HISTORY OF CONSTRUCTION

40 CFR 257.73(c)

Ash Pond

Poston Site

Athens, Ohio

February 2026

Prepared for: Ohio Franklin Realty

Prepared by: American Electric Power Service Corporation

1 Riverside Plaza

Columbus, OH 43215

Poston Ash Pond

Legacy CCR Surface Impoundment

History of Construction

PREPARED BY Blake Arthur, PE Digitally signed by Blake Arthur, PE DN: cn=Blake Arthur, PE, c=US, email=barthur@aep.com Date: 2026.02.02 14:22:52 -05'00' DATE _____

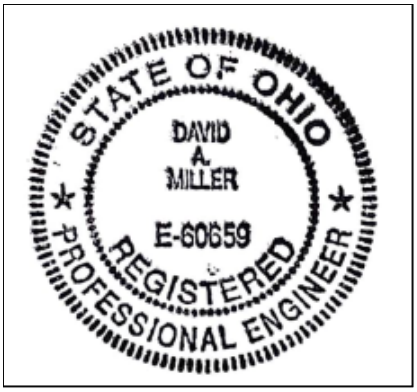
Blake Arthur, P.E.

REVIEWED BY Dan Murphy Digitally signed by Dan Murphy DN: cn=Dan Murphy, c=US, email=dsmurphy1@aep.com Date: 2026.02.02 14:35:44 -05'00' DATE _____

Dan Murphy, P.E.

APPROVED BY David A. Miller DATE 02.02.2026

David A. Miller, P.E.
Director – Ash Management Services



I certify to the best of my knowledge, information and belief that the information contained in this report meets the requirements of 40 CFR § 257.73(c).

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Attachments

1.0 OBJECTIVE

The "Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; Legacy CCR Surface Impoundments", 89 Fed. Reg. 38950 (May 8, 2024) (amending 40 C.F.R. §257) requires owners and operators of facilities with a legacy coal combustion residual (CCR) surface impoundment to prepare a history of construction document for each legacy CCR surface impoundment at the facility.

The Ash Pond at the Poston Site is subject to this rule.

2.0 DESCRIPTION OF CCR THE IMPOUNDMENT

The Former Poston Site is located approximately 2 miles west of The Plains, Ohio. The latitude/longitude of the facility is: 39°23'10" N / 82°10'39" W. The Poston Plant was placed in service in 1949 and subsequently retired in 1987. The Ash Pond Dam was designed by Burgess and Niple, Limited in 1956. The Ash Pond Dam was constructed by H.R. Holderman, Inc. and construction inspection performed by Burgess and Niple, Limited.

The Ash Pond is located north of the former plant. The Ash Pond is formed by cross valley embankment dam and saddle dam. The embankment dam is 100 foot tall and 950 feet in length and the saddle dam is approximately 15 feet tall and 900 feet long. The embankment dam is located on the east side of the reservoir and the saddle dam to the south side of the reservoir. The Ash Pond is approximately 23 acres in surface area.

The crest width of the embankment is 20 feet wide; the upstream slope is 3 Horizontal on 1 Vertical (3H:1V) and the downstream slope varies between 2.5H:1V to 3H:1V. The embankment is zoned with an impervious core with a cutoff trench and a blanket/toe drain.

The spillway is a rectangular concrete chute that discharges into a stilling basin and subsequently to an excavated earthen channel left of the abutment. The stilling basin has a catch basin with an 18-inch pipe to discharge low flow events. The decant water from the Ash Pond discharged into Hamley Run before flowing into the Hocking River.

The pond was graded to drain to the spillway and capped with 2 feet of clay in the 1980s when the Poston Power Plant was closed.

3.0 SUMMARY OF OWNERSHIP 275.73(C)(1)(I)

[The name and address of the person(s) owning or operating the CCR unit: the name associated with the CCR unit: and the identification number of the CCR unit if one has been assigned by the state.]

The name associated with the CCR unit is Ash Pond. Ohio Franklin Realty, LLC is the owner of the Ash Pond at the Poston Site. The Ash Pond Dam site has been assigned ODNR Dam Safety File Number: 9321-002.

Ohio Franklin Realty, LLC
Attn: Gary Spitznogle
1 Riverside Plaza
Columbus, OH 43215
Phone: 614-716-1774
Email: aepccrhelp@aep.com

4.0 LOCATION OF THE CCR UNIT 275.73 (C)(1)(II)

[The location of the CCR unit identified on the most recent U.S. Geological Survey (USGS) 7 ½ minute or 15 minute topographic quadrangle map, or a topographic map of equivalent scale if a USGS map is not available.]

A location map is included in Attachment A.

5.0 STATEMENT OF PURPOSE 275.73 (C)(1)(III)

[A statement of the purpose for which the CCR unit is being used.]

When the Poston Plant was operational, the Ash Pond was a surface impoundment for settling and storing coal ash.

6.0 NAME AND SIZE OF WATERSHED THE CCR UNIT IS LOCATED 275.73 (C)(1)(IV)

[The name and size in acres of the watershed within which the CCR unit is located.]

The Ash Pond is located within the Region 5 - Ohio Region Watershed and is part of the subgroup Hydrologic Unit Code = 050302040801 Hamley Run- Hocking River watershed area. Approximately 43 acres drains to the spillway of the Poston Ash Pond.

7.0 DESCRIPTION OF THE FOUNDATION AND ABUTMENT MATERIALS 275.73(C)(1)(V)

[A description of the physical and engineering properties of the foundation and abutment materials on which the CCR unit is located.]

Based on a Geologic Investigation conducted in 2025, and provided in Attachment B, Geologic Data Report, the Poston Ash Pond is situated in the unglaciated portion of Muskingum-Pittsburgh Plateau, within the unglaciated portion of Ohio with colluvium derived from local bedrock across the majority of the site.

The east and south embankments were designed and constructed as saddle embankments, such that both abutments for the embankments consist of the natural hillsides. The foundation of the east embankment consists of the natural soils and bedrock within the valley between the hillsides. The foundation of the south embankment appears to consist of a pass between sets of smaller hills.

According to the historical borings performed within the impoundment, approximately 5 feet of natural cohesive soils generally with stiff consistency were encountered overlying weathered and interbedded shale, siltstone, and sandstone bedrock beneath the CCR materials. Rock coring performed at the two borings performed by Terracon indicated 95 to 100 percent recoveries with RQD values ranging from 25 to 54 percent.

Based on the recently completed borings, the embankments are supported on approximately 5 to 20 feet of natural soils overlying shale bedrock. A cutoff trench beneath the east embankment extends into the shale bedrock based on the record drawings. The natural soils encountered at the boring locations consisted predominantly of lean clay with varying amounts of sand and gravel. On occasion, granular soils were encountered consisting of poorly graded sand with clay and clayey gravel. Pocket penetrometer measurements within the cohesive soils ranged from 0.2 to 4.0 tons per square foot (tsf) with an average of 2.1 tsf. Field SPT N-values for the cohesive and granular soils ranged from 6 to 34 blows per foot (bpf). SPT N-values (corrected for 60% energy, drill rod length, diameter of borehole, and the use of split-spoon without liners) for these soils ranged from 11 to 70 bpf with an average of 31 bpf. The cohesive soils classified as lean clay (CL) according to the Unified Soil Classification System (USCS) and exhibited a firm to very stiff consistency. The granular soils classified as poorly graded sand with clay (SP-SC) and clayey gravel (GC) and exhibited a medium dense relative density. Within the context of the slope stability analyses, this layer is hereafter referred to as the 'Natural Soils' layer.

Bedrock encountered beneath the embankments at the boring locations consisted of weathered shale interbedded with claystone. The bedrock was cored at each of the boring locations performed by S&ME

for 5 to 20 feet upon encountering refusal conditions. Core recoveries ranged from 36 to 100 percent, and RQD values ranged from 0 to 100 percent, both generally increasing with depth.

A grout curtain was installed on the left and right abutment. The spacing between grout holes appears to be 10 feet center to center and the reported grout takes are generally low.

The design drawings of the foundation of the dam included a cutoff trench keyed into bedrock below the impervious core of the dam. The bottom width of the cutoff trench was 6 feet and the side slopes of 1H:1V.

8.0 DESCRIPTION OF EACH CONSTRUCTED ZONE OR STAGE OF THE CCR UNIT 275.73 (C)(1)(VI)

[A statement of the type, size, range, and physical and engineering properties of the materials used in constructing each zone or stage of the CCR unit; and the approximate dates of construction of each successive stage of construction of the CCR unit.]

The Ash Pond Dam at Poston was constructed in a single stage around 1956. Based on readily available geotechnical construction records and laboratory testing, the embankment was constructed out of cohesive soil, classified as CL or CH per the USCS Soil Classification. The tested soils have liquid limits ranging from 42 to 64 and a plastic limit of 24. The maximum dry density ranged from 97 to 104 pounds per cubic foot and the optimum moisture content was approximately 19 percent. Two consolidated, undrained direct shear tests were performed and indicate that the soil has shear strength parameters of about 180 pounds per square foot of cohesion and an internal friction angle that ranged between approximately 20 and 23 degrees.

In 1981, splitter dikes were constructed to partition the reservoir to allow enhance the sedimentation of the ash. The splitter dikes divided the Ash Pond into three separate areas, referred to as the Ash Pond, Clearwater Pond and Reclaim pond. At that time, ash was excavated from the reservoir and placed as landfill material in the northwest end of the watershed/reservoir.

In 1982, fill material was placed at the toe of the dam after a series of treatment ponds was constructed in the Hamley Run Valley below the dam. The treatment ponds provided additional treatment to water from the Ash Pond spillway before being discharged to Hamley Run. It was anticipated that water would back up to the toe of the dam because of the treatment pond construction and the fill was intended to create a barrier between this water and the toe of the embankment dam. This fill material covered over the headwall where the blanket and associated toe drain discharged. The condition of the toe drain outlets are currently unknown.

Closure of the Ash Pond occurred in 1988. The closure activities included removal of free water within the pond, placement of roughly 300,000 CY of shale/rock mixture as a bridging layer and then placement of 2 feet of compacted clay, and finally a 0.5 foot thick layer of topsoil was placed to establish vegetation. Two drainage swales were shaped on the cap to drain stormwater runoff towards the existing spillway and

eventually to Hamley Run.

9.0 ENGINEERING STRUCTURES AND APPURTENANCES, 275.73 (C)(1)(VII)

[At a scale that details engineering structures and appurtenances relevant to the design, construction, operation, and maintenance of the CCR unit, detailed dimensional drawings of the CCR unit, including a plan view and cross sections of the length and width of the CCR unit, showing all zones, foundation improvements, drainage provisions, spillways, diversion ditches, outlets, instrument locations, and slope protection…]

AEP performed an extensive review to locate historical files, drawings and other information for the Poston Ash Pond. All readily available drawings are included in Attachment C.

10.0 SUMMARY OF POOL SURFACE ELEVATIONS, AND MAXIMUM DEPTH OF CCR, 275.73 (C)(1)(VII)

[…in addition to the normal operating pool surface elevation and the maximum pool elevation following peak discharge from the inflow design flood, the expected maximum depth of CCR within the CCR surface impoundment.]

The expected maximum depth of CCR in the Poston Ash Pond is approximately 90 feet. The Ash Pond no longer receives CCR. The Ash Pond no longer has ponded water; the pool elevation sections are not applicable.

11.0 FEATURES THAT COULD ADVERSELY AFFECT OPERATION DUE TO MALFUNCTION OR MIS-OPERATION (275.73 (C)(1)(VII))

[…and any identifiable natural or manmade features that could adversely affect operations of the CCR unit due to malfunction or mis-operation]

The CCR impoundment has one hydraulic structure passing through its embankments. The structure is a 30-inch, 8-gauge CMP, and is generally situated along the base of the east embankment. The structure is reportedly currently plugged with concrete for its full length and capped at its downstream end with a steel plate and rubber gasket. The pipe was used as a stream diversion during construction of the east embankment. According to the record drawings, a concrete cradle was installed below the pipe which extended up both sides of the pipe to just below the spring line. Additionally, corrugated metal fin seepage collars were reported to be installed at 30 feet intervals along the drain pipe, generally within the middle half of the embankment cross-section.

Prior to the construction of the embankment, two buried water lines were present generally running east-west within the left (north) portion of the east embankment. These water lines consisted of a 16-inch cast iron pipe and a 16-inch steel pipe. The record drawings indicate that these water pipes were encased in concrete with concrete seepage collars placed every 30 feet along the pipe length within the limits of the embankment.

12.0 DESCRIPTION OF THE TYPE, PURPOSE AND LOCATION OF EXISTING INSTRUMENTATION 275.73 (C)(1)(VIII)

[A description of the type, purpose, and location of existing instrumentation.]

Location of instrumentation is shown in Attachment D.

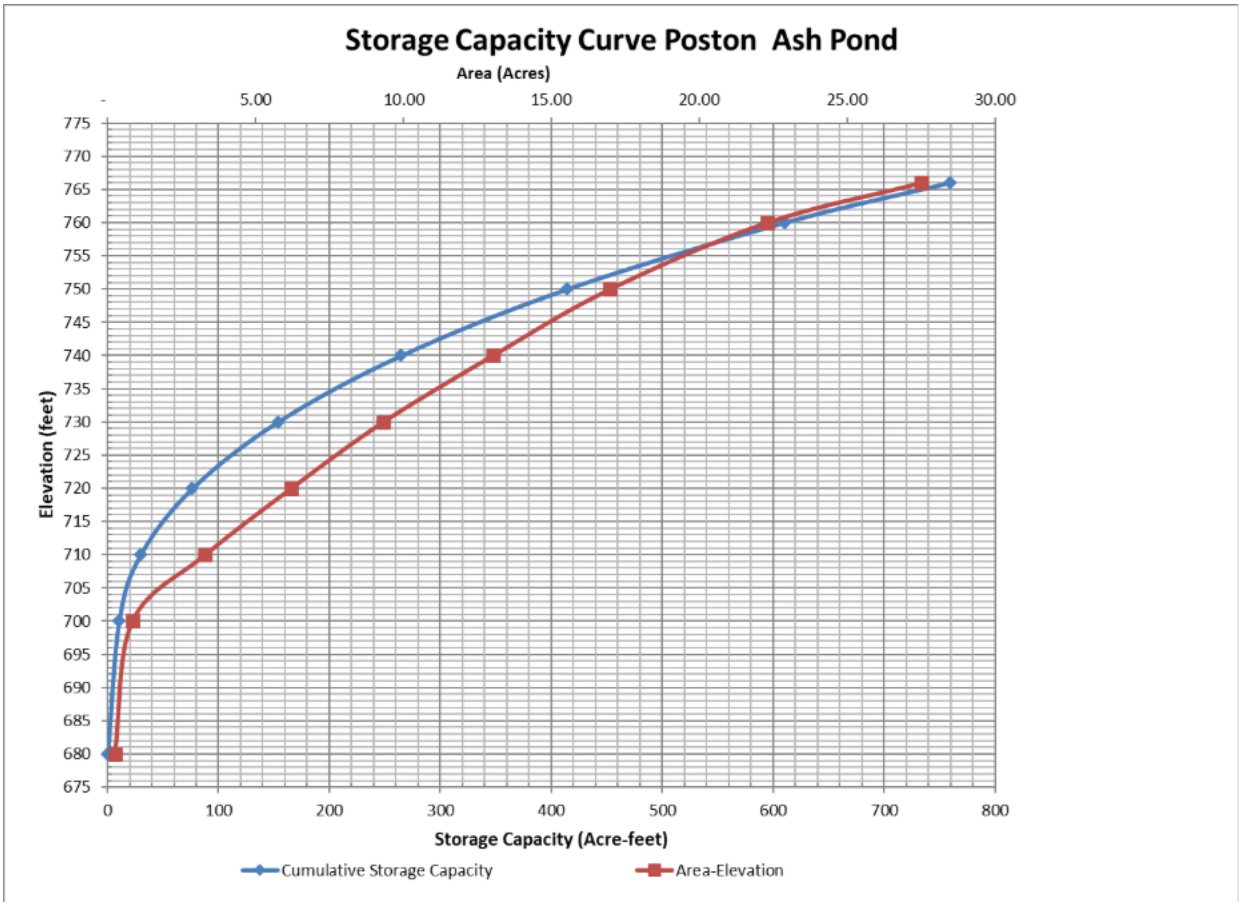
The Poston Ash Pond Dam has 7 deformation monuments installed on the downstream slope of the dam. The deformation monuments are stainless steel bolts embedded in concrete and are used to measure any horizontal or vertical movement of the embankment dam.

