Moist Stiff to V/Stiff			S1	24	2
		12'-13'6	D	8	7	10			Brown Sandy Silty Clay	3	18	16
		15'-17'	Shelby							S2	24	2
		17'-18'6	D	3	5	7				4	18	17
		20'-22'	Shelby							S3	24	
		22'23'6	D	8	9	12				5	18	12
								23'0"				
		25'-27'	Shelby				Stiff	28'0"	Gray Sandy Silty Clay	S4	24	1
		27'-28'6	D	3	6	7				6	18	1
		30'-32'	Shelby				Moist V/Dense		Brown Silty Sand	S5	24	2
		32'-33'6	D	7	8	9		35'0"	Water at 32'0"	7	18	1
		35'-36'6	D	15	27	28	V/Dense	36'6"	Brown F-C Sand and Gravel, Some Silt	8	18	1
		40'-41'6	D	15	26	31		41'6"	Brown -Gray Silty Sand and Gravel	9	18	1
							Moist V/Dense		Sandstone			
		43'6-45'	D	22	35	55	Hard		Highly Weathered Sandy Shale with Clay Seams	10	18	1
									Bottom Of Boring 45'0"			
									Installed Well Point and Cap at 45'0"			

GROUND SURFACE TO 43'5" USED Auger "CASING: THEN Sampled To 45'0" Shelbys-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 45'0"
Rock Coring —
Samples 10

HOLE NO. A-41

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-26-74
HOLE NO. A-41
LINE & STA. South 136
OFFSET West 2850
SURF. ELEV. 506.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
18'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	3 3/4	S.S.	3" Shelby
Size I.D.	Auger		
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-26-74	a.m. p.m.
COMPLETE	3-26-74	a.m. p.m.

TOTAL HRS.
BORING FOREMAN J. Morris
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
		0'-1'6	D	7	7	9			Brown Sandy Clayey Silt with Root Fibers	1	18	14
		5'-7'	Shelby					7'0"				
		7'-8'6	D	3	3	7				2	18	14
		10'-12'	Shelby							S1	24	20
		12'-13'6	D	8	7	10	Moist Stiff to V/Stiff		Brown Sandy Silty Clay	3	18	16
		15'-17'	Shelby							S2	24	20
		17'-18'6	D	3	5	7				4	18	11
		20'-22'	Shelby							S3	24	7
		22'23'6	D	8	9	12		23'0"		5	18	11
		25'-27'	Shelby				Stiff	28'0"	Gray Sandy Silty Clay	S4	24	17
		27'-28'6	D	3	6	7				6	18	14
		30'-32'	Shelby				Moist V/Dense		Brown Silty Sand	S5	24	22
		32'-33'6	D	7	8	9		35'0"	Water at 32'0"	7	18	1
		35'-36'6	D	15	27	28	V/Dense	36'6"	Brown F-C Sand and Gravel, Some Silt	8	18	17
		40'-41'6	D	15	26	31		41'6" 41'7"	Brown -Gray Silty Sand and Gravel	9	18	16
							Moist V/Dense		Sandstone			
		43'6-45'	D	22	35	55	Hard		Highly Weathered Sandy Shale with Clay Seams	10	18	14
									Bottom Of Boring 45'0"			
									Installed Well Point and Cap at 45'0"			

GROUND SURFACE TO 43'5" USED Auger "CASING: THEN Sampled To 45'0" Shelbys-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 43'5"
Rock Coring —
Samples 10

HOLE NO. A-41

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-28-74
HOLE NO. A-42
LINE & STA. South 91
OFFSET West 479'
SURF. ELEV. 548.4

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	NW	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-28-74	a.m. p.m.
COMPLETE	3-28-74	a.m. p.m.

TOTAL HRS.
BORING FOREMAN Jr. Watson
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
		0'-15'6	A	Bag	#1				Top Soil 0'6"	1		
								3'0"	Brown Silty Clay			
		5'-7'	Shelby							S1	24	21
		7'-9'	D	3 4	5	7	Moist M/Dense			1	24	1
		10'-12'	Shelby						Brown Silty F Sand	S2	24	1
		12'-14'	D	4 5	2	9				2	24	2
		15'-16'2	Shelby					15'6		S3	14	1
		17'-19'	D	22 29	31	34	Moist M/Dense		Brown F-C Sand and F-M Gravel	3	24	2
		15'6-45'6	A	Bag	#2					2		
		20'-22'	D	11 20	21	28	Moist Dense			4	24	2
									Bottom Of Boring 46'0"			
									Installed Well Point and Cap at 46'0"			

GROUND SURFACE TO 46'0" USED Auger "CASING: THEN Shelbys-3 Jacks-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 46'0"
Rock Coring —
Samples 7

HOLE NO. A-42

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF
DATE 3-27-74
HOLE NO. A-43
LINE & STA. South 10
OFFSET West 68
SURF. ELEV. 545.8

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At None after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-27-74	a.m. p.m.
COMPLETE	3-28-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'						1'0"	Top Soil			
		1'-10'	A	Bag	#1				Brown Silty Clay	1		
		5'-7'	Shelby							S1	24	21
		7'-9'	D	4 4	6	8	Moist Stiff	10'0"		1	24	22
		10'-12'	Shelby						Brown Sandy Silt	S2	24	[illegible]
		12'-14'	D	2 2	4	6		14'0"		2	24	[illegible]
		15'-17'	D	12 16	27	33	Moist V/Dense		Brown C Sand and F-M Gravel, Trace of Silt	3	24	1[illegible]
		14'-27'6	A	Bag	#2			27'6"		2		
		27'6-38'6	A	Bag	#3				Gray C Sand and Gravel	3		
		38'6-45'	A	Bag	#4			38'6" 45'0"	Brown Sand and F Gravel	4		
		45'-46'6	D	18	23	29	Hard		Shale Rock	4	18	1[illegible]
									Refusal at 46'6"			
									Bottom Of Boring 46'6"			
									Installed Well Point and Cap at 46'6"			

GROUND SURFACE TO 46'0" USED Auger "CASING: THEN Shelbys-2 bags-4

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 36'6
Rock Coring —
Samples 4

HOLE NO. A-43

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-28-74
HOLE NO. A-44
LINE & STA. South 10
OFFSET West 87
SURF. ELEV. 546.7

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 59'0" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-28-74	a.m. p.m.
COMPLETE	4-1-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
		1'-10'	A	Bag	#1				Brown Silty Clay	1		
		5'-7'	Shelby							S1	24	17
								10'0"				
		10'-12'	Shelby						Sandy Silt	S2	24	2
		13'6-17'	A	Bag	#2					2		
		12'-14'	D	3 3	5	5				1	24	1
		15'-17'	Shelby							S3	24	2[illegible]
		17'-19'	D	7 9	11	13		19'0"		2	24	1
		19'-28'6	A	Bag	#3			28'6"	Brown F-M Silty Sand and Gravel	3		
		28'6-41'	A	Bag	#4			41'0"	Gray M Sand and Gravel	4		
		41'-60'	A	Bag	#5				Gray M Sand	5		
									Bottom Of Boring 60'0"			
									Installed Well Point and Cap at 45'0"			

GROUND SURFACE TO 41'0" USED Auger "CASING: THEN Sampler to 60'0" Shelbys-5 bags-

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 41'0
Rock Coring —
Samples 2

HOLE NO. A-44

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-1-74
HOLE NO. A-45
LINE & STA. Smith 22
OFFSET West 5310
SURF. ELEV. 549.7

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At None after ½ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-1-74	a.m. p.m.
COMPLETE	4-2-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				2								
		0'-2'	D	2	3	4			Brown Silty Clay	1	24	9
								4'0"				
5'				2								
		5'-7'	D	2	2	3				2	24	8
							Loose Moist V/Stiff					
10'				2								
		10'-12'	D	3	4	4			Sandy Silt	3	24	12
15'				3								
		15'-17'	D	4	4	3				4	24	3
								20'0"				
20'				4								
		20'-22'	D	6	8	8	Moist V/Dense			5	24	10
25'				10								
		25'-27'	D	14	12	20				6	24	[illegible]
									Brown C Sand and F Gravel			
30'				14								
		30'-32'	D	18	18	20	Moist Dense			7	24	7
35'				10								
		35'-37'	D	13	17	21				8	24	4
40'							V/Dense					

GROUND SURFACE TO 60'0" USED Auger "CASING: THEN Sampler To 68'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring —
Samples 19

HOLE NO. A-45

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-45
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ NO PO 96095
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				13								
		40'-42'	D	19	27	33				9	24	7
									Brown Sand and F Gravel			
45				16			Moist V/Dense					
		45'-47'	D	20	24	27				10	24	8
								48'0"				
50				10								
		50'-52'	D	12	16	20				11	24	10
				13								
		52'-54'	D	16	20	21	Moist Dense			12	24	9
				12								
55		54'-56'	D	16	19	19				13	24	7
				15								
		56'-58'	D	20	23	27			Brown Sand	14	24	11
				21								
		58'-60'	D	24	24	29				15	24	12
60				20								
		60'-62'	D	22	28	32	Moist V/Dense			16	24	17
				21								
		62'-64'	D	27	33	37				17	24	10
				19								
65		64'-66'	D	26	27	34				18	24	17
				24								
		66'-68'	D	24	29	33				19	24	17
									Refusal at 68'0"			
									Bottom Of Boring 68'0"			
70												
									Installed Well Point and Cap at 68'0"			
75												
80												

GROUND SURFACE TO _____ USED _____ "CASING: THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring _____
Rock Coring _____
Samples _____

HOLE NO. A-45

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 4-2-74
HOLE NO. A-46
LINE & STA. South 9[illegible]
OFFSET West 83[illegible]
SURF. ELEV. 542.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At None after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-2-74	a.m. p.m.
COMPLETE	4-3-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				2								
		0'-2'	D	2	2	4				1	24	14
				4								
		5'-7'	D	4	4	7				2	24	14
				4			Moist M/Dense		Brown Sandy Silty Clay			
		10'-12'	D	6	10	10				3	24	8
				8								
		12'-14'	D	10	14	18				4	24	13
				12								
		14'-16'	D	10	14	18		10'0"		5	24	10
				16								
		16'-18'	D	18	24	22			Brown M Sand, Trace of F Gravel	6	24	10
				20								
		18'-20'	D	18	16	14		14'0"		7	24	8
				10								
		22'-24'	D	12	20	24				8	24	10
				16								
		24'-26'	D	14	16	14				9	24	10
				10			Moist Dense					
		26'-28'	D	13	12	13				10	24	8
				12					Brown M Sand, Some Gravel			
		28'-30'	D	14	14	12				11	24	9
				14								
		30'-32'	D	14	18	16				12	24	10
				13								
		32'-34'	D	17	21	21		26'0"		13	24	9
				16								
		34'-36'	D	18	17	21	Moist M/Dense			14	24	10
				13								
		36'-38'	D	16	20	23				15	24	6
				16								
		38'-40'	D	16	19	22				16	24	7
				19								
		40'-42'	D	19	23	27	Moist Dense		Brown M Sand, Trace of Gravel	17	24	9
				9								
		42'-44'	D	13	14	20				18	24	10
				12								
		44'-46'	D	12	16	18				19	24	8
									Bottom Of Boring 46'0"			

GROUND SURFACE TO 44'0" USED Auger "CASING: THEN Samples To 46'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 46'0"
Rock Coring —
Samples 19

HOLE NO. A-46

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-9-74
HOLE NO. A-47
LINE & STA. 1[illegible]5
OFFSET [illegible] 10 W
SURF. ELEV. 524.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 37'0" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-9-74	a.m. p.m.
COMPLETE	3-11-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-0'6	A					0'6"	Top Soil			
		0'6-25'	A	Bag	#1			25'0"	Brown Silty Clay	1		
		25'-28'6	A	Bag	#2				Brown Silt and Lime Clay	2		
							Moist Dense	28'6"				
		28'6-37'	A	Bag	#3				Brown Clay and Gravel	3		
								37'0"				
		37'-45'	A	Bag	#4				Brown F-M Sand	4		
				16				51'0"				
		45'-47'	D	22	15	18			Brown F Sandy Silt	1	24	12
				14				53'0"				
		47'-49'	D	18	22	22			Brown F Sand	2	24	14
				10								
		49'-51'	D	12	10	12	Moist Medium Dense	57'0"		3	24	14
				6								
		51'-53'	D	8	8	10			Brown F Sand and F Gravel	4	24	12
				10								
		53'-55'	D	14	14	18			Bottom Of Boring 61'0"	5	24	10
				12								
		55'-57'	D	16	22	24	Moist Dense			6	24	12
				18								
		57'-59'	D	24	28	32				7	24	12
				20								
		59'-61'	D	26	30	34				8	24	14
							Moist Very Dense					

GROUND SURFACE TO ____ USED ____ "CASING: THEN Bags-1

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 92'6"
Rock Coring —
Samples 8

HOLE NO. A-47

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-12-74
HOLE NO. A-48
LINE & STA. 1220 South
OFFSET 8060 West
SURF. ELEV. 524.7

TO The Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. PROJ. NO. FO 96096
SAMPLES SENT TO Dr. Tom Davisson OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 37'4" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-12-74	a.m. p.m.
COMPLETE	3-13-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Pacuette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-0'6	A					0'6"	Top Soil			
		0'6-35'	A	Bag #1						1		
		35'-40'	A	Bag #2					Brown Silty Clay	2		
		40'-42'	D	12 12 10	16	14		35'0"		1	24	12
		42'-44'	D	12 12 12	12	18			Brown Clay and Sand, Trace of F Gravel	2	24	7
		44'-46'	D	16 16 16	16	20	Moist Dense	40'0"		3	24	8
		46'-48'	D	16 14	18	22			Brown Sand, Little Gravel	4	24	10
		48'-50'	D	14 16	20	22		44'0"		5	24	8
		50'-52'	D	16 18	20	24				6	24	8
		52'-54'	D	22 18	22	26			Brown Silty F Sand	7	24	7
		54'-56'	D	18 16	24	28		56'0"		8	24	8
		56'-58'	D	22 20	22	29			Brown Silty F Sand and F Gravel	9	24	10
		58'-60'	D	24	30	34	VD			10	24	9
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 58'0" USED Auger "CASING: THEN Sampled To 60'0" Bags-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring —
Samples 10

HOLE NO. A-48

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

DATE 3-8-74
HOLE NO. A-49
LINE & STA. [illegible]
OFFSET 7812 W
SURF. ELEV. 529.4

TO The Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. PROJ. NO. FO 96096
SAMPLES SENT TO Dr. Tom Davisson OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 41'6" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-8-74	a.m. p.m.
COMPLETE	3-8-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Pacuette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-0'6	A					0'6"	Top Soil			
		0'6-37'	A	Bag #1					Brown Silty Sand			
		37'-42'6	A	Bag #2				37'0"				
		45'-47'	D	14 16 16	26	26			Brown Silty Clay and Gravel	1	24	
		47'-49'	D	14 28 14	30	40		42'6"		2	24	
		49'-51'	D	24 24	24	16			Brown F Sand	3	24	
		51'-53'	D	24 30	32	36				4	24	1
		53'-55'	D	24 30 28	34	41		61'0"		5	24	
		55'-57'	D	24 30 24	34	34			Brown F-M Sand and F Gravel	6	24	
		57'-59'	D	22 28 22	30	30				7	24	1
		59'-61'	D	24 22 24	29	34			Bottom Of Boring 65'0"	8	24	
		61'-63'	D	21 24 21	33	38				9	24	
		63'-65'	D	24	24	29				10	24	

GROUND SURFACE TO 63'0" USED Auger CASING: THEN Sampled To 65'0" Bags - 2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 65'
Samples 10

HOLE NO. A-49

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-7-74
HOLE NO. A-50
LINE & STA. 1220 South
OFFSET 7530 West
SURF. ELEV. 528.4

TO The Dayton Power & Light Co.
ADDRESS
PROJECT NAME Killen Elec. Gen. Sta.
LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co.
PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 41'6" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-7-74	a.m. p.m.
COMPLETE	3-7-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
		0'-0'6	A					0'6"	Top Soil			
		0'6-33'	A	Bag	#1				Brown Silty Clay			
		33'-42'	A	Bag	#2			33'0"				
		42'-45'	A	Bag	#3				Gray Silt and Trace of Sand			
				10				42'0"				
		45'-47'	D	10	12	14				1	24	12
				6					Gray M Sand			
		47'-49'	D	6	8	10		45'0"		2	24	10
				6								
		49'-51'	D	8	10	8				3	24	12
				7								
		51'-53'	D	7	9	11				4	24	10
				6					Brown F-M Sand			
		53'-55'	D	6	5	5				5	24	10
				5								
		55'-57'	D	6	8	8				6	24	9
				8								
		57'-59'	D	8	10	8			Bottom Of Boring 65'0"	7	24	10
				7								
		59'-61'	D	7	8	8				8	24	10
				7								
		61'-63'	D	8	8	7				9	24	14
				6								
		63'-65'	D	8	8	8				10	24	12

GROUND SURFACE TO 65'0" USED Auger "CASING: THEN Sampled To 65'0" Page – 3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 65'0"
Samples 10

HOLE NO. A-50

2860 FISHER ROAD COLUMBUS, OHIO

DATE 3-8-74
HOLE NO. A-51
LINE & STA. South 1220
OFFSET West 7280
SURF. ELEV. 522.0

TO The Dayton Power & Light Co.
ADDRESS
PROJECT NAME Killen Elec. Gen. Sta.
LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co.
PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
34'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	SS	
Size I.D.	3 3/4	1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-8-74	a.m. p.m.
COMPLETE	3-8-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	G. Brouillette	
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'						1'0"	Topsoil			
		1'-9'		Bag	#1					1		
									Brown Silt and Clay			
							Moist	9'0"				
		9'-19'		Bag	#2					2		
									Light Brown Silt and Clay, Some F Sand			
								19'0"				
		19'-24'		Bag	#3				Brown F-C Sand, Some Silt	3		
								24'0"				
		24'-25'		Bag	#4					4		
				2								
		25'-27'	D	3	5	6	Moist M/Dense			1	2	13
				5								
		27'-29'	D	6	7	8			Brown F-M-C Sand	2	2	10
				5			Moist Loose					
		29'-31'	D	5	4	4				3	2	12
				6								
		31'-33'	D	7	9	9	Moist M/Dense	34'0"		4	2	10
				10								
		33'-35'	D	14	16	16			Brown M Gravel	5	2	11
				14				35'0"				
		35'-37'	D	15	20	20				6	2	11
				15								
		37'-39'	D	19	20	21				7	2	11
				14			Moist Dense					
		39'-41'	D	15	16	19			Brown F-M Sand	8	2	11
				15								
		41'-43'	D	16	19	20				9	2	11
				8								
		43'-45'	D	9	14	17				10	2	12

GROUND SURFACE TO 50'0" USED A "CASING: THEN Page-4

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 63'
Rock Coring –
Samples 19

HOLE NO. A-51

TOWN PRESS – EAST PROV.

DUCATI DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO | PROJ. NO. PO 96096
SAMPLES SENT TO | OUR JOB NO. 45,099

DATE
HOLE NO. A-51
LINE & STA.
OFFSET
SURF. ELEV.

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		
COMPLETE		
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
		45'-47'		1			Moist					
		45'-47'	D	2	2	3	Loose			11	2	4
				2								
		47'-49'	D	3	19	20				12	2	12
				13								
		49'-51'	D	20	32	41				13	2	14
				31								
		51'-53'	D	30	20	19	Moist		Brown F-C Sand, Trace	14	2	15
				20			Dense--		of M Gravel			
		53'-55'	D	22	19	50	VDense			15	2	15
				13								
		55'-57'	D	14	15	17				16	2	15
				11								
		57'-59'	D	19	44	60				17	2	14
				12								
		59'-61'	D	29	39	51				18	2	17
				28								
		61'-63'	D	30	36	50			Bottom Of Boring 63'0"	19	2	15

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-51

TOWN PRESS — EAST PROV.

DUCATI DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 4-3-74
HOLE NO. A-52
LINE & STA. South
OFFSET West
SURF. ELEV. 518.7

GROUND WATER OBSERVATIONS
At 33'0" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		SS	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-3-74	
COMPLETE	4-4-74	
TOTAL HRS.		
BORING FOREMAN	D. Pacquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				2								
		0'-2'	D	2	4	4				1	24	18
5'				3								
		5'-7'	D	4	4	6				2	24	22
				4								
10'							Moist		Brown Silty Clay,			
		10'-12'	D	4	6	8	Stiff		Little Sand	3	24	20
				4								
15'		15'-17'	D	4	6	8				4	24	17
								18'6"				
				3								
20'		20'-22'	D	5	8	8				5	24	12
									Brown Silty Clay and			
									Trace of F Sand			
				4								
25'		25'-27'	D	6	7	10				6	24	10
								28'0"				
				12								
30'		30'-32'	D	18	14	18	Moist		Brown F-C Sand, Little	7	24	1[illegible]
							Dense		F Gravel			
								34'0"				
				8								
35'		35'-37'	D	10	10	12			Brown C Sand, Some	8	24	10
				10			Moist	37'0"	Gravel			
		37'-39'	D	10	14	12	M/Dense			9	24	9
40'									Brown F Sand and F Gravel			

GROUND SURFACE TO 33'0" USED Auger "CASING: THEN Sampled To 55'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 55'0"
Rock Coring —
Samples 17

HOLE NO. A-52

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET ____ OF ____
DATE ____
HOLE NO. A-52
LINE & STA. ____
OFFSET ____
SURF. ELEV. ____

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO ____
SAMPLES SENT TO ____
ADDRESS ____
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				10			M/Dense	41'0"	Brown F Sand and F Gravel			
		39'-41'	D	12	10	12				10	24	6
				4								
		41'-43'	D	6	6	10				11	24	10
				7								
45'		43'-45'	D	9	11	14				12	24	9
				10			Moist M/Dense		Brown C Sand and F-M Gravel			
		45'-47'	D	10	13	13				13	24	6
				9								
		47'-49'	D	11	15	13				14	24	9
50'				10								
		49'-51'	D	14	17	15				15	24	10
				12								
		51'-53'	D	10	10	12				16	24	9
				11								
55'		53'-55'	D	14	12	14			Bottom Of Boring 55'0"	17	24	8
									Installed Well Point and Cap at 55'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-52

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

DATE 3-13-74
HOLE NO. A-53
LINE & STA. 1000' South
OFFSET 8060 West
SURF. ELEV. 518.7

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davinson
ADDRESS ____
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 33'3" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-13-74	a.m. p.m.
COMPLETE	3-14-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-0'6						0'6"	Top Soil			
		0'6-33'	Bag	#1			Moist Medium Dense			1		
				8								
		35'-37'	D	8	12	12			Brown Silty Clay	1	24	10
				10								
		37'-39'	D	12	14	18				2	24	12
				10								
		39'-41'	D	10	14	16		33'0"		3	24	8
				8								
		41'-43'	D	12	16	20				4	24	10
				10								
		43'-45'	D	14	14	16				5	24	12
				8			Moist Dense					
		45'-47'	D	8	14	18				6	24	10
				10								
		47'-49'	D	14	18	22				7	24	8
				16					Brown F Sand			
		49'-51'	D	16	20	20				8	24	10
				12								
		51'-53'	D	17	21	23				9	24	12
				16								
		53'-55'	D	19	23	29				10	24	10
				12								
		55'-57'	D	19	24	31	Moist Very Dense			11	24	10
				13								
		57'-59'	D	17	22	29				12	24	9
				17								
		59'-61'	D	23	29	34				13	24	10
									Bottom Of Boring 61'0"			

GROUND SURFACE TO 61'0" USED Auger "CASING: THEN ____ Bags-1

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 61'0"
Rock Coring --
Samples 13

HOLE NO. A-53

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET ___ OF ___
DATE 3-12-74
HOLE NO. A-54
LINE & STA. 1420 South
OFFSET 7810 West
SURF. ELEV. 519.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ___ after ___ Hours
34'0" at Completion
At ___ after ___ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.	3 3/4	1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-12-74	a.m. p.m.
COMPLETE	3-12-74	a.m. p.m.
TOTAL HRS.
BORING FOREMAN G. Brouillette
INSPECTOR
SOILS ENGR.

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'- 16					Wet	6"	Top Soil			
		0'6-4'	A	Bag	#1				Light Brown Silty Clay	1		
								4'0"				
		4'-10'	A	Bag	#2		Moist		Dark Brown Silt and Clay	2		
								10'0"				
		10'-22'	A	Bag	#3		Wet		Brown Silt, Some Clay	3		
								22'0"				
		22'-33'	A	Bag	#4		Moist		Dark Brown Silt	4		
		33'-35'	A	Bag	#5		Wet	33'0"		5		
		35'-37'	D	13 15 12	15	20			Brown F-C Sand, Trace of C Gravel	1	2	10
								35'0"				
		37'-39'	D	14 13	15	17				2	2	12
		37'-41'	D	13 14	14	19	Dense		Brown F-M Sand	3	2	18
		41'-43'	D	15 13	17	21				4	2	12
								49'0"				
		43'-45'	D	15 14	17	20			Brown F-M Sand, Little M Gravel	5	2	14
		45'-47'	D	15 13	15	17				6	2	22
		47'-49'	D	14 1	14	15	MD		Bottom Of Boring 61'0"	7	2	20
		49'-51'	D	1 6	2	4	NS			8	2	17
		51'-53'	D	7 14	14	16				9	2	12
		53'-55'	D	14 8	16	21	Very Stiff			10	2	12
		55'-57'	D	10 14	12	15				11	2	20
		57'-59'	D	15 15	17	19				12	2	17
		59'-61'	D	16	17	21				13	2	16

GROUND SURFACE TO 59'0" USED Auger "CASING: THEN ___ Bags-5

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50 + Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30 + Hard

SUMMARY:
Earth Boring 61'0"
Rock Coring —
Samples 13

HOLE NO. A-54

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-9-74
HOLE NO. A-55
LINE & STA. 1420 South
OFFSET 7280 West
SURF. ELEV. 520.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 31'6" after 36 Hours
At ___ after ___ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.	3 3/4	1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-9-74	a.m. p.m.
COMPLETE	3-11-74	a.m. p.m.
TOTAL HRS.
BORING FOREMAN G. Brouillette
INSPECTOR
SOILS ENGR.

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'					Moist	1'0"	Top Soil			
		1'-7'	A	Bag	#1			7'0"	Brown Silt and Clay, Trace of F Sand	1		
		7'-18'	A	Bag	#2		Wet	18'0"	Light Brown Clay and Silt, Trace of C Sand	2		
		18'-24'	A	Bag	#3		Wet	24'0"	Light Brown Silt	3		
		30'-32'	D	3 6 10	8	10	MD		Brown F Sand	1	2	15
		32'-34'	D	14 5	16	24	Dense	36'0"		2	2	11
		34'-36'	D	11 20	18	21		38'0"	Brown F-C Sand and M Gravel	3	2	16
		36'-38'	D	25 19	27	28	VD		Brown F Sand	4	2	11
		38'-40'	D	21 19	23	24	Dense	52'0"		5	2	11
		40'-42'	D	20 8	24	25			Brown F-C Sand, Trace of M Gravel	6	2	15
		42'-44'	D	12 12	14	17		54'0"		7	2	16
		44'-46'	D	14 13	15	14	MD	57'0"	Brown F Sand	8	2	[illegible]
		46'-48'	D	14 16	16	16	Dense	59'0"	Brown F-C Sand	9	2	10
		48'-50'	D	18 20	24	30	VD		Brown F-C Sand, Trace of M Gravel	10	2	13
		50'-52'	D	8 16	10	15	MD		Bottom Of Boring 60'0"	11	2	15
		52'-54'	D	20 20	21	25	Dense			12	2	10
		54'-56'	D	21 6	19	21	Wet			13	2	11
		56'-58'	D	8 21	18	21				14	2	16
		58'-60'	D	22	29	28				15	2	13

GROUND SURFACE TO 60'0" USED Auger "CASING: THEN ___ Bags-3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50 + Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30 + Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring —
Samples 15

HOLE NO. A-55

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 3-13-74
HOLE NO. A-56
LINE & STA. 2225 South
OFFSET 6390 West
SURF. ELEV. 532.5

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
45'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.	3 3/4	1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-13-74	a.m. p.m.
COMPLETE	3-13-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	G. Brouillotte	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'						1'0"	Top Soil			
		1'-9'		Bar	#1				Gray-Light Brown Clay and Silt	1		
								9'0"				
		9'-18'		Bag	#2			10'0"	Gray Silt	2		
									Gray Silt, Some F Sand			
								18'0"				
		18'-23'		Bar	#3				Grayish Brown Silt, Trace of M Sand	3		
								23'0"				
		23'-28'		Bar	#4				Brown Silt, Trace of F Sand	4		
								28'0"				
		28'-32'		Bag	#5				Brown F-M Sand, Some Silt	5		
								30'0"				
		32'-34'	D	13 13 19	15	14	Dry M. Dense		Brown F-C Sand	1	2'	1.0
								34'0"				
		34'-36'	D	20 20	21	23	Dry Dense		Brown F Sand	2	2'	1.7
		36'-38'	D	22 24	24	29				3	2'	1.7
		38'-40'	D	22 34	28	39				4	2'	2.2
		40'-42'	D	30 30	30	46	Dry V. Dense			5	2'	2.2
								41'0"				
		42'-44'	D	32 38	39	39			Brown F-C Sand	6	2'	2.0
		44'-46'	D	40	41	51				7	2'	2.2

GROUND SURFACE TO 70'0" USED Auger "CASING: THEN ____ BBS-5

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 70'0"
Rock Coring -
Samples 19

HOLE NO. A-56

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

DATE
HOLE NO. A-56
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				38					Brown F-C Sand			
		46'-48'	D	36 14	40	37	Dry V. Dense	48'0"		8	2'	[illegible]
		48'-50'	D	15 18	16	21	Moist Dense		Brown F Sand with trace of C Sand	9	2'	1
		50'-52'	D	20 13	26	28	Moist V. Dense	52'0"		10	2'	2.2
		52'-54'	D	21 13	20	23			Brown F-M Sand	11	2'	2
		54'-56'	D	19 19	20	22				12	2'	2.2
		56'-58'	D	20 16	22	26	Moist Dense	58'0"		13	2'	1
		58'-60'	D	17 18	15	17				14	2'	2
		60'-62'	D	23 17	21	23				15	2'	2
		62'-64'	D	23 21	40	46			Brown F Sand	16	2'	2
		64'-66'	D	25 25	29	32				17	2'	2.2
		66'-68'	D	26 26	29	31	Moist V. Dense			18	2'	2
		68'-70'	D	30	39	42				19	2'	2
									Bottom Of Boring 70'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-56

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS OHIO

SHEET 1 OF 2
DATE 3-14-74
HOLE NO. A-57
LINE & STA. 2225 South
OFFSET 6190 West
SURF. ELEV. 532.16

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
44'0" at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	3-14-74	a.m. p.m.
COMPLETE	3-14-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	G. Brouillotte	
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'						1'0"	Top Soil			
		1'-5'	Bag	#1					Gray Silt and Clay	1		
								5'0"				
		5'-12'6	Bag	#2				6'0"	Brown Silt with 1" layer of Clay	2		
		12'6-18'	Bag	#3					Gray Silt	3		
								12'6"				
		18'-23'	Bag	#4					Gray Silt and F Sand	4		
		23'-25'	Bag	#5				18'0"		5		
		25'-27'	D	10 12 11	15	22			Brown Silt and F Sand	1	2'	5
		27'-29'	D	15 20	17	23		23'0"		2	2'	10
		29'-31'	D	19 26	20	22				3	2'	18
		31'-33'	D	32 24	29	24	Dry Dense		Brown F Sand	4	2'	18
		33'-35'	D	40 30	42	39				5	2'	15
		35'-37'	D	38 29	26	26		31'6"		5A 6	2'	5 12
		37'-39'	D	38 21	29	29	Dry V. Dense		Brown F-C Sand, Some M Gravel	7	2'	12
		39'-41'	D	29 30	40	49		33'6"		8	2'	17
		41'-43'	D	40 50	59	60		39'0"	Brown F-C Sand, Some M Gravel, Some Silt in Sample 5A	9	2'	17
		43'-45'	D	60	80	100	Moist at 44'		Brown F-C Sand	10	2'	12

GROUND SURFACE TO 65'0" USED Auger "CASING: THEN _____ Bars-5

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density	Cohesive Consistency
0-10 Loose	0-4 Soft
10-30 Med. Dense	4-8 M/Stiff
30-50 Dense	8-15 Stiff
50 + Very Dense	15-30 V-Stiff
	30 + Hard

SUMMARY:
Earth Boring 65'0"
Rock Coring --
Samples 17

HOLE NO. A-57

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET ___ OF ___
DATE _____
HOLE NO. A-57
LINE & STA. _____
OFFSET _____
SURF. ELEV. _____

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO _____ | PROJ. NO. PO 96096
SAMPLES SENT TO _____ | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		45'-47'	D	46 80 24	82	58			Brown F-C Sand (2" Cobble)	11	2'	16
		47'-49'	D	31 25	34	40		49'0"		12	2'	25
		49'-51'	D	30 38	39	44				13	2'	22
		51'-53'	D	40 36	48	46				14	2'	17
		53'-55'	D	77 32	41	45	Moist			15	2'	12
		55'-57'	D	41 29	40	42			Brown F-M Sand	16	2'	0
		57'-59'	D	43 30	46	40				17	2'	17
		59'-61'	D	42 46	47	42				--	2'	0
		61'-63'	D	72	78	80				18	2'	22
									Bottom Of Boring 65'0"			

GROUND SURFACE TO _____ USED _____ "CASING: THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler

Cohesionless Density	Cohesive Consistency
0-10 Loose	0-4 Soft
10-30 Med. Dense	4-8 M/Stiff
30-50 Dense	8-15 Stiff
50 + Very Dense	15-30 V-Stiff
	30 + Hard

SUMMARY:
Earth Boring _____
Rock Coring _____
Samples _____

HOLE NO. A-57

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-15-74
HOLE NO. A-58
LINE & STA. South 2225
OFFSET West 5990
SURF. ELEV. 532.6

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	H.S. Auger	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-15-74	a.m. p.m.
COMPLETE	3-18-74	a.m. p.m.
TOTAL HRS.
BORING FOREMAN Jr. Watson
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-13'	A	Bag	#1			0'6"	Top Soil	1		
								13'0"	L. Brown Silt and Clay			
		13'-20'	A	Bag	#2					2		
								20'0"	Brown Silt, Some Sand			
		20'-30'	A	Bag	#3					3		
								30'0"	Brown Silt, Trace of F Sand			
		30'-40'	A	Bag	#4					4		
									Brown Silt and F-M Sand			
				14				40'0"				
		40'-42'	D	14	18	21	Moist Dense			1	24	9
				15								
		42'-44'	D	16	19	20			Brown F Sand and F-M Gravel	2	24	9
				24								
		44'-46'	D	46	40	42	Moist Very Dense			3	24	16
				31								
		46'-48'	D	42	34	40		47'0"		4	24	20
				19								
		48'-50'	D	26	30	40			Brown F Sand, Some F Gravel and Silt	5	24	22
				12								
		50'-52'	D	18	24	41				6	24	11
				16								
		52'-54'	D	18	19	27	Moist Dense			7	24	21
				18				54'0"				
		54'-56'	D	21	24	29			Brown F Sand	8	24	20
				19								
		56'-58'	D	22	36	42				9	24	20
				14								
		58'-60'	D	18	23	35				10	24	20
				18								
		60'-62'	D	21	29	37				11	24	21
									Bottom Of Boring 62'0"			

GROUND SURFACE TO 60'0" USED HS "CASING: THEN Sampled To 62'0" Bags-4

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 62'0"
Rock Coring —
Samples 11

HOLE NO. A-58

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

DATE 3-18-74
HOLE NO. A-59
LINE & STA. South 2225
OFFSET West 5790
SURF. ELEV. 532.9

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
31'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-18-74	a.m. p.m.
COMPLETE	3-19-74	a.m. p.m.
TOTAL HRS.
BORING FOREMAN Jr. Watson
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-10'	A	Bag	#1				Light Gray Clay, Some Silt	1		
								10'0"	10'6" Water			
								18'0"	Light Gray Clay and Silt, Trace of Sand	2		
		10'-18'	A	Bag	#2							
								30'0"	Light Gray Silt and Sand	3		
		18'-30'	A	Bag	#3							
				28								
		40'-42'	D	15	17	18	Moist Dense		Brown F Sand	1	24	16
				14								
		42'-44'	D	15	16	19				2	24	17
				19				44'0"				
		44'-46'	D	24	27	37	Moist Very Dense		Brown F Sand and F-M Gravel	3	24	13
				17								
		46'-48'	D	19	23	28		48'6"		4	24	9
				14								
		48'-50'	D	17	18	21	Moist Dense			5	24	22
				15								
		50'-52'	D	16	21	25				6	24	11
				18								
		52'-54'	D	23	27	30	Moist Very Dense		Brown F Sand	7	24	24
				16								
		54'-56'	D	18	25	34				8	24	22
				14								
		56'-58'	D	16	29	38				9	24	24
				16								
		58'-60'	D	19	26	37				10	24	13
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 56'0" USED HS "CASING: THEN Sampled To 60'0" Bags-5

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring —
Samples 10

HOLE NO. A-59

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-20-74
HOLE NO. A-60
LINE & STA. South 2225
OFFSET West 5590
SURF. ELEV. 533.9

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-20-74	a.m. p.m.
COMPLETE	3-21-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	Jr. Watson	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-18'	A	Bag	#1			18'0"	Brown Silty Clay	1		
		18'-27'	A	Bag	#2				Brown Silty Sand	2		
								27'0"				
		27'-40'	A	Bag	#3				Brown F Sand	3		
				15				40'0"				
		40'-42'	D	19	23	27	Moist Dense		Brown F Sand and F-M Gravel, Boulder at 50'	1	24	12
				16								
		42'-44'	D	18	21	22				2	24	16
				25								
		44'-46'	D	31	35	42				3	24	18
				27								
		46'-48'	D	32	38	49				4	24	21
				16								
		48'-50'	D	21	27	36		50'0"		5	24	18
				15								
		50'-52'	D	22	33	41	Moist Very Dense		Brown F Sand and Gravel	6	24	22
				18				52'6"				
		52'-54'	D	25	31	39				7	24	13
				18								
		54'-56'	D	23	26	29				8	24	17
				17								
		56'-58'	D	22	29	35			Brown F Sand	9	24	16
				21								
		58'-60'	D	27	36	47				10	24	19
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 58'0" USED HS "CASING: THEN Sampled To 60'0" Bags-3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring --
Samples 10

HOLE NO. A-60

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

DATE 3-21-74
HOLE NO. A-61
LINE & STA. South 2225
OFFSET West 5390
SURF. ELEV. 534.5

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
43'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-21-74	a.m. p.m.
COMPLETE	3-21-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	Jr. Watson	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-8'	A	Bag	#1			0'6"	Top Soil			
								8'0"	Brown Silty Clay	1		
		8'-27'	A	Bag	#2				Brown Sandy Silt	2		
								27'0"				
		27'-40'	A	Bag	#3					3		
				16								
		40'-42'	D	16	20	24			Brown F Sand	1	24	22
				18								
		42'-44'	D	21	25	27	Moist Very Dense			2	24	20
				19								
		44'-46'	D	23	27	33				3	24	21
				16								
		46'-48'	D	22	25	31				4	24	19
				16								
		48'-50'	D	19	21	34				5	24	24
				16				50'0"	Water at 50'0"			
		50'-52'	D	20	24	25				6	24	22
				14			Moist Dense					
		52'-54'	D	18	22	27				7	24	24
				13								
		54'-56'	D	17	20	29			Brown F Sand	8	24	21
				15								
		56'-58'	D	19	24	31	Moist Very Dense			9	24	22
				14								
		58'-60'	D	16	21	28	Moist Dense			10	24	22
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 58'0" USED H.S. "CASING: THEN Sampled To 60'0" Bags-3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring --
Samples 10

HOLE NO. A-61

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-19-74
HOLE NO. A-62
LINE & STA.
OFFSET 6'15" W
SURF. ELEV. 534.5

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 28'6" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type	Auger	S.S.	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-19-74	a.m. p.m.
COMPLETE	3-20-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
		0'-1'						1'0"	Top Soil			
		1'-16'	A	Bag	#1			16'0"	Brown Silty Clay	1		
		16'-23'	A	Bag	#2			23'0"	Brown Clayey Silt	2		
				2								
		25'-27'	D	3	3	4	Moist Medium Stiff	30'0"	Brown Sandy Silt	1	24	14
				6								
		30'-32'	D	6	8	11				2	24	10
				7								
		35'-37'	D	9	11	11	Moist Medium Dense		Brown C Silty Sand and F-M Gravel	3	24	7
				10								
		37'-39'	D	11	14	17		37'0"		4	24	9
				7								
		39'-41'	D	13	19	22				5	24	12
				11								
		41'-43'	D	14	18	21	Moist Dense			6	24	9
				8								
		43'-45'	D	8	11	16				7	24	10
				10								
		45'-47'	D	13	19	19	M/Dense		Brown M Sand	8	24	17
				7			Dense					
		47'-49'	D	9	9	15				9	24	10
				9								
		49'-51'	D	12	12	17	Moist Medium Dense			10	24	12
				12								
		51'-53'	D	16	14	16				11	24	9
				10								
		53'-55'	D	10	13	17				12	24	9
				13								
		55'-57'	D	17	17	23		57'0"		13	24	10
				10								
		57'-59'	D	14	19	19	Moist Dense			14	24	12
				17								
		59'-61'	D	17	22	21			Brown F Sand	15	24	12
									Bottom Of Boring 61'0"			

GROUND SURFACE TO 59'0" USED HS "CASING: THEN Sampled To 61'0" Bore-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50 + Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30 + Hard

SUMMARY:
Earth Boring 61'
Rock Coring —
Samples 15

HOLE NO. A-62

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-20-74
HOLE NO. A-~~62~~ A-
LINE & STA.
OFFSET 6'15" W
SURF. ELEV. 533.5

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 29'8" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type	Auger	S.S.	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-20-74	a.m. p.m.
COMPLETE	3-20-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
		0'-1'						1'0"	Top Soil			
		1'-13'	A	Bag	#1			13'0"	Brown Gray Clay	1		
		13'-28'	A	Bag	#2			28'0"	Gray Silt	2		
				2								
		30'-32'	D	4	6	6				1	24	1
				8					Brown F-C Sand and F Gravel			
		35'-37'	D	10	14	12	Moist Medium Dense	37'0"		2	24	10
				4								
		37'-39'	D	7	9	9				3	24	
				8								
		39'-41'	D	11	11	15				4	24	9
				6								
		41'-43'	D	10	14	14				5	24	
				13								
		43'-45'	D	17	17	21				6	24	
				8								
		45'-47'	D	13	18	18	Moist Dense			7	24	9
				6								
		47'-49'	D	9	12	12	M/Dense			8	24	
				10								
		49'-51'	D	10	13	19	Dense			9	24	6
				14					Brown F Sand			
		51'-53'	D	19	23	29				10	24	
				11			V/Dense					
		53'-55'	D	16	16	22	Dense			11	24	
				16								
		55'-57'	D	21	27	33				12	24	
				9								
		57'-59'	D	17	23	29	Moist Very Dense			13	24	1
				14								
		59'-61'	D	19	26	31				14	24	10
									Bottom Of Boring 61'0"			

GROUND SURFACE TO 59'0" USED HS "CASING: THEN Sampled To 61'0" Bore-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50 + Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30 + Hard

SUMMARY:
Earth Boring 61'
Rock Coring —
Samples 14

HOLE NO. A-6

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-21-74
HOLE NO. A-65
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 533.8

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 39'4" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-21-74	a.m. p.m.
COMPLETE	3-21-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-0'6						0'6"	Top Soil			
		0'6-9'6	A	Bag	#1			9'6"	Brown Silty Clay	1		
		9'6-28'6	A	Bag	#2			28'6"	Gray Silt	2		
		30'-32'	D	10 16	19	23	Moist Dense	34'0"	Brown C Sand and F Gravel	1	24	8
		35'-37'	D	8 12	12	17	Moist V/Dense		Brown M Sand	2	24	6
		37'-39'	D	8 9	11	2				3	24	8
		39'-41'	D	11 12	16	14		41'0"		4	24	10
		41'-43'	D	16 10	19	23	Moist Dense		Brown F Sand	5	24	9
		43'-45'	D	13 11	16	19				6	24	10
		45'-47'	D	15 9	19	21				7	24	20
		47'-49'	D	16 14	20	25				8	24	12
		49'-51'	D	19 11	27	31	Moist Very Dense			9	24	9
		51'-53'	D	17 19	22	29				10	24	8
		53'-55'	D	24	27	32				11	24	14
									Bottom Of Boring 55'0"			

GROUND SURFACE TO 23'0" USED HS "CASING: THEN Sampled To 55'0" Bags-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 55'0"
Rock Coring —
Samples 11

HOLE NO. A-65

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

DATE 3-26-74
HOLE NO. A-66
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 532.6

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
37'6" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-26-74	a.m. p.m.
COMPLETE	3-27-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	Jr. Watson	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-9'	A	Bag	#1				Top Soil 0'6"	1		
								9'0"	Brown Silt and Clay			
		9'-24'	A	Bag	#2				Brown Sandy Silt	2		
								24'0"				
		24'-40'	A	Bag	#3				Gray Silty Clay, Trace of Sand	3		
		40'-42'	D	15 17	18	19		41'0"		1	24	2
				12				42'0"	Brown F Sand			
		42'-44'	D	13 11	13	17			Brown F-M Sand	2	24	2
		44'-46'	D	13 13	14	16				3	24	2
		46'-48'	D	13 12	17	18			Water Seepage at 46'	4	24	2
		48'-50'	D	14 14	16	17	Moist V/Stiff to Dense	50'0"	Brown F-M Sand	5	24	2
		50'-52'	D	16 15	17	19		52'0"	Brown F-M Sand, Trace of F Gravel	6	24	2
		52'-54'	D	17 14	19	20		54'0"	Brown F-C Sand, Trace of F-C Gravel	7	24	2
		54'-56'	D	17 15	21	25				8	24	
		56'-58'	D	18 17	19	21			Brown F Sand	9	24	1
		58'-60'	D	19	22	28				10	24	
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 38'0" USED HS "CASING: THEN Sampled to 60'0" Bags-1

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring —
Samples 10

HOLE NO. A-66

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-27-74
HOLE NO. A-67
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 533.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
35'6" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-27-74	a.m. p.m.
COMPLETE	3-27-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	Jr. Watson	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-12'	A	Bag	#1				Top Soil 0'6"	1		
								12'0"	Brown Silt and Clay			
		12'-40'	A	Bag	#2			40'0"	Brown Sandy Silt	2		
				13					Brown F-C Sand, Little F Gravel			
		40'-42'	D	15	17	19				1	24	12
				11			Moist Dense	42'0"				
		42'-44'	D	12	14	16				2	24	24
				12				43'6"	Gray Silty Clay and F Sand			
		44'-46'	D	13	15	18			Brown F Silty Sand	3	24	10
				9				46'0"				
		46'-48'	D	11	12	24	M/Dense			4	24	24
				12					Brown F-M Sand			
		48'-50'	D	14	16	17				5	24	10
				15				50'0"				
		50'-52'	D	17	19	20	Moist Dense		Brown F-M Sand, Trace of F Gravel	6	24	20
				16				54'0"				
		52'-54'	D	18	21	24				7	24	8
				14					Brown F Sand			
		54'-56'	D	16	19	23				8	24	[illegible]
									Bottom Of Boring 56'0"			

GROUND SURFACE TO 54'0" USED HS "CASING: THEN Sampled To 56'0" Bags-2

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50 + Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30 + Hard

SUMMARY:
Earth Boring 56'0"
Rock Coring —
Samples 8

HOLE NO. A-67

2860 FISHER ROAD COLUMBUS, OHIO

DATE 3-26-74
HOLE NO. A-68
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 532.6

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 46'3" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt		140	BIT
Hammer Fall		30	

	Date	Time
START	3-26-74	a.m. p.m.
COMPLETE	3-27-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
		1'-40'	A	Bag	#1				Brown Silty Clay	1		
				10				40'0"				
		40'-42'	D	13	13	16	Moist M/Dense			1	24	6
				9								
		42'-44'	D	14	17	19	Moist Dense			2	24	8
				11								
		44'-46'	D	13	13	16	Moist M/Dense			3	24	8
				14								
		46'-48'	D	16	16	19				4	24	[illegible]
				8								
		48'-50'	D	12	15	17				5	24	[illegible]
				11			Moist Dense		Brown F-M Sand			
		50'-52'	D	14	16	16				6	24	6
				13								
		52'-54'	D	17	19	22				7	24	7
				11								
		54'-56'	D	16	21	24				8	24	10
				10								
		56'-58'	D	10	13	15	M/Dense			0	24	[illegible]
				13								
		58'-60'	D	17	17	18	Dense			9	24	9
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 58'0" USED Auger "CASING: THEN Sampled To 60'0" Bags-1

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50 + Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30 + Hard

SUMMARY:
Earth Boring 60
Rock Coring —
Samples 9

HOLE NO. A-68

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-25-74
HOLE NO. A-69
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 536.5

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 44'6" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-25-74	a.m. p.m.
COMPLETE	3-26-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
		1'-17'6	A	Bag	#1			17'6"	Brown Silty Clay	1		
		17'6-23'	A	Bag	#2			23'0"	Brown Silty Clay and Gravel	2		
		23'-29'	A	Bag	#3			29'0"	Brown F-C Sand, Trace of Gravel	3		
		29'-43'	A	Bag	#4			43'0"	Brown M Sand and F Gravel	4		
		45'-47'	D	7 / 7	9	9	Moist M/Dense		Brown F Sand, Trace of M Sand	1	24	[illegible]
		47'-49'	D	11 / 9	9	8				2	24	[illegible]
		49'-51'	D	11 / 12	15	18	Moist Dense			3	24	[illegible]
		51'-53'	D	16 / 14	16	19		53'0"		4	24	[illegible]
		53'-55'	D	17 / 17	19	23	Moist V/Dense		Brown F-M Sand, Trace of F Gravel and C Sand	5	24	[illegible]
		55'-57'	D	22 / 19	24	29				6	24	[illegible]
		57'-59'	D	26 / 16	31	33				7	24	[illegible]
		59'-61'	D	21 / 21	27	33				8	24	[illegible]
		61'-63'	D	27 / 19	27	35				9	24	[illegible]
		63'-65'	D	24	29	36				10	24	[illegible]
									Bottom Of Boring 65'0"			

GROUND SURFACE TO 63'0" USED Auger "CASING: THEN Sampled To 65'0" Bags-4

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 63'0"
Rock Coring —
Samples 10

HOLE NO. A-69

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

DATE 3-23-74
HOLE NO. A-70
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 536.1

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 45'0" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-23-74	a.m. p.m.
COMPLETE	3-25-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
		1'-22'6	A	Bag	#1			22'6"	Brown Silty Clay	1		
		22'6-28'	A	Bag	#2			28'6"	Brown Silty Clay and Gravel	2		
		28'-42'	A	Bag	#3			42'0"	Brown F-M Sand, Trace of Gravel	3		
		42'-45'	A	Bag	#4			45'0"	Brown M Sand	4		
		45'-47'	D	8 / 10	9	11	Moist M/Dense		Brown F Sand	1	24	
		47'-49'	D	13 / 8	13	10				2	24	
		49'-51'	D	13 / 11	15	17	Moist Dense			3	24	
		51'-53'	D	16 / 16	19	22				4	24	
		53'-55'	D	19 / 13	24	29	Moist V/Dense			5	24	
		55'-57'	D	18 / 15	23	27				6	24	
		57'-59'	D	15 / 17	23	26	Dense			7	24	
		59'-61'	D	22 / 13	28	33	V/Dense			8	24	
		61'-63'	D	19 / 15	22	27	Dense			9	24	
		63'-65'	D	21	24	30	V/Dense			10	24	
									Bottom Of Boring 65'0"			

GROUND SURFACE TO 63'0" USED Auger "CASING: THEN Sampled To 65'0" Bags-4

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 63'0"
Rock Coring —
Samples 10

HOLE NO. A-70

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-22-74
HOLE NO. A-71
LINE & STA.
OFFSET
SURF. ELEV. 536.5

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. FO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 52'6" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-22-74	a.m. p.m.
COMPLETE	3-23-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
		1'-24'6	A	Bag #1				24'6"	Brown Silty Clay	1		
		24'6-33'	A	Bag #2				33'0"	Brown Silty Clay and Gravel	2		
		33'-39'	A	Bag #3				39'0"	Brown M Silty Sand and F Gravel	3		
		40'-42'	D	21 27	33	38	Moist Very Dense		Brown F Sand	1	24	1
		42'-44'	D	27 36	41	49				2	24	1
		44'-46'	D	32 39	43	48				3	24	1
		46'-48'	D	19 23	29	35				4	24	1
		48'-50'	D	17 19	22	28				5	24	1
		50'-52'	D	23 27	31	38				6	24	1
		52'-54'	D	19 23	28	28				7	24	1
		54'-56'	D	17 21	25	29				8	24	1
		56'-58'	D	14 18	23	27				9	24	1
		58'-60'	D	12 12	15	19		58'0"	Brown F Sand, Trace of F Gravel	10	24	1
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 58'0" USED Auger" CASING: THEN Sampled To 60'0" Bags-1

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 58'0"
Rock Coring —
Samples 10

HOLE NO. A-71

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET ____ OF ____
DATE 3-21-74
HOLE NO. A-72
LINE & STA.
OFFSET
SURF. ELEV. 535.6

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. FO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 45'0" after 42 Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-21-74	a.m. p.m.
COMPLETE	3-22-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'	A					1'0"	Top Soil			
		1'-24'	A	Bag #1				24'0"	Brown Silty Clay	1		
		24'-32'6	A	Bag #2				32'6"	Brown Silty Clay and Gravel	2		
		32'6-42'	A	Bag #3				42'0"	Brown Silty Sand and Gravel	3		
		42'-45'	A	Bag #4				45'0"	Brown M Sand	4		
		45'-47'	D	4 6 10	6	6	Moist M/Dense		Brown F-M Sand	1	24	1
		47'-49'	D	17 9	17	21	Moist Dense			2	24	1
		49'-51'	D	13 15	19	19				3	24	1
		51'-53'	D	19 8	23	28	V/Dense			4	24	1
		53'-55'	D	10 14	17	21	Dense			5	24	1
		55'-57'	D	18 18	23	29	Moist V/Dense	57'0"		6	24	1
		57'-59'	D	24 15	29	33				7	24	1
		59'-61'	D	17 19	24	28				8	24	1
		61'-63'	D	21 11	25	27			Brown F-M Sand, Trace of F Gravel	9	24	1
		63'-65'	D	13	16	20	Dense			10	24	1
									Bottom Of Boring 65'0"			

GROUND SURFACE TO 65'0" USED Auger" CASING: THEN Sampled To 65'0" Bags-4

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 65'0"
Rock Coring —
Samples 10

HOLE NO. A-72

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-25-74
HOLE NO. A-73
LINE & STA.
OFFSET
SURF. ELEV. 535.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
38'6" at Completion.
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-25-74	a.m. p.m.
COMPLETE	3-26-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	Jr. Watson	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-9'	A	Bag	#1			0'6"	Top Soil	1		
									Brown Silt and Clay			
								9'0"				
		9'-37'	A	Bag	#2				Brown Sandy Silt	2		
								37'0"				
		37'-41'	A	Bag	#3				Brown F-M Gravel and F Sand	3		
								41'0"				
				10								
		44'-46'	D	11	12	14	Moist M/Dense	46'0"	Water at 46'0"	1	24	1
				11								
		46'-48'	D	12	13	15				2	24	2
				12								
		48'-50'	D	14	15	16	Moist Dense		Brown F Sand	3	24	21
				13								
		50'-52'	D	15	17	19				4	24	2
				12								
		52'-54'	D	14	15	17				5	24	
				10								
		54'-56'	D	11	13	15	Moist M/Dense			6	24	3
				12								
		56'-58'	D	15	18	21	Moist Dense			7	24	2
				13								
		58'-60'	D	16	19	24				8	24	1
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 58'0" USED HS "CASING: THEN Sampled To 60'0" Bags-3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 58'0"
Rock Coring --
Samples 8

HOLE NO. A-73

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET ___ OF ___
DATE 3-23-74
HOLE NO. A-74
LINE & STA.
OFFSET
SURF. ELEV. 534.3

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
35'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-23-74	a.m. p.m.
COMPLETE	3-25-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	Jr. Watson	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-11'	A	Bag	#1				Top Soil 0'6"	1		
									Brown Silt and Clay			
								11'0"				
		11'-37'	A	Bag	#2				Brown Sandy Silt	2		
								37'0"				
		37'-40'	A	Bag	#3					3		
				11								
		40'-42'	D	12	14	15	Moist M/Dense		Brown F Sand	1	24	14
				12								
		42'-44'	D	13	14	16				2	24	20
				12								
		44'-46'	D	15	16	17			Water at 46'0"	3	24	24
				12								
		46'-48'	D	13	16	17				4	24	21
				14								
		48'-50'	D	15	17	19				5	24	24
				13								
		50'-52'	D	15	18	24	Moist Dense		Brown F Sand	6	24	22
				14								
		52'-54'	D	16	19	23				7	24	21
				13								
		54'-56'	D	15	17	21				8	24	21
				16								
		56'-58'	D	18	21	27				9	24	21
									Botton Of Boring 58'0"			

GROUND SURFACE TO 56'0" USED Auger "CASING: THEN Sampled To 58'0" Bags-3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 56'0"
Rock Coring --
Samples 9

HOLE NO. A-74

TOWN PRESS — EAST BROY

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 3-22-74
HOLE NO. A-75
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 533.0

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
42'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-22-74	a.m. p.m.
COMPLETE	3-23-74	a.m. p.m.

TOTAL HRS.
BORING FOREMAN Jr. Watson
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-10'	A	Bag	#1				Top Soil 0'6"	1		
								10'0"	Brown Silt and Clay			
		10'-37'	A	Bag	#2					2		
								37'0"	Brown Sandy Silt			
		37'-40'	A	Bag	#3					3		
				16					Brown F-M Sand			
		40'-42'	D	11	13	14				1	24	17
				12								
		42'-44'	D	14	16	17		44'0"	Water at 44'0"	2	24	19
				11								
		44'-46'	D	12	14	15				3	24	1[illegible]
				12								
		46'-48'	D	15	17	19				4	24	22
				15								
		48'-50'	D	16	18	21				5	24	2[illegible]
				14								
		50'-52'	D	16	19	24				6	24	22
				17								
		52'-54'	D	19	22	26			Brown F Sand	7	24	2[illegible]
				16								
		54'-56'	D	20	19	22				8	24	[illegible]
				18								
		56'-58'	D	22	26	31				9	24	[illegible]
				17								
		58'-60'	D	23	28	34				-	24	-
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 58'0" USED HS "CASING: THEN Sampled To 60'0" Bags-3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring -
Samples 9

HOLE NO. A-75

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 3-22-74
HOLE NO. A-76
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 531.6

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
42'6" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-22-74	a.m. p.m.
COMPLETE	3-22-74	a.m. p.m.