The Poston Ash Pond and Dam has 7 piezometers installed, 3 within the pond and 4 within the dam. The piezometers are used to monitor water level changes within the impoundment and dam.

13.0 AREA – CAPACITY CURVES FOR THE CCR UNIT 275.73 (C)(1)(IX)

[Area-capacity curves for the CCR unit.]

Below are the area-capacity curves based on the original grade contours in the design drawings. The area-capacity curves reflect conditions before ash pond closure and an ash storage area was constructed in northeast corner of the site.



14.0 275.73 (c)(1)(x) DESCRIPTION OF EACH SPILLWAY AND DIVERSION

[A description of each spillway and diversion design features and capacities and calculations used in their determination.]

The spillway system consists of a 30-foot wide broad crested concrete weir located near the northern-most portion of the embankment. There has been an approximately 4-foot tall wall constructed in the middle of the weir which forms two notches, approximately 2.75 feet wide each, on either side of the spillway.

The discharge capacity of the Poston Fly Ash Dam spillway was computed in HEC-HMS using the weir equation. The two 2.75-foot wide notches were modeled as weirs with a discharge coefficient of 2.6, while the 24.5-foot wide wall in the middle was modeled as a weir with a discharge coefficient of 3.0. The discharge rating curve for the Poston Fly Ash Dam spillway is shown in Table 4.

Spillway Rating Curve

Elevation (feet)	Discharge (cfs)
759.45[1]	0
760.0	6
761.0	28
762.0	58
763.0	96
763.45[2]	114
764.0	169
765.0	329
765.45[3]	418

[1]Normal Pool
[2]Top of wall
[3]Effective Top of Dam.

15.0 SUMMARY CONSTRUCTION SPECIFICATIONS AND PROVISIONS FOR SURVEILLANCE, MAINTENANCE AND REPAIR 275.73 (C)(1)(XI)

[The construction specifications and provisions for surveillance, maintenance, and repair of the CCR unit.]

There are no readily available portions of the original construction specifications.

As required by the CCR rules the Poston Ash Pond is inspected at least every 7 days by a qualified person. Also as a requirement of the CCR rules the impoundment is inspected annually by a qualified professional engineer.

If repairs are found to be necessary during any inspection they will be completed as soon as feasible.

16.0 RECORD OR KNOWLEDGE OF STRUCTURAL INSTABILITY 275.73 (C)(1)(XII)

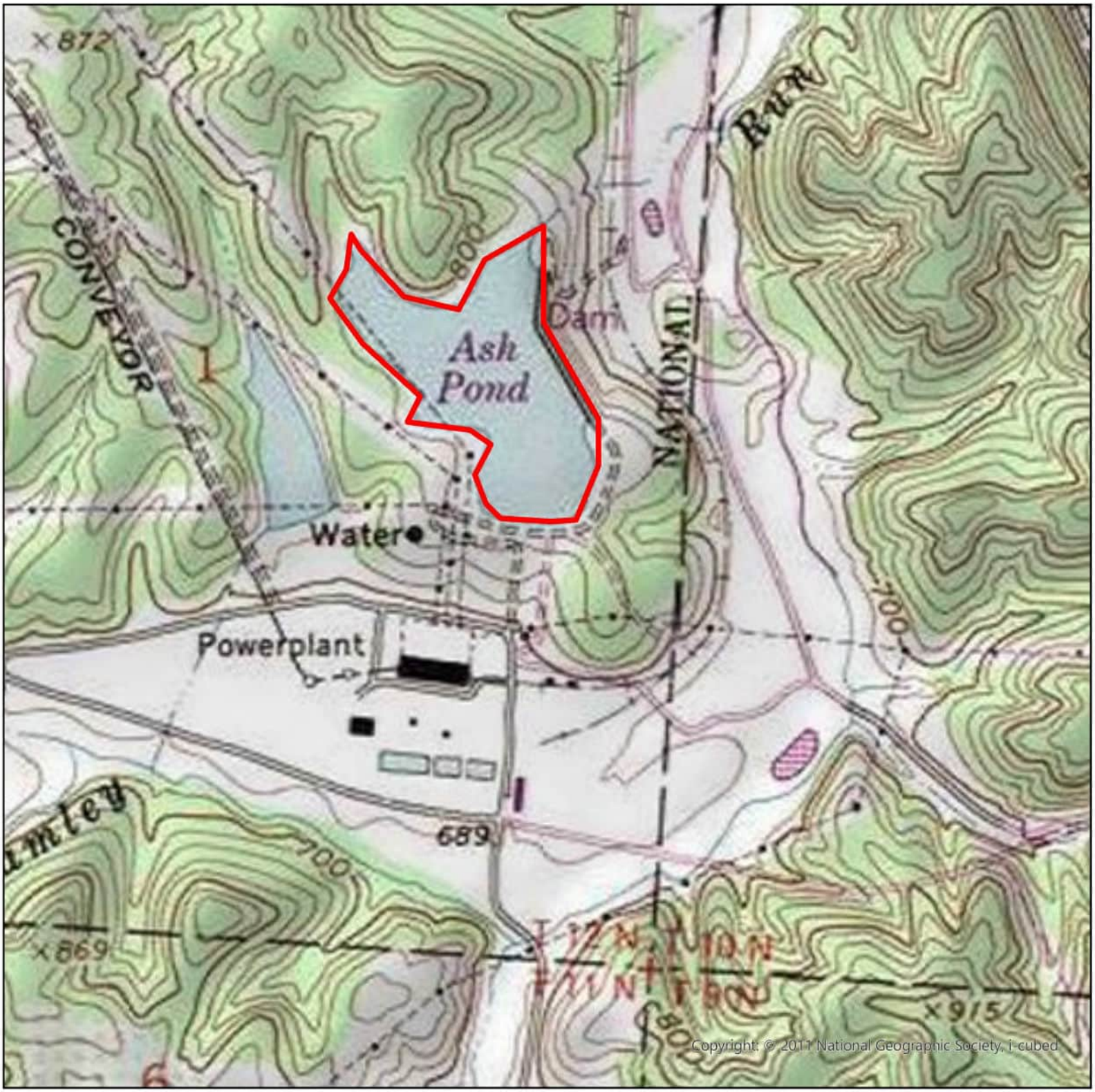
[Any record or knowledge of the structural instability of the CCR unit.]

To date there has been no known record of knowledge of the structural instability of the CCR unit.

ATTACHMENT A

LOCATION MAP

Former Poston Power Plant Ash Pond



History of Construction 2026

0 470 940 1,880 US Feet

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ATTACHMENT B

Geotechnical Data Report

Geotechnical Data Report
Poston Plant Legacy CCR Impoundment
York Township - Athens County, Ohio
S&ME Project No. 25170078

PREPARED FOR:

American Electric Power
1 Riverside Plaza
Columbus, OH 43215

PREPARED BY:

S&ME, Inc.
6190 Enterprise Court
Dublin, OH 43016

January 22, 2026

January 22, 2026

American Electric Power
1 Riverside Plaza
Columbus, OH 43215

Attention: Mr. Blake Arthur

Reference: **Geotechnical Data Report**
Poston Plant Legacy CCR Impoundment
York Township - Athens County, Ohio
S&ME Project No. 25170078

Dear Mr. Arthur:

In accordance with our proposal dated May 2, 2025, and your authorization on May 20, 2025 via AEP Contract No. 738673, S&ME, Inc. (S&ME) has completed the Geotechnical Data Report in preparation for the Structural Integrity Assessment and the Safety Factor Assessment for the Legacy CCR Impoundment at the former Philo Power Plant located in Philo, Ohio.

We appreciate the opportunity to be of service on this project. If you require additional assistance or have any questions, please feel free to contact us.

Sincerely,

S&ME, Inc.

Daniel J. Tobergte, PE
Project Engineer

Jason S. Reeves, PE (TN)
Technical Principal

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Appendices

1.0 Project Description

AEP has requested that S&ME perform a Structural Integrity Assessment and a Safety Factor Assessment for the Legacy CRR Impoundment at the former Poston Power Plant site to fulfill requirements of Code of Federal Regulations 40 CFR § 257.73 paragraphs (d) Periodic Structural Stability Assessments and (e) Periodic Safety Factor Assessments of the USEPA Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments. It is understood that AEP will address the remaining parts of this rule.

Per our proposal dated April 25, 2025, these assessments were proposed to be performed by S&ME through completing several individual tasks. This Geotechnical Data Report completes Task 2.0 (Geotechnical Investigation) which included the completion of a geologic site review, seven (7) soil borings, laboratory testing, and geophysical testing. A draft report was submitted to AEP on December 19, 2025, which did not include specialty laboratory testing (i.e. triaxial testing and permeability testing) due to delays in the laboratory schedule. These tests have been completed and the results are included in this report. The general location of the site is shown on the Vicinity Map included as Figure 1 included in Appendix I.

Based on information provided by AEP, the CCR impoundment was created by construction of two embankments between hills in the 1950's and received CCR materials until the 1980's when the pond was capped with a clay cover. These embankments are identified throughout this report as the east embankment and the south embankment. The east embankment is approximately 950 linear feet in length and has a maximum height of approximately 100 feet. The south embankment consists of an approximate 950-foot-long embankment with a maximum fill height of approximately 15 feet. The inboard and outboard slopes of the east embankment were constructed at 3H:1V and 2.5H:1V within the upper portion of the slope and a 3H:1V slope within the lower portion of the slope, respectively. The inboard and outboard slopes of the south embankment are both 3H:1V.

The historical documents, consisting of as-built drawings prepared by Burgess & Niple in 1956-1957, among other reports, indicate that the east embankment included a seepage barrier (cutoff trench) by extending the embankment through the natural soils and into the underlying bedrock generally beneath the crest. A seepage barrier extending into bedrock was not apparent beneath the south embankment.

2.0 Geologic Review

According to the Physiographic Regions of Ohio[1] map, the site is situated in the Muskingum-Pittsburgh Plateau Region of the Allegheny Plateaus Section, Appalachian Plateaus Province, Appalachian Highlands Division. This region consists of a highly dissected plateau with broad major valleys and moderately high to high relief. The valleys typically contain outwash terraces with lacustrine terraces common in the tributaries. The subsurface profile broadly consists of Mississippian- and Pennsylvanian-age siltstones, shales, sandstones, and economically important coals and claystones throughout the region with Wisconsinan-age sand, gravel, and lacustrine silt deposits within the valleys and silt-loam colluvium generally along the slopes. This region is bounded by the

[1] Ohio Division of Geological Survey. (1998). *Physiographic regions of Ohio*. Ohio Department of Natural Resources.

maximum glacial margin to the north, the transition to finer grained bedrock to the southeast, and the transition to coarser grained bedrock in the southwest.

A review of the Ohio Geology Interactive Map[2] also indicates that the site is situated within the unglaciated portion of Ohio with colluvium derived from local bedrock across the majority of the site. The bedrock beneath the site generally consists of bedrock from the Pennsylvanian age Conemaugh Group. This group typically consists of shale, siltstone, sandstone, mudstone and lesser amounts of limestone and coal. This group is known for containing multicolored mudstones, rare coal beds, thin to thick marine shale, and limestone in lower 2/3 of the unit with rapid horizontal and vertical changes of rock types. Refer to the Quaternary Geology Map and the Bedrock Geology Map included as Figures 3 and 4, respectively, in Appendix I for general boundaries of the recent (Holocene age) soil deposits and bedrock units. Note that the locations of these boundaries are considered approximate in a geological sense.

Groundwater information can also be found in the Ohio Geology Interactive Map[2] including water well logs. A cursory review of several water wells at the site and surrounding the site indicate that static water levels within these wells range from around 10 to 45 feet below the existing ground surface and well test rates ranged widely from 1 to 490 gallons per minute. Note that the depths of the water surface are considered approximate in a geological sense.

Geologic hazards, such as karst features and underground mining, are another set of information that can be found in the Ohio Geology Interactive Map[2]. According to the interactive map, no karst features have been identified within the vicinity of the site, as is common for the geology in this area. Documentation of underground mining beneath the site is not present in the state archives. However, several underground mines are documented in the vicinity of the site.

The closest abandoned underground mine (AS-025 – Hanley Run Mine) is situated approximately 0.2 miles north and northeast of the site. The Hanley Run Mine was a drift mine, owned by Manhattan Coal Co. and extracted the middle Kittanning No. 6 Coal. It was abandoned in 1899. The coal elevation was not documented within this mine; however, other mines in the site vicinity with mining of the Middle Kittanning No. 6 Coal reported the coal at depths ranging between EL. 580 and EL. 620 on the east side of the river and between El. 493 and El. 680 on the west side of the river, generally increasing in elevation from south to north. Mining of the Upper Freeport Coal was also common in the area with coal elevations between El. 740 and El. 780. Based on this publicly-available information, mining activities are not documented to have occurred within the CCR impoundment area.

3.0 Field Work

Field work performed at this site included geotechnical borings, electro-magnetic scanning, and spillway investigations. These items are discussed in the following subsections.

[2] Office of Information Technology, GIS Services Section. (2024). *Ohio Geology Interactive Map*. Ohio Department of Natural Resources. https://gis.ohiodnr.gov/website/dgs/geologyviewer/#

3.1 Geotechnical Borings

Between August 19, 2025 and August 28, 2025, S&ME performed a total of seven (7) soil borings (designated as Borings B-01 through B-07) at the site as shown on Figure 2 included in Appendix I. All the borings were staked in the field by S&ME personnel on July 7, 2025 during a site meeting with AEP. Borings were advanced to depths ranging between 28.5 to 123.5 feet below the existing ground surface.

The boring latitude/longitude coordinates and ground surface elevations at these locations were recorded by S&ME personnel utilizing a hand-held GPS unit. The approximate locations of the borings are shown on the Plan of Borings included as Figure 2 in Appendix I.

Boring B-01 and Borings B-03 through B-06 were drilled using a track-mounted Mobile B-57 drill rig, and Boring B-07 was drilled by a track-mounted Geoprobe 3126 drill rig. Boring B-02 was started with the Geoprobe 3126 rig; however, the boring was completed with the Mobile B-57 rig due to the depth limitations of the Geoprobe rig within the embankment material. The boreholes were advanced using 3-1/4-inch hollow-stem augers (HSA) in general accordance with ASTM D6151 *Standard Practice for Using Hollow-Stem Augers for Geotechnical Exploration and Soil Sampling*. Soil samples were obtained by lowering a 2-inch O.D. split-barrel sampler through the auger stem to the bottom of the boring and then driving the sampler into the soil for a total penetration of 18 inches or until refusal conditions were encountered with blows from a 140-pound automatic hammer freely falling 30 inches in general accordance with ASTM D1586 *Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils*.

Calibrated automatic hammers were used to drive the sampler from both drill rigs. The Mobile B-57 drill rig hammer had a reported energy ratio of 80.4% as tested on August 21, 2023, and the Geoprobe 3126 drill rig hammer had an energy ratio of 90.1% as tested on July 7, 2025. At the locations of Borings B-01 and B-02 (situated along the crest of the east embankment), samples were generally obtained at 2.5-foot intervals until refusal conditions on bedrock. At the locations of Borings B-03 to B-07, continuous sampling was performed at 1.5-foot intervals until refusal conditions on bedrock. The soil samples were visually classified in general accordance with ASTM D2488 *Standard Practice for Description and Identification of Soils (Visual-Manual Procedures).*

Relatively undisturbed (intact) soil samples (Shelby tube samples) were attempted at selected depths in the borings based on the soils encountered during drilling in general accordance with ASTM D1587 *Standard Practice for Thin-Walled Tube Sampling of Fine-Grained Soils for Geotechnical Purposes*. The length of soil recovered in each Shelby tube was recorded and the tubes were sealed with paraffin wax and plastic caps.

Coring of the bedrock was performed in all the borings, extending the boreholes approximately 5 to 25 feet below the sampler refusal conditions. Rock coring was performed using an NQ-2 double-tube core barrel with a diamond-tipped core bit in general accordance with ASTM D2113 *Practice for Rock Core Drilling and Sampling of Rock for Site Exploration*. Potable water was used as the circulating fluid to flush the cuttings and cool the core bit. Water was obtained from a nearby municipal source. Recovery and Rock Quality Designation (RQD) percentages for each core run were measured upon retrieval, and the recovered rock samples were preserved in compartmented core boxes for transportation to our laboratory for additional classification.

In the field, S&ME personnel performed the following duties: 1) examined and preserved recovered soil and bedrock samples; 2) prepared a log of each boring; 3) recorded seepage and groundwater observations and measurements; 4) obtained pocket penetrometer measurements in cohesive soil samples; and 5) provided liaison between the field work and the engineer so that any modifications to the exploration program could be implemented if unusual or unanticipated conditions were encountered. All recovered samples were transported to the S&ME Dublin office soil laboratory for further examination and testing.

3.1.1 Piezometers

Open-standpipe piezometers were installed at the locations of Borings B-01 to B-04. The lower portion of the boring was backfilled with a sand-bentonite chip mixture up to the bottom of the sand surrounding the screened interval. A 1-inch PVC 0.010-inch slot casing was installed with a 5-foot screened section at the bottom of the well. The screened interval was backfilled with No. 5 filter sand to approximately 2 feet above the screened interval. A 2-foot layer of bentonite was installed above the well sand. The upper portion of the well was grouted by the tremie method above the bentonite seal to the ground surface. A lockable steel protective casing with a concrete pad were installed to complete the piezometers. The individual piezometer completion diagrams are provided as Figures 4 through 7 in Appendix II. Table 3-1 summarizes the piezometer installation information.

Table 3-1: Piezometer Summary

Boring	Exist. GS Elevation	Boring Termination (Elev./Depth)		Top of Screen (Elev./Depth)		Bottom of Screen (Elev./Depth)	
B-01	766.0	642.5	123.5 ft	676.0	90.0 ft	669.0	97.0 ft
B-02	767.0	673.5	93.5 ft	714.0	53.0 ft	707.0	60.0 ft
B-03	695.0	649.7	45.3 ft	681.0	14.0 ft	672.0	23.0 ft
B-04	697.0	655.9	41.1 ft	680.0	17.0 ft	672.0	25.0 ft

3.1.2 Borehole Abandonment

The borings which did not receive the open-standpipe piezometers, Borings B-05 to B-06, were abandoned using a cement-benotnite grout which was placed using the tremie method. The full depth of the boring was grouted.

3.2 Geophysical Testing

In an attempt to locate the 30-inch CMP pipe, which was abandoned after construction of the embankment, S&ME performed electro-magnetic (EM) scanning and ground-penetrating radar (GPR) methods to scan the ground surface at accessible locations within the vicinity of the embankment toe. The scanning suggested the presence of this pipe and potential features of the outlet headwall; however, a clear signal was not obtained. These features were staked in the field and coordinates of these staked locations were obtained using a hand-held GPS unit. These GPS coordinates were submitted to Blake Arther with AEP via email on October 24, 2024.

3.3 Spillway Investigation

On September 15, 2025, Bloodhound (subcontracted through S&ME) performed video camera services for the spillway outlet pipe currently serving as the primary spillway for the impoundment. Photos, video footage, site sketches, and field notes were transmitted to AEP using the SharePoint site provided by AEP on October 14, 2025.

In summary, the camera inspection of the pipe indicated that the pipe was generally in good condition, with one circumferential crack situated approximately 19 feet upstream of the pipe outlet, and a few longitudinal cracks located further upstream. It appears that the longitudinal cracks were cuts in the pipe made during construction at the pipe segment ends to act as a fitting. The camera was unable to completely inspect the lateral pipe connecting the catch basin within the original spillway to the manhole structure situated to the south; however, this pipe segment appears to be in good condition with the exception of debris which has fallen into the pipe from the catch basin.

4.0 Laboratory Testing

Following sample retrieval, the on-site S&ME staff preserved the recovered soil samples in airtight containers. The recovered samples were transported to our laboratory where applicable laboratory tests were assigned. S&ME conducted the following laboratory tests on representative soil samples collected:

- Natural moisture contents (ASTM D2216)
- Atterberg Limits (ASTM D4318)
- Grain-Size Analyses (ASTM D422)
- Consolidated-Undrained (CU) Triaxial Compression Test (ASTM D4767)
- Hydraulic Conductivity - Permeability (ASTM D5084)

The laboratory testing results for the index soil testing (natural moisture contents, Atterberg limits, grain-size analyses, consolidated-undrained (CU) triaxial compression tests, and hydraulic conductivity tests) are provided in Appendix III. A summary of the index laboratory test results is presented in Table 4-1, and a summary of the specialty testing results are presented in Table 4-2. Water contents ranged from 9.4 to 25.9 percent with one outlier at 2.1 percent and an average moisture content of 18.8 percent. The procedures used by S&ME for field and laboratory sampling and testing are in general accordance with ASTM procedures and established engineering practice.

Table 4-1: Laboratory Index Testing Summary

Boring	Sample No.	Approx. Depth (ft)	Sample Type	w (%)	LL	PI	Fines (%)	CF (%)	USCS
B-01	S-02	3.5	Disturbed	16.9	36	16	-	-	CL
B-01	S-03	5.0	Intact	25.8	51	29	90.0	45	CH
B-01	S-08	16.0	Disturbed	26.0	53	30	-	-	CH
B-01	S-14	31.0	Disturbed	21.8	54	31	84.8	40	CH
B-01	S-18	41.0	Disturbed	20.7	47	21	-	-	CL

Boring	Sample No.	Approx. Depth (ft)	Sample Type	w (%)	LL	PI	Fines (%)	CF (%)	USCS
B-01	S-25	55.0	Intact	19.5	47	25	78.1	34	CL
B-01	S-29	63.5	Disturbed	23.7	44	22	-	-	CL
B-01	S-34	75.0	Intact	18.6	42	22	88.4	36	CL
B-01	S-40	88.5	Disturbed	19.0	40	17	-	-	CL
B-02	S-06	12.5	Intact	20.4	36	17	75.6	24	CL
B-02	S-12	26.0	Disturbed	20.4	44	22	-	-	CL
B-02	S-16	36.0	Disturbed	20.7	44	21	74.9	28	CL
B-02	S-24	56.0	Disturbed	19.7	44	25	-	-	CL
B-02	S-33	76.0	Disturbed	19.2	49	28	84.9	38	CL
B-02	S-37	85.0	Intact	21.2	44	25	83.4	37	CL
B-03	S-08	10.5	Disturbed	17.0	44	21	-	-	CL
B-03	S-10	13.5	Disturbed	12.0	33	14	52.8	14	CL
B-03	S-14A	20.0	Disturbed	-	-	-	16.2	2	SC
B-03	S-19	27.0	Disturbed	22.6	45	24	-	-	CL
B-03	S-22	31.5	Disturbed	21.0	36	19	-	-	CL
B-04	S-05	6.0	Disturbed	15.0	30	11	71.6	17	CL
B-04	S-12	16.5	Disturbed	23.3	37	18	-	-	CL
B-04	S-15A	21.5	Disturbed	-	-	-	11.6	1	SW-SC
B-04	S-19	27.0	Disturbed	19.6	37	18	-	-	CL
B-05	S-04	4.5	Disturbed	17.6	36	16	-	-	CL
B-05	S-05A	6.5	Disturbed	-	-	-	8.6	1	SW-SM
B-05	S-06	7.5	Disturbed	17.8	38	19	-	-	CL
B-05	S-08	10.5	Disturbed	19.8	33	14	-	-	CL
B-06	S-03	3.0	Disturbed	14.0	35	14	-	-	CL
B-06	S-05	5.0	Disturbed	-	-	-	9.7	1	SW-SM
B-06	S-08	9.0	Disturbed	22.2	35	13	-	-	CL
B-07	S-04	4.5	Disturbed	21.5	53	29	78.9	39	CH
B-07	S-05	6.0	Intact	21.4	40	18	76.9	28	CL
B-07	S-08	11.0	Disturbed	18.0	41	22	88.1	-	CL
B-07	S-10	14.0	Disturbed	9.4	32	17	-	-	CL

CF indicates Clay Fraction, defined as particle sizes smaller than 0.002 mm
- Indicates testing not performed

Table 4-2: Laboratory Test Results – CU Triaxial and Flexible Wall Permeability

Boring	Sample No.	Approx. Depth (ft)	Effective Strength		Undrained Strength		Hydraulic Conductivity (cm/s)
			c′ (psf)	ϕ′ (deg)	C (psf)	ϕ (deg)	
B-01	S-03	5.0-6.5	100	30.2	280	13.3	-
B-01	S-25	55.0-56.8	290	21.1	100	13.9	$2.5x10^{-9}$
B-01	S-34	75.0-76.3	76.3	-	-	-	$3.1x10^{-9}$
B-02	S-06	12.5-14.5	180	26.4	150	21.7	-
B-02	S-37	85.0-87.0	-	-	-	-	$6.2x10^{-9}$
B-07	S-05	6.0-8.0	220	25.2	520	17.5	-

- Indicates testing not performed

5.0 Exploration Findings

5.1 General Subsurface Conditions

The subsurface conditions encountered within the existing dam embankments generally consisted of existing fill soils underlain natural soils consisting by colluvium and weathered shale. The natural soils were underlain by bedrock consisting of weathered shale. Boring Logs B-01 through B-07 illustrate the generalized subsurface conditions encountered at each boring location included in Appendix II. In addition, Embankment Cross-Sections are included as Figures 1 to 3 in Appendix II.

5.1.1 Fill Soils

Fill material was encountered at the ground surface at all boring locations with fill or possible fill thicknesses ranging from 10.5 feet to 98.5 feet along the embankment. Along the alignment of the main embankment (Borings B-01 and B-02), the thickness of fill material ranged between approximately 98.5 and 87.0 feet of fill, respectively. Boring B-07 located along the alignment of the small embankment encountered 12.5 feet of fill. Borings B-03 and B-04 located near the mid-slope of the main embankment encountered 27.0 feet of fill. Borings B-05 and B-06 encountered 13.5 and 10.5 feet of fill, respectively. The majority of fill soils consisted of lean clay (CL) and fat clay (CH) with varying amounts of sand and gravel. Lesser amounts of granular soils consisting of clayey sand (SC), well graded sand (SW-SM), and poorly graded sand (SP-SC) were also encountered with no clear trend of changes in material laterally or vertically. The cohesive fill materials exhibited soft to very stiff consistencies, and the granular fill exhibited very loose to medium dense relative densities. Field SPT N-values ranged from 3 to 27 blows per foot (bpf) within the embankment soils.

5.1.2 Colluvium and Weathered Shale

Natural soils consisting of colluvium and weathered shale were encountered below the fill with thicknesses of approximately 3.0 to 12.0 feet between the fill and underlying bedrock in Borings B-03 to B-07. This stratum was not encountered in Borings B-01 and B-02. The soil stratum consisted of lean clay (CL), shale interbedded with

claystone, well graded sand (SW-SC), clayey gravel (GC), poorly graded sand (SP-SC), and well graded sand (SW). The fine-grained soils generally exhibited stiff to hard consistencies with relative densities of the granular soils ranging from medium dense to dense. Field SPT N-values obtained in the natural colluvial soils ranged from 6 to 34 bpf.

5.1.3 Bedrock

Bedrock consisting of fresh to highly weathered shale was encountered at approximate depths ranging from approximately 17.0 feet to 103.5 feet below the existing ground surface. Based on the depth of bedrock encountered at the boring locations, the surface of the bedrock dips from the south to the north-northeast from about El. 751 near Boring B-07, El. 680 near Boring B-2, and El. 660 near Boring B-05. Rock core recoveries ranged from 36 to 100 percent with Rock Quality Designation (RQD) values ranging from 0 to 100 percent.

Please refer to the individual Boring Logs and Embankment Cross-Sections included in Appendix II (Figures 1 to 3) for more detailed information at each exploration location.

5.1.4 Water Level Measurements

Groundwater was encountered during auger drilling in Borings B-03 through B-06 at depths ranging between 6.0 and 21.0 feet below the ground surface. Groundwater was not encountered in the remaining borings prior to rock coring. Groundwater measurements were obtained at the completion of drilling inside the HSA at depths ranging between 9.7 and 32.0 feet below the ground surface.

As indicated in Section 3.1, a total of four Casagrande-style water level observation wells were installed within the east embankment – two below the crest (Borings B-01 and B-02) and two within the sand drain upslope of the toe (Borings B-03 and B-04). Water level measurements were made by S&ME and AEP personnel at the dates indicated in Table 5-1. The water levels measured in the piezometers are summarized in Table 5-1.