TOTAL HRS.
BORING FOREMAN Jr. Watson
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-14'	A	Bag	#1			0'6"	Top Soil	1		
								14'0"	Brown Silt and Clay			
		14'-40'	A	Bag	#2			40'0"	Brown Sandy Silt	2		
									Brown F Sand			
		40'-44'	A	Bag	#3			44'0"		3		
				12								
		44'-46'	D	14	17	21				1	24	1
				13								
		46'-48'	D	15	17	20				2	24	2[illegible]
				11								
		48'-50'	D	14	19	23	Moist Dense			3	24	2
				13					Brown F-M Sand			
		50'-52'	D	15	18	25				4	24	-
				14								
		52'-54'	D	17	21	26				5	24	2[illegible]
				16								
		54'-56'	D	19	22	28				6	24	1
				18			Moist Very Dense					
		56'-58'	D	21	27	34		58'0"		7	24	2[illegible]
				19					Brown F Sand			
		58'-60'	D	22	29	36				-	24	
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 58'0" USED HS "CASING: THEN Sampled To 60'0" Bags-3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring -
Samples 7

HOLE NO. A-76

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 3-20-74
HOLE NO. A-77
LINE & STA.
OFFSET
SURF. ELEV. 530.5

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
43'6" at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	3-20-74	a.m. p.m.
COMPLETE	3-21-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	Jr. Watson	
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc	SAMPLE No.	Pen	Rec
		0'-16'	A	Bag	#1				Top Soil 0'6"	1		
									Brown Silty Clay			
								16'0"				
		16'-42'	A	Bag	#2					2		
									Brown Silty Sand			
								42'0"				
		42'-45'	A	Bag	#3					3		
				14								
		46'-48'	D	15	17	20				1	24	7
				15								
		48'-50'	D	16	19	23				2	24	[illegible]
				15								
		50'-52'	D	18	20	22			Brown F-M Sand	3	24	21
				18								
		52'-54'	D	19	23	28				4	24	24
				14								
		54'-55'	D	13	25	33				5	24	21
				19								
		56'-58'	D	20	22	35				6	24	23
				20								
		58'-60'	D	21	28	37				7	24	20
									Bottom Of Boring 60'0"			

GROUND SURFACE TO 53'0" USED HS "CASING: THEN Sampled To 60'0" Page-3

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 60'0"
Rock Coring —
Samples 7

HOLE NO. A-77

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-10-74
HOLE NO. A-78
LINE & STA.
OFFSET
SURF. ELEV. 532.5

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
46'0" at Completion
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-10-74	a.m. p.m.
COMPLETE	4-10-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Wright	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	2	3	7	Soft		0'6" Top Soil	1	18	[illegible]
5'		5'-6'6	D	2	4	7				2	18	1
							Damp Stiff		Brown Clayey Silt, Trace of F Sand			
10'		10'-11'6	D	5	5	7				3	18	17
15'		15'-16'6	D	1	2	5	Wet M/Stiff		Water at 16'0"	4	18	1
20'								20'6"				
		20'-21'6	D	3	7	7				5	18	
				3			Moist M/Dense		Brown F-C Sand, Trace to Little F Gravel (Small Boulder 23'-23'6)			
		22'-24'	D	5	68	10				6	24	1
25'		24'-26'	D	5	4	4		25'0"		7	24	11
				2			Wet M/Dense		Brown F Sand, Little Silt			
		26'-28'	D	2	3	6		28'0"		8	24	3
				6								
		28'-30'	D	10	14	19				9	24	16
30'				17								
		30'-32'	D	14	15	16				10	24	1
				10			Damp Dense					
		32'-34'	D	13	27	15			Brown F-M Sand, Trace of F Gravel	11	24	1
				9								
35		34'-36'	D	16	23	23				12	24	1
				11								
		36'-38'	D	14	20	25				13	24	1
				12				38'0"				
		38'-40'	D	11	17	21			Brown F Sand, Little Silt	14	24	1
40												

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0"
Rock Coring —
Samples 11

HOLE NO. [illegible]

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-78
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		
COMPLETE		
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				12								
		40'-42'	D	12	12	18				15	24	12
				12								
		42'-44'	D	13	15	19	Damp Dense		Brown F-M Sand, Little Silt, Trace of F Gravel	16	24	14
45'				9								
		44'-46'	D	18	15	18				17	24	10
				11								
		46'-48'	D	16	19	21				18	24	12
				10								
50'		48'-50'	D	14	17	20				19	24	12
									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples
HOLE NO. A-78

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-10-74
HOLE NO. A-79
LINE & STA.
OFFSET 10' N
SURF. ELEV. 534.3

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
30'6" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-10-74	
COMPLETE	4-10-74	
TOTAL HRS.		
BORING FOREMAN	D. Wright	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	1	1			0'6" Top Soil	1	18	1
5'		5'-6'6	D	4	5	6			Brown Silty Clay, Trace of F Sand	2	18	1
10'		10'-11'6	D	1	2	1	Soft Damp	10'0"		3	18	1
									Water Seepage at 13'0"			
15'		15'-16'6	D	1	1	1			Brown Silt and F. Sand, Some Clay	4	18	1
20'		20'-21'6	D	2	2	3		23'0"		5	18	1
25'				4								
		25'-27'	D	8	12	16	Damp Dense			6	24	1
				15								
		27'-29'	D	16	21	21				7	24	1
				12								
30'		29'-31'	D	14	18	24			Brown F-M Sand, Trace of F Gravel	8	24	1
				9								
		31'-33'	D	14	15	16				9	24	1
				11								
		33'-35'	D	15	12	13	Damp M/Dense			10	24	
35'				12								
		35'-37'	D	12	14	13				11	24	1
				9				37'0"				
		37'-39'	D	14	15	17			Brown F Sand and Silt	12	24	
				15			Damp Dense					
40'		39'-41'	D	22	16	23				13	24	1

GROUND SURFACE TO 29'0" USED HS "CASING: THEN Auger to 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 29'0"
Rock Coring
Samples 13
HOLE NO. A-79

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET ___ OF ___
DATE ___
HOLE NO. A-79
LINE & STA. ___
OFFSET ___
SURF. ELEV. ___

TO The Dayton Power & Light Co. | ADDRESS ___
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO ___ | PROJ. NO. PO 96096
SAMPLES SENT TO ___ | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ___ after ___ Hours
At ___ after ___ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				14			Damp Dense	41'0"	Brown F Sand and Silt			
		41'-43'	D	19	22	22				14	24	9
				12								
		43'-45'	D	19	19	21	Moist Dense		Brown F-M Sand, Little to Some Silt	15	24	10
45'				11								
		45'-47'	D	19	20	23				16	24	9
				12								
		47'-49'	D	13	16	22				17	24	19
		49'-50'	D	13	15					18	12	9
50'									Bottom Of Boring 50'0"			

GROUND SURFACE TO ___ USED ___ "CASING: THEN ___

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ___
Rock Coring ___
Samples ___

HOLE NO. A-79

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 4-11-74
HOLE NO. A-80
LINE & STA. ___
OFFSET ___
SURF. ELEV. 537.3

TO The Dayton Power & Light Co. | ADDRESS ___
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO ___ | PROJ. NO. PO 96096
SAMPLES SENT TO ___ | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ___ after ___ Hours
48'0" at Completion
At ___ after ___ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-11-74	a.m. p.m.
COMPLETE	4-11-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Wright	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	3	7	Damp Stiff		Brown Clayey Silt, Trace of F Sand	1	18	12
		5'-6'6	D	4	4	7				2	18	1
		10'-11'6	D	3	4	6		12'0"		3	18	13
		15'-16'6	D	1	1	2	Wet Loose	"	Brown Silt and F Sand, Little Clay	4	18	[illegible]
		20'-21'6	D	2	2	3				5	18	1
				4				23'0"				
		25'-27'	D	11	7	9	Damp M/Dense		Brown F-C Sand, Little F-M Gravel, Trace of Silt	6	24	12
				5								
		27'-29'	D	9	12	12				7	24	1
				11								
		29'-31'	D	12	12	12				8	24	12
				10								
		31'-33'	D	13	9	14				9	24	1
				8								
		33'-35'	D	11	11	13				10	24	1
				9								
		35'-37'	D	12	13	12				11	24	1
				8								
		37'-39'	D	8	10	11				12	24	1
				9								
		39'-41'	D	7	8	12				13	24	12
				8								
		41'-43'	D	8	9	13				14	24	1
				9								
		43'-45'	D	10	10	11		46'0"	Water at 46'0"	15	24	10
				10								
		45'-47'	D	9	12	12			Brown F-M Sand, Little Silt	16	24	1
				8								
		47'-49'	D	8	10	10				17	24	1
		49'-50'	D	9	12				Bottom Of Boring 50'0"	18	12	9

GROUND SURFACE TO 49'0" USED HS "CASING: THEN Sample: To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0"
Rock Coring ___
Samples 18

HOLE NO. A-80

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 4-16-74
HOLE NO. A-81
LINE & STA.
OFFSET
SURF. ELEV. 532.6

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-16-74	a.m. p.m.
COMPLETE	4-16-74	a.m. p.m.

TOTAL HRS.
BORING FOREMAN D. Paquette
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
								1'0"	Top Soil			
		0'-1'		1								
		0'-2'	D	2	2	2				1	24	16
5'		5'-7'	D	2 / 4	4	5	Moist Stiff		Brown Silty Clay	2	24	14
								9'0"				
10'		10'-12'	D	2 / 3	4	4			Brown Sandy Silt	3	24	13
								12'6"				
15'		15'-17'	D	4 / 4	6	6				4	24	[illegible]
		17'-19'	D	4 / 6	6	8				5	24	7
20'		19'-21'	D	6 / 9	8	9				6	24	8
		21'-23'	D	8 / 10	10	8				7	24	10
		23'-25'	D	10 / 12	10	12	Moist Dense		Medium Brown Sand	8	24	9
25'		25'-27'	D	11 / 10	13	15				9	24	12
		27'-29'	D	10 / 12	11	13				10	24	[illegible]
30'		29'-31'	D	12 / 7	14	16				11	24	13
		31'-33'	D	12 / 9	13	14				12	24	[illegible]
		33'-35'	D	11	10	12				13	24	6
35'									Bottom Of Boring 35'0"			
40'												

GROUND SURFACE TO 35'0" USED HS "CASING: THEN Sampled To 35'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions, Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 35'0"
Rock Coring --
Samples 13

HOLE NO

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 4-11-74
HOLE NO. A-82
LINE & STA.
OFFSET
SURF. ELEV. 535.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
47'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-11-74	a.m. p.m.
COMPLETE	4-11-74	a.m. p.m.

TOTAL HRS.
BORING FOREMAN E. Wright
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	2	6	Damp Stiff		0'3" Top Soil	1	18	[illegible]
		5'-6'	D	2	4	5		8'0"	Brown Clayey Silt, Trace of F Sand	2	18	1
		10'-11'6	D	2 / 3	3	4	Moist Loose	13'0"	Brown Silt and F Sand, Little Clay	3	18	[illegible]
		15'-17'	D	6 / 5	5	6				4	24	1
		17'-19'	D	6 / 5	5	7				5	24	[illegible]
		19'-21'	D	5 / 5	6	7				6	24	1
		21'-23'	D	6 / 4	6	8				7	24	[illegible]
		23'-25'	D	5 / 5	6	8	Damp M/Dense		Brown F-C Sand, Little F-M Gravel, Trace of Silt	8	24	[illegible]
		25'-27'	D	7 / 4	7	9				9	24	1
		27'-29'	D	7 / 6	8	10				10	24	[illegible]
		29'-31'	D	5 / 3	5	8				11	24	[illegible]
		31'-33'	D	4 / 6	4	6				12	24	1
									Water at 33'0"	13	24	[illegible]
		33'-35'	D	8 / 7	9	12						
		35'-37'	D	9 / 9	10	14				14	24	1
		37'-39'	D	10 / 12	13	14				15	24	[illegible]
		39'-41'	D	14 / 14	15	19	Wet M/Dense Dense		Brown F-C Sand, Little F-M Gravel, Trace of Silt	16	[illegible]	1
		41'-43'	D	17 / 10	18	23				17	[illegible]	
		43'-45'	D	13 / 9	14	17				18	[illegible]	[illegible]
		45'-47'	D	14 / 13	17	17				19	[illegible]	[illegible]
		47'-49'	D	15	18	21				20	[illegible]	[illegible]
		49'-50'	D	13	22				Bottom Of Boring 50'0"	21	[illegible]	1

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0"
Rock Coring --
Samples 21

HOLE NO

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 1
DATE 4-16-74
HOLE NO. A-83
LINE & STA. South 125
OFFSET West 6
SURF. ELEV. 532.5

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-16-74	
COMPLETE	4-16-74	
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'		2			Damp M/Dense	1'0"	Top Soil			
		1'-2'	D	2	3	3				1	24	13
				4					Brown Clayey Silt, Trace of F Sand			
5'		5'-7'	D	6	8	8	Damp V/Stiff			2	24	24
								9'0"				
				2								
10'		10'-12'	D	2	3	2				3	24	13
							Wet Loose		Brown Silt and F Sand, Silty Clay			
				2								
15'		15'-17'	D	2	3	3				4	24	14
								18'6"				
				10								
20'		20'-22'	D	16	16	18				5	24	12
				10			Damp Dense					
		22'-24'	D	12	10	13				6	24	12
				13								
		24'-27'	D	12	14	16				7	24	12
25'				12								
		26'-28'	D	16	14	18				8	24	10
				10								
		28'-30'	D	15	18	22			Brown F-M Sand, Little Silt, Trace of F Gravel	9	24	10
				14								
30'		30'-32'	D	17	17	20				10	24	13
				12								
		32'-34'	D	15	18	22	Damp V/Dense			11	24	10
				17								
35'		34'-36'	D	21	27	30				12	24	12
				15								
		36'-38'	D	18	23	29				13	24	12
				21								
40'		38'-40'	D	27	31	34				14	24	17
									Bottom Of Boring 40'0"			

GROUND SURFACE TO 38'0" USED HS "CASING: THEN Sampled To 40'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 40'0"
Rock Coring —
Samples 14

HOLE NO A-83

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-15-74
HOLE NO. A-84
LINE & STA.
OFFSET
SURF. ELEV. [illegible]

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
45'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-15-74	
COMPLETE	4-15-74	
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'		2				1'0"	Top Soil			
		1'-2'	D	2	3	3	Moist M/Stiff			1	24	
				4								
5'		5'-7'	D	6	8	8			Brown Silty Clay	2	24	
							Moist Stiff					
				2								
10'		10'-12'	D	2	2	2	Soft			3	24	
								13'0"				
				2								
15'		15'-17'	D	3	2	3				4	24	
							Moist M/Stiff		Brown Sandy Silt			
				2								
20'		20'-22'	D	2	3	3				5	24	
								24'0"				
				4								
25'		25'-27'	D	4	6	6				6	24	
				5								
		27'-29'	D	6	6	7				7	24	
				10			Moist M/Dense		Brown C Sand			
30'		29'-31'	D	13	13	17				8	24	
				12								
		31'-33'	D	11	13	16				9	24	
				14				33'0"				
		33'-35'	D	17	16	20				10	24	
				17								
35'		35'-37'	D	23	21	26	Moist Dense		Brown C Sand and F Gravel	11	24	
				21								
		37'-39'	D	25	29	31				12	24	
				19								
40'		39'-41'	D	22	22	27				13	24	

GROUND SURFACE TO 45'0" USED HS "CASING: THEN Sampled To 45'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY
Earth Boring [illegible]
Rock Coring
Samples [illegible]

HOLE NO [illegible]

BUCKEYE DRILLING CORPORATION
2850 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-84
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
				17								
		41'-43'	D	20	24	27				14	24	9
45'							Moist Dense		Brown C Sand and F Gravel			
				18								
		43'-45'	D	18	23	24				15	24	12
50'									Bottom Of Boring 45'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-84

BUCKEYE DRILLING CORPORATION
2850 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-12-74
HOLE NO. A-85
LINE & STA.
OFFSET
SURF. ELEV. 531.8

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Ton Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 46'6" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1⅜	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-12-74	
COMPLETE	4-15-74	
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
				2				1'0"	Top Soil			
		0'-2'	D	2	4	5	Moist Stiff			1	24	20
				6					Brown Silty Clay			
5'		5'-7'	D	6	8	8				2	24	[illegible]
								9'0"				
				2								
10'		10'-12'	D	2	3	3				3	24	[illegible]
				2								
15'		15'-17'	D	3	4	4	Moist M/Stiff		Brown Sandy Silt	4	24	3
				3								
20'		20'-22'	D	4	4	6				5	24	
								23'0"				
				4								
25'		25'-27'	D	6	6	10				6	24	[illegible]
				8								
		27'-29'	D	6	4	6				7	24	1
				6								
30'		29'-31'	D	6	7	8	Moist M/Dense		Brown C Sand and F Gravel	8	24	
				9								
		31'-33'	D	10	12	10				9	24	[illegible]
				8								
		33'-35'	D	7	8	9				10	24	
35'				6								
		35'-37'	D	7	6	8				11	24	[illegible]
				11								
		37'-39'	D	10	12	14				12	24	1
				12								
40'		39'-41'	D	14	14	17				13	24	

GROUND SURFACE TO 43'0" USED HS "CASING: THEN Sampled To 51'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 51.0
Rock Coring —
Samples 13

HOLE NO. A-85

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-85
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
				13								
		41'-43'	D	12	16	19				14	24	6
				17			Moist M/Dense		Brown C Sand and F-M Gravel			
		43'-45'	D	21	19	23				15	24	10
				21								
45		45'-47'	D	18	21	26				16	24	12
				14				47'0"				
		47'-49'	D	18	21	23				17	24	19
				19			Moist Dense		Brown F-M Sand			
50		49'-51'	D	23	23	20				18	24	13
									Bottom Of Boring 51'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. ____

2860 FISHER ROAD COLUMBUS, OHIO

TO Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

DATE 4-11-74
HOLE NO. A-86
LINE & STA.
OFFSET
SURF. ELEV. 516.1

GROUND WATER OBSERVATIONS
At 27'0" after ¼ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-11-74	a.m.
COMPLETE	4-12-74	p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
		0'-1'					Soft	1'0"	Top Soil			
				3								
		1'-2'	D	4	4	6				1	24	20
				4								
5'		5'-7'	D	6	6	8				2	24	24
				2								
10'		10'-12'	D	2	4	4				3	24	1[illegible]
							Damp Stiff		Brown Silty Clay, Trace of F Sand			
				2								
15'		15'-17'	D	4	4	6				4	24	16
				4								
20'		20'-22'	D	4	4	6				5	24	1[illegible]
				3								
25'		25'-27'	D	4	4	7		27'0"		6	24	1[illegible]
				4								
30'		30'-32'	D	6	6	9				7	24	10
				6								
		32'-34'	D	7	9	7				8	24	
				9			Moist-Wet M/Dense		Brown F-C Sand, Trace of F Gravel			
		34'-36'	D	9	8	9				9	24	[illegible]
				8								
35'		36'-38'	D	10	9	11				10	24	1[illegible]
				10								
		38'-40'	D	12	10	13				11	24	1
				12								
40'		40'-42'	D	13	15	14				12	24	1[illegible]

GROUND SURFACE TO 42'0" USED HS "CASING: THEN Sampler to 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 29'0"
Rock Coring —
Samples 16

HOLE NO. A-86

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

TO: Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. LOCATION Wrightsville Ohio
REPORT SENT TO PROJ. NO.
SAMPLES SENT TO OUR JOB NO. 45,099

SHEET ___ OF ___
DATE
HOLE NO. A-86
LINE & STA.
OFFSET
SURF. ELEV.

GROUND WATER OBSERVATIONS
At ___ after ___ Hours
At ___ after ___ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
				13								
		42'-44'	D	16	19	23				13	24	12
				12								
		44'-46'	D	16	19	25				14	24	17
				10								
45'		46'-48'	D	14	17	20	Wet Dense		Brown F-C Sand, Trace of F Gravel	15	24	17
				9								
		48'-50'	D	13	17	22				16	24	16
50'									Bottom Of Boring 50'0"			
55'												
60'												
65'												
70'												
75'												
80'												

GROUND SURFACE TO ___ USED ___ "CASING:- THEN ___

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ___
Rock Coring ___
Samples ___

HOLE NO. A-86

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson OUR JOB NO. 45,099

DATE 4-11-74
HOLE NO. A-87
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 518.0

GROUND WATER OBSERVATIONS
At 29'0" after 1/6 Hours
At ___ after ___ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-11-74	a.m. p.m.
COMPLETE	4-11-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Fennette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
		0'-0'6"					Soft		0'6" Top Soil			
				2								
		0'6-2'	D	6	8	12				1	24	20
				12								
5'		5'-7'	D	14	14	12	Damp V/Stiff			2	24	22
				2								
10'		10'-12'	D	4	6	6			Brown Clayey Silt, Trace of F Sand	3	24	1
				4								
15'		15'-17'	D	6	8	7				4	24	23
							Damp Stiff					
				4								
20'		20'-22'	D	4	6	6				5	24	1
								24'0"				
				4								
25'		25'-27'	D	5	6	5	Damp M/Dense		Brown Silt and F Sand, Little Clay	6	24	1
								29'0"				
				6								
30'		30'-32'	D	8	10	12	Wet M/Dense			7	24	1
				10								
		32'-34'	D	10	12	10			Brown F-C Sand, Trace of F Gravel	8	24	[illegible]
				9								
		34'-36'	D	11	10	12				9	24	
35'				11								
		36'-38'	D	14	16	19	Wet Dense			10	24	1
				9								
		38'-40'	D	13	18	18				11	24	1
40'												

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 20'0"
Rock Coring —
Samples 16

HOLE NO. A-87

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO | PROJ. NO.
SAMPLES SENT TO | OUR JOB NO. 45,099

DATE
HOLE NO. A-87
LINE & STA.
OFFSET
SURF. ELEV.

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				12								
		40'-42'	D	15	12	17				12	24	14
				14								
		42'-44'	D	13	16	20				13	24	12
				9			Wet		Brown F-C Sand,			
45'		44'-46'	D	11	13	16	M/Dense		Trace of F Gravel	14	24	14
				9								
		46'-48'	D	9	12	15				15	24	13
				11								
50'		48'-50'	D	10	14	15				16	24	12
									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____
HOLE NO. A-87

TOWN PRESS – EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF ?

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

DATE 4-11-74
HOLE NO. A-88
LINE & STA.
OFFSET
SURF. ELEV. 512.8

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
10'3" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-11-74	a.m.
COMPLETE	4-11-74	p.m.
TOTAL HRS.		
BORING FOREMAN	Jr Cornell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	2	3	3	Soft		0'9" Top Soil	1	18	1[illegible]
							Damp		Brown Silty Clay, Trace			
							Soft		of F Sand			
5												
		5'-6'6	D	1	1	2		7'0"	Water at 7'0"	2	18	1
10'												
		10'-11'6	D	3	5	6				3	13	1[illegible]
15'							Moist		Brown Clayey Silt, Trace			
		15'-16'6	D	3	5	8	Stiff		of F Sand	4	18	1
20'												
		20'-21'6	D	4	5	7				5	18	[illegible]
								23'0"				
				5								
25'		25'-27'	D	6	8	10				6	24	[illegible]
				4			Wet		Brown F-C Sand, Trace			
		27'-29'	D	6	8	11	M/Dense		of F Gravel and Silt	7	24	1[illegible]
				9								
30'		29'-31'	D	12	15	18				8	24	[illegible]
				8								
		31'-33'	D	10	12	15				9	24	1[illegible]
				14				33'0"				
		33'-35'	D	15	19	23				10	24	[illegible]
				11			Wet					
35'		35'-37'	D	14	16	25	Dense		Brown F-M Sand, Little	11	24	[illegible]
				10					Silt			
		37'-39'	D	17	19	23	Dry			12	24	[illegible]
				11			Dense					
40'		39'-41'	D	14	18	21				13	24	[illegible]

GROUND SURFACE TO 49'0" USED HS "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY
Earth Boring 20
Rock Coring [illegible]
Samples 13
HOLE NO.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-88
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At after Hours
At after Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				12								
		41'-43'	D	12	16	19	Dry Dense			14	24	11
				11								
		43'-45'	D	15	18	22				15	24	12
				10					Brown F-M Sand, Little Silt			
45'		45'-47'	D	21	19	28	Wet Dense			16	24	12
				12								
		47'-49'	D	19	23	27				17	24	11
50'		49'-50'	D	13	19					18	12	9
									Bottom Of Boring 50'0"			

GROUND SURFACE TO USED "CASING: THEN

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-88

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-11-74
HOLE NO. A-89
LINE & STA.
OFFSET
SURF. ELEV. 534.6

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At after Hours
At after Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START	4-11-74	a.m. p.m.
COMPLETE	4-11-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornwall	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	2	2			0'6" Top Soil	1	13	12
							Damp M/Stiff		Brown Clay Silt, Trace of F Sand			
5'		5'-6'6	D	3	4	4				2	18	1[illegible]
								9'6"	Water Seepage 9'6"			
10'		10'-11'6	D	2	2	4				3	18	1[illegible]
							Wet M/Stiff		Brown Clayey Silt, Some F Sand			
15'		15'-16'6	D	1	2	2				4	18	1[illegible]
20'		20'-21'6	D	2	2	8	Wet Stiff			5	18	1[illegible]
								23'0"				
				8								
25'		25'-27'	D	11	17	20				6	24	[illegible]
				9								
		27'-29'	D	15	12	18	Damp Dense		Brown F-M Sand, Trace of Silt	7	24	1[illegible]
				15								
		29'-31'	D	16	19	22				8	24	1[illegible]
30'				12								
		31'-33'	D	18	21	23				9	24	13
				5				33'0"				
		33'-35'	D	7	7	10	Damp M/Dense			10	24	1[illegible]
				7								
35'		35'-37'	D	12	20	25	Damp Dense			11	24	[illegible]
				12					Brown F-C Sand, Little F-C Gravel, Trace of Silt and Clay			
		37'-39'	D	14	18	24				12	24	1[illegible]
				18								
40'		39'-40'	D	21	26	32	V Dense		Brown F-M Sand, Trace of Silt	13	24	[illegible]

GROUND SURFACE TO 49'0" USED HS "CASING: THEN Sample: To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Lose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 70'
Rock Coring
Samples 18

HOLE NO

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-90
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		
COMPLETE		
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				20								
		41'-43'	D	37	30	35	Damp V/Dense		Brown F-M Sand, Trace of Silt	14	24	10
				14								
		43'-45'	D	20	26	30				15	24	9
				14				45'0"				
45'		45'-47'	D	25	29	35				16	24	12
				12			Moist V/Dense		Brown F-C Sand, Trace of F-M Gravel and Silt			
		47'-49'	D	28	25	39				17	24	13
		49'-50'	D	16	27					18	12	10
50'									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-90

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-5-74
HOLE NO. A-90
LINE & STA.
OFFSET
SURF. ELEV. 534.3

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-5-74	a.m. p.m.
COMPLETE	4-5-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornwell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	0	2	4			0'6" Top Soil	1	18	13
							Moist V/Stiff					
5		5'-6'6	D	4	5	6	Moist Stiff		Brown Silty Clay, Trace to Little F Sand	2	18	11
								9'6"				
10'		10'-11'6	D	2	2	2	Moist Loose		Brown Clayey Silt, Some F Sand	3	18	18
								14'6"				
15'		15'-16'6	D	3	4	6	Loose	16'6"	Brown F Sand and Silt, Trace of Clay	4	18	16
		16'6-18'	D	6	9	15	Moist M/Dense			5	18	16
20'		18'-20'	D	13	22	25				6	24	9
		20'-22'	D	11	19	21			Brown F-M Sand, Trace of F Gravel	7	24	10
		22'-24'	D	12	16	20				8	24	10
25'		24'-26'	D	12	15	18				9	24	9
		26'-28'	D	14	15	20		28'0"		10	24	11
30'		28'-30'	D	18	20	20	Moist Dense			11	24	11
		30'-32'	D	19	19	22				12	24	12
		32'-34'	D	14	15	18			Brown F-C Sand, Trace to Little F-C Gravel	13	24	8
35'		34'-36'	D	17	19	16				14	24	6
		36'-38'	D	13	15	18				15	24	8
40'		38'-40'	D	12	16	21				16	24	10

GROUND SURFACE TO 40'0" USED Auger "CASING: THEN Sample 1 To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0"
Rock Coring —
Samples 21

HOLE NO. A-90

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 4 OF 4
DATE
HOLE NO. A-90
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		40'-42'	D	13	15	18	Moist Dense	42'0"	Brown F-C Sand, Trace to Little F-C Gravel	17	24	7
		42'-44'	D	12	14	15			Gray F-C Sand, Trace to Little F-M Gravel, Washed Coal Fragments	18	24	13
45'		44'-46'	D	14	17	22		46'0"		19	24	15
		46'-48'	D	22	22	26	Moist V/Dense		Brown F-C Sand, Trace to Little F-M Gravel	20	24	20
		48'-50'	D	21	27	27				21	24	27
									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-90

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET ____ OF ____
DATE 4-4-74
HOLE NO. A-91
LINE & STA.
OFFSET
SURF. ELEV. 537.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
48'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		S.S.	
Size I.D.	Auger	1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-4-74	a.m. p.m.
COMPLETE	4-4-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornwell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	2	3	5			0'5" Top Soil	1	18	14
5'		5'-6'6	D	3	5	8	Moist Stiff		Brown Sandy Silty Clay	2	18	13
10'		10'-11'6	D	3	4	6				3	18	12
15'		15'-16'6	D	3	3	6		15'10"		4	18	12
								17'0"				
		16'6-18'	D	3	5	6			Brown Sand with Clay Seams	5	18	12
20'		18'-19'6	D	3	4	7				6	18	17
		19'-21'	D	4	4	6	Moist M/Dense			7	18	12
		21'-22'6	D	3	4	6				8	18	11
		22'6-24'	D	3	4	6				9	18	13
		24'-25'6	D	4	5	5				10	18	11
25'		25'6-27'	D	8	8	11				11	18	12
		27'-28'6	D	10	11	14			Brown Sand	12	18	13
30'		28'6-30'	D	15	18	23				13	18	16
		30'-31'6	D	13	16	20	Moist Dense			14	18	14
		31'6-33'	D	16	18	24				15	18	18
35'		33'-34'6	D	15	18	25		35'0"		16	18	17
		34'6-36'	D	14	8	11				17	18	12
		36'-38'	D	4 5 7	5	11	Moist		Brown Sand and F Gravel	18	24	[illegible]
40'		38'-40'	D	8	8	12				19	24	9

GROUND SURFACE TO 48'0" USED Auger "CASING: THEN Resampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 20'0"
Rock Coring
Samples

HOLE NO. A-91

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-91
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				10				41'0"	Brown Sand and F Gravel			
		40'-42'	D	9	10	11				20	24	8
				9								
		42'-44'	D	10	10	14				21	24	13
				10			Moist					
45'		44'-46'	D	12	12	13	M/Dense		Brown Sand	22	24	11
				9								
		46'-48'	D	12	13	13				23	24	11
				9								
50'		48'-50'	D	11	14	15				24	24	16
									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-91

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

DATE 4-4-74
HOLE NO. A-92
LINE & STA.
OFFSET
SURF. ELEV. 539.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
49'6" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type	Auger	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-4-74	a.m. p.m.
COMPLETE	4-4-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornwell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From - To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	2	4			0'6" Top Soil	1	18	15
5'		5'-6'6	D	4	5	8			Brown Silty Sandy Clay	2	18	14
10'		10'-11'6	D	3	5	7			Water Seepage 11'0"	3	18	13
								14'0"				
15'		15'-16'6	D	2	3	6				4	18	13
		16'6-18'	D	3	4	6				5	18	10
				5								
20'		18'-20'	D	6	8	9	Moist					
				5								
		20'-22'	D	7	8	10			Brown Sand	7	24	10
				6								
		22'-24'	D	8	9	12				8	24	17
				8								
25'		24'-26'	D	10	10	13				9	24	[illegible]
				8								
		26'-28'	D	10	12	14				10	24	20
				12								
30'		28'-20'	D	12	14	18		30'0"		11	24	15
				14								
		30'-32'	D	15	18	21				12	24	11
				15								
		32'-34'	D	17	19	24				13	24	9
				15								
35'		34'-36'	D	16	18	25			Brown Sand, Some Gravel	14	24	7
				18								
		36'-38'	D	18	20	26				15	24	[illegible]
				13								
40'		38'-40'	D	15	17	19				16	24	[illegible]

GROUND SURFACE TO 45'0" USED Auger "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50
Rock Coring —
Samples 21

HOLE NO. A-9[illegible]

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET ___ OF ___
DATE
HOLE NO. A-92
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ___ after ___ Hours
At ___ after ___ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		
COMPLETE		
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				12								
		40'-42'	D	15	16	19			Brown Sand, Some Gravel	17	24	17
				12								
		42'-44'	D	14	16	18		44'0"		18	24	6
45'				11			Moist					
		44'-46'	D	14	15	17			Brown Sand, Trace of Gravel	19	24	5
				11								
		46'-48'	D	13	15	16				20	24	6
				9					Water at 49'0"			
50'		48'-50'	D	11	12	15				21	24	8
									Bottom Of Boring 50'0"			

GROUND SURFACE TO ___ USED ___ "CASING: THEN ___

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-92

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET ___ OF ___
DATE 4-8-74
HOLE NO. A-93
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 538.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ___ after ___ Hours
48'0" at Completion
At ___ after ___ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-8-74	
COMPLETE	4-8-74	
TOTAL HRS.		
BORING FOREMAN	J. Cornwell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	3	5	Soft		0'6" Top Soil	1	18	17
5'		5'-6'6	D	4	7	10	Damp M/Stiff		Brown Clayey Silt, Trace of F Sand	2	18	14
								9'0"				
10'		10'-11'6	D	2	3	4	Loose Moist		Slight Water Seepage 10'6" Brown Silt and F Sand, Some to Little Clay	3	18	15
15'		15'-16'6	D	2	3	3		15'0"		4	18	15
20'		20'-22'	D	7	10	12			Brown F Sand, Some Silt, Trace to Little Clay	5	24	1[illegible]
		22'-24'	D	7	9	11				6	24	9
25'		24'-26'	D	4	7	9	Damp M/Dense	26'0"		7	24	1[illegible]
		26'-28'	D	4	6	8				8	24	[illegible]
		28'-30'	D	9	12	16			Brown F-M Sand, Little to Some Silt, Trace of Clay	9	24	1[illegible]
30'		30'-32'	D	7	11	17				10	24	[illegible]
		32'-34'	D	10	13	16		33'6"		11	24	10
35'		34'-36'	D	12	17	15	Damp Dense			12	24	1[illegible]
		36'-38'	D	11	13	15			Brown F-C Sand, Little to Trace of F Gravel	13	24	[illegible]
		38'-40'	D	14	11	15	Damp M/Dense			14	24	
40'												

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampled to 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0"
Rock Coring —
Samples 19

HOLE NO. A-93

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-93
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. LOCATION Wrightsville, Ohio
REPORT SENT TO PROJ. NO. FO 96096
SAMPLES SENT TO OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At after Hours
At after Hours

	CASING	SAMPLER	CORE BAR
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
		40'-42'	D	11	13	16	Damp M/Dense		Brown F-C Sand, Little to Trace of F Gravel	15	24	10
		42'-44'	D	11	15	12		43'0"		16	24	8
45'		44'-46'	D	12	15	10	Moist Dense		Brown F-C Sand, Some to And F-C Gravel	17	24	8
		46'-48'	D	11	16	13				18	24	12
								48'3"				
		48'-50'	D	12	14	14	Moist M/Dense		Brown F-M Sand, Little F Gravel	19	24	13
50'									Bottom Of Boring 50'0"			

GROUND SURFACE TO USED "CASING: THEN

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-93

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

DATE 1-9-74
HOLE NO. A-94
LINE & STA.
OFFSET
SURF. ELEV. 536.2

TO The Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. PROJ. NO. FO 96096
SAMPLES SENT TO Dr. Tom Davisson OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At after Hours
48'0" at Completion
At after Hours

	CASING	SAMPLER	CORE BAR
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	1-9-74	a.m. p.m.
COMPLETE	1-9-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornwell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From–To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	2	4	Soft		0'5" Top Soil	1	18	5
5'		5'-6'6	D	3	5	6	Damp Stiff		Brown Clayey Silt, Trace of F Sand	2	18	9
10'		10'-11'6	D	2	3	5		10'6"		3	18	13
							Moist Loose	14'0"	Brown Silt and F Sand, Trace to Little Clay			
15'		15'-16'6	D	1	4	4			Brown F Sand and Silt, Trace of Clay	4	18	16
								19'6"				
20'		20'-22'	D	5	7	8	Damp M/Dense		Brown F-M Sand, Some Silt	5	24	[illegible]
		22'-24'	D	5	8	9				6	24	7
25'		24'-26'	D	5	6	8				7	24	1[illegible]
		26'-28'	D	5	5	8				8	24	[illegible]
		28'-30'	D	7	9	11				9	24	[illegible]
30'		30'-32'	D	7	10	13				10	24	[illegible]
		32'-34'	D	10	11	16				11	24	7
35'		34'-36'	D	12	15	22	Damp Dense	36'0"		12	24	[illegible]
		36'-38'	D	7	9	11	Damp-Moist M/Dense		Brown F-C Sand, Little F-C Gravel	13	24	[illegible]
40'		38'-40'	D	8	11	12				14	24	[illegible]

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'
Rock Coring —
Samples 10

HOLE NO. A-94

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-94
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. FO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		40'-42'	D	12	16	19	Damp-Moist Dense			15	24	8
		42'-44'	D	22	23	25			Brown F-C Sand, Little F-C Gravel	16	24	7
45		44'-46'	D	37	30	33				17	24	6
		46'-48'	D	15	16	27	Damp Dense	46'0"		18	24	9
		48'-50'	D	28	39	34	V/Dense		Brown F-M Sand, Trace of F Gravel	19	24	12
50'									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-94

2860 FISHER ROAD COLUMBUS, OHIO

DATE 4-9-74
HOLE NO. A-95
LINE & STA.
OFFSET
SURF. ELEV. 536.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. FO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
49'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-9-74	a.m. p.m.
COMPLETE	4-9-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornwall	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	2	5	Soft		0'5" Top Soil	1	18	8
							Damp Stiff		Brown Clayey Silt, Trace of F Sand			
5'		5'-6'6	D	5	7	9				2	18	12
								9'0"				
10'		10'-11'6	D	2	2	3				3	18	16
15'		15'-16'6	D	3	3	4	Damp Loose		Brown Silt and F Sand	4	18	12
20'		20'-22'	D	4	6	8				5	24	19
							Damp M/Dense	24'0"				
25'		24'-26'	D	5	5	6				6	24	13
		26'-28'	D	5	7	11			Brown F-M Sand, Some Silt	7	24	8
30'		29'-30'	D	8	9	11	Damp-Moist M/Dense			8	24	6
								34'0"				
35'		30'-32'	D	6	8	12				9	24	14
		32'-34'	D	7	8	11			Brown F-C Sand, Little F-M Gravel	10	24	10
		34'-36'	D	10	12	10				11	24	8
		36'-38'	D	8	11	9				12	24	7
40'		38'-40'	D	6	7	9				13	24	7

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0
Rock Coring —
Samples 13

HOLE NO A-95

TOWN PRESS — EAST PLOV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

DATE
HOLE NO. A-95
LINE & STA.
OFFSET
SURF. ELEV.

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		40'-42'	D	10	12	11				14	24	11
		42'-44'	D	10	16	21			Brown F-C Sand, Little F-M Gravel	15	24	8
45		44'-46'	D	12	13	15	Damp-Moist M/Dense	45'0"		16	24	8
		46'-48'	D	12	12	14			Brown F-M Sand, Little Silt, Trace of F Gravel	17	24	9
		48'-50'	D	15	17	20				18	24	12
50									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-95

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson

ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

DATE 4-8-74
HOLE NO. A-96
LINE & STA.
OFFSET 5'43" W
SURF. ELEV. 534.6

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-8-74	a.m. p.m.
COMPLETE	4-8-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornwell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
							Soft		0'6" Top Soil			
		0'-1'6	D	1	2	4				1	18	1
5'		5'-6'6	D	4	5	6				2	18	6
							Damp Stiff		Brown Clayey Silt, Trace of F Sand			
10'		10'-11'6	D	2	4	7				3	18	1
15'		15'-16'6	D	2	2	5		15'6"		4	18	1
20'		20'-22'	D	2 / 2	4	6				5	24	1
							Damp Loose		Brown F-M Sand, Some Silt, Little to Trace of Clay			
25'		22'-24'	D	2 / 4	5	7				6	24	1
		24'-26'	D	3 / 5	5	9				7	24	
30'		26'-28'	D	3 / 5	7	9				8	24	6
		28'-30'	D	9 / 12	11	15		32'0"		9	24	
		30'-32'	D	10 / 12	16	18				10	24	
35'		32'-34'	D	6 / 9	13	12	Damp Dense-M/Dense		Brown F-C Sand, Little F-C Gravel	11	24	
		34'-36'	D	8 / 14	11	14				12	24	
40'		36'-38'	D	9 / 11	20	20				13	24	6

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 20'0"
Rock Coring —
Samples 19

HOLE NO. A-96

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-96
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		

BORING FOREMAN
INSPECTOR
SOILS ENGR.

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
				8								
		38'-40'	D	10	15	19	Damp Dense-V/Dense		Brown F-C Sand, Little F-C Gravel	14	24	9
				9								
		40'-42'	D	14	16	13		44'4"		15	24	7
				17								
45'		42'-44'	D	11	15	21				16	24	3
				10			Damp V/Dense		Brown F-M Sand, Trace of Gravel			
		44'-46'	D	13	16	12				17	24	10
				9								
50'		46'-48'	D	16	15	12				18	24	7
				11								
		48'-50'	D	12	14	16			Bottom Of Boring 50'0"	19	24	12

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-96

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-10-74
HOLE NO. A-97
LINE & STA.
OFFSET
SURF. ELEV. 534.6

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
49'0" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-10-74	a.m. p.m.
COMPLETE	4-10-74	a.m. p.m.
TOTAL HRS.		

BORING FOREMAN J. Cornwell
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	2	3	4	Soft		0'6" Top Soil	1	18	6
							Damp Stiff		Brown Clayey Silt, Trace of F Sand			
5'		5'-6'6	D	2	4	5				2	18	8
								9'0"				
10'		10'-11'6	D	1	2	2				3	18	18
							Wet Loose		Brown Silt and F Sand, Little Clay			
15'		15'-16'6	D	1	1	2				4	18	17
								18'6"				
20'		20'-22'	D	7	7	9				5	24	16
		22'-24'	D	12	12	12				6	24	9
									Brown F-M Sand, Trace of Silt			
25'		24'-26'	D	9	13	17				7	24	11
		26'-28'	D	12	14	16	Moist M/Dense			8	24	6
		28'-30'	D	10	12	15				9	24	10
30'		30'-32'	D	9	10	9		30'2"		10	24	11
		32'-34'	D	7	6	7			Brown F-C Sand, Trace of F Gravel	11	24	7
35'		34'-36'	D	7	6	10				12	24	10
								36'0"				
		36'-38'	D	19	26	30	Moist V/Dense	38'0"	Brown F-C Sand and F-C Gravel	13	24	12
40'		38'-40'	D	12	14	15	V/Dense		Brown F-C Sand, Little to Some F Gravel	14	24	11

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampler to 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0"
Rock Coring
Samples 10

HOLE NO. A-97

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-97
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
		40'-42'	D	12	18	22	Moist Dense		Brown F-C Sand, Little to Some F Gravel	15	24	11
		42'-44'	D	21	26	30		44'0"		16	24	10
45'		44'-46'	D	19	25	29	Moist V/Dense		Brown F-C Sand and to Some F-C Gravel	17	24	11
		46'-48'	D	22	30	50		48'0"		18	24	10
50'		48'-50'	D	21	30	39			Brown F-C Sand, Little F Gravel	19	24	10
									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-97

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-11-74
HOLE NO. A-98
LINE & STA.
OFFSET
SURF. ELEV. 591.9

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
44'6" at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-11-74	a.m. p.m.
COMPLETE	4-11-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornwell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
		0'-1'6	D	1	1	3			0'6" Top Soil	1	12	[illegible]
5'		5'-6'6	D	3	5	7	Damp-Moist Stiff		Brown Clayey Silt, Trace of F Silt	2	18	
10'		10'-11'6	D	4	3	6				3	18	1
15'		15'-16'6	D	2	2	3	Wet M/Stiff	20'0"	Water Seepage 15'0"	4	18	[illegible]
20'		20'-21'6	D	2	2	4	Wet Loose	25'0"	Brown Silt and F Sand, Trace of Clay	5	18	1
25'		25'-27'	D	4 8 6	9	21	Damp M/Dense		Brown F-M Sand, Trace of Silt	6	24	[illegible]
		27'-29'	D	9 11	11	16				7	24	1
30'		29'-31'	D	16 11	20	19	Damp Dense	31'0"		8	24	1
		31'-33'	D	22 12	20	18		33'0"	Brown F-M Sand, Trace of Silt and F Gravel	9	24	[illegible]
		33'-35'	D	22 19	22	20				10	24	1
35'		35'-37'	D	24 20	23	21			Brown F-C Sand, Little F-C Gravel, Trace of Silt	11	24	1
		37'-39'	D	22 41	24	23				12	24	1
40'		39'-41'	D	16	20	21				13	24	[illegible]

GROUND SURFACE TO 49'0" USED HS "CASING: THEN Sampler to 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0"
Rock Coring —
Samples 13

HOLE NO

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-99
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At after Hours
At after Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		
COMPLETE		
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				19								
		41'-43'	D	18	20	21	Damp Dense		Brown F-C Sand, Little F-C Gravel, Trace of Silt	14	24	[illegible]
				17				43'0"				
		43'-45'	D	19	18	23			Brown F-C Sand, Little Silt	15	24	11
				17			Moist Dense	45'0"				
45'		45'-47'	D	12	25	21			Brown F-C Sand, Little Silt, Trace of F-M Gravel	16	24	[illegible]
				15				47'0"				
		47'-49'	D	27	29	32	Moist V/Dense		Brown F-C Sand, Little Silt	17	24	11
		49'-50'	D	19	36					18	12	[illegible]
50'									Bottom Of Boring 50'0"			

GROUND SURFACE TO USED "CASING: THEN

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-99

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-10-74
HOLE NO. A-99
LINE & STA.
OFFSET
SURF. ELEV. 535.5

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At after Hours
48'6" at Completion
At after Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-10-74	
COMPLETE	4-11-74	
TOTAL HRS.		
BORING FOREMAN	J. Cornwell	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'6	D	1	3	5			0'8" Top Soil	1	18	1
							Damp Stiff					
5'		5'-6'6	D	3	6	6				2	18	[illegible]
10'		10'-11'6	D	2	3	4				3	18	[illegible]
							Damp M/Stiff		Brown Clayey Silt, Trace of F Sand			
15'		15'-16'6	D	2	2	3				4	18	[illegible]
20'									Water Seepage 20'0"			
		20'-21'6	D	1	1	2	Wet Soft	24'0"		5	18	
25'		25'-26'6	D	5	6	8				6	18	[illegible]
		26'6-28'	D	7	9	9	Damp M/Dense		Brown F-M Sand, Little Silt	7	18	
30'		28'-30'	D	10	16	9				8	24	
		30'-32'	D	14	15	11				9	24	
		32'-34'	D	13	14	17		30'0"		10	24	
35'		34'-36'	D	16	18	14	Dry Dense-V/Dense		Brown F-M Sand, Trace of Silt and F Gravel	11	24	[illegible]
		36'-38'	D	18	23	30		34'0"		12	24	
40'		38'-40'	D	24	29	36			Brown F-C Sand, Little F-C Gravel, Trace of Silt	13	24	[illegible]

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 20
Rock Coring
Samples 13

HOLE NO A-99

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-99
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At after Hours
At after Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				19								
		40'-42'	D	23	32	31				14	24	8
				20			Damp V/Dense		Brown F-C Sand, Little F-C Gravel, Trace of Silt			
		42'-44'	D	26	30	34				15	24	12
45'				20								
		44'-46'	D	24	27	39		46'0"		16	24	12
				22								
		46'-48'	D	34	37	35			Brown F-M Sand, Little Silt	17	24	12
				16			(Wet)					
50'		48'-50'	D	22	34	39				18	24	
									Bottom Of Boring 50'0"			

GROUND SURFACE TO USED "CASING: THEN

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO A-99

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-10-74
HOLE NO. A-100
LINE & STA.
OFFSET
SURF. ELEV. 534.3

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Tavisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At after Hours
70'0" at Completion
At after Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-10-74	a.m. p.m.
COMPLETE	4-10-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	J. Cornell	
INSPECTOR		
SOILS ENGR.	Dr. Tavisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No	Pen	Rec
		0'-1'6	D	2	3	4	Soft		0'6" Top Soil	1	18	1
							Damp M/Stiff -Stiff					
5'		5'-6'6	D	3	4	7			Brown Clayey Silt, Trace of F Sand	2	18	1
10'		10'-11'6	D	3	3	4				3	18	1
									Water Seepage 12'0"			
15'		15'-16'6	D	2	3	5	Wet M/Stiff		Brown Clayey Silt, Trace of F Sand	4	18	1
20'								20'0"				
		20'-21'6	D	1	1	1	Wet Soft			5	18	1
									Brown Silt and F Sand, Sandy Clay			
				1								
25'		24'-26'	D	1	2	2	Wet M/Stiff			6	24	1
				1								
		26'-28'	D	2	2	3		27'6"		7	24	1
				1			Wet Stiff		Gray Silt and F Sand, Sandy Clay			
30'		30'-32'	D	2	2	6		31'6"		8	24	1
				10								
		32'-34'	D	20	30	35	Dry V/Dense		Reddish Brown F-C Sand, Little F-C Gravel, Trace of Silt and Clay	9	24	
				13								
35'		34'-36'	D	10	32	28		36'0"		10	24	24
				19								
		36'-38'	D	17	15	28	Dry Dense		Grayish Brown F-C Sand, Little F-C Gravel, Trace of Silt and Clay	11	24	1
				20								
		38'-40'	D	23	32	40	Dry V/Dense			12	24	12
40'												

GROUND SURFACE TO 20'0" USED HS "CASING: THEN Sampled To 52'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 5'0"
Rock Coring
Samples 12

HOLE NO

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-100
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				18								
		40'-42'	D	22	26	31		42'0"		13	24	18
				16								
		42'-44'	D	21	25	29				14	24	15
				19								
45'		44'-46'	D	25	31	34	Dry V/Dense			15	24	13
				20					Brown F-M Sand, Trace of C Sand and F Gravel			
		46'-48'	D	27	39	36				16	24	12
				24								
50'		48'-50'	D	25	33	38				17	24	9
				22								
		50'-52'	D	27	37	35				18	24	1[illegible]

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50 + Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30 + Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-8-74
HOLE NO. A-101
LINE & STA.
OFFSET
SURF. ELEV. 535.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 29'6" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type		SS	
Size I.D.	Auger	1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-8-74	a.m.
COMPLETE	4-9-74	p.m.
TOTAL HRS.		
BORING FOREMAN	D. Pacuette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Re
		0'-1'					Soft	1'0"	Top Soil			
		1'-2'	D	3	4	4				1	24	18
							Damp Stiff		Brown Clayey Silt, Trace of F Sand			
5'		5'-7'	D	6	6	8				2	24	2[illegible]
								9'0"				
10'		10'-12	D	2	4	4				3	24	1[illegible]
15'		15'-17'	D	2	3	5				4	24	1[illegible]
							Wet Loose		Brown Silt and F Sand			
20'		20'-22'	D	4	5	4				5	24	1[illegible]
25'		25'-27'	D	2	4	6				6	24	1[illegible]
								29'0"				
30'		30'-32'	D	8	8	12				7	24	[illegible]
		32'-34'	D	13	17	20				8	24	20
35'		34'-36'	D	11	15	17	Moist-Wet V/Dense-Dense		Brown F-C Sand, Trace to Little F-M Gravel	9	24	12
		36'-38'	D	17	21	21				10	24	[illegible]
40'		38'-40'	D	11	15	19				11	24	7

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampler To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50 + Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30 + Hard

SUMMARY:
Earth Boring 50'0"
Rock Coring —
Samples 10

HOLE NO A-101

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-101
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. FO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		

BORING FOREMAN
INSPECTOR
SOILS ENGR.

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		40'-42'	D	15	19	19				12	24	9
		42'-44'	D	19	23	27				13	24	10
45'							Moist Dense-V/Dense		Brown F-C Sand, Trace to Little F-M Gravel			
		44'-46'	D	21	25	28				14	24	9
		46'-48'	D	17	17	22				15	24	8
50'		48'-50'	D	16	19	22				16	24	9
									Bottom Of Boring 50'0"			

GROUND SURFACE TO _____ USED _____ "CASING: THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-101

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-8-74
HOLE NO. A-102
LINE & STA.
OFFSET
SURF. ELEV. 535.2

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. FO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At None after ½ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-8-74	a.m. p.m.
COMPLETE	4-8-74	a.m. p.m.
TOTAL HRS.		

BORING FOREMAN D. Paquette
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'					Soft	1'0"	Top Soil			
		1'-2'	D	2	4	6				1	24	14
5'		5'-7'	D	7	7	9	Damp Stiff		Brown Clayey Silt, Trace of Sand	2	24	12
								9'6"				
10'		10'-12'	D	6	6	6	Damp M/Dense		Brown Silt and F Sand	3	24	12
								14'0"				
15'		15'-17'	D	3	56/6"		Wet Loose		Brown F-M Sand, Some Silt	4	24	14
20'		20'-22'	D	4	4	5				5	24	4
								22'0"				
		22'-24'	D	2	4	3	Damp-Moist Loose		Brown Silt and F Sand	6	24	12
25'		24'-26'	D	6	6	8				7	24	12
		26'-28'	D	5	7	7				8	24	10
								28'0"				
		28'-30'	D	6	4	6	Damp M/Dense -Dense		Brown F-M Sand, Some Silt	9	24	3
30'		30'-32'	D	13	16	17		32'0"		10	24	7
		32'-34'	D	15	19	23				11	24	7
35'		34'-36'	D	27	34	39	Damp V/Dense		Brown F-C Sand, Little F Gravel	12	24	7
		36'-38'	D	23	29	33				13	24	8
		38'-40'	D	25	29	36				14	24	8
40'												

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0"
Rock Coring –
Samples 13

HOLE NO. A-102

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-102
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		

BORING FOREMAN
INSPECTOR
SOILS ENGR.

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		40'-42'	D	29	35	41				15	24	8
		42'-44'	D	36	41	46				16	24	8
45'		44'-46'	D	35	39	43	Damp V/Dense		Brown F-C Sand, Little F Gravel	17	24	12
		46'-48'	D	39	46	51				18	24	12
		48'-50'	D	39	44	49				19	24	12
50'									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-102

2860 FISHER ROAD COLUMBUS, OHIO

DATE 4-6-74
HOLE NO. A-103
LINE & STA.
OFFSET
SURF. ELEV. 535.0

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 49'6" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	Auger	S.S.	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-6-74	a.m. p.m.
COMPLETE	4-8-74	a.m. p.m.
TOTAL HRS.		

BORING FOREMAN D. Paquette
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'					Soft	1'0"	Top Soil			
		1'-2'	D	4	6	6				1	24	18
5'		5'-7'	D	4	6	6	Damp Stiff	9'0"	Brown Clayey Silt, Trace of F Sand	2	24	16
10'		10'-12'	D	2	3	3				3	24	10
15'		15'-17'	D	2	2	4	Damp Loose	18'0"	Brown Silt and F Sand, Little to Trace Clay	4	24	9
20'		20'-22'	D	4	4	6			Brown F-M Sand, Little to Some Silt	5	24	6
		22'-24'	D	8	6	6		24'0"		6	24	7
25'		24'-26'	D	4	5	6		26'0"	Brown Silt and F Sand	7	24	10
		26'-28'	D	7	7	6	(Moist to Wet)		Brown F-M Sand, Little to Some Silt	8	24	8
30'		28'-30'	D	7	8	8		30'0"		9	24	11
		30'-32'	D	6	9	8	Damp V/Dense		Brown F-C Sand, Little to Trace of F Gravel	10	24	8
		32'-34'	D	4	6	8		34'0"		11	24	14
35'		34'-36'	D	7	7	9		36'0"	Brown F-M Sand, Trace to Little Silt	12	24	8
		36'-38'	D	7	10	8			Brown F-C Sand, Some to Little F-C Gravel	13	24	10
40'		38'-40'	D	9	8	9				14	24	9

GROUND SURFACE TO 48'0" USED HS "CASING: THEN Sampled To 50'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 50'0"
Rock Coring —
Samples 19

HOLE NO A-103

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 5 OF 6
DATE
HOLE NO. A-103
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		

BORING FOREMAN
INSPECTOR
SOILS ENGR.

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
		40'-42'	D	9	8	9				15	24	8
		42'-44'	D	10	7	9	Damp to Moist W/Dense		Brown F-C Sand, Some to Little F-C Gravel	16	24	9
45'		44'-46'	D	8	7	7				17	24	7
		46'-48'	D	10	10	12				18	24	0
		48'-50'	D	12	10	12				19	24	10
50'									Bottom Of Boring 50'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-103

TOWN PRESS – EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

DATE 4-5-74
HOLE NO. A-104
LINE & STA.
OFFSET 6[illegible] W
SURF. ELEV. 532.3

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 28'0" after ½ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR
Type	Auger	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-5-74	a.m. p.m.
COMPLETE	4-6-74	a.m. p.m.
TOTAL HRS.		

BORING FOREMAN D. Paquette
INSPECTOR
SOILS ENGR. Dr. Davisson

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-2'	D	1	2	2	Moist Soft	1'0"	Top Soil	1	24	3
5'		5'-7'	D	4	6	6	Moist Stiff		Brown Silty Clay, Trace of F Sand	2	24	20
10'		10'-12'	D	4	4	7				3	24	10
								14'0"				
15'		15'-17'	D	2	2	3	Moist Loose		Brown F Sand and Silt, Trace of Clay	4	24	[illegible]
								18'6"				
20'		20'-22'	D	14	20	24	Moist Dense		Brown F-M Sand, Little to Trace of Silt	5	24	[illegible]
		22'-24'	D	23	29	33	Moist W/Dense			6	24	[illegible]
25'		24'-26'	D	27	34	41				7	24	10
		26'-28'	D	21	26	31		28'0"		8	24	12
30'		28'-30'	D	27	32	39		30'0"	Gray F-M Sand, Little Silt	9	24	[illegible]
		30'-32'	D	17	22	27	Moist Dense		Brown F-M Sand, Little to Trace of Silt	10	24	10
		32'-34'	D	19	19	23				11	24	12
35'		34'-36'	D	23	20	21				12	24	[illegible]
		36'-38'	D	18	22	22		38'0"		13	24	[illegible]
40'		38'-40'	D	13	13	16	W/Dense		Brown F-C Sand, Some F-C Gravel	14	24	[illegible]

GROUND SURFACE TO 44'0" USED Auger "CASING: THEN Sampler To 40'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring [illegible]
Rock Coring –
Samples [illegible]

HOLE NO. A-104

TOWN PRESS – EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-104
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
		40'-42'	D	17	17	16	Moist		Brown F-C Sand, Some	15	24	7
		42'-44'	D	19	18	19	W/Dense		F-C Gravel	16	24	10
45'		44'-46'	D	19	17	15				17	24	8
									Bottom Of Boring 46'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-104

TOWN PRESS — EAST BROS.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-9-74
HOLE NO. A-105
LINE & STA.
OFFSET
SURF. ELEV. 530.3

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO Dayton Power & Light Co.
SAMPLES SENT TO Dr. Tom Davisson
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-9-74	a.m. p.m.
COMPLETE	4-9-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Re
		0'-1'					Soft	1'0"	Top Soil			
				2								
		1'-2'	D	2	6	6				1	24	19
				6			Damp		Brown Silty Clay,			
5'		5'-7'	D	8	8	8	Stiff		Trace of F Sand	2	24	[illegible]
								8'6"				
				2								
10'		10'-12'	D	2	2	2	Damp		Brown Clayey Silt,	3	24	[illegible]
							M/Stiff		Trace of F Sand			
								14'0"				
				2								
15'		15'-17'	D	2	4	3				4	24	[illegible]
							Moist					
				4			M/Stiff		Brown Silt and F Sand,			
20'		20'-22'	D	4	6	6	-Stiff		Little Clay	5	24	[illegible]
								24'6"				
				20								
25'		25'-27'	D	18	56	61				6	24	[illegible]
				62								
		27'-29'	D	86	69	52				7	24	[illegible]
				18								
30'		29'-31'	D	20	26	24				8	24	[illegible]
				19			Damp-		Brown F-C Sand, Little			
		31'-33'	D	22	29	33	Dry		F-C Gravel, Silt and	9	24	[illegible]
				20			W/Dense		Clay			
		33'-35'	D	26	31	37				10	24	[illegible]
35'				18								
		35'-37'	D	24	27	31				11	24	[illegible]
				17								
		37'-39'	D	21	20	29				12	24	[illegible]
				21								
40'		39'-41'	D	27	35	30				13	24	[illegible]

GROUND SURFACE TO 29'0" USED HS "CASING: THEN Sampled To 51'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring [illegible]
Rock Coring —
Samples [illegible]

HOLE NO. [illegible]

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-106
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At _____ after _____ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				20								
		41'-43'	D	29	36	40				14	24	10
				17								
		43'-45'	D	23	23	27				15	24	8
45				13			Damp-Dry V/Dense		Brown F-C Sand, Little F-C Gravel, Silt and Clay			
		45'-47'	D	18	22	21				16	24	7
				19								
		47'-49'	D	23	20	23				17	24	12
				16								
50		49'-51'	D	19	22	20				18	24	12
									Bottom Of Boring 51'0"			

GROUND SURFACE TO _____ USED _____ "CASING: THEN _____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-106

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 1 OF 2
DATE 4-9-74
HOLE NO. A-106
LINE & STA. [illegible]
OFFSET [illegible]
SURF. ELEV. 530.6

TO The Dayton Power & Light Co. | ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. | LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. | PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson | OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At 31'0" after ½ Hours
At _____ after _____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1½	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-9-74	a.m. p.m.
COMPLETE	4-9-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-0'6					Soft		0'6" Top Soil			
				1								
		0'-2'	D	2	2	3	Damp M/Stiff			1	24	14
				6					Brown Clayey Silt, Trace of Sand			
5'		5'-7'	D	8	16	16	Damp V/Stiff			2	24	24
								8'6"				
				2								
10'		10'-11'6	D	2	2	2				3	24	10
							Wet Loose		Brown Silt and F Sand, Little Clay			
				2								
15'		15'-17'	D	2	2	3				4	24	[illegible]
				6				20'0"				
20'		20'-22'	D	6	10	12				5	24	[illegible]
				4								
25'		25'-27'	D	6	8	8	Damp M/Dense -Dense		Brown F-M Sand, Little Silt	6	24	[illegible]
				10								
		27'-29'	D	14	14	12				7	24	[illegible]
				7								
30'		29'-31'	D	11	14	17				8	24	[illegible]
				11								
		31'-33'	D	13	13	18				9	24	[illegible]
				7								
		33'-35'	D	7	9	9				10	24	[illegible]
				8				35'0"				
35'		35'-37'	D	7	7	8				11	24	[illegible]
				9			Damp M/Dense		Medium Brown Sand, Some F Gravel			
		37'-39'	D	9	11	13				12	24	[illegible]
				10								
40'		39'-41'	D	9	8	10				13	24	[illegible]

GROUND SURFACE TO 50'0" USED HS "CASING: THEN Sampler to 51'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 21'0"
Rock Coring –
Samples 13

HOLE NO A-106

2860 FISHER ROAD COLUMBUS, OHIO

TO The Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. LOCATION Wrightsville, Ohio
REPORT SENT TO PROJ. NO. PO 96096
SAMPLES SENT TO OUR JOB NO. 45,099

DATE
HOLE NO. A-106
LINE & STA.
OFFSET
SURF. ELEV.

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		
BORING FOREMAN		
INSPECTOR		
SOILS ENGR.		

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
				12								
		41'-43'	D	10	11	11				14	24	9
				13			Damp		Brown Sand, Some F-C			
		43'-45'	D	14	14	16	W/Dense		Gravel	15	24	7
45'				10								
		45'-47'	D	13	12	13				16	24	9
				11				47'0"				
		47'-49'	D	14	14	17	Wet		Brown F-M Sand, Trace	17	24	7
				13			Dense		of F Gravel			
50'		49'-51'	D	17	21	21				18	24	8
									Bottom Of Boring 51'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ____
Rock Coring ____
Samples ____

HOLE NO. A-106

TOWN PRESS — EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

TO Dayton Power & Light Co. ADDRESS
PROJECT NAME Killen Elec. Gen. Sta. LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co. PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson OUR JOB NO. 45,099

DATE 4-10-74
HOLE NO. A-107
LINE & STA.
OFFSET
SURF. ELEV. 533.7

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
None at Completion
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt.		140	BIT
Hammer Fall		30	

	Date	Time
START	4-10-74	a.m. p.m.
COMPLETE	4-11-74	a.m. p.m.
TOTAL HRS.		
BORING FOREMAN	D. Paquette	
INSPECTOR		
SOILS ENGR.	Dr. Davisson	

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec
		0'-1'					Soft	1'0"	Top Soil			
				2								
		1'-2'	D	4	7	9				1	24	22
							Damp					
				6			W/Stiff		Brown Clayey Silt,			
5'		5'-7'	D	8	8	10			Trace of Sand	2	24	24
								8'6"				
				2								
10'		10'-12'	D	2	2	2				3	24	1[illegible]
							Damp					
							Loose					
				2								
15'		15'-17'	D	2	4	3			Brown Silt and F Sand,	4	24	[illegible]
									Little Clay			
				8								
20'		20'-22'	D	8	10	10				5	24	1
								22'6"				
				8								
25'		25'-27'	D	8	10	12	Damp			6	24	[illegible]
				12			W/Dense					
		27'-29'	D	10	12	18			Brown F-M Sand, Little	7	24	[illegible]
				8					Silt, Trace of F Gravel			
30'		29'-31'	D	10	14	14				8	24	24
				10								
		31'-33'	D	12	12	17				9	24	1
				12				33'0"				
		33'-35'	D	15	18	21				10	24	1[illegible]
				11								
35'		35'-37'	D	14	18	18	Damp		Brown F-C Sand, Little	11	24	1[illegible]
				12			Dense		F-M Gravel			
		37'-39'	D	17	20	21				12	24	1[illegible]
				17								
40'		39'-41'	D	14	17	19				13	24	1[illegible]

GROUND SURFACE TO 40'0" USED HS "CASING: THEN Sampler To 51'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 51'0"
Rock Coring —
Samples 18

HOLE NO. A-107

TOWN PRESS — EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET ___ OF ___
DATE ___
HOLE NO. A-107
LINE & STA. ___
OFFSET ___
SURF. ELEV. ___

TO: Dayton Power & Light Co.
ADDRESS ___
PROJECT NAME: Killen Elec. Gen. Sta.
LOCATION: Wrightsville, Ohio
REPORT SENT TO ___
PROJ. NO. ___
SAMPLES SENT TO ___
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ___ after ___ Hours
At ___ after ___ Hours

	CASING	SAMPLER	CORE BAR
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		
COMPLETE		
TOTAL HRS.		