Table 5-1: Piezometer Readings

Boring	*El. GS*	*El. Top of Screen*	*El. Bottom of Screen*	*8/29/25 (S&ME)*	*9/15/25 (S&ME)*	*9/30/25 (AEP)*
B-01	766.0	674.0	669.0	720.3	724.6	723.7
B-02	767.0	712.0	707.0	743.5	745.5	745.3
B-03	700.0	683.0	678.0	681.6	680.4	681.8
B-04	700.0	681.0	676.0	676.8	676.8	679.7

Elevation Datum: NGVD88

6.0 Limitations

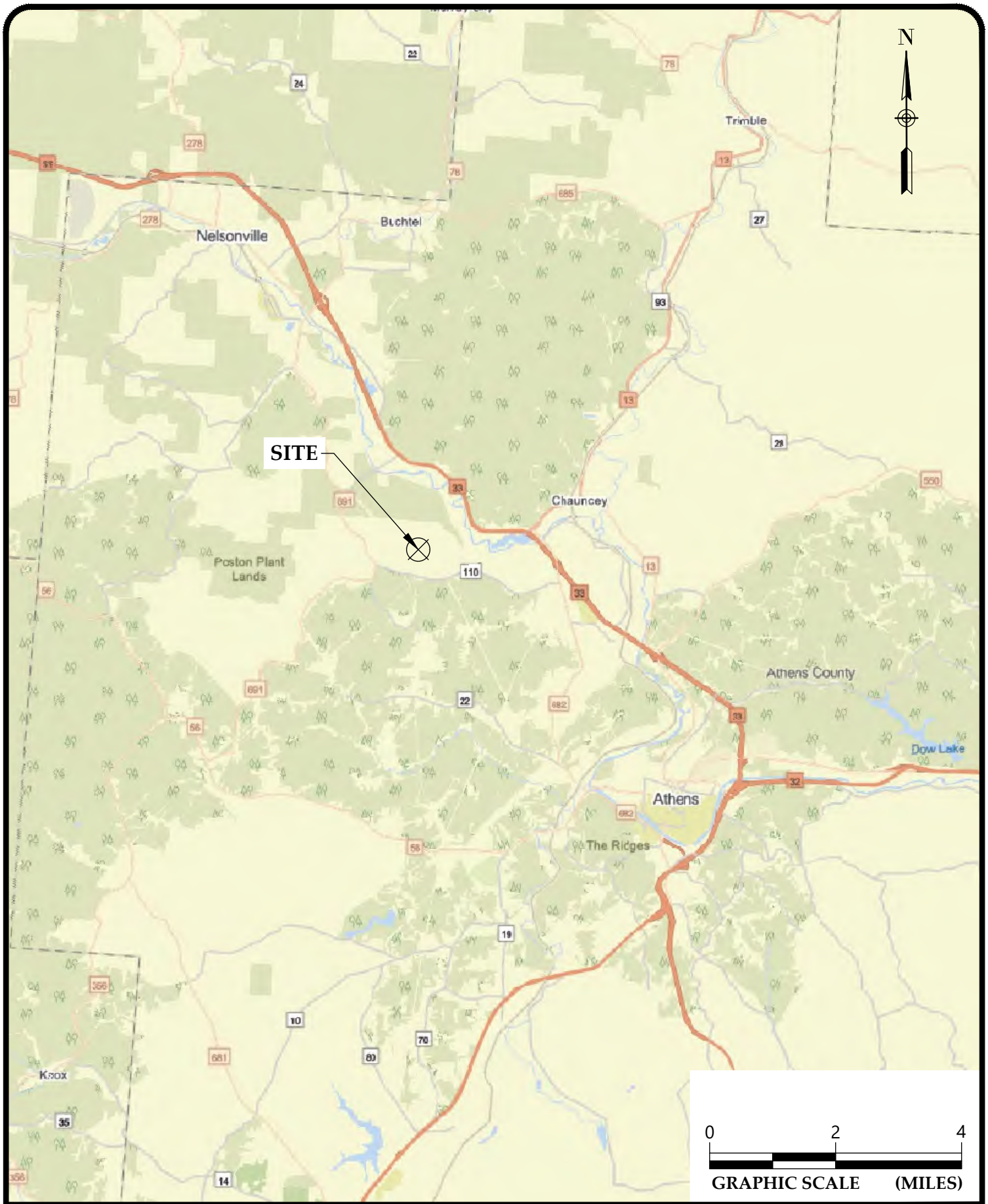
This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. Subsurface conditions can vary widely between explored areas. Some variations

may not become evident until construction. If conditions are encountered which appear different than those described in our report, we should be notified. This report should not be construed to represent subsurface conditions for the entire site.

Our field exploration program did not include an assessment of regulatory compliance, environmental conditions or pollutants or presence of any biological materials (mold, fungi, bacteria). If there is a concern about these items, other studies should be performed. S&ME can provide a proposal and perform these services if requested.

Appendices

Appendix I – Vicinity Map and Plan of Borings



S&ME, Inc.

VICINITY MAP

POSTON LEGACY CCR IMPOUNDMENT EVAL
GEOTECHNICAL DATA REPORT
YORK TOWNSHIP-ATHENS COUNTY, OHIO

SCALE:	FIGURE NO.
1" = 2 Miles	1
DATE:	
01/21/2026	
PROJECT NUMBER	
25170078	

DRAWING PATH: T:\Columbus-1170\Projects\2025\25170078_AEP_Poston Legacy CCR Impoundment Eval\Civil\CAD\DWG\XREF\25170078 BASE_EXISTING.dwg TAB: VM-GEO SAVE DATE: 2026-01-21 PAGE SIZE: ANSI full bleed A (11.00 x 8.50 Inches)

PLAN OF BORINGS

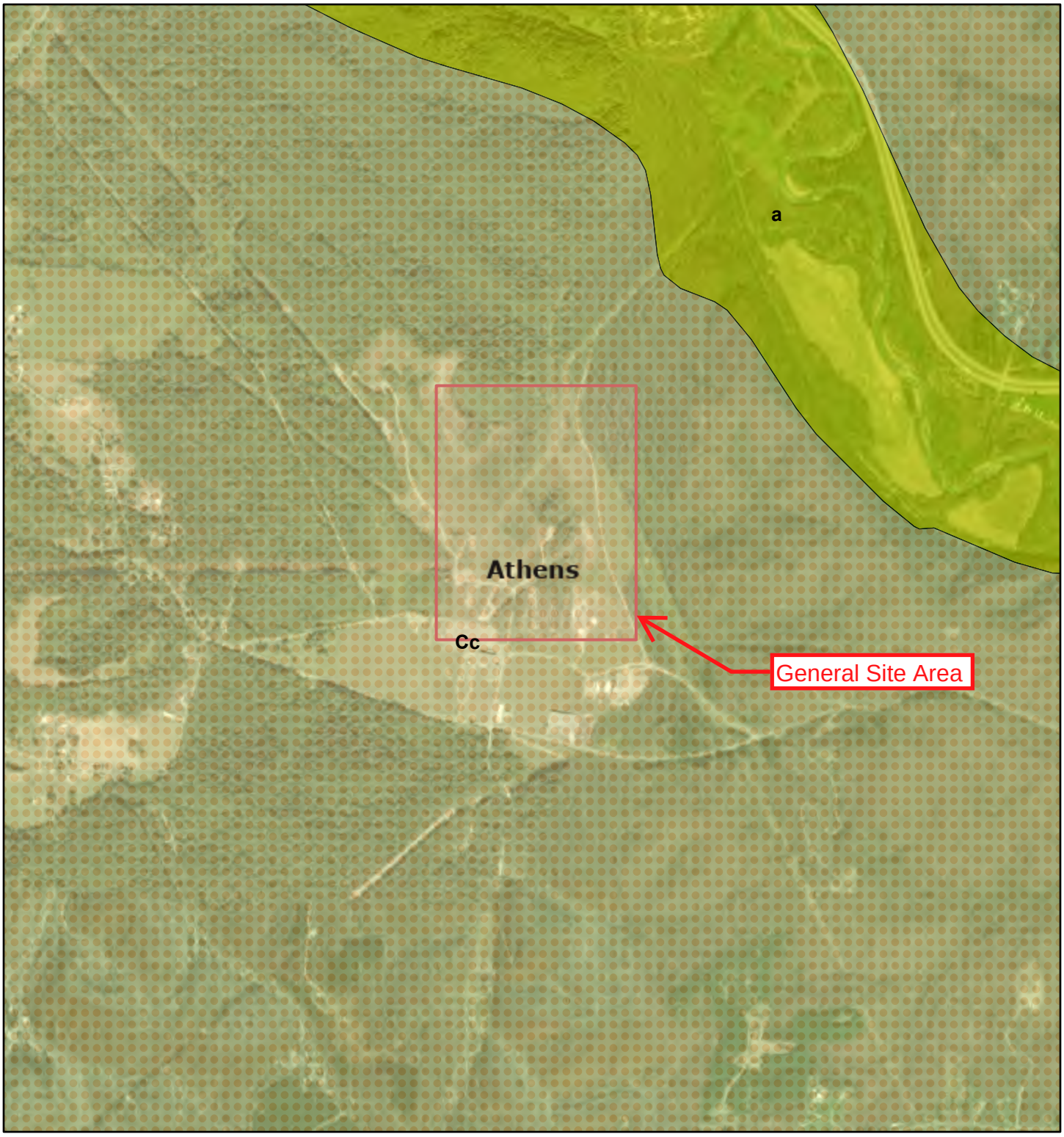
POSTON LEGACY CCR IMPOUNDMENT EVAL
GEOTECHNICAL DATA REPORT
YORK TOWNSHIP-ATHENS COUNTY, OHIO

S&ME, Inc.

SCALE:	FIGURE NO.
1" = 200'	2
DATE:	
01/21/2026	
PROJECT NUMBER	
25170078	

DRAWING PATH: T:\Columbus-1170\Projects\2025\25170078_AEP_Poston Legacy CCR Impoundment Eval\Civil\CAD\DWG\XREF\25170078 BASE_EXISTING.dwg **TAB:** POB-GEO **SAVE DATE:** 2026-01-21 **PAGE SIZE:** ANSI full bleed A (11.00 x 8.50 Inches)

Quaternary Geology Map



1/22/2026, 12:21:49 PM

Counties
Quaternary Geology 500K
Cc - Colluvium derived from local bedrock in unglaciated areas
a - Alluvium and alluvial terraces
World Imagery
Low Resolution 15m Imagery
High Resolution 60cm Imagery
High Resolution 30cm Imagery
Citations
4.8m Resolution Metadata

1:24,000

0 0.15 0.3 0.6 mi
0 0.25 0.5 1 km

Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Poston Legacy CCR Impoundment

Figure 3

Bedrock Geology Map

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Counties

Bedrock Geology 24K

IPc - Conemaugh Group

IPap - Allegheny And Pottsville Groups Undivided

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

4.8m Resolution Metadata

1:24,000

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Poston Legacy CCR Impoundment

Figure 4

Appendix II – Boring Logs, Subsurface Profile, Cross Sections, and Piezometer Construction Logs

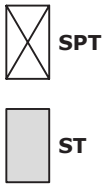
SOIL LOG LEGEND

SOIL PROPERTY SYMBOLS

N - Standard Penetration, bpf
LL - Liquid Limit, %
PPV - Pocket Penetrometer Value, tsf
NMC - Natural Moisture Content, %
PL - Plastic Limit, %
Qu - Unconfined Compressive Strength
F - Fines Content, %
PI - Plasticity Index, %
γd - Dry Unit Weight, pcf

The STANDARD PENETRATION TEST (SPT) as defined by ASTM D1586 (or AASHTO T206) is a method to obtain a disturbed soil sample for examination and testing and to obtain relative density and consistency information. A standard 1.4-inch I.D./2-inch O.D. split-barrel sampler is driven three 6-inch increments with a 140 lb. hammer freely falling 30 inches. The hammer can either be of a trip, free-fall design, or actuated by a rope and cathead. The SPT N Value is determined by adding the number of blows from the 2nd and 3rd 6-inch increments. A normalized blowcount (N_{60}) may be determined by the following equation: N_{60} = [Rig Energy Ratio (%) / 60] * N.

SHELBY TUBE (ST) samples are obtained by hydraulically pushing a thin-walled tube (typically 3-inches in diameter) to obtain a relatively undisturbed sample for testing of fine-grained soils to determine engineering properties such as strength, compressibility, permeability, and density. Shelby tubes are sampled in general accordance with ASTM D1587 (AASHTO T207).



Descriptive Order of Soil Strata: Geologic Disposition (i.e., Fill, Colluvium, Alluvium, etc.), ASTM Group Name (ASTM Group Symbol), quantified/qualified soil constituents, misc. constituents, consistency/density, color, organic description, moisture. ASTM group classifications is determined per ASTM D2487 where lab testing has been performed and ASTM D2488 where lab testing has not been performed.

ASTM GROUP NAME (SYMBOL) AND GRAPHIC

- WELL GRADED GRAVEL (GW)
- POORLY GRADED GRAVEL (GP)
- WELL GRADED GRAVEL WITH SILT (GW-GM)
- WELL GRADED GRAVEL WITH CLAY (GW-GC)
- POORLY GRADED GRAVEL WITH SILT (GP-GM)
- POORLY GRADED GRAVEL WITH CLAY (GP-GC)
- SILTY GRAVEL (GM)
- CLAYEY GRAVEL (GC)
- CLAYEY GRAVEL WITH SILT (GC-GM)
- WELL GRADED SAND (SW)
- POORLY GRADED SAND (SP)
- WELL GRADED SAND WITH SILT (SW-SM)
- WELL GRADED SAND WITH CLAY (SW-SC)
- POORLY GRADED SAND WITH SILT (SP-SM)
- POORLY GRADED SAND WITH CLAY (SP-SC)
- SILTY SAND (SM)
- CLAYEY SAND (SC)
- CLAYEY SAND WITH SILT (SC-SM)
- LEAN CLAY (CL)
- SILTY CLAY (CL-ML)
- SILT (ML)
- FAT CLAY (CH)
- ELASTIC SILT (MH)
- ORGANIC LOW PLASTICITY SILT OR CLAY (OL)
- ORGANIC HIGH PLASTICITY SILT OR CLAY (OH)
- PEAT (PT)
- TOPSOIL
- ASPHALT
- BASE - CEMENT MODIFIED
- BASE - CEMENT STABILIZED AGGREGATE
- BASE - GRAVEL
- CONCRETE
- VOID / NO RECOVERY
- IGM / PWR

FINE-GRAINED SOIL (Relative Consistency)

	N	PPV
Very Soft	< 2 bpf	< 0.25 tsf
Soft	2 - 4 bpf	> 0.25 - 0.5 tsf
Firm	5 - 8 bpf	> 0.5 - 1.0 tsf
Stiff	9 - 15 bpf	> 1.0 - 2.0 tsf
Very Stiff	16 - 30 bpf	> 2.0 - 4.0 tsf
Hard	> 30 bpf	> 4.0 tsf

COARSE-GRAINED SOIL (Relative Density)

	N
Very Loose	< 5 bpf
Loose	5 - 10 bpf
Medium Dense	11 - 30 bpf
Dense	31 - 50 bpf
Very Dense	> 50 bpf

MINOR CONSTITUENTS (% By Weight)

	Percentage
Trace	0% - 10%
Little	11% - 20%
Some	21% - 35%
"And"	≥ 36%

ORGANIC CONTENT OF SOIL (Determined by ASTM D2974 or AASHTO T267)

Classification	Percentage
With Organic Matter	4% - 15%
Organic Soil	16% - 30%
Peat	> 30%

MOISTURE CONDITION

Dry	Absense of moisture, dusty, dry to touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

At Time of Drilling (ATD) — Groundwater observation made anytime during the drilling process. Depending on time of reading and drilling methodologies, this value may be influenced by the drilling process.

End of Drilling — Groundwater measurement soon after the drilling processes are complete, and the borehole is at final depth. Drilling fluids, if introduced during drilling, may influence this measurement.

After Drilling — Groundwater measurements made in a borehole hours to days after drilling is complete. Depending on subsurface conditions, elapsed time, drilling process, etc. this observation may reflect a stabilized level.