BORING FOREMAN ___
INSPECTOR ___
SOILS ENGR. ___

LOCATION OF BORING: ___

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
				13								
		41'-43'	D	15	18	21				14	24	8
				15								
		43'-45'	D	14	16	19				15	24	9
45'				11			Damp Dense		Brown F-C Sand, Little F-M Gravel			
		45'-47'	D	15	18	22				16	24	10
				14								
		47'-49'	D	17	17	23				17	24	10
				17								
50'		49'-51'	D	15	19	19				18	24	13
									Bottom Of Boring 51'0"			

GROUND SURFACE TO ___ USED ___ "CASING: THEN ___

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring ___
Rock Coring ___
Samples ___

HOLE NO. A-107

TOWN PRESS – EAST PROV.

2860 FISHER ROAD COLUMBUS, OHIO

DATE 4-9-74
HOLE NO. A-108
LINE & STA. ___
OFFSET ___
SURF. ELEV. 583.1

TO The Dayton Power & Light Co.
ADDRESS ___
PROJECT NAME Killen Elec. Gen. Sta.
LOCATION Wrightsville, Ohio
REPORT SENT TO Dayton Power & Light Co.
PROJ. NO. PO 96096
SAMPLES SENT TO Dr. Tom Davisson
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At None after ½ Hours
At ___ after ___ Hours

	CASING	SAMPLER	CORE BAR
Type	HS	SS	
Size I.D.		1 3/8	
Hammer Wt		140	BIT
Hammer Fall		30	

	Date	Time
START	4-9-74	
COMPLETE	4-9-74	
TOTAL HRS.		

BORING FOREMAN D. Paquette
INSPECTOR ___
SOILS ENGR. Dr. Davisson

LOCATION OF BORING: ___

DEPTH	Casing Blows per foot	Sample Depths From – To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	To 12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen	Rec.
							Soft	1'0"	Top Soil			
		0'-2'	D	4	6	8	Damp Stiff			1	24	20
									Brown Clayey Silt, Trace of F Sand			
5'		5'-7'	D	8	10	10	Damp V/Stiff			2	24	20
								9'0"				
10'		10'-12'	D	3	4	4				3	24	10
15'		15'-17'	D	4	4	6	Wet Loose		Brown Silt and F Sand, Little Clay	4	24	8
20'		20'-22'	D	4	4	6				5	24	6
								24'0"				
25'		25'-27'	D	20	28	44	Damp V/Dense		Brown F-C Sand, Some F-C Gravel, Trace to Little Clayey Silt	6	24	6
		27'-29'	D	23	29	38		29'0"		7	24	7
30'		29'-31'	D	12	14	14	Damp-Moist M/Dense		Brown F-C Sand, Some to And F-C Gravel	8	24	12
		31'-33'	D	14	12	10				9	24	10
35'		33'-35'	D	16	20	23	Damp Dense	36'0"		10	24	9
		35'-37'	D	21	24	29	Moist V/Dense		Brown F-C Sand, Little to Some F-C Gravel	11	24	8
40'		37'-39'	D	25	29	34				12	24	9

GROUND SURFACE TO 50'0" USED HS "CASING: THEN Sampled To 51'0"

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring 51'0"
Rock Coring ___
Samples 12

HOLE NO. A-108

TOWN PRESS – EAST PROV.

BUCKEYE DRILLING CORPORATION
2860 FISHER ROAD COLUMBUS, OHIO

SHEET 2 OF 2
DATE
HOLE NO. A-108
LINE & STA.
OFFSET
SURF. ELEV.

TO The Dayton Power & Light Co.
PROJECT NAME Killen Elec. Gen. Sta.
REPORT SENT TO
SAMPLES SENT TO
ADDRESS
LOCATION Wrightsville, Ohio
PROJ. NO. PO 96096
OUR JOB NO. 45,099

GROUND WATER OBSERVATIONS
At ____ after ____ Hours
At ____ after ____ Hours

	CASING	SAMPLER	CORE BAR.
Type			
Size I.D.			
Hammer Wt.			BIT
Hammer Fall			

	Date	Time
START		a.m. p.m.
COMPLETE		a.m. p.m.
TOTAL HRS.		

BORING FOREMAN
INSPECTOR
SOILS ENGR.

LOCATION OF BORING:

DEPTH	Casing Blows per foot	Sample Depths From-To	Type of Sample	Blows per 6" on Sampler From 0-6	To 6-12	12-18	Moisture Density or Consist.	Strata Change Elev.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, condition, hardness, Drilling time, seams and etc.	SAMPLE No.	Pen.	Rec.
		39'-41'	D	23	29	36				13	24	8
		41'-43'	D	29	34	39				14	24	12
45'		43'-45'	D	23	29	37	Damp V/Dense		Brown F-C Sand, Little to Some F-C Gravel	15	24	10
		45'-47'	D	19	22	27				16	24	8
		47'-49'	D	25	30	39				17	24	12
50'		49'-51'	D	28	36	45				18	24	17
									Bottom Of Boring 51'0"			

GROUND SURFACE TO ____ USED ____ "CASING: THEN ____

Sample Type
D=Dry C=Cored W=Washed
UP=Undisturbed Piston
TP=Test Pit A=Auger V=Vane Test
UT=Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb Wt. x 30" fall on 2" O.D. Sampler
Cohesionless Density: 0-10 Loose; 10-30 Med. Dense; 30-50 Dense; 50+ Very Dense
Cohesive Consistency: 0-4 Soft; 4-8 M/Stiff; 8-15 Stiff; 15-30 V-Stiff; 30+ Hard

SUMMARY:
Earth Boring
Rock Coring
Samples

HOLE NO. A-108

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-1
DATE STARTED 10-2-75
DATE COMPLETED 10-2-75

EQUIPMENT USED Bulldozer
LOCATION S 1200, W 6570
SURFACE ELEVATION 533.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
532.0	1.0		Topsoil	
528.5	4.5		Brown Silt, some sand, some clay (Bottom of Excavation)	(see notes)

NOTES: 50 pound bag sample

LOG OF TEST PIT 1

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-2
DATE STARTED 10-2-75
DATE COMPLETED 10-2-75

EQUIPMENT USED Bulldozer
LOCATION S 1340, W 5955
SURFACE ELEVATION 534.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
533.0	1.0		Topsoil	
			Brown Silt, some clay, some sand	(see notes)
529.0	5.0		(Bottom of Excavation)	

NOTES: 50 pound bag sample

LOG OF TEST PIT 2

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-3
DATE STARTED 10-2-75
DATE COMPLETED 10-2-75

EQUIPMENT USED Bulldozer
LOCATION S 2230, W 6060
SURFACE ELEVATION 537.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
536.0	1.0		Topsoil	
			Gray Silt and clay, trace of sand	(see notes)
532.0	4.0		(Bottom of Excavation)	

NOTES: 50 pound bag sample

LOG OF TEST PIT 3

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-4
DATE STARTED 10-2-75
DATE COMPLETED 10-2-75

EQUIPMENT USED Bulldozer
LOCATION S 2715, W 6120
SURFACE ELEVATION 533.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
532.0	1.0		Topsoil	
528.5	4.5		Brown Silt, some clay, some sand (Bottom of Excavation)	(see notes)

NOTES: 50 pound bag samples

LOG OF TEST PIT 4

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-5
DATE STARTED 12-3-75
DATE COMPLETED 12-3-75

EQUIPMENT USED Bulldozer
LOCATION S 2120, W 1050
SURFACE ELEVATION 511.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
509.5	1.5		Topsoil	
504.0	7.0		Brown Silt, some clay, trace to some sand	5.0
497.0	14.0		Brown Silt and sand, trace of clay (Bottom of Excavation)	10.0 14.0

NOTES: (1) Bottom of test pit soft and moist
(2) No bulging or sluffing noted
(3) No immediate seepage evident

LOG OF TEST PIT 5

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-6
DATE STARTED 12-2-75
DATE COMPLETED 12-2-75

EQUIPMENT USED Bulldozer
LOCATION S 3435, W 3000
SURFACE ELEVATION 520.5

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
519.0	1.5		Topsoil	
			Mottled Gray and Brown Silt, some clay, Trace sand	5.0
				10.0
508.5	12.0			12.0
506.5	14.0		Interbedded gray and brown sand and silt layers	

NOTES: (1) Bottom of test pit soft and moist
(2) Some groundwater seepage at 6' depth
(3) No bulging or sluffing noted

LOG OF TEST PIT 6

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-7
DATE STARTED 12-3-75
DATE COMPLETED 12-3-75

EQUIPMENT USED Bulldozer
LOCATION S 1950, W 2125
SURFACE ELEVATION 523.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
522.0	1.0		Topsoil	
519.0	4.0		Brown silt, some clay, some sand	
			Brown sand, some silt with interbedded sand layers	5.0
				10.0
509.5	13.5			
508.0	15.0		Brown and tan sand, trace of silt (Bottom of Excavation)	15.0

NOTES: (1) Minor bulging noted near bottom of test pit
(2) Sand seams very moist, but no immediate seepage

LOG OF TEST PIT 7

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO.	TP-8	EQUIPMENT USED	Bulldozer
DATE STARTED	12-2-75	LOCATION	S 3000, W 3250
DATE COMPLETED	12-3-75	SURFACE ELEVATION	520.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
519.0	1.0		Topsoil	
516.0	4.0		Gray Silt, some clay, trace sand	4.0
507.0	13.0		Mottled gray and brown clay and silt, trace to some sand, trace of gravel (Bottom of Excavation)	8.0 12.5'

NOTES: (1) Test Pit left open overnight, no bulging or sluffing occurred.
(2) No immediate seepage evident.
(3) Organic material present to a depth of 8'

LOG OF TEST PIT 8

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO.	TP-9	EQUIPMENT USED	Bulldozer
DATE STARTED	12-2-75	LOCATION	S 3000, W 2200
DATE COMPLETED	12-2-75	SURFACE ELEVATION	523.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
521.5	1.5		Topsoil	
512.5	10.5		Mottled gray and brown silt and clay, trace of sand, trace of gravel. Interbedded sand layers below 8' depth.	4.0 8.0
511.0	12.0		Brown silt, some sand (Bottom of Excavation)	11.5

NOTES: (1) Bottom of test pit was very soft
(2) No bulging or sluffing noted
(3) No immediate seepage evident

LOG OF TEST PIT 9

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-10
DATE STARTED 12-2-75
DATE COMPLETED 12-2-75

EQUIPMENT USED Bulldozer
LOCATION S 2500, W 3250
SURFACE ELEVATION 521.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
520.0	1.0		Topsoil	
517.0	4.0		Gray silt and clay, trace of sand	
512.5	8.5		Brown silt, some clay, trace of sand	5.0
510.0	11.0		Brown silt, some sand, trace of clay	10.0
507.5	13.5		Brown silt and sand (Bottom of Excavation)	13.5

NOTES:
(1) Upper 6' very hard due to dessication
(2) Bottom soft and very moist
(3) Some minor sluffing from sides
(4) No immediate seepage evident

LOG OF TEST PIT 10

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-11
DATE STARTED 11-20-75
DATE COMPLETED 11-20-75

EQUIPMENT USED Bulldozer
LOCATION S 1780, W 3735
SURFACE ELEVATION 505.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
502.5	2.5		Brown-gray clay, some silt, trace of sand	
491.5	13.5		Mottled brown and gray clay and silt, trace of sand (Bottom of Excavation)	

NOTES:
(1) Moderate sluffing occurred during excavation of test pit
(2) No immediate seepage evident

LOG OF TEST PIT 11

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-12
DATE STARTED 11-20-75
DATE COMPLETED 11-20-75

EQUIPMENT USED Bulldozer
LOCATION S 3680, W 6470
SURFACE ELEVATION 492.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
489.0	3.0		Brown silt, some clay, trace of sand	
477.0	15.0		Gray-brown silt, some clay, trace of sand (Bottom of Excavation)	

NOTES: (1) Groundwater seepage at 10' depth
(2) Organic material present to 5' depth
(3) Strata dip toward creek (west)
(4) Minor bulging noted, no sluffing

LOG OF TEST PIT 12

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-13
DATE STARTED 11-18-75
DATE COMPLETED 11-18-75

EQUIPMENT USED Bulldozer
LOCATION S 3500, W 6365
SURFACE ELEVATION 506.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
503.0	3.0		Mottled brown and gray clay, some silt, Trace of sand	
492.0	14.0		Brown silt, some clay, trace of sand (Bottom of Excavation)	5.0 10.0 13.0

NOTES: (1) Significant bulging and sluffing
(2) Ground water seepage noted at 7' depth

LOG OF TEST PIT 13

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-14
DATE STARTED 11-17-75
DATE COMPLETED 11-17-75

EQUIPMENT USED Bulldozer
LOCATION S 3000, W 5775
SURFACE ELEVATION 513.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
510.0	3.0		Brown and gray silt, trace of clay, Trace of sand	
504.0	9.0		Mottled brown and gray silt, some clay, Trace of sand	5.0
500.0	13.0		Brown silt, trace of clay, trace of sand (Bottom of Excavation)	10.0 13.0

NOTES: (1) No bulging or sluffing noted
(2) No immediate seepage noted
(3) Bottom of test pit was soft and moist

LOG OF TEST PIT 14

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

TEST PIT NO. TP-15
DATE STARTED 11-19-75
DATE COMPLETED 11-19-75

EQUIPMENT USED Bulldozer
LOCATION S 1850, W 4835
SURFACE ELEVATION 507.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
503.0	4.0		Brown silt, some clay, trace of sand	
498.0	9.0		Brown and gray clay, some silt, some gravel	8.0
494.5	12.5		Brown sand and gravel, some silt (Bottom of Excavation)	12.5

NOTES: (1) No bulging or sluffing
(2) No immediate seepage evident
(3) Bottom very soft and wet

LOG OF TEST PIT 15

EBASCO SERVICES INCORPORATED

KILLEN ELECTRIC GENERATING STATION
TEST PIT LOG

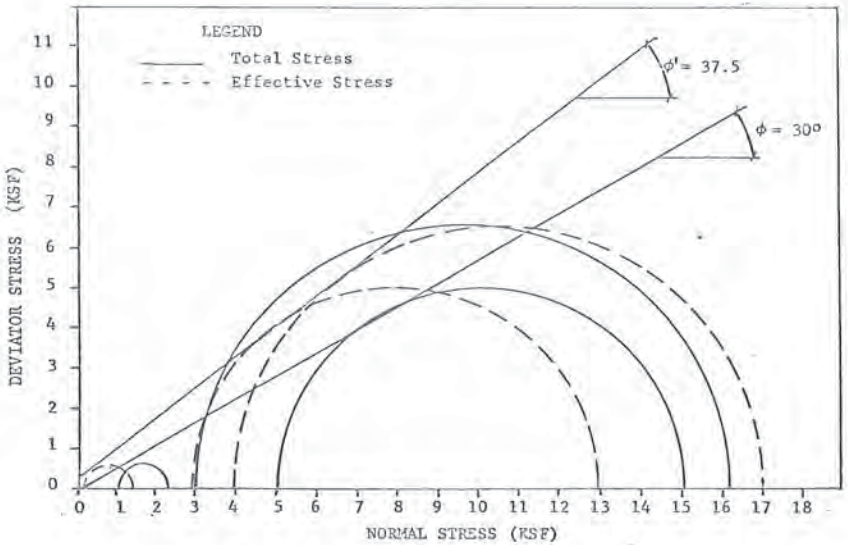
TEST PIT NO.	TP-16	EQUIPMENT USED	Backhoe
DATE STARTED	12-3-75	LOCATION	S 1580, W 4385
DATE COMPLETED	12-4-75	SURFACE ELEVATION	509.0

ELEVATION	DEPTH		MATERIAL CLASSIFICATION	SAMPLE DEPTH
504.0	5.0		Brown silt, trace of clay, trace of sand	
			Gray-brown silt, some clay, some sand, Trace of gravel	8.0 12.0
494.5	14.5		(Bottom of Excavation)	

NOTES: (1) Test pit was excavated to 7' depth and left open overnight. Two feet of water in bottom next day. Significant seepage present at 5' depth.
(2) Severe caving and sluffing occurred during excavation.
(3) All material was very soft.

LOG OF TEST PIT 16

MOHR DIAGRAM



CONSOLIDATED-UNDRAINED TRIAXIAL SHEAR TEST

WITH PORE PRESSURE MEASUREMENTS

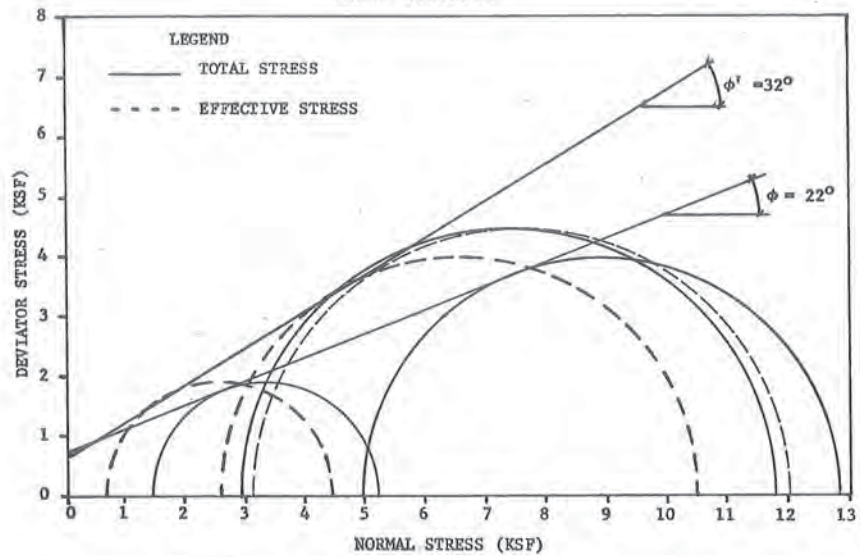
TOTAL STRESS PARAMETERS:
"Cohesion", C 0 ksf
Angle of Shear Resistance, ϕ 30°

EFFECTIVE STRESS PARAMETERS:
"Cohesion", C' 0.26 ksf
Angle of Shear Resistance, ϕ' 37.5°
UNIT WEIGHT, γ 108.1 PCF (Dry)
INITIAL MOISTURE CONTENT, ω 18.2%

SAMPLE TYPE UD
DEPTH 0-2 Ft.
MATERIAL SANDY CLAYEY SILT
LOCATION MISC. CLAY FILL

TEST 1

MOHR DIAGRAM



CONSOLIDATED-UNDRAINED TRIAXIAL SHEAR TEST

WITH PORE PRESSURE MEASUREMENTS

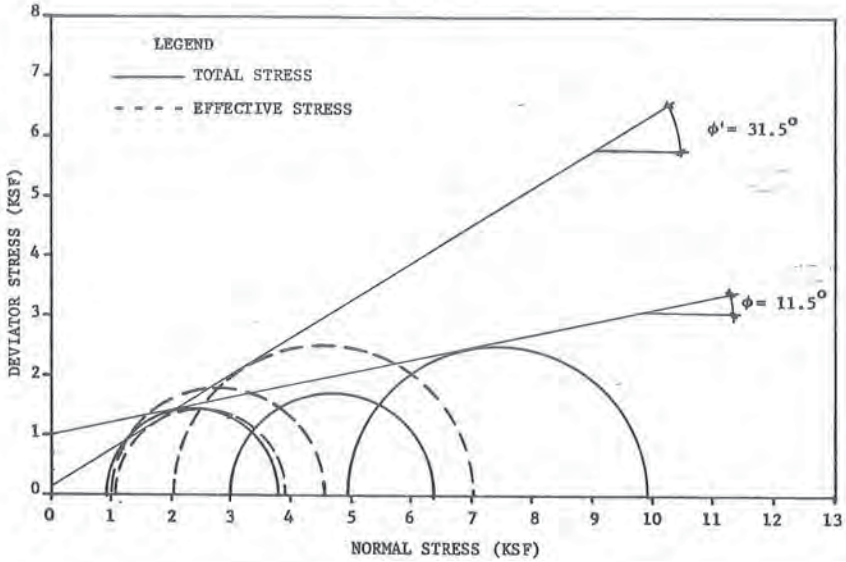
TOTAL STRESS PARAMETERS:
"Cohesion", C 0.70 KSF
Angle of Shear Resistance, ϕ 22°

EFFECTIVE STRESS PARAMETERS
"Cohesion", C' 0.60 KSF
Angle of Shear Resistance, ϕ' 32°
Unit Weight, γ 104.5 PCF (Dry)
Initial Moisture Content, ω 20.3%

SAMPLE TYPE UD
DEPTH 0-2 ft.
MATERIAL SANDY CLAYEY SILT
LOCATION MISC. CLAY FILL

TEST 2

MOHR DIAGRAM



CONSOLIDATED-UNDRAINED TRIAXIAL SHEAR TEST

WITH PORE PRESSURE MEASUREMENTS

TOTAL STRESS PARAMETERS:
"Cohesion", C 1.00 KSF
Angle of Shear Resistance, φ 11.5°

EFFECTIVE STRESS PARAMETERS:
"Cohesion", C' 0.10 KSF
Angle of Shear Resistance, φ' 31.5°

Unit Weight, γ 112.8 PCF (Dry)

Initial Moisture Content, ω 17.6%

SAMPLE TYPE LAB COMPACTED

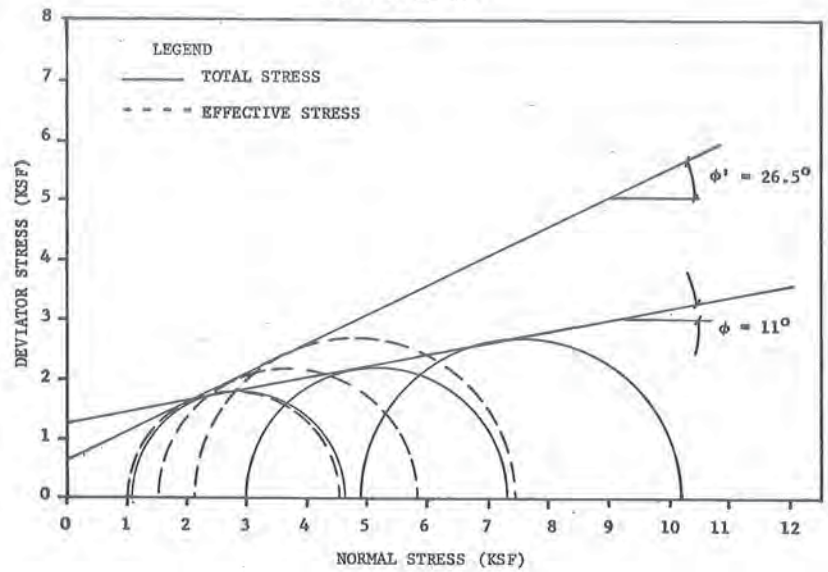
DEPTH ——

MATERIAL SANDY CLAYEY SILT

LOCATION MISC. CLAY FILL

TEST 3

MOHR DIAGRAM



CONSOLIDATED-UNDRAINED TRIAXIAL SHEAR TEST

WITH PORE PRESSURE MEASUREMENTS

TOTAL STRESS PARAMETERS:
"Cohesion", C 1.25 KSF
Angle of Shear Resistance, φ 11°

EFFECTIVE STRESS PARAMETERS:
"Cohesion", C' 0.60 KSF
Angle of Shear Resistance, φ' 26.5°

Unit Weight, γ 113.6 PCF (Dry)

Initial Moisture Content, ω 19.0%

SAMPLE TYPE LAB COMPACTED

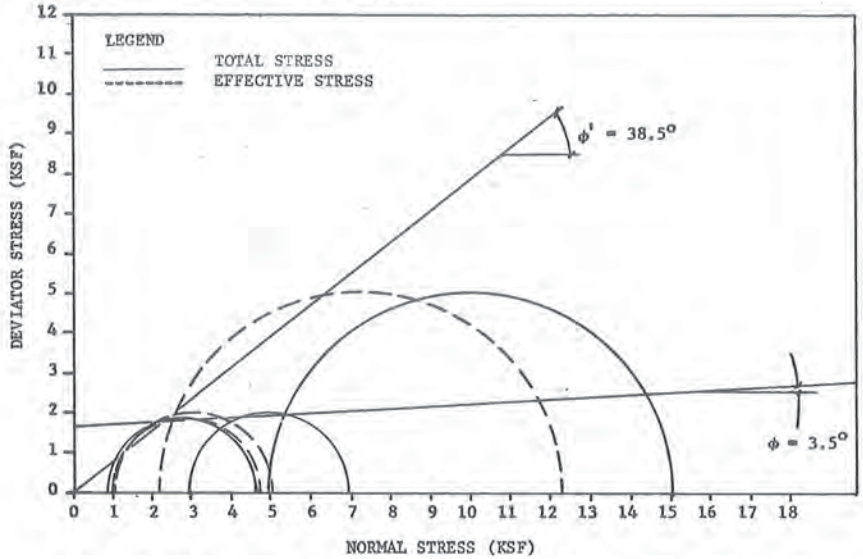
DEPTH ——

MATERIAL SANDY CLAYEY SILT

LOCATION MISC. CLAY FILL

TEST 4

MOHR DIAGRAM



CONSOLIDATED-UNDRAINED TRIAXIAL SHEAR TEST

WITH PORE PRESSURE MEASUREMENTS

TOTAL STRESS PARAMETERS:
"Cohesion", C 1.70 KSF
Angle of Shear Resistance, ϕ 3.5°

EFFECTIVE STRESS PARAMETERS:
"Cohesion", C' 0.0 KSF
Angle of Shear Resistance, ϕ' 38.5°

Unit Weight, γ 107.7 PCF (Dry)

Initial Moisture Content, ω 23.0%

SAMPLE TYPE LAB COMPACTED

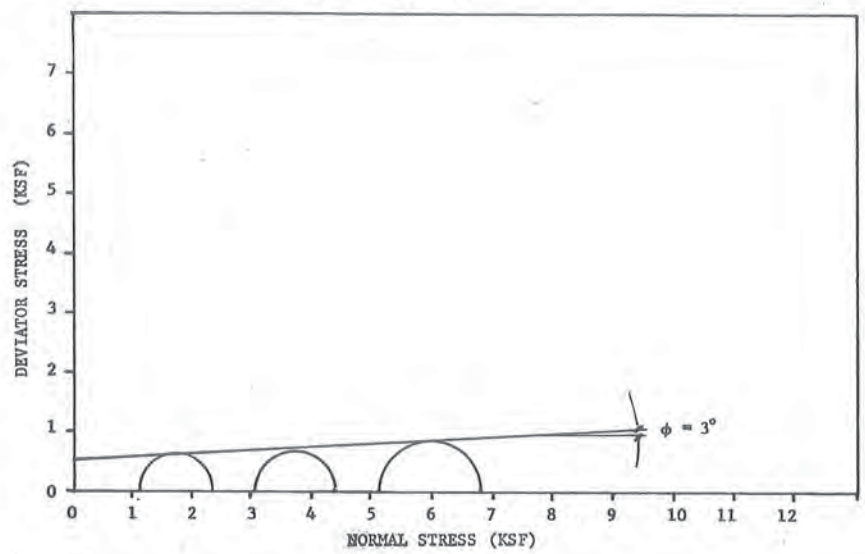
DEPTH —

MATERIAL SANDY CLAYEY SILT

LOCATION MISC. CLAY FILL

TEST 5

MOHR DIAGRAM



UNCONSOLIDATED-UNDRAINED TRIAXIAL SHEAR TEST

TOTAL STRESS PARAMETERS:
"Cohesion", C 0.55 KSF
Angle of Shear Resistance, ϕ 3°

Unit Weight, γ 111.0 PCF (Dry)
Initial Moisture Content, ω 19.4%

SAMPLE TYPE LAB COMPACTED

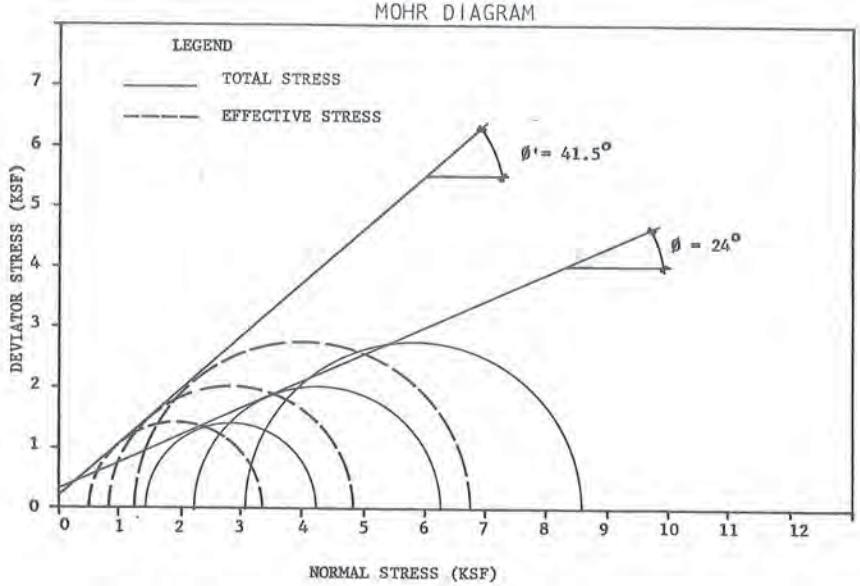
DEPTH —

MATERIAL SANDY CLAYEY SILT

LOCATION MISC. CLAY FILL

TEST 6

MOHR DIAGRAM



CONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
WITH PORE PRESSURE MEASUREMENTS

TOTAL STRESS PARAMETERS:
"Cohesion", C 0.30 KSF
Angle of Shear Resistance, Ø 24°

EFFECTIVE STRESS PARAMETERS:
"Cohesion", C' 0.20 KSF
Angle of Shear Resistance, Ø' 41.5°

Unit Weight, γ 106.8 PCF (DRY)

Initial Moisture Content, ω 15.7%

SAMPLE TYPE UD

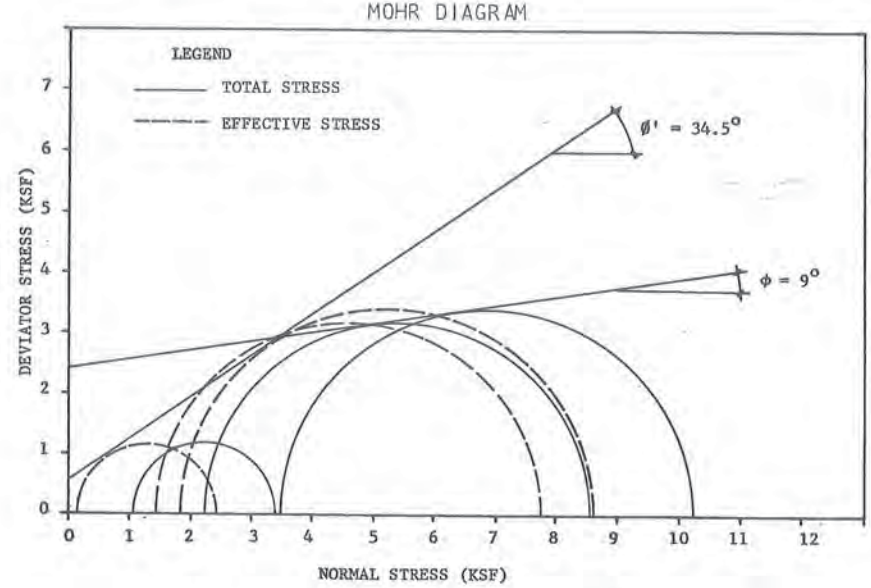
DEPTH 0-2 Ft

MATERIAL Sandy Clayey Silt

LOCATION CLAY TEST FILL

TEST 7

MOHR DIAGRAM



CONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
WITH PORE PRESSURE MEASUREMENTS

TOTAL STRESS PARAMETERS:
"Cohesion", C 2.40 KSF
Angle of Shear Resistance, Ø 9°

EFFECTIVE STRESS PARAMETERS:
"Cohesion", C' 0.55 KSF
Angle of Shear Resistance, Ø' 34.5°

Unit Weight, γ 107.8 PCF (DRY)

INITIAL MOISTURE CONTENT, ω 16.8%

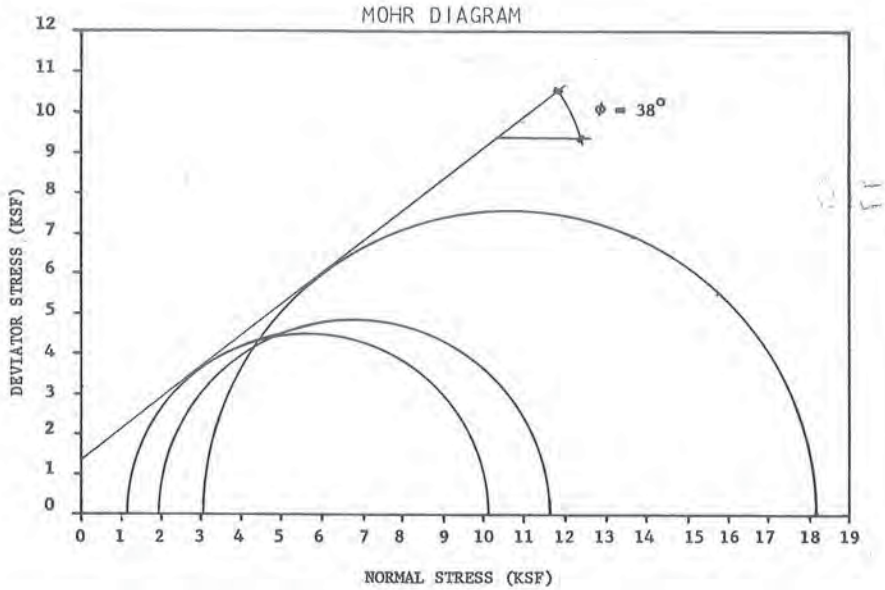
SAMPLE TYPE UD

DEPTH 2-4 Ft

MATERIAL Sandy Silty Clay

LOCATION CLAY TEST FILL

TEST 8



UNCONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST

TOTAL STRESS PARAMETERS:
"Cohesion", C 1.30 KSF
Angle of Shear Resistance, ϕ 38°

Unit Weight, 106.1 PCF(DRY)

INITIAL MOISTURE CONTENT, ω 15.9%

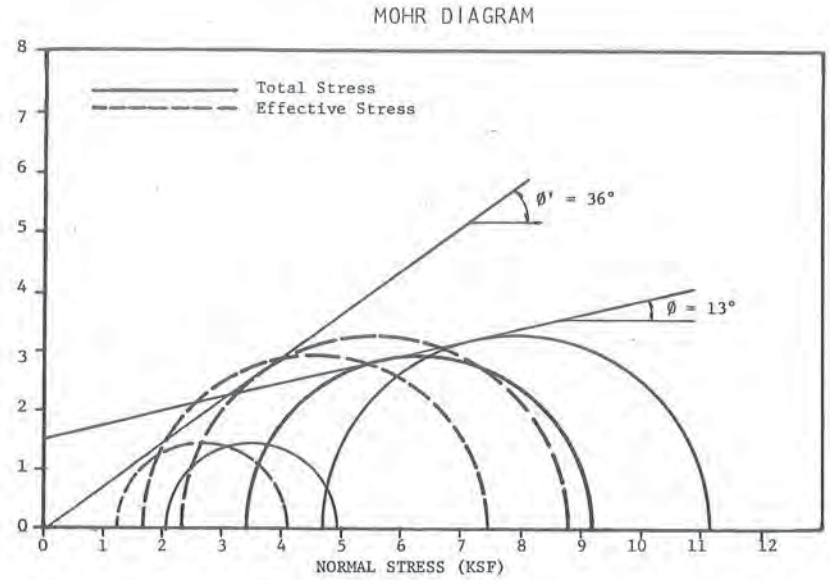
SAMPLE TYPE LAB COMPACTED

DEPTH -

MATERIAL Sandy Silty Clay

LOCATION CLAY TEST FILL

TEST 9



CONSOLIDATED-UNDRAINED TRIAXIAL SHEAR TEST
WITH PORE PRESSURE MEASUREMENTS

TOTAL STRESS PARAMETERS:
"Cohesion", C 1.50 KSF
Angle of Shear Resistance, ϕ 13°

EFFECTIVE STRESS PARAMETERS:
"Cohesion", C' 0.0 KSF
Angle of Shear Resistance, ϕ' 36°

UNIT WEIGHT, γ 105.9 PCF (Dry)

INITIAL MOISTURE CONTENT, ω 17.5%

SAMPLE TYPE UD

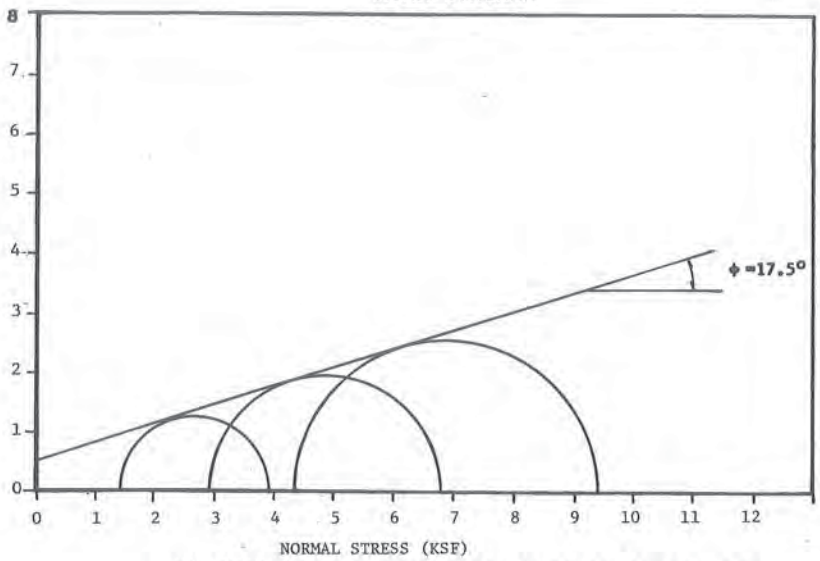
DEPTH 5-7 Ft.

MATERIAL Brown Silt, Some Clay Some Sand

LOCATION Boring A-129

TEST 10

MOHR DIAGRAM



UNCONSOLIDATED-UNDRAINED TRIAXIAL SHEAR TEST

TOTAL STRESS PARAMETERS:
"Cohesion", C 0.50 KSF
Angle of Shear Resistance, Ø 17.5°

UNIT WEIGHT, γ 105.9 PCF (Dry)

INITIAL MOISTURE CONTENT, ω 20.7%

SAMPLE TYPE UD

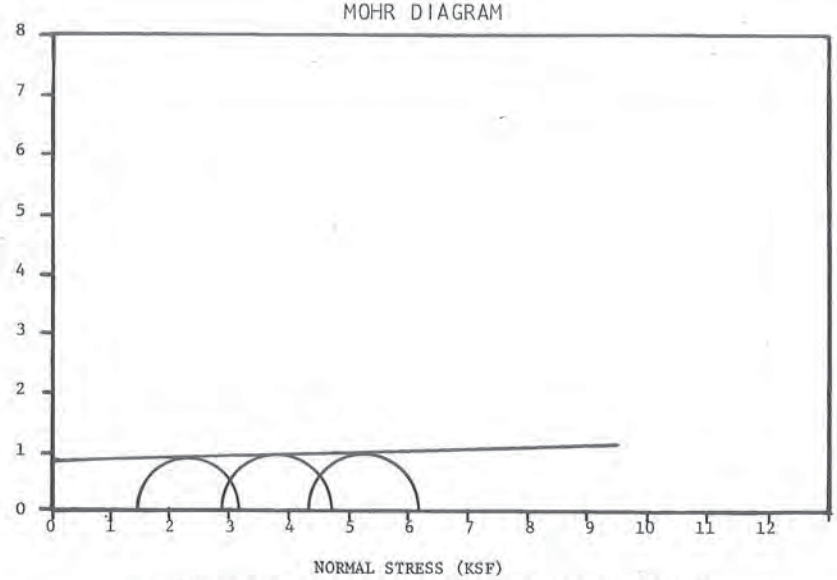
DEPTH 18-20 Ft.

MATERIAL Brown Silt and Sand, Trace of Clay

LOCATION Boring A-135

TEST 11

MOHR DIAGRAM



UNCONSOLIDATED-UNDRAINED TRIAXIAL SHEAR TEST

TOTAL STRESS PARAMETERS
"Cohesion", C 0.80 KSF
Angle of Shear Resistance, Ø 1.5°

UNIT WEIGHT, γ 91.5 PCF (Dry)

INITIAL MOISTURE CONTENT, ω 30.0%

SAMPLE TYPE UD

DEPTH 18.5-20.5

MATERIAL Brown and Gray Clay, Some Silt, Trace of Sand

LOCATION Boring A-142

TEST 12

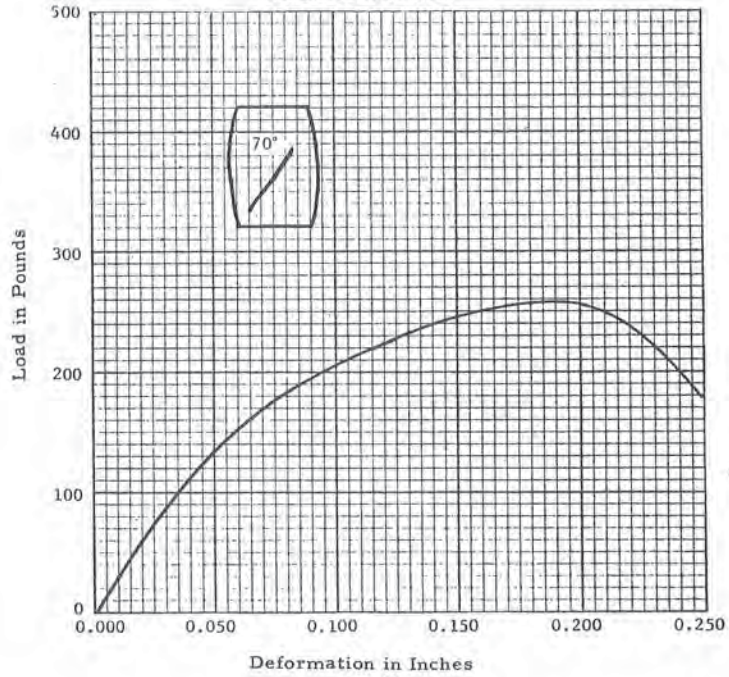
UNCONFINED COMPRESSION TEST

Project:	KILLEN STATION - TEST FILL
Boring No:	A3
Sample No:	1C
Surface Elevation:	Not Taken
Depth Interval of Sample:	0.0 - 2.0'
Depth Interval of Strata:	0.0 - 2.8'
Depth of Interval of Test Sample:	0.5 - 1.0'
Sample Recovery:	17"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.188"
Test Specimen Weight	2.32 lbs.
Moisture Content	15.9%
Wet Unit Weight	121.9 pcf
Dry Unit Weight	105.2 pcf
Unconfined Compression Strength	5670 psf
Load Increment at Failure	258.8 lbs.
Height at Failure	5.013"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, some Sand, trace of Gravel

FAILURE SKETCH



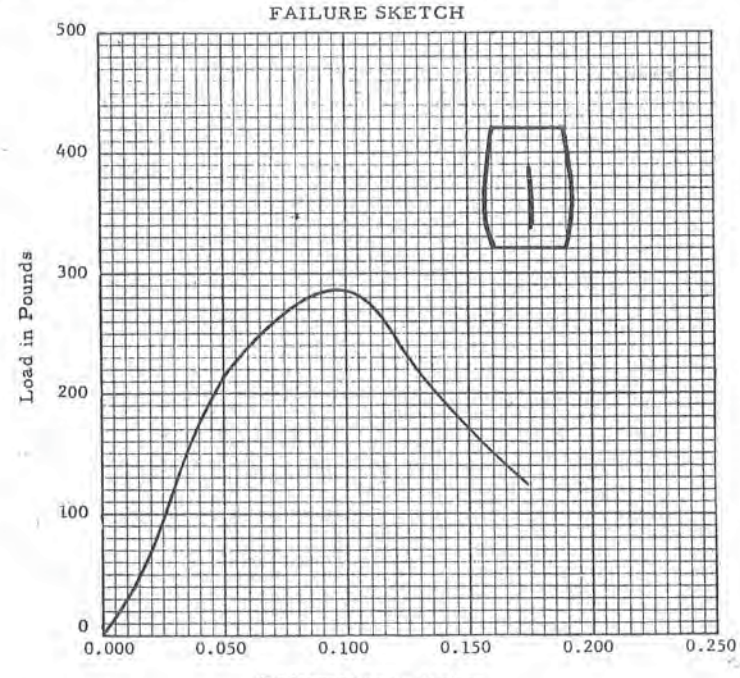
UNCONFINED COMPRESSION TEST

Project:	KILLEN STATION - TEST FILL
Boring No:	A2
Sample No:	1C
Surface Elevation:	Not Taken
Depth Interval of Sample:	0.0 - 2.0'
Depth Interval of Strata:	0.0 - 3.2'
Depth of Interval of Test Sample:	0.5 - 0.9'
Sample Recovery:	17"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.062"
Test Specimen Weight	2.27 lbs.
Moisture Content	15.9%
Wet Unit Weight	122.7 pcf
Dry Unit Weight	105.9 pcf
Unconfined Compression Strength	6360 psf
Load Increment at Failure	286.2 lbs.
Height at Failure	4.962"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, some Sand

FAILURE SKETCH



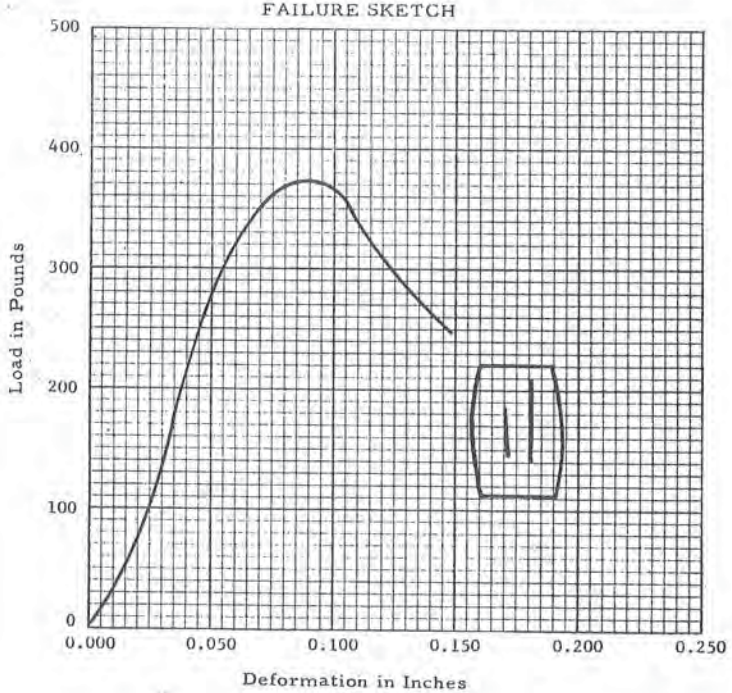
UNCONFINED COMPRESSION TEST

Project:	KILLEN STATION - TEST FILL
Boring No:	B2
Sample No:	1C
Surface Elevation:	Not Taken
Depth Interval of Sample:	0.0 - 2.0'
Depth Interval of Strata:	0.0 - 3.3'
Depth of Interval of Test Sample:	0.8 - 1.3'
Sample Recovery:	27"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.531"
Test Specimen Weight	2.55 lbs.
Moisture Content	17.1%
Wet Unit Weight	125.6 pcf
Dry Unit Weight	107.3 pcf
Unconfined Compression Strength	8140 psf
Load Increment at Failure	365.4 lbs.
Height at Failure	5.431"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, some Sand

FAILURE SKETCH



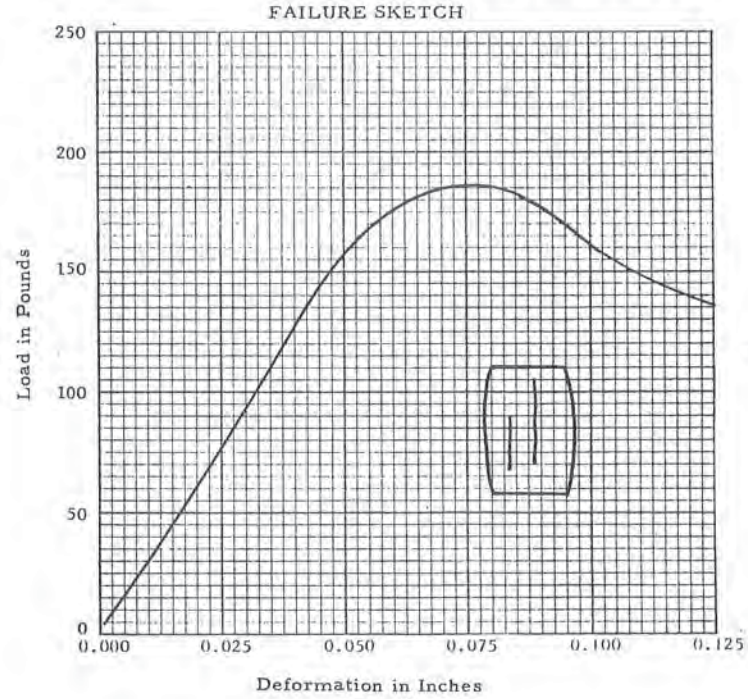
UNCONFINED COMPRESSION TEST

Project:	KILLEN STATION - TEST FILL
Boring No:	B2
Sample No:	1C
Surface Elevation:	Not Taken
Depth Interval of Sample:	0.0 - 2.0'
Depth Interval of Strata:	0.0 - 3.3'
Depth of Interval of Test Sample:	1.7 - 2.2'
Sample Recovery:	27"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.72 lbs.
Moisture Content	17.5%
Wet Unit Weight	124.4 pcf
Dry Unit Weight	105.9 pcf
Unconfined Compression Strength	3820 psf
Load Increment at Failure	170.5 lbs.
Height at Failure	5.200"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, some Sand

FAILURE SKETCH



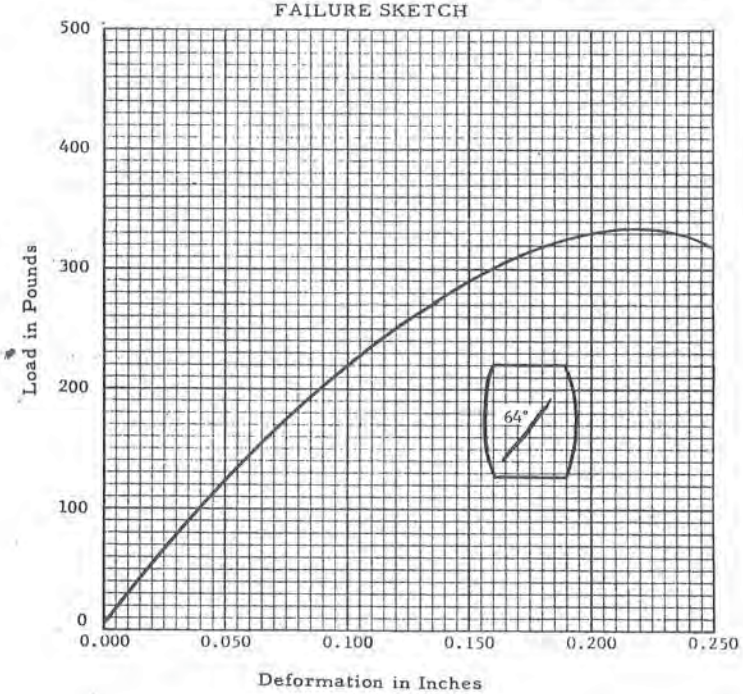
UNCONFINED COMPRESSION TEST

Project:	KILLEN STATION - TEST FILL
Boring No:	B2
Sample No:	2C
Surface Elevation:	Not Taken
Depth Interval of Sample:	2.0 - 4.0'
Depth Interval of Strata:	0.0 - 3.3'
Depth of Interval of Test Sample:	2.0 - 2.4'
Sample Recovery:	24"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	4.875"
Test Specimen Weight	2.30 lbs.
Moisture Content	17.4%
Wet Unit Weight	128.6 pcf
Dry Unit Weight	109.5 pcf
Unconfined Compression Strength	7180 psf
Load Increment at Failure	331.9 lbs.
Height at Failure	4.650"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, some Sand

FAILURE SKETCH



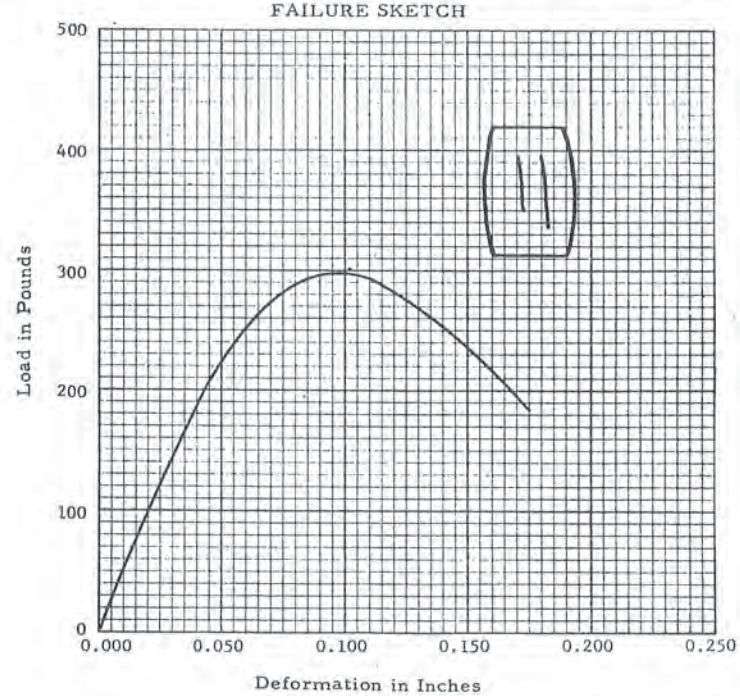
UNCONFINED COMPRESSION TEST

Project:	KILLEN STATION - TEST FILL
Boring No:	C1
Sample No:	1C
Surface Elevation:	Not Taken
Depth Interval of Sample:	0.0 - 2.0'
Depth Interval of Strata:	0.0 - 3.5'
Depth of Interval of Test Sample:	0.4 - 0.8'
Sample Recovery:	26"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.500"
Test Specimen Weight	2.38 lbs.
Moisture Content	16.6%
Wet Unit Weight	117.9 pcf
Dry Unit Weight	101.2 pcf
Unconfined Compression Strength	6580 psf
Load Increment at Failure	295.4 lbs.
Height at Failure	5.400"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, some Sand

FAILURE SKETCH



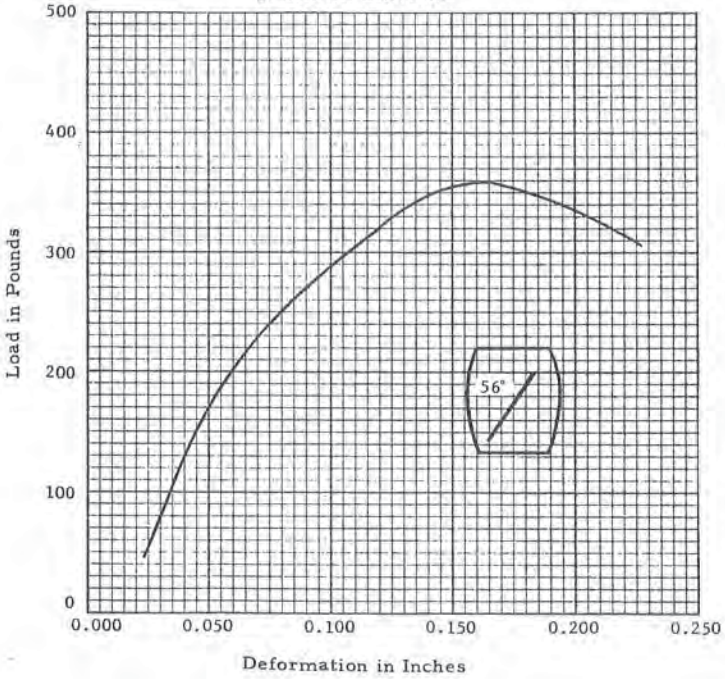
UNCONFINED COMPRESSION TEST

Project:	KILLEN STATION - TEST FILL
Boring No:	C1
Sample No:	1C
Surface Elevation:	Not Taken
Depth Interval of Sample:	0.0 - 2.0'
Depth Interval of Strata:	0.0 - 3.5'
Depth of Interval of Test Sample:	1.1 - 1.5'
Sample Recovery:	26"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	4.500"
Test Specimen Weight	2.0 lbs.
Moisture Content	15.1%
Wet Unit Weight	121.1 pcf
Dry Unit Weight	105.3 pcf
Unconfined Compression Strength	7920 psf
Load Increment at Failure	362.4 lbs.
Height at Failure	4.335"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, some Sand

FAILURE SKETCH



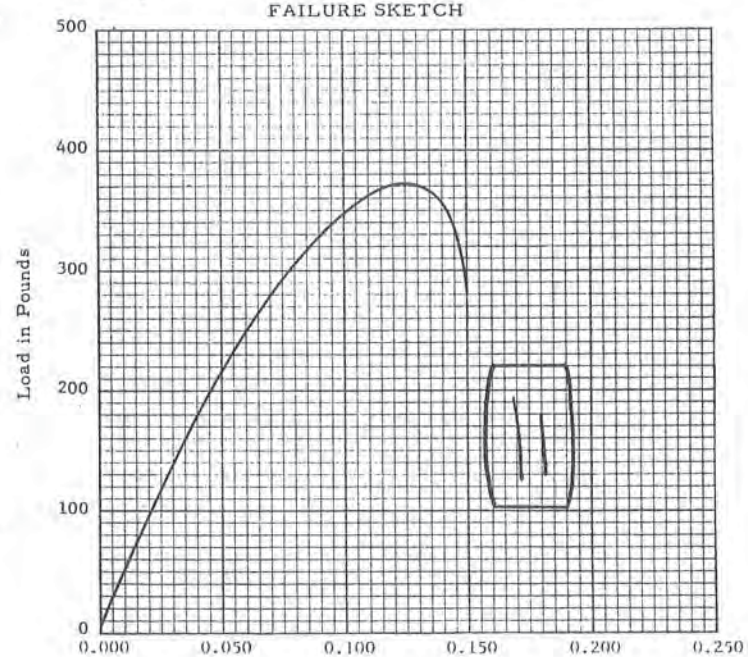
UNCONFINED COMPRESSION TEST

Project:	KILLEN STATION - TEST FILL
Boring No:	C2
Sample No:	1C
Surface Elevation:	Not Taken
Depth Interval of Sample:	0.0 - 2.0'
Depth Interval of Strata:	0.0 - 3.3'
Depth of Interval of Test Sample:	0.9 - 1.4'
Sample Recovery:	20"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.69 lbs.
Moisture Content	16.0%
Wet Unit Weight	123.2 pcf
Dry Unit Weight	106.2 pcf
Unconfined Compression Strength	8250 psf
Load Increment at Failure	371.5 lbs.
Height at Failure	5.825"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, some Sand

FAILURE SKETCH



UNCONFINED COMPRESSION TEST

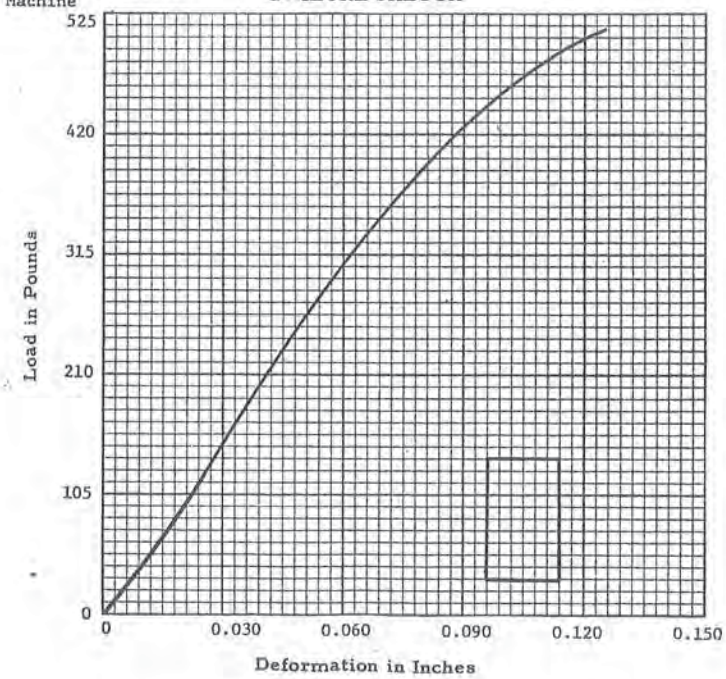
Project:	KILLEN ELECTRIC GENERATING STATION - ADAMS COUNTY, OHIO
Boring No:	A-129
Sample No:	1C
Surface Elevation:	Not Taken
Depth Interval of Sample:	0.0'-2.0'
Depth Interval of Strata:	0.0'-7.0'
Depth of Interval of Test Sample:	0.1'-0.6'
Sample Recovery:	10"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.531"
Test Specimen Weight	2.39 lbs.
Moisture Content	19.1%
Wet Unit Weight	117.6 pcf
Dry Unit Weight	98.7 pcf
Unconfined Compression Strength	11350 psf*
Load Increment at Failure	511.4 lbs.
Height at Failure	5.825"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, some Sand, trace of Organic