REFERENCES:

FHWA NHI-16-072, Geotechnical Engineering Circular No. 5 "Geotechnical Site Characterization"
ASTM Specifications D2487 and D2488
DOT Specifications & Design Manuals from NC, SC, OH, MI, IN, PA, VA.

ROCK CORE LOG LEGEND

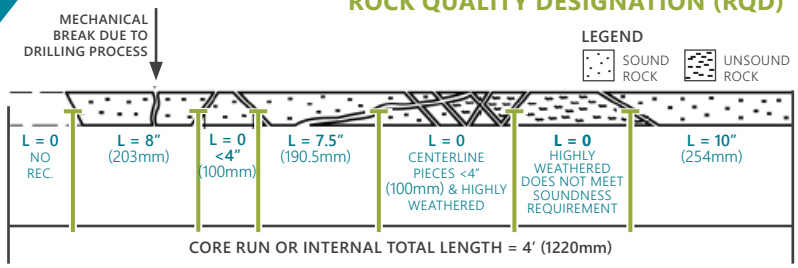
ROCK CORE RECOVERY

Core Diameter (I.D.)	Inches
BQ	1-7/16
NQ	1-7/8
HQ	2-1/2

Rock Core Sample

$$\text{REC (Recovery)} = \frac{\text{Length of Rock Core Recovered}}{\text{Length of Core Run}} \times 100$$

ROCK QUALITY DESIGNATION (RQD)



$$\text{RQD (Equation)} = \left(\frac{\sum \text{Sound Core with Length (L)} \geq 4\text{" (100mm)}}{\text{Core Run or Interval Total Length}}\right) \times 100$$

$$\text{RQD (Example)} = \left(\frac{8\text{"} + 7.5\text{"} + 10\text{"}}{48\text{"}}\right) \times 100 = 53\% \text{ (FAIR)}$$

ROCK QUALITY

Percent	Quality
>90–100	Excellent
>75–90	Good
>50–75	Fair
>25–50	Poor
0–25	Very Poor

(ASTM D6032)

GRAIN SIZE

Very Fine-Grained	<0.003 in. (<0.075 mm)
Fine-Grained	0.003 – 0.02 in. (0.075 – 0.425 mm)
Medium-Grained	0.02 – 0.8 in. (0.425 – 2 mm)
Coarse-Grained	0.8 – 2 in. (2 – 4.75 mm)
Very Coarse-Grained	>2 in. (>4.75 mm)

BEDDING

Very Thickly Bedded	>3 ft.
Thickly Bedded	3 ft. – 18 in.
Thinly Bedded	18 in. – 2 in.
Very Thinly Bedded	2 in. – 0.4 in.
Laminated	0.4 in. – 0.1 in.
Thinly Laminated	<0.1 in.

FRACTURE RATE / SPACING

Unfractured	>10 ft.
Intact	10 ft. – 3 ft.
Slightly Fractured	3 ft. – 1 ft.
Moderately Fractured	12 in. – 4 in.
Fractured	4 in. – 2 in.
Highly Fractured	< 2 in.

SURFACE ROUGHNESS

Very Rough	Near vertical steps and ridges occur on the discontinuity surface.
Slightly Rough	Asperities on the discontinuity surface are distinguishable and can be felt.
Smooth	Surface appears smooth and feels so to the touch.
Slickensided	Surface has a smooth, glassy finish with visual evidence of striation.

WEATHERING

Fresh	No visible sign of rock material weathering; slight discoloration on major discontinuity surfaces is possible.
Slightly Weathered	Discoloration indicates weathering of rock material and discontinuity surfaces. All rock material may be discolored by weathering and the external surface may be somewhat weaker than in its fresh condition.
Moderately Weathered	Less than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a discontinuous framework or as corestones. A minimum 2 in. diameter sample cannot be broken readily by hand.
Highly Weathered	More than half the rock is decomposed or disintegrated to soil. Fresh or discolored rock is present either as a discontinuous framework or as corestones. A minimum 2 in. diameter sample can be broken readily by hand across the rock fabric.
Completely Weathered	All rock material is decomposed and/or disintegrated to soil. The original mass structure is largely still intact. Material can by granulated by hand.
Residual Soil	All rock material is converted to soil. Material can be easily broken apart by hand.

STRENGTH

		APPROX. UNCONFINED COMPRESSIVE STRENGTH (PSI)
Extremely Strong Rock	Specimen can only be chipped with firm blows from the hammer end of a geological hammer.	> 36,250
Very Strong Rock	Specimen requires many firm blows from the hammer end of a geological hammer to fracture.	36,250 – 14,500
Strong Rock	Specimen requires more than one firm blow of the point of a geological hammer to fracture.	14,500 – 7,250
Medium Strong Rock	Specimen cannot be scraped or cut with a pocket knife. Specimen can be fractured with a single firm blow with a geological hammer point.	7,250 – 3,500
Weak Rock	Shallow cuts or scrapes can be made in a specimen with a pocket knife. A firm blow with a geological hammer creates shallow indents.	3,500 – 725
Very Weak Rock	Specimen crumbles under sharp blow with point of geological hammer and can be peeled with a pocket knife.	725 – 150
Extremely Weak Rock	Specimen can be indented by thumbnail.	150 – 35

HARDNESS

Very Hard	Cannot be scratched with a pocket knife; leaves knife steel marks on surface.
Hard	Can be scratched by a pocket knife with difficulty; scratch produces little powder and is only faintly visible; trace of knife's steel may be visible.
Moderately Hard	Can be readily scratched by a pocket knife; scratch leaves a heavy trace of dust and scratch is readily visible after the powder has been blown away.
Low Hardness	Can be gouged deeply or carved with a pocket knife.
Friable	Easily crumbled by hand, pulverized or reduced to powder sand is too soft to be cut by a pocket knife.
Soft	Very weak plastic material.

REFERENCES:

FHWA NHI-16-072, GEOTECHNICAL ENGINEERING CIRCULAR NO. 5 "GEOTECHNICAL SITE CHARACTERIZATION"
DOT SPECIFICATIONS & DESIGN MANUALS FROM NC, SC, OH, MI, IN, PA.

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-01 *Sheet 1 of 4*
DATE DRILLED: 08/19/2025	**ELEVATION:** 766 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: B-57 (Track)	**DATUM:** NAVD88	
DRILLER: A. Unverzagt	**BORING DEPTH:** 123.5 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA, NQ	**LOGGED BY:** M.S. Ansari	**LATITUDE:** 39.386850 **LONGITUDE:** -82.177165
SAMPLING METHOD: UD, SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢PL---LL; 20 40 60 80 100)	ELEVATION
0	0.4				ROOTMAT - 5 INCHES			766
	PPV = 1.7-2.0			S-01 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace to little fine to coarse gravel, firm to stiff, few organics roots, brown, moist.	3-3-4 N = 7		
	PPV = 0.7			S-02 (18 in)		3-2-2 N = 4		
5	450 psi 5.0			S-03 REC-65%	FILL: FAT CLAY (CH), trace fine to coarse sand, trace fine gravel, firm to stiff, brown mottled with gray, moist.			761
	PPV = 1.0-1.2							
	7.0							
	PPV = 1.2-2.2			S-04 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace fine to coarse gravel, stiff to very stiff, brown mottled with gray, moist.	2-5-6 N = 11		
	PPV = 1.2-2.5			S-05 (18 in)		3-4-5 N = 9		
10								756
	PPV = 1.2-1.5 Slight seepage at 13.0'			S-06 (18 in)		3-4-5 N = 9		
						3-4-4 N = 8		
15	PPV = 1.5-1.7 15.0			(0 in) S-07/07A	FILL: FAT CLAY (CH), trace fine to coarse sand, trace fine gravel, stiff to very stiff, brown mottled with gray, damp	10 N = WOH		751
	PPV = 1.5-1.7			(6 in) S-08 (18 in)		2-4-4 N = 8		
	PPV = 1.2-1.7			S-09 (18 in)		2-4-5 N = 9		
20	20.5							746
	PPV = 2.5-2.7 ▼			S-10 (16 in)	FILL: LEAN CLAY WITH SAND (CL), trace to little fine to coarse gravel, stiff to very stiff, brown mottled with gray, damp to moist.	4-5-6 N = 11		
	PPV = 1.2-1.5			S-11 (18 in)		4-7-7 N = 14		
25	25.5							741
	PPV = 1.2-2.2			S-12 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace to little fine to coarse gravel, stiff to very stiff, brown mottled with gray, few iron oxide stains, moist.	3-5-6 N = 11		
	PPV = 1.7-2.0			S-13 (18 in)		3-6-6 N = 12		
30	30.0				FILL: FAT CLAY WITH SAND (CH), trace fine gravel, very stiff, brown mottled with gray, few iron oxide stains, moist.			736
	PPV = 2.5-2.7							

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/19/2025		Dry during drilling; slight seepage encountered at 13.0' and 44.8'.
END OF DRILLING	▼	08/21/2025		Dry prior to rock core; slight seepage at 101.5'
AFTER DRILLING	▼	08/21/2025	22.1	Prior to auger removal; after rock core.
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-01 *Sheet 2 of 4*
DATE DRILLED: 08/19/2025	**ELEVATION:** 766 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: B-57 (Track)	**DATUM:** NAVD88	
DRILLER: A. Unverzagt	**BORING DEPTH:** 123.5 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA, NQ	**LOGGED BY:** M.S. Ansari	**LATITUDE:** 39.386850 **LONGITUDE:** -82.177165
SAMPLING METHOD: UD, SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢ PL---LL; 20 40 60 80 100)	ELEVATION
				S-14 (18 in)	FILL: FAT CLAY WITH SAND (CH), trace fine gravel, very stiff, brown mottled with gray, few iron oxide stains, moist.	3-5-7 N = 12		
	PPV = 3.0-3.2			S-15 (18 in)		3-5-7 N = 12		
35								731
	35.5				FILL: SANDY LEAN CLAY (CL), trace fine gravel, firm to stiff, brown, few iron oxide stains, moist.			
	PPV = 1.0-1.5			S-16 (18 in)		3-6-6 N = 12		
	PPV = 1.0-1.5			S-17 (18 in)		3-5-6 N = 11		
40	40.0				FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, firm to stiff, brown and gray, few shale fragments, moist.			726
	PPV = 1.0-1.5			S-18 (18 in)		4-5-8 N = 13		
	Slight seepage at 44.8'							
	PPV = 1.0-1.2			S-19 A/B (18 in)		4-5-10 N = 15		
45	Slight seepage at 44.8	44.8 45.2		S-20 A/B (18 in)	FILL: CLAYEY SAND WITH GRAVEL (SC), medium dense, brown, wet.	10-12-14 N = 26		721
	PPV = 2.0-2.5 PPV = 2.5-2.7			S-21 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace fine to coarse gravel, stiff to very stiff, brown and gray, moist.	4-5-8 N = 13		
	PPV = 2.0-2.2			S-22 (16 in)		7-17-10 N = 27		
50								716
				S-23 (6 in)		5-7-10 N = 17		
	52.5				FILL: LEAN CLAY WITH SAND (CL), trace fine gravel, firm, brown, moist.			
	PPV = 0.7-1.0			S-24 (18 in)		3-5-7 N = 12		
55	55.0				FILL: LEAN CLAY WITH SAND (CL), trace fine gravel, stiff to very stiff, brown, moist.			711
	PPV = 2.0-2.2 900 psi			S-25 REC-90%				
	PPV = 2.0-2.5			S-26 (18 in)		3-8-10 N = 18		
	58.5 PPV = 1.7-2.0			S-27 (18 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, stiff to very stiff, brown, moist.	5-6-6 N = 12		
60								706
	61.0 PPV = 1.7-2.2			S-28 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace little fine to coarse gravel, stiff to very stiff, brown, moist.	9-7-9 N = 16		

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/19/2025		Dry during drilling; slight seepage encountered at 13.0' and 44.8'.
END OF DRILLING	▼	08/21/2025		Dry prior to rock core; slight seepage at 101.5'
AFTER DRILLING	▼	08/21/2025	22.1	Prior to auger removal; after rock core.
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-01 *Sheet 3 of 4*
DATE DRILLED: 08/19/2025	**ELEVATION:** 766 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: B-57 (Track)	**DATUM:** NAVD88	
DRILLER: A. Unverzagt	**BORING DEPTH:** 123.5 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA, NQ	**LOGGED BY:** M.S. Ansari	**LATITUDE:** 39.386850 **LONGITUDE:** -82.177165
SAMPLING METHOD: UD, SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢ PL---LL; 20 40 60 80 100)	ELEVATION
65	PPV = 1.2-1.7			S-29 (16 in)	FILL: LEAN CLAY WITH SAND (CL), trace little fine to coarse gravel, stiff to very stiff, brown, moist.	3-5-6 N = 11		701
	PPV = 2.2-2.5			S-30 (18 in)		7-9-9 N = 18		
70	PPV = 2.0-2.2			S-31 (18 in)		4-7-8 N = 15		696
	70.5				FILL: LEAN CLAY WITH SAND (CL), trace little fine to coarse gravel, stiff, few organics wood chips, brown and gray, moist.			
	PPV = 2.5-2.7			S-32 (18 in)		7-6-11 N = 17		
	73.0				FILL: LEAN CLAY WITH SAND (CL), stiff to very stiff, brownish gray, moist.			
	PPV = 1.5-2.5			S-33 (18 in)		6-6-8 N = 14		
75	75.0				FILL: LEAN CLAY (CL), little fine to coarse sand, trace fine to coarse gravel, stiff to very stiff, brown mottled with gray, moist.			691
	PPV = 3.5 1200 psi			S-34 REC-93%				
	PPV = 1.7-2.2			S-35 (18 in)		5-7-10 N = 17		
	PPV = 2.7-3.2			S-36 (18 in)		5-9-10 N = 19		
80								686
	PPV = 1.7-2.0			S-37 (18 in)		4-9-9 N = 18		
	PPV = 2.5-2.7			S-38 (18 in)		7-7-7 N = 14		
85	85.0				FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine to coarse gravel, firm to stiff, brown, moist.			681
	PPV = 2.5-2.7			S-39 (18 in)		5-8-12 N = 20		
	PPV = 2.2-3.0			S-40 (18 in)		4-8-12 N = 20		
90								676
	PPV = 1.7-2.2			S-41 (18 in)		7-16-10 N = 26		
	PPV = 1.5-1.7			S-42 (18 in)		5-7-5 N = 12		
95								671

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/19/2025		Dry during drilling; slight seepage encountered at 13.0' and 44.8'.
END OF DRILLING	▼	08/21/2025		Dry prior to rock core; slight seepage at 101.5'
AFTER DRILLING	▼	08/21/2025	22.1	Prior to auger removal; after rock core.
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
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PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-01 *Sheet 4 of 4*
DATE DRILLED: 08/19/2025	**ELEVATION:** 766 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: B-57 (Track)	**DATUM:** NAVD88	
DRILLER: A. Unverzagt	**BORING DEPTH:** 123.5 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA, NQ	**LOGGED BY:** M.S. Ansari	**LATITUDE:** 39.386850 **LONGITUDE:** -82.177165
SAMPLING METHOD: UD, SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢ PL---LL; 20 40 60 80 100)	ELEVATION
	PPV = 0.7-1.5			S-43 (18 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine to coarse gravel, firm to stiff, brown, moist.	0-4-6 N = 10		
	98.5			S-44 (18 in)	SHALE, gray, highly weathered, highly fractured.	14-34-30 N = 64		
100	Slight seepage at 101.5'			S-45 (5 in)		50/5" N = 50/5"		666
	103.5			S-46 REC-84% RQD-75%	SHALE, gray, slightly to highly weathered, strong to weak, moderately hard to low hardness, fine grained, thinly bedded, slightly to highly fractured, smooth.			
105								661
				S-47 REC-100% RQD-73%				
110								656
				S-48 REC-100% RQD-93%				
115								651
				S-49 REC-100% RQD-100%				
120								646
	123.5				Borehole terminated at 123.5 feet			
125								641