* Capacity of Testing Machine

FAILURE SKETCH



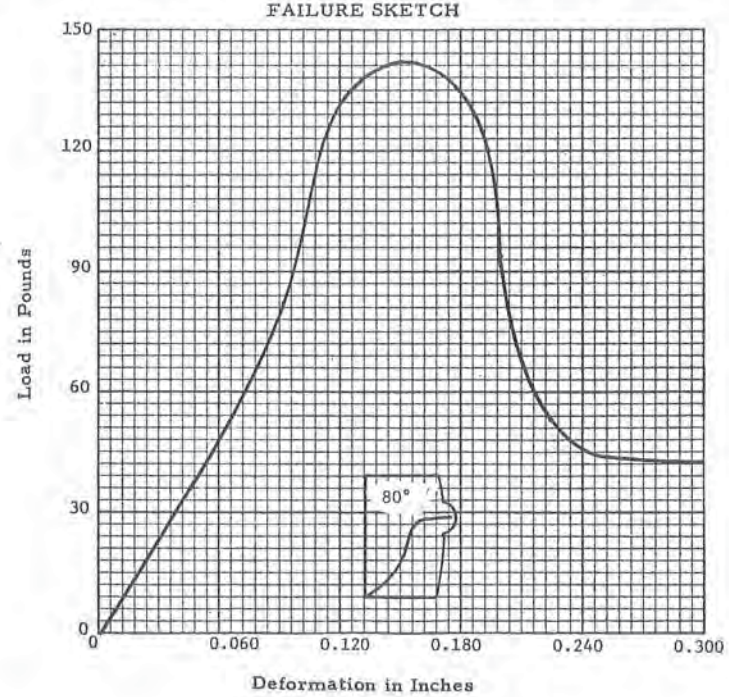
UNCONFINED COMPRESSION TEST

Project:	KILLEN ELECTRIC GENERATING STATION - ADAMS COUNTY, OHIO
Boring No:	A-129
Sample No:	3C
Surface Elevation:	Not Taken
Depth Interval of Sample:	10.0'-12.0'
Depth Interval of Strata:	7.0'-17.0'
Depth of Interval of Test Sample:	11.0'-11.5'
Sample Recovery:	24"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.71 lbs.
Moisture Content	22.6%
Wet Unit Weight	124.0 pcf
Dry Unit Weight	101.1 pcf
Unconfined Compression Strength	3130 psf
Load Increment at Failure	141.2 lbs.
Height at Failure	5.800"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, trace of Sand

FAILURE SKETCH



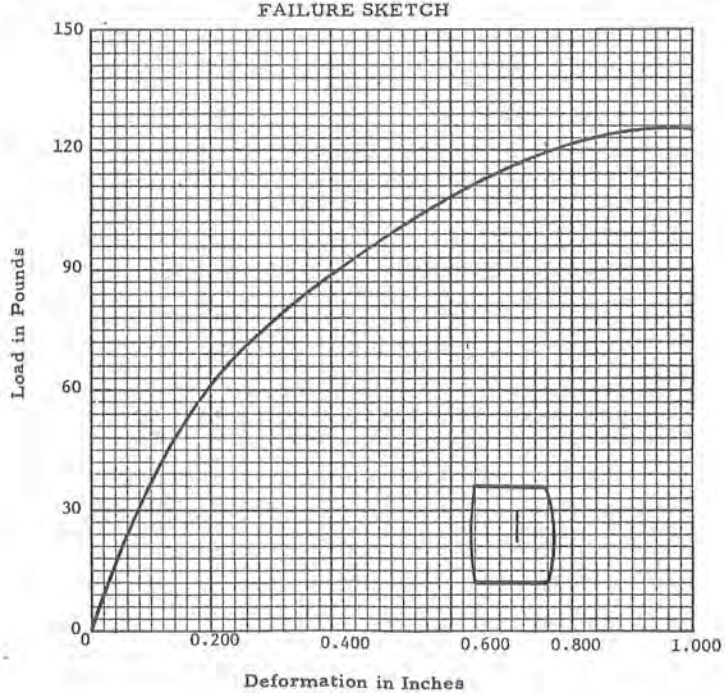
UNCONFINED COMPRESSION TEST

Project:	KILLEN ELECTRIC GENERATING STATION - ADAMS COUNTY, OHIO
Boring No:	A-129
Sample No:	4C
Surface Elevation:	Not Taken
Depth Interval of Sample:	15.0'-17.0'
Depth Interval of Strata:	7.0'-17.0'
Depth of Interval of Test Sample:	16.5'-17.0'
Sample Recovery:	22"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.75 lbs.
Moisture Content	21.2%
Wet Unit Weight	125.8 pcf
Dry Unit Weight	103.8 pcf
Unconfined Compression Strength	2370 psf
Load Increment at Failure	125.5 lbs.
Height at Failure	4.950"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, trace of Sand

FAILURE SKETCH



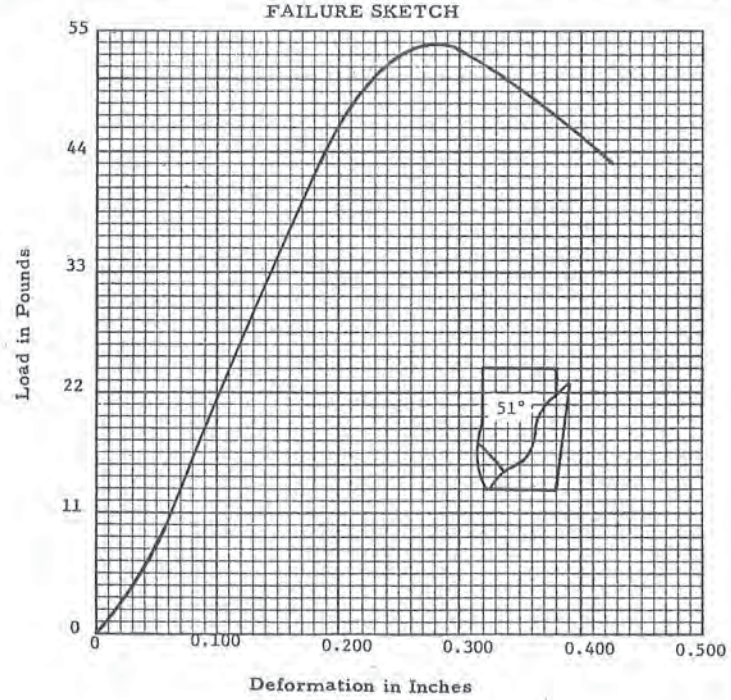
UNCONFINED COMPRESSION TEST

Project:	KILLEN ELECTRIC GENERATING STATION - ADAMS COUNTY, OHIO
Boring No:	A-129
Sample No:	5C
Surface Elevation:	Not Taken
Depth Interval of Sample:	20.0'-22.0'
Depth Interval of Strata:	17.0'-27.0'
Depth of Interval of Test Sample:	21.0'-21.5'
Sample Recovery:	20"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.68 lbs.
Moisture Content	25.7%
Wet Unit Weight	122.6 pcf
Dry Unit Weight	97.5 pcf
Unconfined Compression Strength	1150 psf
Load Increment at Failure	53.0 lbs.
Height at Failure	5.675"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt and Sand, trace of Clay

FAILURE SKETCH



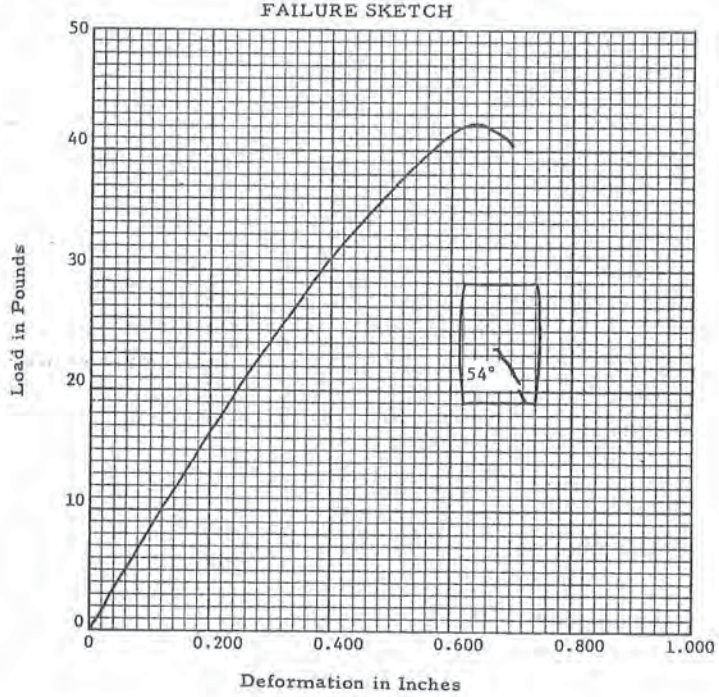
UNCONFINED COMPRESSION TEST

Project: PROPOSED ASH DISPOSAL AREA - KILLEN STATION	
Boring No:	A-133
Sample No:	2C
Surface Elevation:	512.0'
Depth Interval of Sample:	8.0' - 10.0'
Depth Interval of Strata:	5.0' - 29.0'
Depth of Interval of Test Sample:	8.8' - 9.3'
Sample Recovery:	23"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.79 lbs.
Moisture Content	20.0%
Wet Unit Weight	127.8 pcf
Dry Unit Weight	106.5 pcf
Unconfined Compression Strength	850 psf
Load Increment at Failure	42.1 lbs.
Height at Failure	5.325"
Test Method	ASTM-D2166-66
Soil Classification	Brown silt and sand, trace clay

FAILURE SKETCH



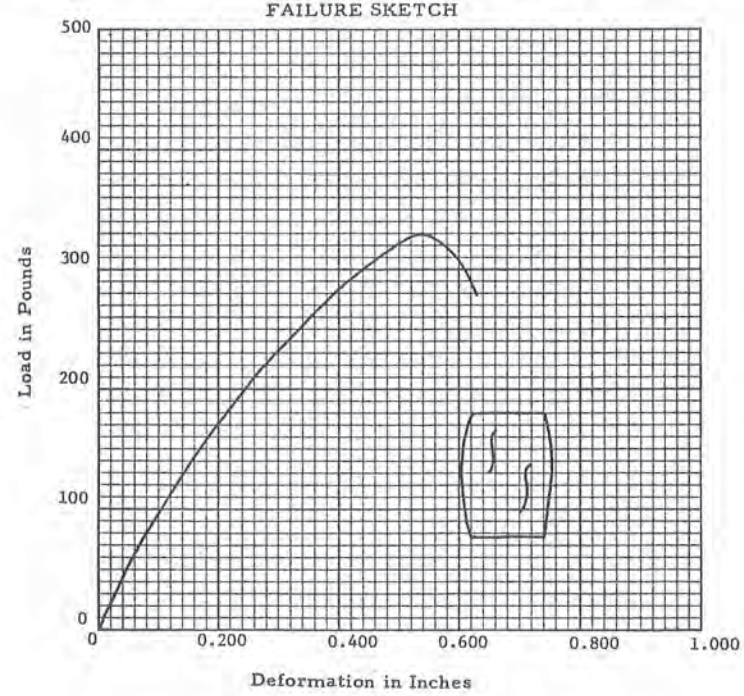
UNCONFINED COMPRESSION TEST

Project: PROPOSED ASH DISPOSAL AREA - KILLEN STATION	
Boring No:	A-133
Sample No:	1C
Surface Elevation:	512.0'
Depth Interval of Sample:	3.0' - 5.0'
Depth Interval of Strata:	1.0' - 5.0'
Depth of Interval of Test Sample:	4.0' - 4.5'
Sample Recovery:	19"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.77 lbs.
Moisture Content	20.3%
Wet Unit Weight	126.9 pcf
Dry Unit Weight	105.4 pcf
Unconfined Compression Strength	6710 pcf
Load Increment at Failure	325.8 lbs.
Height at Failure	5.400"
Test Method	ASTM-D2166-66
Soil Classification	Brown clay, some silt, trace sand

FAILURE SKETCH



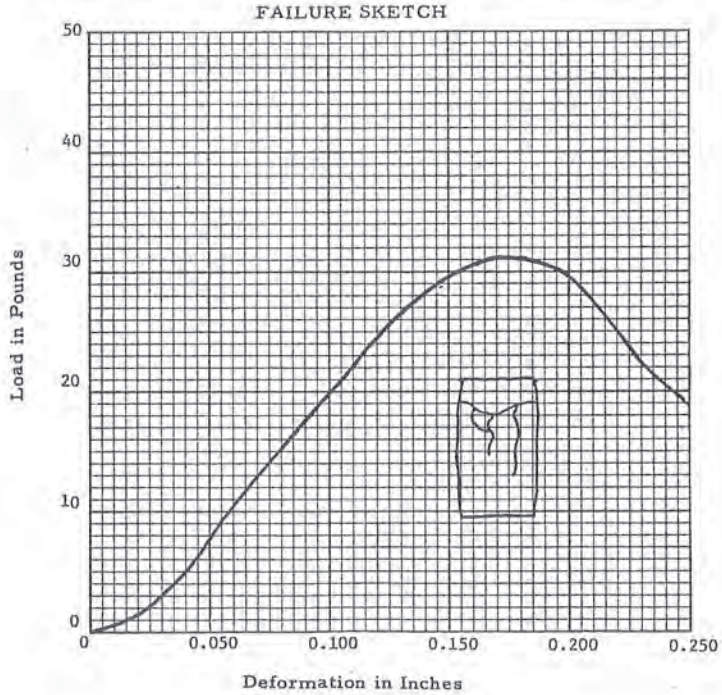
UNCONFINED COMPRESSION TEST

Project: PROPOSED ASH DISPOSAL AREA - KILLEN STATION	
Boring No:	A-133
Sample No:	4C
Surface Elevation:	512.0'
Depth Interval of Sample:	18.0' - 20.0'
Depth Interval of Strata:	5.0' - 29.0'
Depth of Interval of Test Sample:	19.3' - 19.8'
Sample Recovery:	24"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.58 lbs.
Moisture Content	22.0%
Wet Unit Weight	118.1 pcf
Dry Unit Weight	96.9 pcf
Unconfined Compression Strength	680 psf
Load Increment at Failure	31.1 lbs.
Height at Failure	5.775"
Test Method	ASTM-D2166-66
Soil Classification	Brown silt and sand, trace clay

FAILURE SKETCH



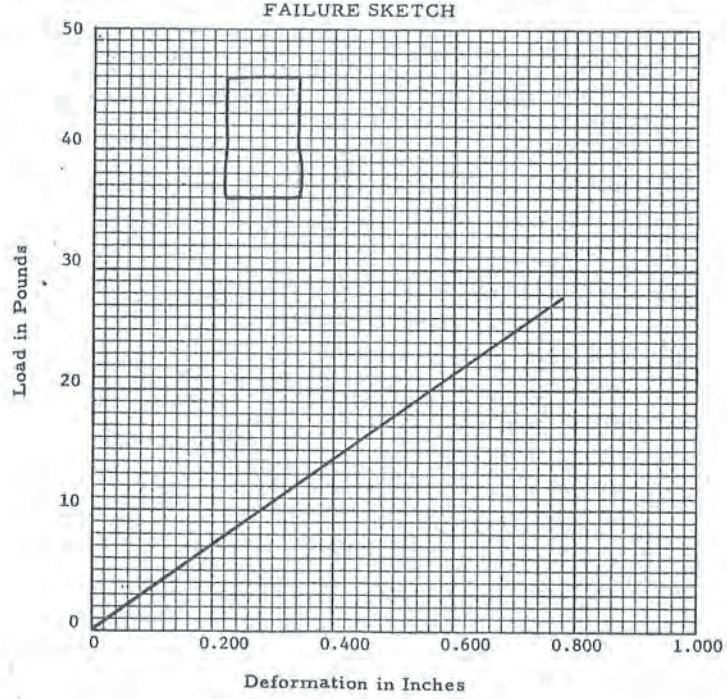
UNCONFINED COMPRESSION TEST

Project: PROPOSED ASH DISPOSAL AREA - KILLEN STATION	
Boring No:	A-133
Sample No:	6C
Surface Elevation:	512.0'
Depth Interval of Sample:	28.0' - 29.0'
Depth Interval of Strata:	5.0' - 29.0'
Depth of Interval of Test Sample:	28.2' - 28.7'
Sample Recovery:	12"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.77 lbs.
Moisture Content	17.9%
Wet Unit Weight	126.7 pcf
Dry Unit Weight	107.5 pcf
Unconfined Compression Strength	540 psf
Load Increment at Failure	27.3 lbs.
Height at Failure	5.175"
Test Method	ASTM-D2166-66
Soil Classification	Brown silt and sand, trace clay

FAILURE SKETCH



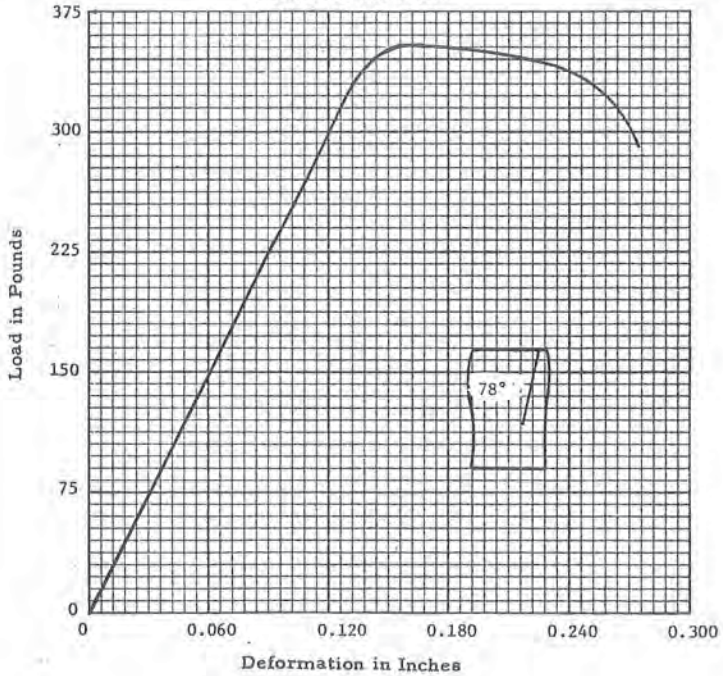
UNCONFINED COMPRESSION TEST

Project: KILLEN ELECTRIC GENERATING STATION - ADAMS COUNTY, OHIO	
Boring No:	A-135
Sample No:	1C
Surface Elevation:	Not Taken
Depth Interval of Sample:	3.0'-5.0'
Depth Interval of Strata:	1.0'-10.0'
Depth of Interval of Test Sample:	4.0'-4.5'
Sample Recovery:	24"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.90 lbs.
Moisture Content	18.9%
Wet Unit Weight	130.8 pcf
Dry Unit Weight	110.1 pcf
Unconfined Compression Strength	7740 psf
Load Increment at Failure	350.7 lbs.
Height at Failure	5.800"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt, some Clay, some Sand, trace of Organic

FAILURE SKETCH



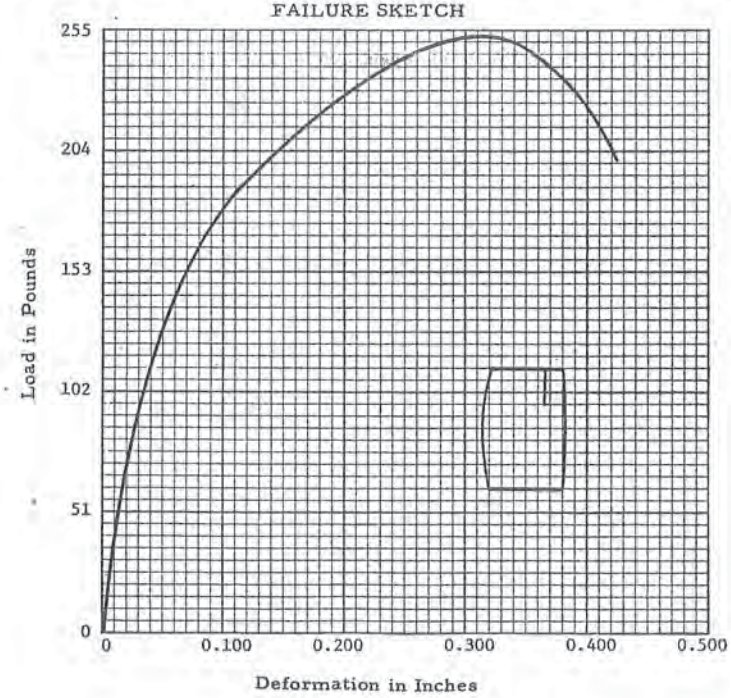
UNCONFINED COMPRESSION TEST

Project: KILLEN ELECTRIC GENERATING STATION - ADAMS COUNTY, OHIO	
Boring No:	A-135
Sample No:	5C
Surface Elevation:	Not Taken
Depth Interval of Sample:	23.0'-25.0'
Depth Interval of Strata:	10.0'-29.0'
Depth of Interval of Test Sample:	24.0'-24.5'
Sample Recovery:	20"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.80 lbs.
Moisture Content	20.5%
Wet Unit Weight	128.0 pcf
Dry Unit Weight	106.2 pcf
Unconfined Compression Strength	5440 psf
Load Increment at Failure	252.70 lbs.
Height at Failure	5.650"
Test Method	ASTM-D2166-66
Soil Classification	Brown Silt and Sand, trace of Clay

FAILURE SKETCH



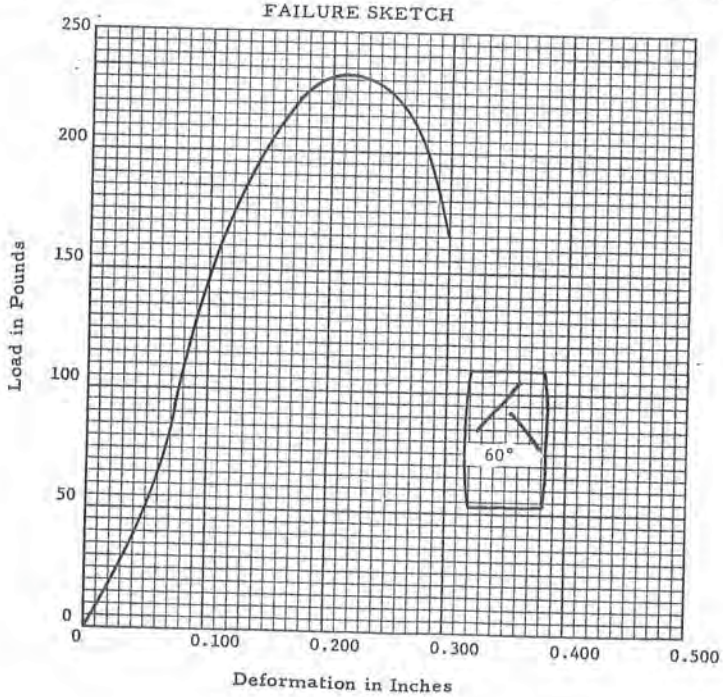
UNCONFINED COMPRESSION TEST

Project:	PROPOSED ASH DISPOSAL AREA - KILLEN STATION
Boring No:	A-137
Sample No:	1C
Surface Elevation:	518.5'
Depth Interval of Sample:	3.0' - 5.0'
Depth Interval of Strata:	1.5' - 10.0'
Depth of Interval of Test Sample:	4.3' - 4.8'
Sample Recovery:	18"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.90 lbs.
Moisture Content	17.1%
Wet Unit Weight	132.8 pcf
Dry Unit Weight	113.4 pcf
Unconfined Compression Strength	5050 psf
Load Increment at Failure	231.4 lbs.
Height at Failure	5.725"
Test Method	ASTM-D2166-66
Soil Classification	Brown silt, some sand, some clay

FAILURE SKETCH



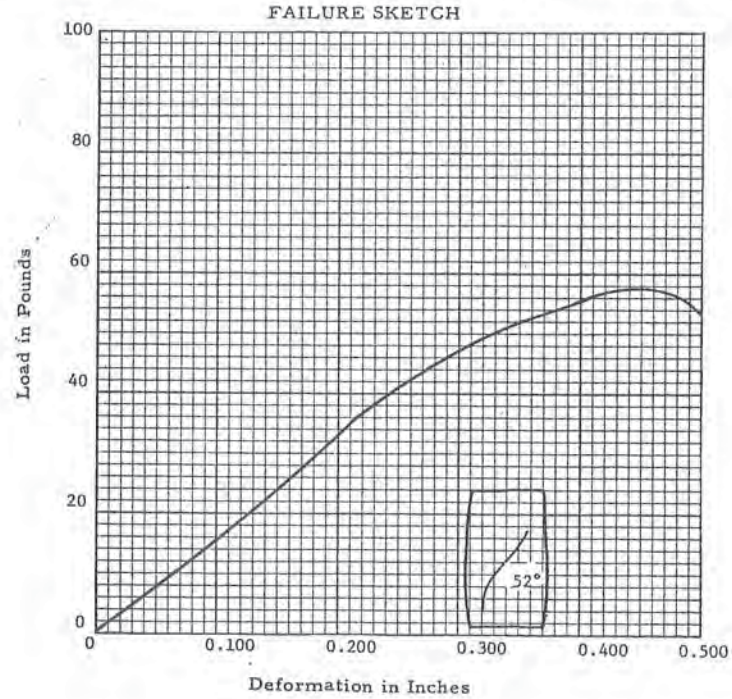
UNCONFINED COMPRESSION TEST

Project:	PROPOSED ASH DISPOSAL AREA - KILLEN STATION
Boring No:	A-137
Sample No:	2C
Surface Elevation:	518.5'
Depth Interval of Sample:	8.0' - 10.0'
Depth Interval of Strata:	1.5' - 10.0'
Depth of Interval of Test Sample:	8.1' - 8.6'
Sample Recovery:	24"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.84 lbs.
Moisture Content	19.3%
Wet Unit Weight	129.8 pcf
Dry Unit Weight	108.8 pcf
Unconfined Compression Strength	1200 psf
Load Increment at Failure	57.1 lbs.
Height at Failure	5.500"
Test Method	ASTM-D2166-66
Soil Classification	Brown silt, some sand, some clay

FAILURE SKETCH



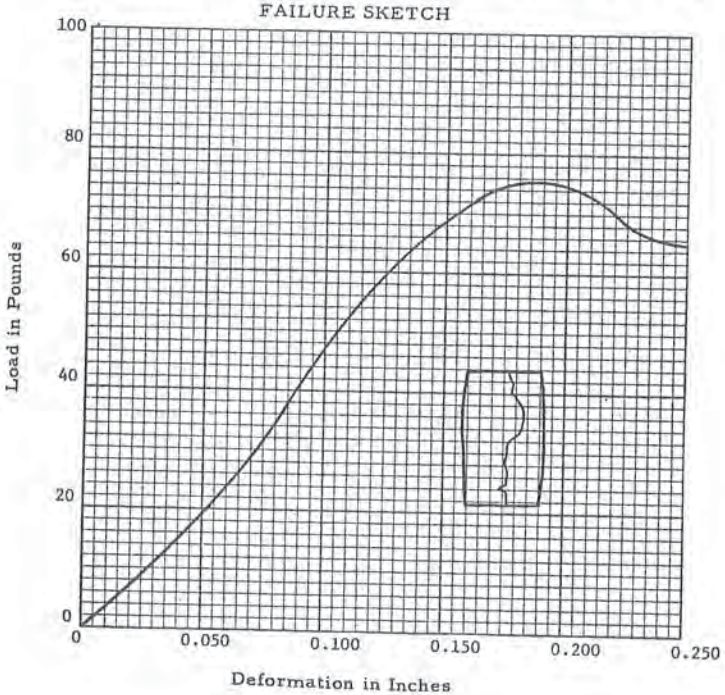
UNCONFINED COMPRESSION TEST

Project: PROPOSED ASH DISPOSAL AREA - KILLEN STATION	
Boring No:	A137
Sample No:	4C
Surface Elevation:	518.5'
Depth Interval of Sample:	18.0' - 20.0'
Depth Interval of Strata:	10.0' - 25.5'
Depth of Interval of Test Sample:	19.1' - 19.6'
Sample Recovery:	24"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.76 lbs.
Moisture Content	22.5%
Wet Unit Weight	126.3 pcf
Dry Unit Weight	107.1 pcf
Unconfined Compression Strength	1650 psf
Load Increment at Failure	74.8 lbs.
Height at Failure	5.775"
Test Method	ASTM-D2166-66
Soil Classification	Brown silt and sand, trace clay

FAILURE SKETCH



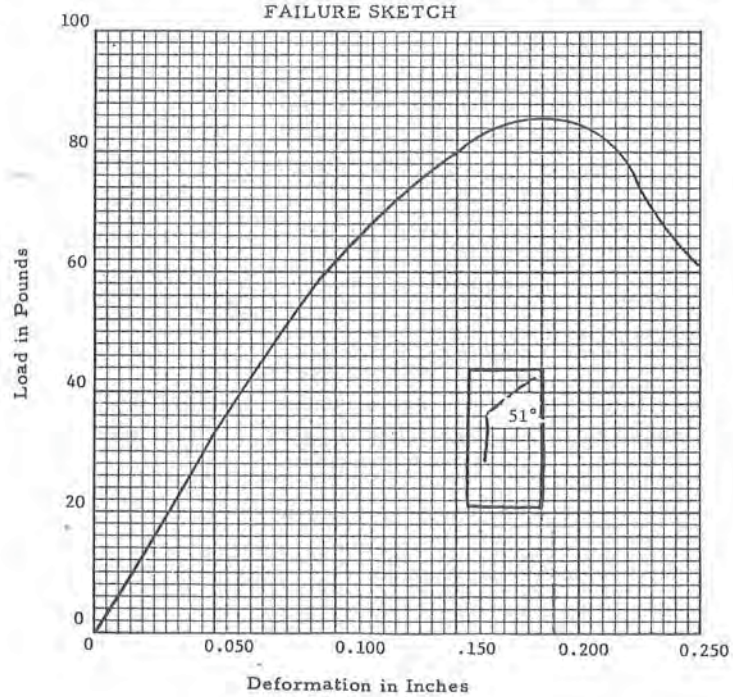
UNCONFINED COMPRESSION TEST

Project: PROPOSED ASH DISPOSAL AREA - KILLEN STATION	
Boring No:	A139
Sample No:	1C
Surface Elevation:	521.8'
Depth Interval of Sample:	3.0' - 5.0'
Depth Interval of Strata:	1.5' - 10.0'
Depth of Interval of Test Sample:	4.2' - 4.7'
Sample Recovery:	24"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950
Test Specimen Weight	2.94 lbs.
Moisture Content	18.1%
Wet Unit Weight	134.6 pcf
Dry Unit Weight	114.0 pcf
Unconfined Compression Strength	11,390 psf
Load Increment at Failure	517.7 lbs.
Height at Failure	5.775"
Test Method	ASTM-D2166-66
Soil Classification	Brown clay, some silt, some sand

FAILURE SKETCH



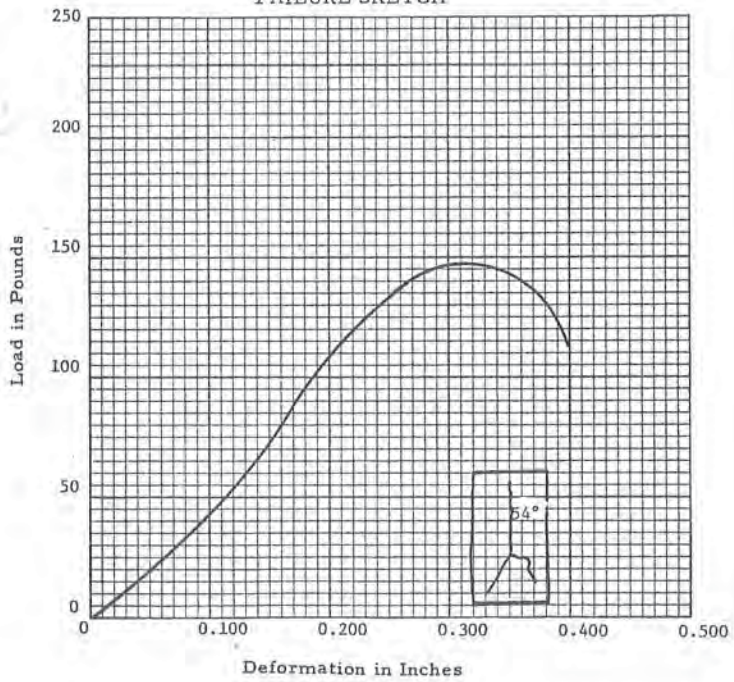
UNCONFINED COMPRESSION TEST

Project:	PROPOSED ASH DISPOSAL AREA - KILLEN STATION
Boring No:	A-139
Sample No:	2C
Surface Elevation:	521.8'
Depth Interval of Sample:	8.0' - 10.0'
Depth Interval of Strata:	1.5' - 10.1'
Depth of Interval of Test Sample:	9.1' - 9.7'
Sample Recovery:	24"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.84 lbs.
Moisture Content	20.7%
Wet Unit Weight	129.8 pcf
Dry Unit Weight	107.5 pcf
Unconfined Compression Strength	3210 psf
Load Increment at Failure	149.6 lbs.
Height at Failure	5.625"
Test Method	ASTM-D2166-66
Soil Classification	Brown clay, some silt, some sand

FAILURE SKETCH



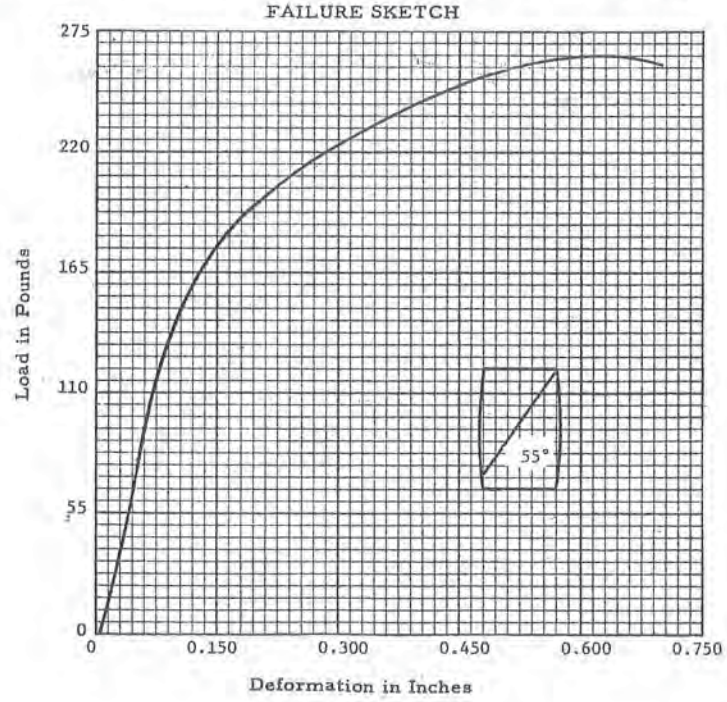
UNCONFINED COMPRESSION TEST

Project:	KILLEN ELECTRIC GENERATING STATION - ADAMS COUNTY, OHIO
Boring No:	A-142
Sample No:	1C
Surface Elevation:	Not Taken
Depth Interval of Sample:	3.0'-5.0'
Depth Interval of Strata:	2.0'-20.5'
Depth of Interval of Test Sample:	3.7'-4.2'
Sample Recovery:	18"

SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.68 lbs.
Moisture Content	26.1%
Wet Unit Weight	122.9 pcf
Dry Unit Weight	97.4 pcf
Unconfined Compression Strength	5390 psf
Load Increment at Failure	263.1 lbs.
Height at Failure	5.375"
Test Method	ASTM-D2166-66
Soil Classification	Brown and Gray Clay, some Silt, trace of Sand

FAILURE SKETCH



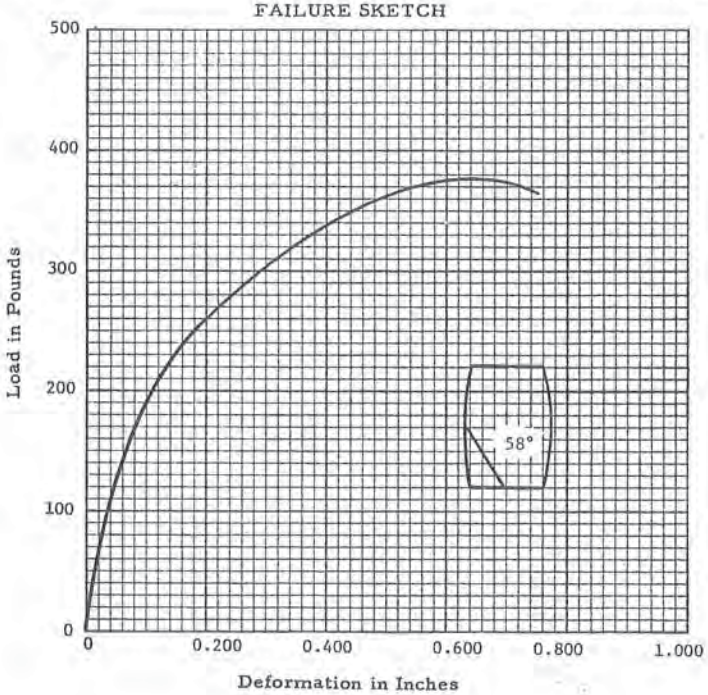
UNCONFINED COMPRESSION TEST

Project: KILLEN ELECTRIC GENERATING STATION - ADAMS COUNTY, OHIO	
Boring No:	A-142
Sample No:	3C
Surface Elevation:	Not Taken
Depth Interval of Sample:	10.0'-12.0'
Depth Interval of Strata:	2.0'-20.5'
Depth of Interval of Test Sample:	10.8'-11.3'
Sample Recovery:	19"

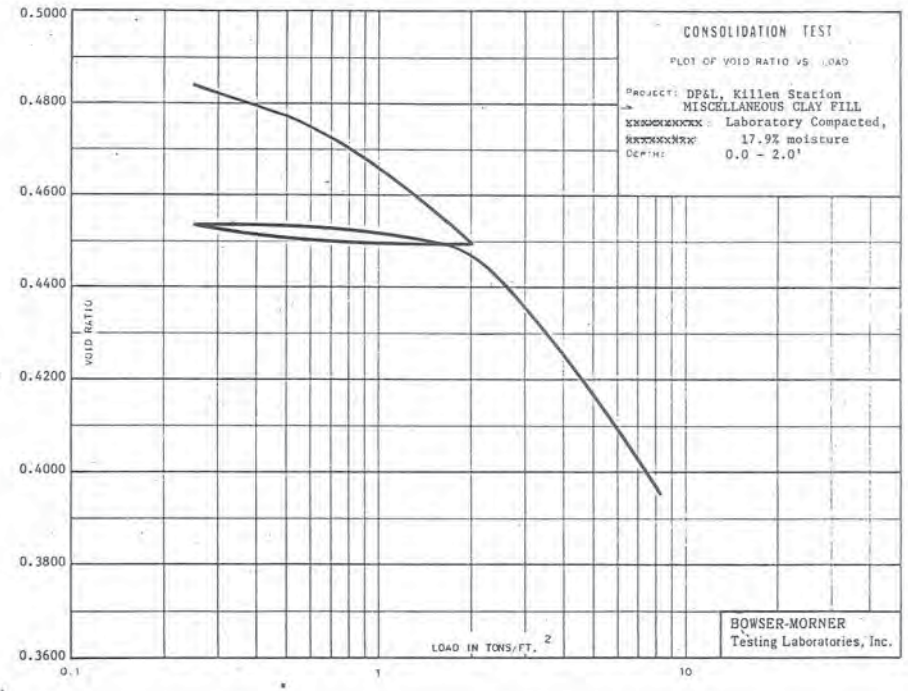
SPECIMEN DATA

Initial Diameter	2.843"
Initial Height	5.950"
Test Specimen Weight	2.62 lbs.
Moisture Content	22.5%
Wet Unit Weight	119.8 pcf
Dry Unit Weight	97.8 pcf
Unconfined Compression Strength	7660 psf
Load Increment at Failure	377.6 lbs.
Height at Failure	5.325"
Test Method	ASTM-D2166-66
Soil Classification	Brown and Gray Clay, some Silt, trace of Sand

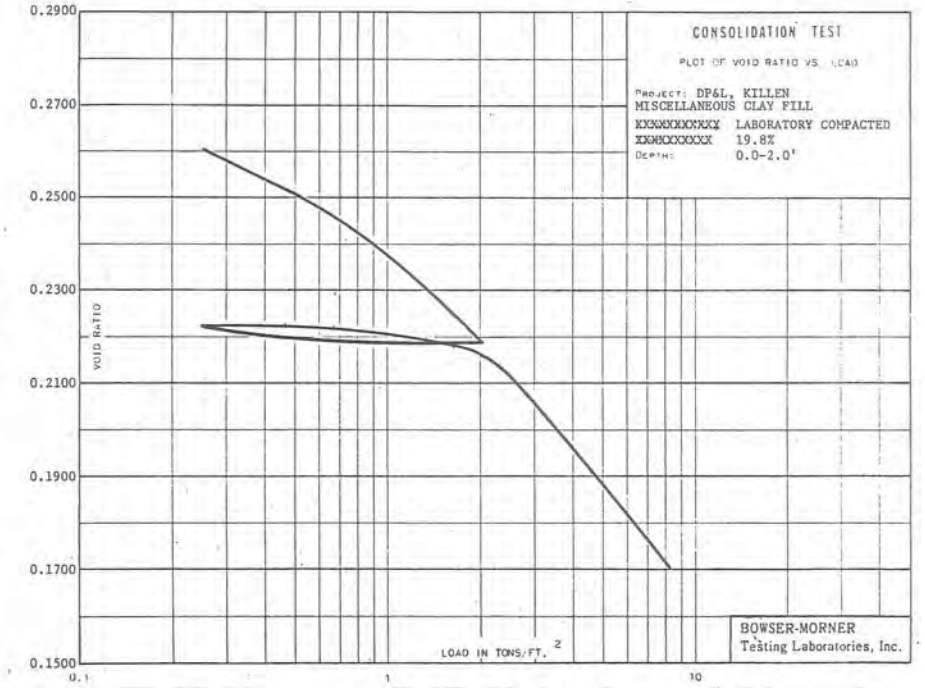
FAILURE SKETCH



FORM 2A80



Form 2A86



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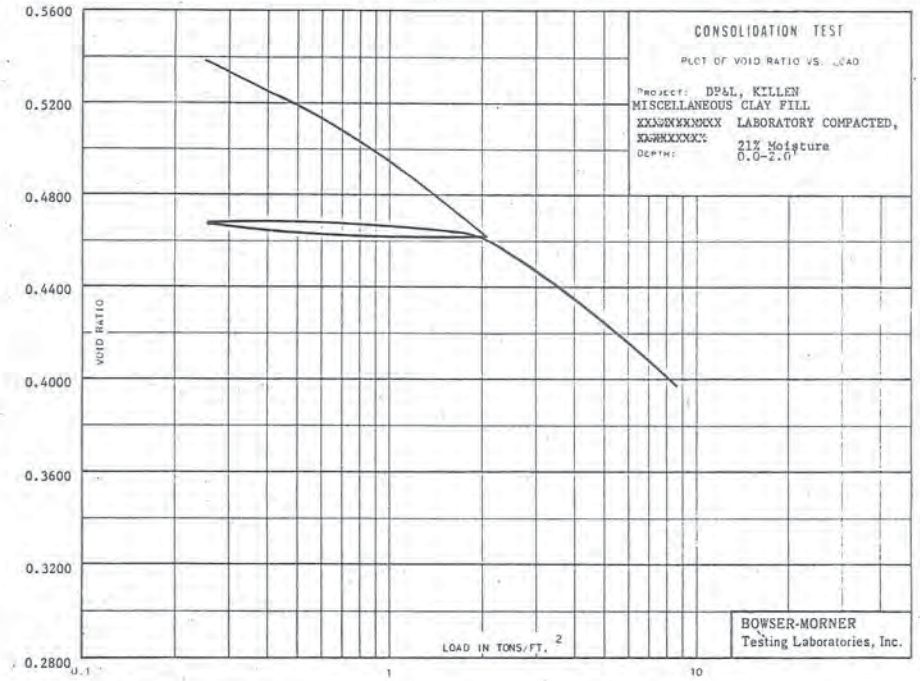

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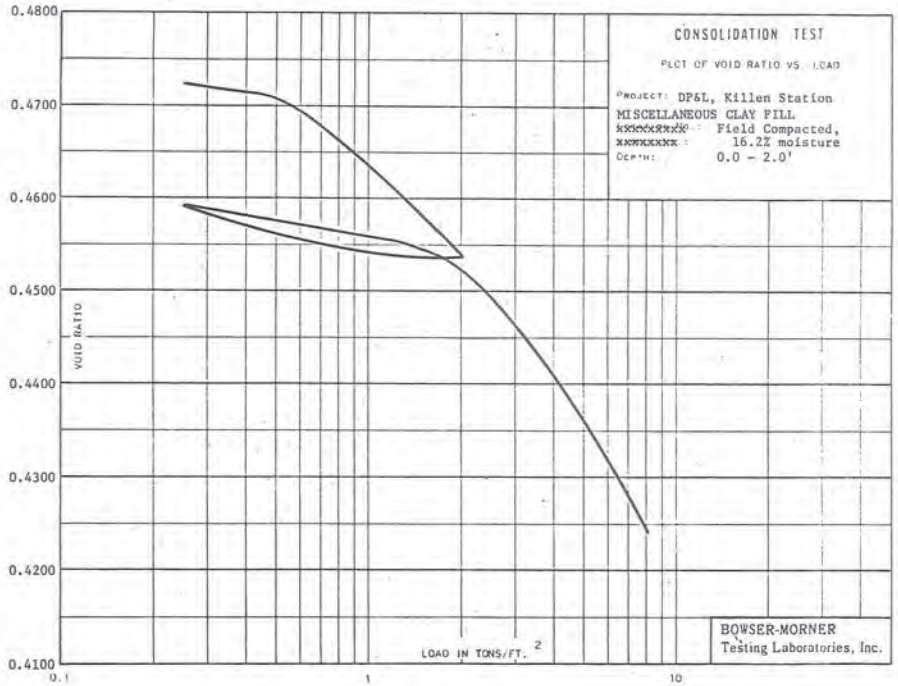

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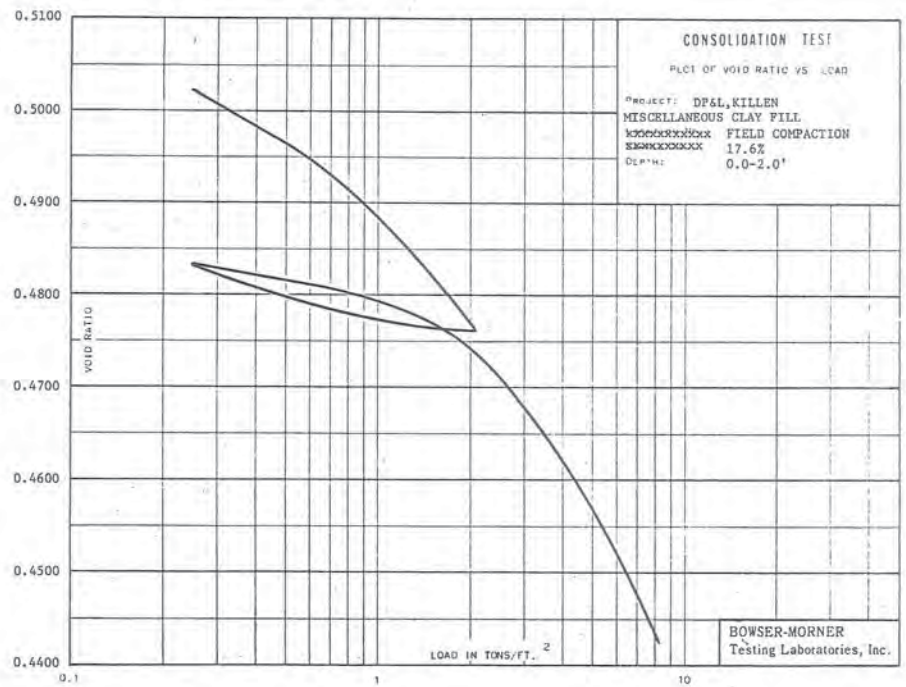

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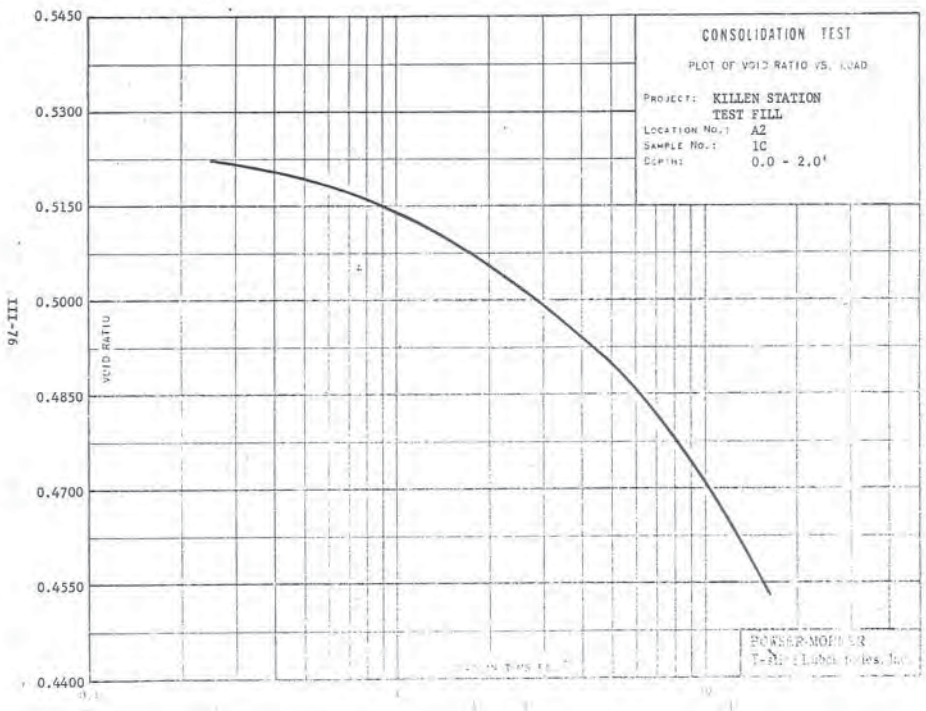
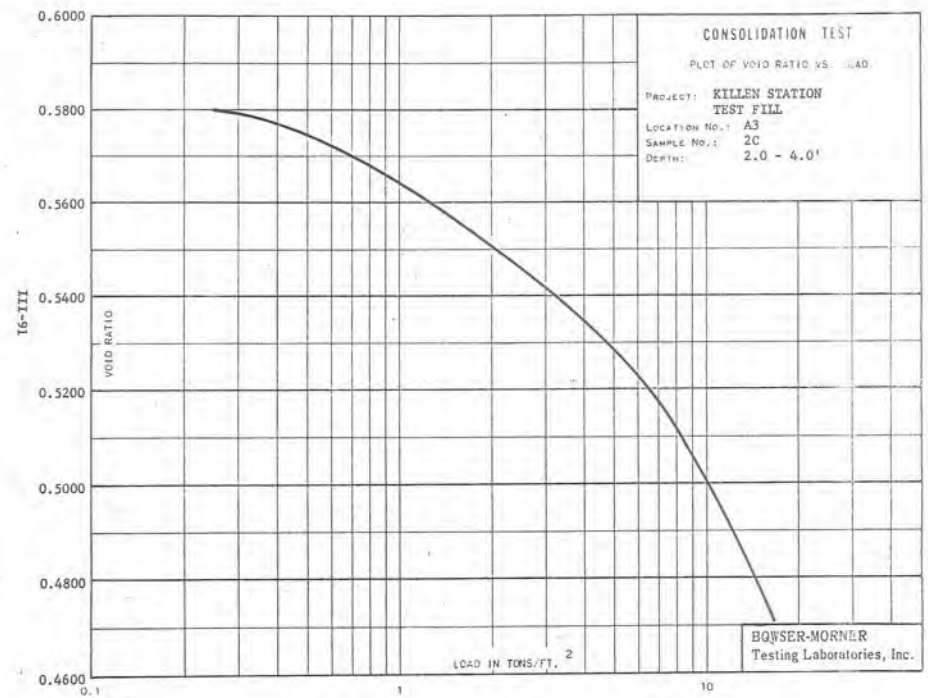
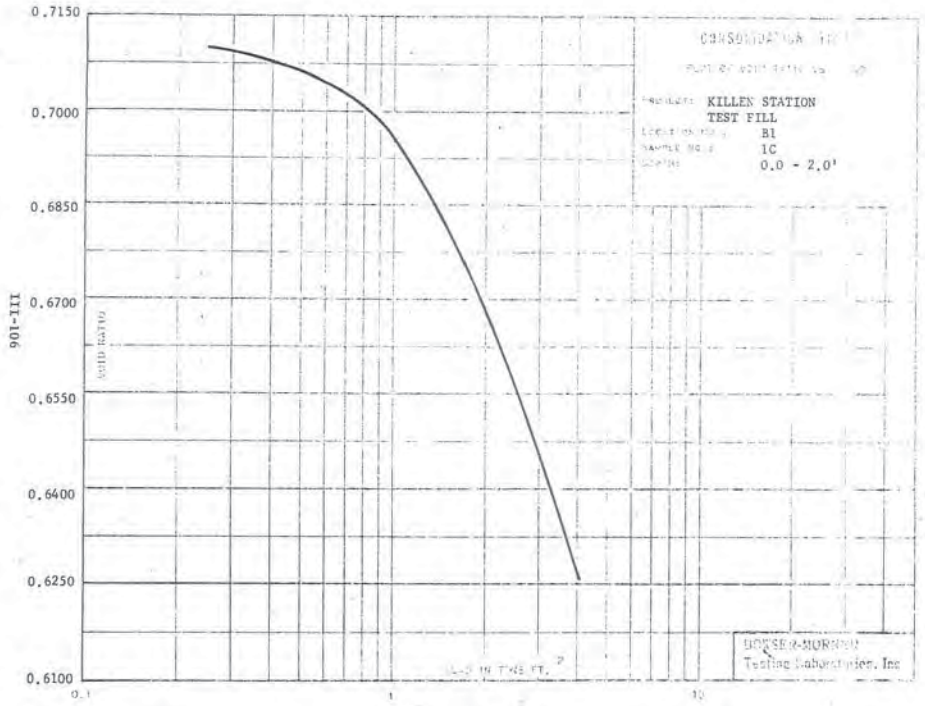


III-76

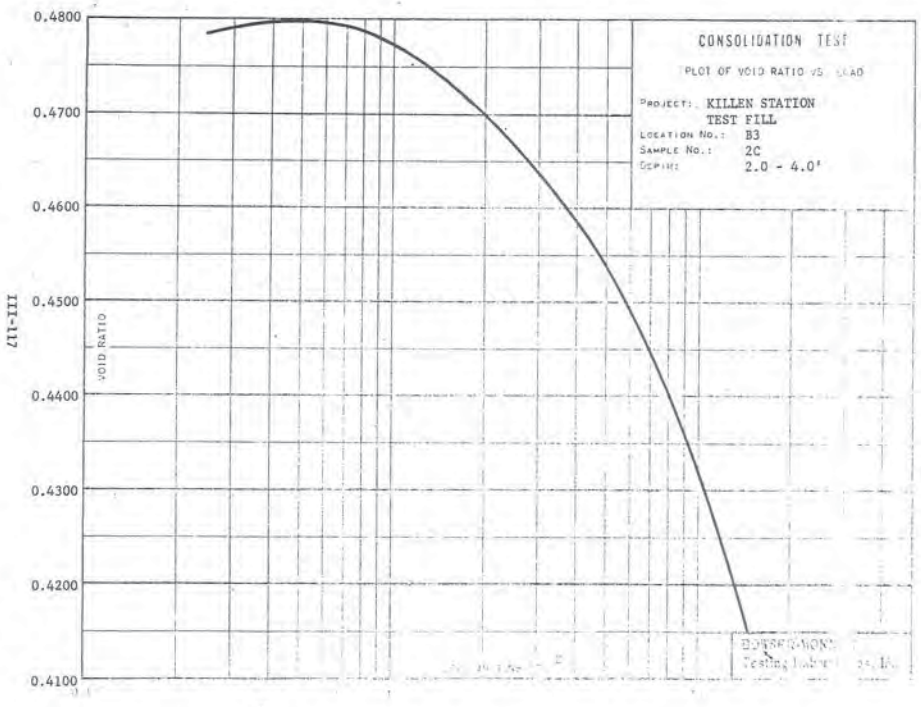
Form 2A86



III-91

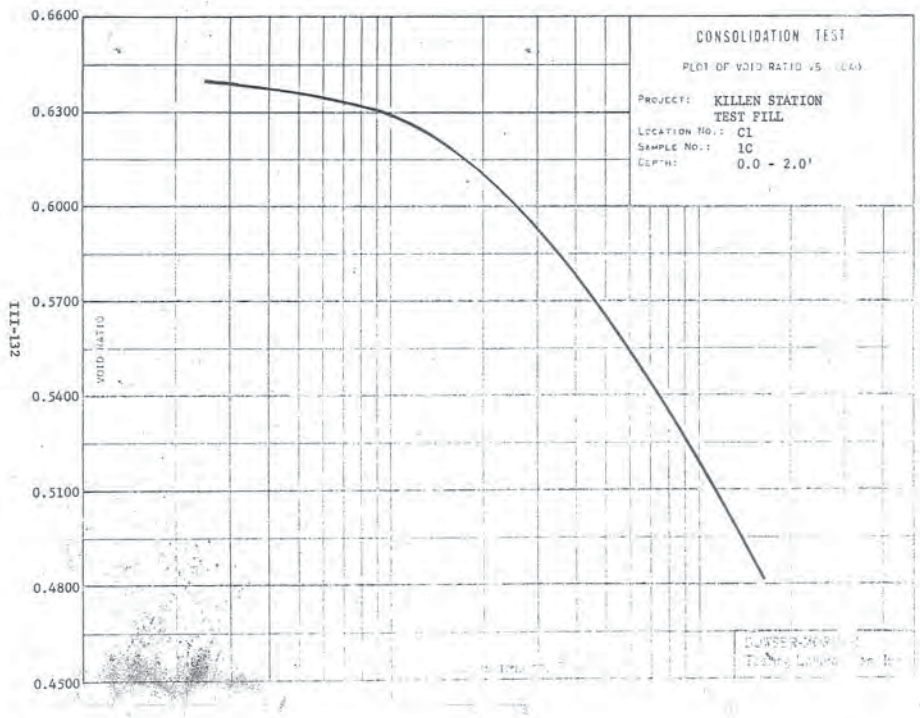


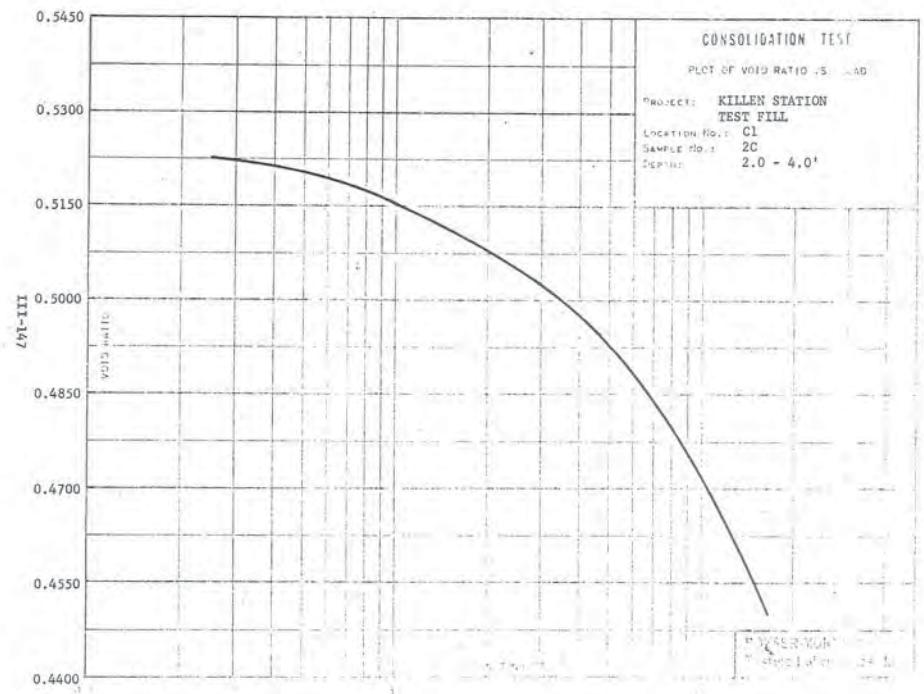
III-106



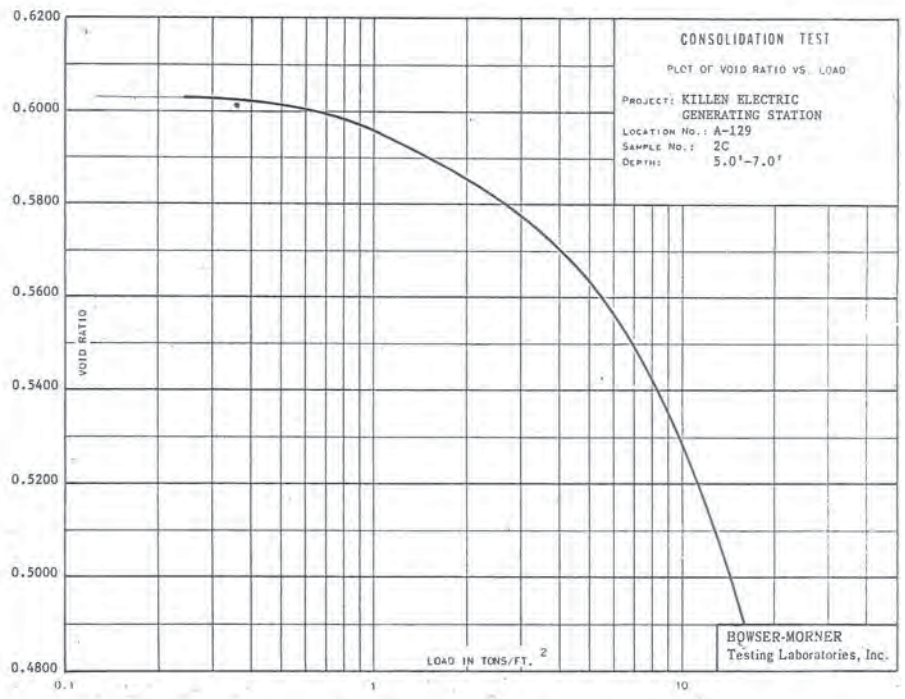
III-117

FORM 2A30


CONSOLIDATION TEST
PLOT OF VOID RATIO VS LOAD
PROJECT: KILLEN STATION
TEST FILL
LOCATION NO.: C1
SAMPLE NO.: 1C
DEPTH: 0.0 - 2.0'
VOID RATIO
0.6600
0.6300
0.6000
0.5700
0.5400
0.5100
0.4800
0.4500


CONSOLIDATION TEST
PLOT OF VOID RATIO VS LOAD
PROJECT: KILLEN STATION
TEST FILL
LOCATION NO.: C1
SAMPLE NO.: 2C
DEPTH: 2.0 - 4.0'
VOID RATIO
0.5450
0.5300
0.5150
0.5000
0.4850
0.4700
0.4550
0.4400

Form 2A80


CONSOLIDATION TEST
PLOT OF VOID RATIO VS. LOAD
PROJECT: KILLEN ELECTRIC GENERATING STATION
LOCATION NO.: A-129
SAMPLE NO.: 2C
DEPTH: 5.0'-7.0'
VOID RATIO
0.6200
0.6000
0.5800
0.5600
0.5400
0.5200
0.5000
0.4800
LOAD IN TONS/FT.^{2}
0.1
1
10
BOWSER-MORNER
Testing Laboratories, Inc.