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/19/2025		Dry during drilling; slight seepage encountered at 13.0' and 44.8'.
END OF DRILLING	▼	08/21/2025		Dry prior to rock core; slight seepage at 101.5'
AFTER DRILLING	▼	08/21/2025	22.1	Prior to auger removal; after rock core.
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-02 *Sheet 1 of 3*
DATE DRILLED: 08/20/2025	**ELEVATION:** 767 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: B-57 (Track), Geoprobe 3100GT	**DATUM:** NAVD88	
DRILLER: A. Unverzagt, A. Archer	**BORING DEPTH:** 93.5 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA, NQ	**LOGGED BY:** W. Babiy	**LATITUDE:** 39.386496 **LONGITUDE:** -82.176957
SAMPLING METHOD: UD, SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢ PL---LL; 20 40 60 80 100)	ELEVATION
0					WOOD CHIPS/TOPSOIL/ROOTMAT - 12 INCHES			767
	1.0							
	PPV = 1.0-2.5			S-01 (18 in)	FILL: SANDY LEAN CLAY (CL), firm, yellowish brown, damp.	3-2-4 N = 6	●	
	2.5							
	PPV = 1.0-2.0			S-02 (18 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace coal fragments, soft, orange brown and gray, damp.	1-1-2 N = 3	● ○	
5								762
	6.0							
	PPV = 0.5-1.0			S-03 (14 in)	FILL: LEAN CLAY WITH SAND (CL), trace fine to coarse gravel, firm to stiff, light brown with gray, moist to damp.	0-2-2 N = 4	●	
	PPV = 1.0			S-04 (18 in)		0-2-3 N = 5	● ○	
10	Seepage at 10.0'							757
	PPV = 1.0-2.0			S-05 (18 in)		1-2-3 N = 5	●	
	500 psi							
	PPV = 1.0-2.0			S-06 REC-80%			⊢ △	
15	PPV = 0.5-2.0			S-07 (18 in)		1-2-3 N = 5	●	752
	PPV = 1.0-1.5			S-08 (18 in)		1-3-4 N = 7	● ○	
	PPV = 1.0-2.0			S-09 (18 in)		1-2-4 N = 6	●	
20								747
	PPV = 0.5-1.5			S-10 (18 in)		1-2-4 N = 6	● ○	
	PPV = 1.0-2.0			S-11 (18 in)		2-2-5 N = 7	●	
25								742
	PPV = 1.0-2.5			S-12 (18 in)		1-3-4 N = 7	● ⊢	
	PPV = 2.5-3.5			S-13 (18 in)		2-3-5 N = 8	●	
30								737
	PPV = 2.5-3.5						● ○	

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/25/2025	87.0	During drilling; seepage encountered at 10.0' and 57.0'.
END OF DRILLING	▼	08/25/2025	32.0	Prior to auger removal; after rock core.
AFTER DRILLING	▼			
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-02 *Sheet 2 of 3*
DATE DRILLED: 08/20/2025	**ELEVATION:** 767 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: B-57 (Track), Geoprobe 3100GT	**DATUM:** NAVD88	
DRILLER: A. Unverzagt, A. Archer	**BORING DEPTH:** 93.5 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA, NQ	**LOGGED BY:** W. Babiy	**LATITUDE:** 39.386496 **LONGITUDE:** -82.176957
SAMPLING METHOD: UD, SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢PL---LL; 20 40 60 80 100)	ELEVATION
				S-14 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace fine to coarse gravel, firm to stiff, light brown with gray, moist to damp.	1-5-8 N = 13		
	PPV = 1.0-2.0			S-15 (18 in)		1-3-5 N = 8		
35								732
	PPV = 0.5-0.7			S-16 (18 in)		1-2-3 N = 5		
	PPV = 1.0-1.5			S-17 (18 in)		2-2-4 N = 6		
40								727
	41.0							
	PPV = 3.5-4.5			S-18 (18 in)	FILL: SANDY LEAN CLAY WITH GRAVEL (CL), stiff to very stiff, light brown with gray, damp.	3-7-9 N = 16		
	PPV = 1.0-3.0			S-19 (18 in)		4-5-7 N = 12		
45								722
	PPV = 1.5-2.5			S-20 (18 in)		3-4-8 N = 12		
	PPV = 2.5-3.5			S-21 (18 in)		4-5-8 N = 13		
50								717
	PPV = 2.5-3.5			S-22 (18 in)		4-7-9 N = 16		
	PPV = 0.5-2.0			S-23 (18 in)		3-3-6 N = 9		
55								712
	56.0							
	PPV = 1.5 wet sand pocket at 57.0' 750 psi			S-24 (18 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine to coarse gravel, stiff to very stiff, light brown with gray, damp.	1-5-7 N = 12		
				S-25 REC-80%				
	PPV = 3.0-4.0			S-26 (18 in)		3-8-10 N = 18		
60								707
	PPV = 2.0-4.0			S-27 (12 in)		4-8-14 N = 22		
	63.5				FILL: LEAN CLAY WITH SAND (CL), trace fine to coarse gravel, very stiff, brown, damp.			

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/25/2025	87.0	During drilling; seepage encountered at 10.0' and 57.0'.
END OF DRILLING	▼	08/25/2025	32.0	Prior to auger removal; after rock core.
AFTER DRILLING	▼			
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
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PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-02 *Sheet 3 of 3*
DATE DRILLED: 08/20/2025	**ELEVATION:** 767 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: B-57 (Track), Geoprobe 3100GT	**DATUM:** NAVD88	
DRILLER: A. Unverzagt, A. Archer	**BORING DEPTH:** 93.5 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA, NQ	**LOGGED BY:** W. Babiy	**LATITUDE:** 39.386496 **LONGITUDE:** -82.176957
SAMPLING METHOD: UD, SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢ PL---LL; 20 40 60 80 100)	ELEVATION
65	PPV = 2.5-4.0			S-28 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace fine to coarse gravel, very stiff, brown, damp.	4-10-12 N = 22		702
	PPV = 3.0-4.5			S-29 (18 in)		4-8-14 N = 22		
70	PPV = 2.5-3.5 B-57 starts at 70.0'			S-30 (12 in)		4-8-12 N = 20		697
	71.0 PPV = 2.0-3.5			S-31 (18 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine to coarse gravel, very stiff, trace coal, trace organics, brown with gray, damp to moist.	4-8-8 N = 16		
75	73.5 PPV = 2.0-3.5			S-32 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace fine gravel, stiff to very stiff, orange brown, damp to moist.	4-7-9 N = 16		692
	PPV = 2.0-2.5			S-33 (18 in)		4-7-9 N = 16		
80	PPV = 1.0-2.0			S-34 (18 in)		4-6-7 N = 13		687
	PPV = 1.5-2.5			S-35 (12 in)		4-4-6 N = 10		
85	PPV = 0.5-1.0 Seepage at 85.0' 800 psi			S-36 (18 in)		2-4-4 N = 8		682
	87.0 PPV = 4.5			S-37 REC-75%				
	87.7			S-38 (8 in)	WELL GRADED SAND WITH CLAY (SW-SC), decomposed shale, very dense, damp.	32-50/2" N = 50/2"		
90				S-39 REC-94% RQD-74%	SHALE, gray, very fine grained, thinly bedded to laminated, moderately fractured, slightly rough, moderately weathered, weak to medium strong, soft to low hardness.			677
	93.5				Borehole terminated at 93.5 feet			
95								672

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/25/2025	87.0	During drilling; seepage encountered at 10.0' and 57.0'.
END OF DRILLING	▼	08/25/2025	32.0	Prior to auger removal; after rock core.
AFTER DRILLING	▼			
AFTER DRILLING	▼			

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PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-03 *Sheet 1 of 2*
DATE DRILLED: 08/28/2025	**ELEVATION:** 700 ft	**NOTES:** Elevation estimated from Google Earth. Boring location offset 5.0ft east of staked location and 2.0ft bench cut from original slope
DRILL RIG: B-57 (Track)	**DATUM:** NAVD88	
DRILLER: A. Unverzagt	**BORING DEPTH:** 45.3 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA	**LOGGED BY:** M.S. Ansari	**LATITUDE:** 39.387047 **LONGITUDE:** -82.176517
SAMPLING METHOD: SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢ PL---LL; 20 40 60 80 100)	ELEVATION
0	PPV = 2.0-2.2			S-01 (18 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, iron staining, firm to stiff, brown and gray, damp to moist	3-4-4		700
	PPV = 1.7-2.0			S-02 (18 in)		N = 8		
	PPV = 2.2-2.5			S-03 (18 in)		3-3-3		
5	PPV = 2.0-2.2			S-04 (18 in)		N = 6		695
				S-05 (18 in)		3-4-4		
				S-06 (12 in)		N = 8		
				S-07 (18 in)		3-5-5		
10	PPV = 0.7-1.2			S-08 (13 in)		N = 10		690
	PPV = 1.0-1.2			S-09 (18 in)		3-5-6		
	PPV = 2.2	12.0		S-10 (18 in)	FILL: GRAVELLY LEAN CLAY WITH SAND (CL), stiff to very stiff, grayish brown, moist	N = 11		
	PPV = 1.7-2.0			S-11 (18 in)		3-3-4		
15	PPV = 1.7-2.2			S-12 (13 in)		N = 7		685
	Seepage encountered at 19.5'			S-13 (7 in)		2-4-4		
		19.5		S-14/14A (18 in)	FILL: CLAYEY SAND WITH GRAVEL (SC), medium dense, brown and gray, moist to wet	N = 8		
20		21.0		S-15 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace fine to coarse gravel, iron stains, stiff, brown, moist	3-4-5		680
	PPV = 1.7-2.5			S-16 (18 in)		N = 9		
	PPV = 3.5-4.0			S-17 (18 in)		3-4-5		
25	PPV = 2.0-2.2			S-18 (18 in)		N = 9		675
	PPV = 2.0-2.2			S-19 (18 in)		4-5-6		
	PPV = 1.7-2.0	27.0		S-20 (18 in)	LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, stiff to very stiff, brown mottled with gray, moist	N = 11		
	PPV = 1.0-1.2			S-21A/B (18 in)		6-10-11		
30	PPV = 2.0-2.2					N = 21		670
	PPV = 2.5-2.7	31.1			LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, stiff to very stiff, bluish gray, moist	14-7-4		
						N = 11		
						4-5-8		
						N = 13		
						9-14-9		
						N = 23		
						3-5-6		
						N = 11		
						2-6-8		
						N = 14		
						4-5-8		
						N = 13		
						6-7-8		
						N = 15		
						2-4-5		
						N = 9		
						2-3-4		
						N = 7		
						4-9-10		
						N = 19		

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/28/2025	21.0	Encountered groundwater
END OF DRILLING	▼	08/29/2025	40.0	Prior to rock core, inside HSA
AFTER DRILLING	▼	08/29/2025	17.0	After rcck core, prior to removing HSA
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-03 *Sheet 2 of 2*

DATE DRILLED: 08/28/2025	**ELEVATION:** 700 ft	**NOTES:** Elevation estimated from Google Earth. Boring location offset 5.0ft east of staked location and 2.0ft bench cut from original slope
DRILL RIG: B-57 (Track)	**DATUM:** NAVD88	
DRILLER: A. Unverzagt	**BORING DEPTH:** 45.3 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA	**LOGGED BY:** M.S. Ansari	**LATITUDE:** 39.387047 **LONGITUDE:** -82.176517
SAMPLING METHOD: SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (SPT ● / % Fines △ / NMC ○ / PL---LL ⊢⊣ ; 20 40 60 80 100)	ELEVATION
35	PPV = 1.2-1.7			S-22 (18 in)	LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, stiff to very stiff, bluish gray, moist	3-4-5	●	665
	PPV = 1.2-1.7			S-23 (18 in)		N = 9		
				S-24 (18 in)		3-6-6	●	
	36.0			S-25 (18 in)	CLAYEY GRAVEL (GC), trace fine to coarse sand, dense, brown, moist, (completely weathered shale).	N = 12		
						7-7-6	● ○	
				S-26 (6 in)		N = 13		
	Sampler refusal at 40.3 feet					3-5-11	●	
	39.0			S-27 (6 in)	SHALE, gray, highly weathered, highly fractured	N = 16		
40	40.3 ▽					5-9-17	●	660
					SHALE, gray, moderately to highly weathered, medium strong to weak, moderately hard to soft, thinly bedded, moderately to high fractured	N = 26		
				S-28 REC-68% RQD-50%		5-25-50/3"	●	
45	45.3				Borehole terminated at 45.3 feet	N = 50/3"		655
50								650
55								645
60								640

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/28/2025	21.0	Encountered groundwater
END OF DRILLING	▼	08/29/2025	40.0	Prior to rock core, inside HSA
AFTER DRILLING	▼	08/29/2025	17.0	After rcck core, prior to removing HSA
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-04 *Sheet 1 of 2*
DATE DRILLED: 08/27/2025	**ELEVATION:** 700 ft	**NOTES:** Elevation estimated from Google Earth Boring location offset 6.3 ft east of staked location. and 2.0 ft bench cut from original slope.
DRILL RIG: B-57 (Track)	**DATUM:** NAVD88	
DRILLER: A. Unverzagt	**BORING DEPTH:** 41.1 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA	**LOGGED BY:** M.S. Ansari	**LATITUDE:** 39.386908 **LONGITUDE:** -82.176428
SAMPLING METHOD: SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢PL---LL; 20 40 60 80 100)	ELEVATION
0	PPV = 1.7			S-01 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace fine to coarse gravel, firm, grayish brown, damp	3-3-3	● ○	700
	1.5			S-02 (18 in)	FILL: LEAN CLAY WITH SAND (CL), trace fine gravel, iron stains, firm to stiff, gray and brown, damp	N = 6 3-4-6	●	
				S-03 (18 in)		N = 10 3-4-3	● ○	
				S-04 (18 in)		N = 7 3-4-3	●	
5				S-05 (18 in)		N = 7 2-4-4	● ○ ⊢ △	695
	PPV = 1.0-1.2			S-06 (18 in)		N = 8 3-5-6	●	
	PPV = 1.5-1.7			S-07 (18 in)		N = 11 12-5-3	● ○	
10	PPV = 1.2-2.0			S-08 (18 in)		N = 8 5-7-7	●	690
	12.0 PPV = 2.2-2.5			S-09 (6 in)	FILL: LEAN CLAY WITH SAND (CL), trace fine to coarse gravel, firm, gray, few organic decayed wood chips, moist	N = 14 2-4-4	○ ●	
	13.5 PPV = 2.2-2.5			S-10 (18 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine to coarse gravel, stiff, brown, moist	N = 8 3-3-7	●	
15	15.0			S-11 (12 in)		N = 10 8-7-8	●	685
	PPV = 0.7-1.2			S-12 (18 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, stiff, brown, moist	N = 15 3-4-4	● ○ ⊢	
	18.0			S-13 (6 in)	FILL: GRAVELLY LEAN CLAY (CL), trace fine to coarse sand, stiff, brown, moist to damp	N = 8 3-4-6	○ ●	
20				S-14 (6 in)		N = 10 4-5-3	●	680
	21.0			S-15\15A (18 in)	FILL: WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC), loose to medium dense, brown, wet	N = 8 6-5-9	△ ◑	
				S-16 (14 in)		N = 14 5-4-3	●	
	24.0 PPV = 2.0-2.2			S-17 (7 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, stiff to very stiff, brown, moist	N = 7 3-3-3	● ○	
25	PPV = 4.5			S-18 (8 in)		N = 6 5-8-9	●	675
	27.0 PPV = 3.2-3.5			S-19 (12 in)	LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, very stiff to hard, brown mottled with gray, moist	N = 17 4-8-9	● ○ ⊢	
	PPV = 2.0-3.2			S-20 (18 in)		N = 17 4-7-9	●	
30	30.0			S-21 (18 in)	SHALE, gray and brown, iron staining, highly weathered, similar to soil	N = 16 6-10-17	●	670
						N = 27		

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/27/2025	21.0	Groundwater encountered
END OF DRILLING	▼	08/28/2025	21.2	Prior to rock core, inside HSA
AFTER DRILLING	▼			
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-04 *Sheet 2 of 2*
DATE DRILLED: 08/27/2025	**ELEVATION:** 700 ft	**NOTES:** Elevation estimated from Google Earth Boring location offset 6.3 ft east of staked location. and 2.0 ft bench cut from original slope.
DRILL RIG: B-57 (Track)	**DATUM:** NAVD88	
DRILLER: A. Unverzagt	**BORING DEPTH:** 41.1 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Installed Piezometer	
DRILLING METHOD: 3-1/4" HSA	**LOGGED BY:** M.S. Ansari	**LATITUDE:** 39.386908 **LONGITUDE:** -82.176428
SAMPLING METHOD: SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢ PL---LL; 20 40 60 80 100)	ELEVATION
35	Sampler refusal at 36.1 feet			S-22 (18 in) S-23 (18 in) S-24 (18 in)	SHALE, gray and brown, iron staining, highly weathered, similar to soil	10-14-16 N = 30 5-13-30 N = 43 13-23-38 N = 61		665
	36.1			(0 in)		50/1" N = 50/1"		
40				S-25 REC-86% RQD-58%	SHALE, gray, fresh to highly weathered, strong to medium strong, moderately hard, thinly bedded, moderately to highly fractured, slightly rough to smooth			660
	41.1				Borehole terminated at 41.1 feet			
45								655
50								650
55								645
60								640

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/27/2025	21.0	Groundwater encountered
END OF DRILLING	▼	08/28/2025	21.2	Prior to rock core, inside HSA
AFTER DRILLING	▼			
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-05 *Sheet 1 of 1*
DATE DRILLED: 08/26/2025	**ELEVATION:** 680 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: B-57 (Track)	**DATUM:** NAVD88	
DRILLER: A. Unverzagt	**BORING DEPTH:** 28.5 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Cement-Bentonite Grout	
DRILLING METHOD: 3-1/4" HSA	**LOGGED BY:** W. Babiy	**LATITUDE:** 39.387103 **LONGITUDE:** -82.176328
SAMPLING METHOD: SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES		Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA ● SPT △ % Fines ○ NMC ⊢ PL---LL 20 40 60 80 100	ELEVATION
0	PPV = 3.0-3.5	0.2			S-01 (18 in)	ROOTMAT - 3 INCHES	4-3-2		680
						FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, firm to stiff, brown, damp to wet	N = 5		
	PPV = 1.5-3.0				S-02/02A (18 in)		3-6-4		
	Seepage at 3.3'						N = 10		
	PPV = 1.5-3.5				S-03 (18 in)		3-3-3		
	PPV = 0.2-1.0				S-04 (18 in)		N = 6		
5							2-1-5		675
		6.0 ▽			S-05/05A (18 in)	FILL: WELL GRADED SAND WITH SILT AND GRAVEL (SW-SM), very loose, gray and light brown, wet	N = 6		
							3-2-1		
	PPV = 3.5-4.5	7.5			S-06 (18 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, very stiff to hard, light brown with gray, moist	N = 3		
							3-4-6		
	PPV = 3.5-4.5	9.0			S-07 (6 in)		N = 10		
10							4-6-6		670
	PPV = 1.0-1.5				S-08 (18 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, stiff, brown mottled with black, moist.	N = 12		
	PPV = 1.5-2.5				S-09 (18 in)		6-5-4		
		13.5					N = 9		
	PPV = 0.2-0.5				S-10 (18 in)	LEAN CLAY, firm, light brown mottled with gray	8-4-4		
15		15.0					N = 8		665
	PPV = 1.0-2.0				S-11 (18 in)	GRAVELY LEAN CLAY WITH SAND, firm to very stiff, light brown to gray, moist, (completely weathered shale).	3-2-4		
					S-12 (6 in)		N = 6		
					S-13 (18 in)		2-3-5		
							N = 8		
					S-14 (18 in)		17-13-6		
20							N = 19		660
					S-15 (10 in)		5-7-12		
	Sampler refusal at 23.5 feet	23.1			S-16 (6 in)		N = 19		
							7-16-14		
						SHALE, gray, moderately to highly fractured, highly weathered, very weak, friable, thinly bedded to thinly laminated, slightly rough	N = 30		
							12-50/4"		
25					S-17 REC-36% RQD-0%		N = 50/4"		655
							2-50/2"		
		28.5				Borehole terminated at 28.5 feet	N = 50/2"		
30									650

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/26/2025	6.0	Groundwater encoutered
END OF DRILLING	▼	08/26/2025	6.0	Prior to rock core, inside HSA
AFTER DRILLING	▼			
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-06 *Sheet 1 of 1*
DATE DRILLED: 08/27/2025	**ELEVATION:** 681 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: B-57 (Track)	**DATUM:** NAVD88	
DRILLER: A. Unverzagt	**BORING DEPTH:** 29.0 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Cement-Bentonite Grout	
DRILLING METHOD: 3-1/4" HSA	**LOGGED BY:** M.S. Ansari	**LATITUDE:** 39.386967 **LONGITUDE:** -82.176253
SAMPLING METHOD: SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (SPT ● / % Fines △ / NMC ○ / PL---LL ⊢)	ELEVATION
0							20 40 60 80 100	681
0.4				S-01 (18 in)	ROOTMAT - 5 INCHES	2-4-2		
				S-02 (5 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, soft to firm, light brown, few roots, moist	N = 6		
				S-03 (12 in)		3-2-3		
4.9						N = 5		
5				S-4A/4B/5 (18 in)		2-2-2		676
6.2				S-06 (6 in)	FILL: WELL GRADED SAND WITH SILT (SW-SM), trace fine to coarse gravel, medium dense, light brown, wet	N = 4		
	PPV = 3.0-3.2			S-07 (6 in)	FILL: LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, soft, light brown, moist	3-8-5		
	PPV = 0.7-1.0			S-08 (6 in)		N = 13		
	PPV = 0.7-1.0			S-09 (18 in)		1-3-3		
10				S-10 (8 in)		N = 6		671
10.5	PPV = 0.7-1.2			S-11 (6 in)	LEAN CLAY WITH SAND (CL), trace to little fine to coarse gravel, firm to stiff, light brown mottled with gray, moist, few shale fragments	2-2-2		
12.0	PPV = 4.0-4.2			S-12 (13 in)	SANDY LEAN CLAY (CL), little fine to coarse gravel, iron staining, very stiff to hard, brown mottled with gray, moist, few sandstone fragments	N = 4		
14.4				S-13 (14 in)	POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), medium dense, brown, wet	2-1-2		
15				S-14 (18 in)	GRAVELLY LEAN CLAY (CL), some fine to coarse sand, iron staining, very stiff, brown mottled with black and gray, moist to wet	N = 3		666
16.5				S-15 (18 in)	LEAN CLAY (CL), trace fine to coarse sand, trace fine to coarse gravel, very stiff, light gray mottled with brown, moist	8-7-6		
18.0	PPV = 3.2-3.5			S-16 (180 in)	SHALE, light gray, highly weathered, highly cemented	N = 13		
19.5					SHALE, gray, fresh to moderately weathered, strong to medium strong, moderately hard, thinly laminated, slightly fractured to highly fractured, slightly rough to smooth	4-6-13		
20						N = 19		661
	Sampler refusal at 24.0 feet					11-50/5"		
24.0				(0 in)		N = 50/5"		
25				S-17 REC-90% RQD-53%		10-16-10		656
29.0						N = 26		
30					Borehole terminated at 29.0 feet	7-12-9		651
						N = 21		
						8-10-6		
						N = 16		
						10-22-30		
						N = 52		
						21-50/5"		
						N = 50/5"		
						50/5"		
						N = 50/5"		

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/27/2025	6.0	Groundwater encountered
END OF DRILLING	▼	08/27/2025	5.4	Prior to rock core, inside HSA
AFTER DRILLING	▼	08/27/2025	9.7	After rock core, prior to auger removal
AFTER DRILLING	▼			

GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-07 *Sheet 1 of 2*
DATE DRILLED: 08/19/2025	**ELEVATION:** 768 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: Geoprobe 3100GT	**DATUM:** NAVD88	
DRILLER: A. Archer	**BORING DEPTH:** 39.5 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Cement-Bentonite Grout	
DRILLING METHOD: 3-1/4" HSA	**LOGGED BY:** W. Babiy	**LATITUDE:** 39.384383 **LONGITUDE:** -82.176848
SAMPLING METHOD: UD, SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA (● SPT, △ % Fines, ○ NMC, ⊢ PL---LL; 20 40 60 80 100)	ELEVATION
0								768
	0.3			S-01 (12 in)	TOPSOIL/ROOTMAT - 4 INCHES	10-18-10 N = 28		
	1.0 PPV = 3.0-4.0			S-02 (12 in)	FILL: WELL GRADED GRAVEL WITH SAND (GW), trace silt, gray, medium dense, dry.	8-5-4 N = 9		
	3.0 PPV = 1.5-2.0			S-03 (13 in)	FILL: GRAVELLY LEAN CLAY WITH SAND (CL), brown, very stiff, damp.	2-3-4 N = 7		
5	PPV = 0.5-0.7			S-04 (11 in)	FILL: FAT CLAY WITH SAND (CH), trace fine gravel, brown to gray, firm, damp.	2-2-3 N = 5		763
	6.0 500 psi PPV = 1.5-2.5			S-05/05A REC-95%	FILL: LEAN CLAY WITH SAND (CL), trace fine gravel, brown to gray, firm, damp.			
	PPV = 0.5-1.5			S-06 (13 in)		1-2-3 N = 5		
	9.5 PPV = 1.0-1.5 Seepage at 12.0'			S-07 (18 in)	FILL: LEAN CLAY (CL), little fine to coarse sand, trace fine gravel, firm to stiff, yellowish brown, moist.	2-3-4 N = 7		
10	PPV = 0.5-1.5			S-08 (18 in)		2-3-8 N = 11		758
	12.5 PPV = 4.5			S-09 (18 in)	LEAN CLAY (CL), trace fine to coarse sand, trace fine gravel, very stiff to hard, yellowish brown mottled with gray, few iron oxide stains, damp, (completely weathered shale).	4-9-16 N = 25		
	PPV = 4.5			S-10 (180 in)		8-14-20 N = 34		
15	PPV = 4.5			S-11 (18 in)		10-14-18 N = 32		753
	17.0 Sampler refusal at 19.5 feet			S-12 (12 in)	SHALE, decomposed, yellowish brown	15-50/5" N = 50/5"		
	19.3			S-13 (10 in)	SHALE, light brown to gray, very fine grained, thinly laminated, moderately to highly fractured, slightly rough, highly weathered, weak rock, soft to low hardness, some sand seams.	25-50/4" N = 50/4"		
20				S-14 REC-64% RQD-44%				748
25								743
	26.5			S-15 REC-100% RQD-46%	MICACEOUS SHALE, very fine grained, thinly laminated, moderately fractured, smooth, fresh, strong, moderately hard.			
30								738

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/19/2025		Dry during drilling; seepage encountered at 12.0'.
END OF DRILLING	▼			
AFTER DRILLING	▼	08/20/2025	13.0	Prior to auger removal; after rock core.
AFTER DRILLING	▼			

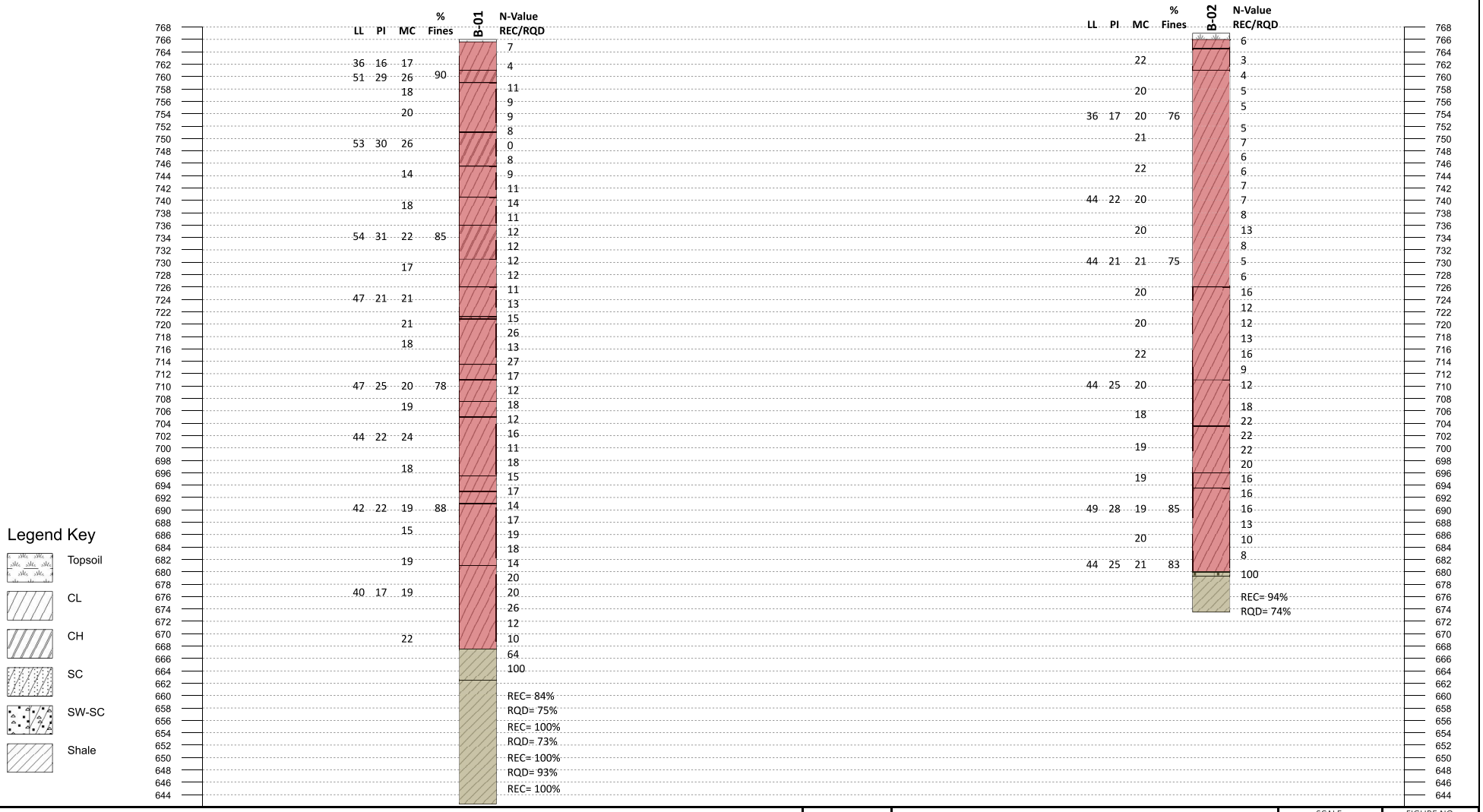
GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial

PROJECT:	Poston Plant Legacy CCR Impoundment York Township - Athens County, Ohio S&ME Project No. 25170078	BORING LOG: B-07 *Sheet 2 of 2*
DATE DRILLED: 08/19/2025	**ELEVATION:** 768 ft	**NOTES:** Elevation estimated from Google Earth
DRILL RIG: Geoprobe 3100GT	**DATUM:** NAVD88	
DRILLER: A. Archer	**BORING DEPTH:** 39.5 ft	
HAMMER TYPE: Auto Hammer (140 lb)	**CLOSURE:** Cement-Bentonite Grout	
DRILLING METHOD: 3-1/4" HSA	**LOGGED BY:** W. Babiy	**LATITUDE:** 39.384383 **LONGITUDE:** -82.176848
SAMPLING METHOD: UD, SS, RC	**PROJECT COORDINATE SYSTEM -** NAD 1983 StatePlane Ohio South FIPS 3402 Feet	

DEPTH (feet)	NOTES	Origin/Identifier	GRAPHIC	SAMPLE NO. (RECOVERY)	MATERIAL DESCRIPTION	BLOW COUNT DATA (SPT N-value)	STANDARD PENETRATION TEST DATA ● SPT △ % Fines ○ NMC ⊢ PL---LL 20 40 60 80 100	ELEVATION
35				S-16 REC-92% RQD-88%	MICACEOUS SHALE, very fine grained, thinly laminated, moderately fractured, smooth, fresh, strong, moderately hard.			733
				S-17 REC-100% RQD-80%				
40	39.5				Borehole terminated at 39.5 feet			728
45								723
50								718
55								713
60								708

GROUNDWATER		DATE	DEPTH (FT)	REMARKS
ATD	▽	08/19/2025		Dry during drilling; seepage encountered at 12.0'.
END OF DRILLING	▼			
AFTER DRILLING	▼	08/20/2025	13.0	Prior to auger removal; after rock core.
AFTER DRILLING	▼			

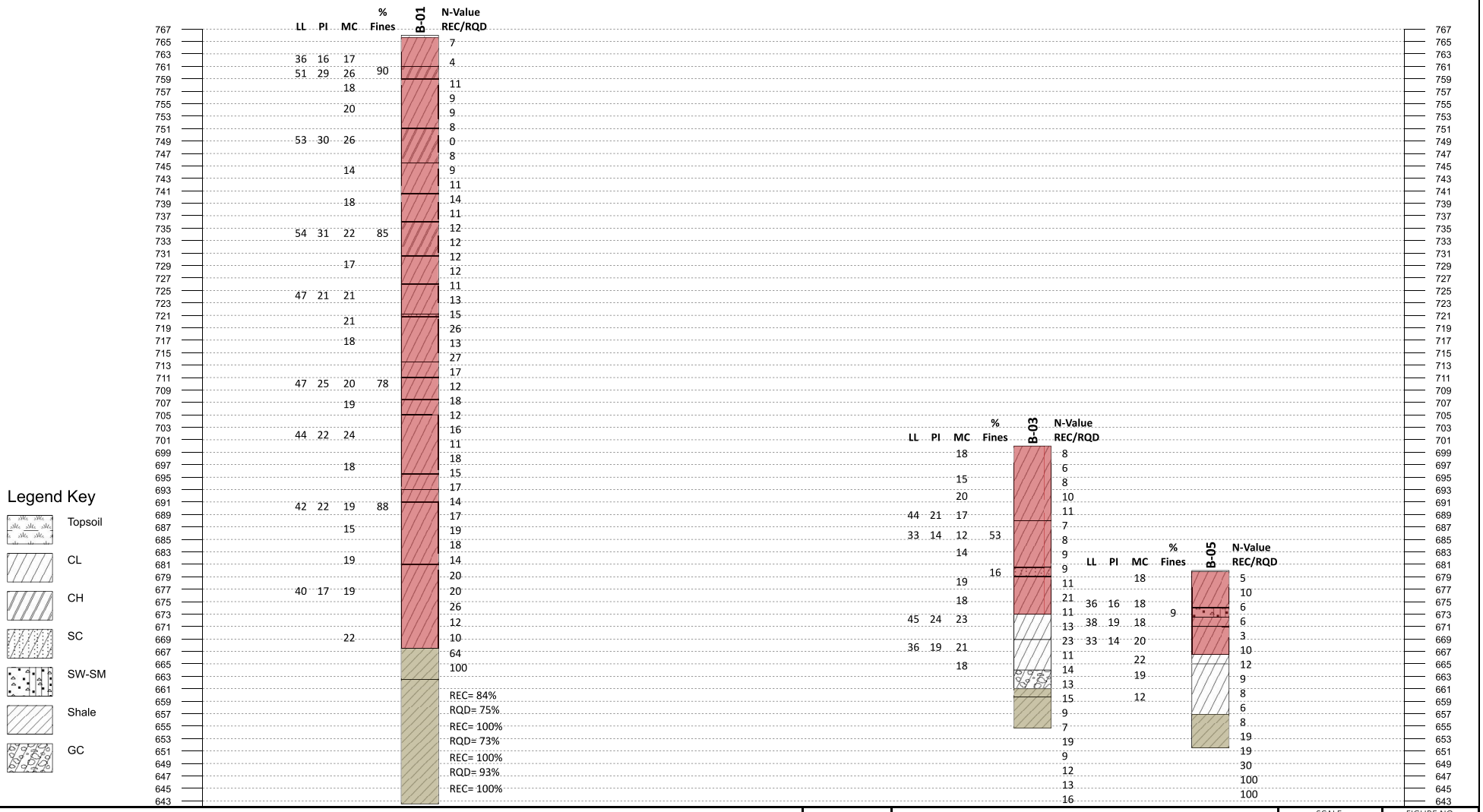
GROUNDWATER DEPTHS ARE NOT EXACT AND MAY VARY SUBSTANTIALLY FROM THOSE INDICATED. ATD = AT TIME OF DRILLING
LL=Liquid Limit, PL = Plastic Limit, NMC = Natural Moisture Content, PPV = Pocket Penetrometer (tsf), PTV = Pocket Torvane (tsf), AR = Auger Refusal, IGM = Intermediate Geomaterial



Subsurface Profile - East Embankment Alignment

Poston Plant Legacy CCR Impoundment
York Township - Athens County, Ohio

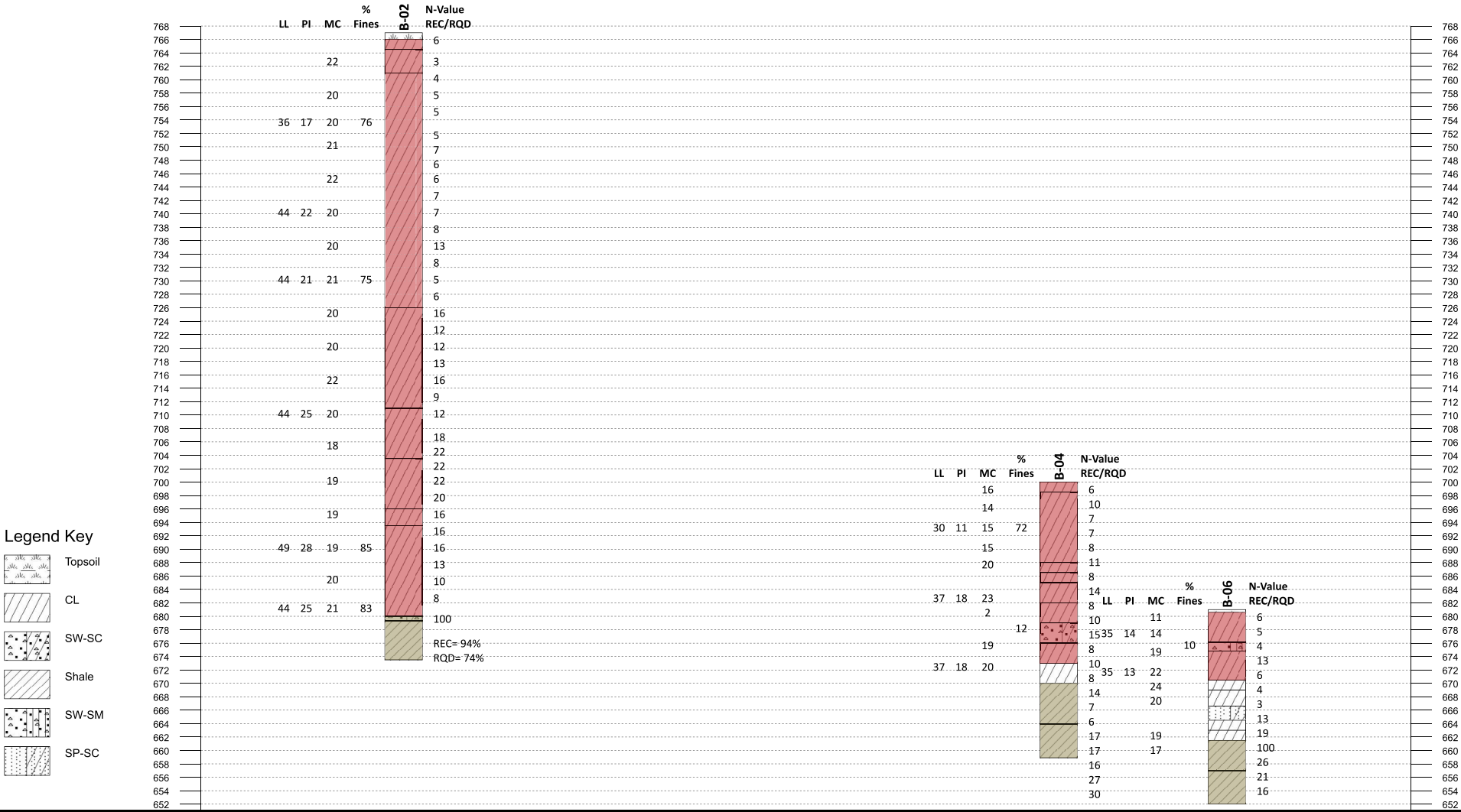
SCALE:	FIGURE NO.
1:219	1
DATE:	
Jan 19, 2026	
PROJECT NUMBER:	
25170078	



East Embankment Cross section 1 (B-01, B-03, B-05)

Poston Plant Legacy CCR Impoundment
York Township - Athens County, Ohio

SCALE:	1:364
DATE:	Jan 19, 2026
PROJECT NUMBER:	25170078
FIGURE NO.	2



Legend Key

- Topsoil
- CL
- SW-SC
- Shale
- SW-SM
- SP-SC

East Embankment Cross Section 2 (B-02, B-04, B-06)

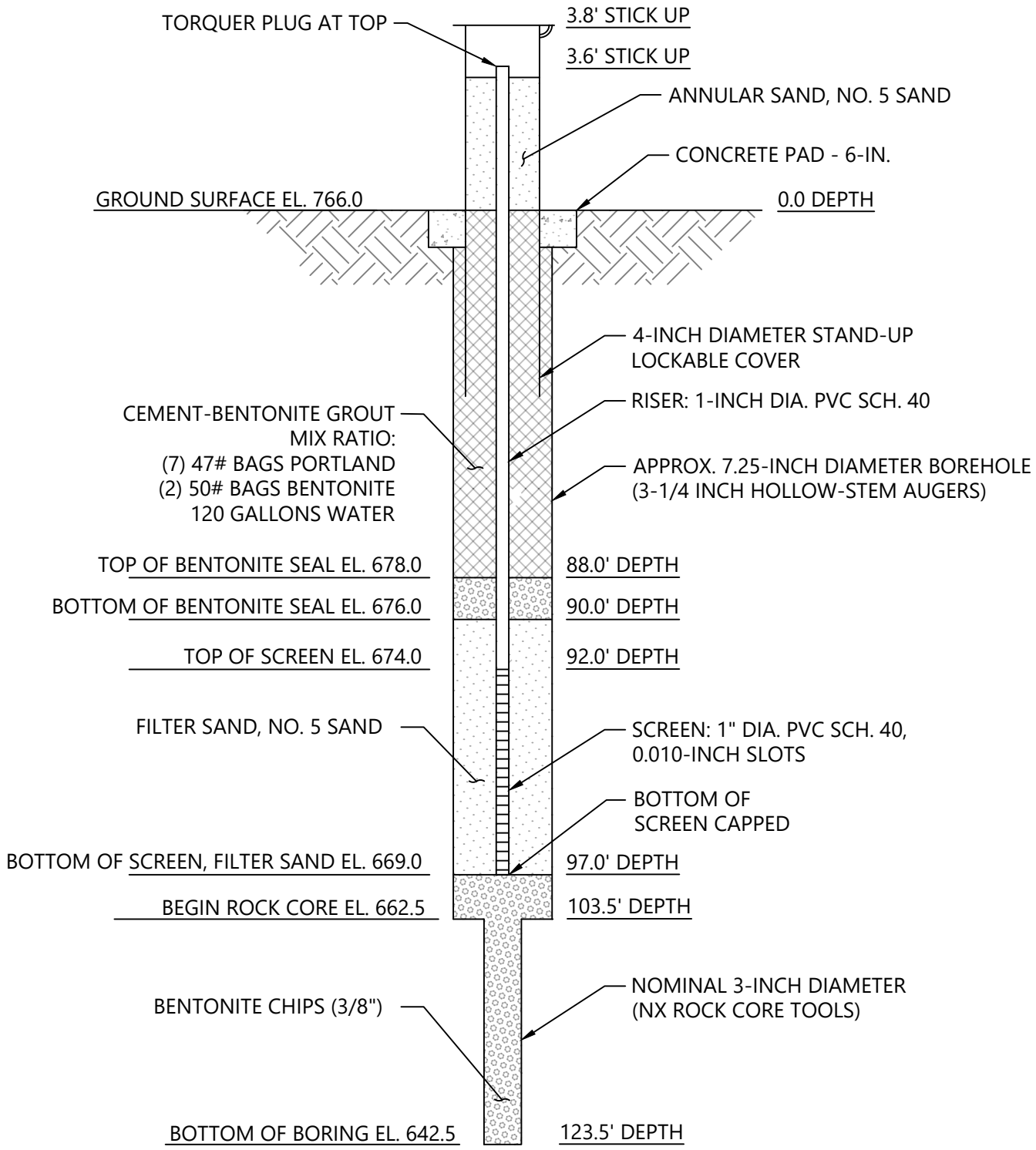
Poston Plant Legacy CCR Impoundment
York Township - Athens County, Ohio

SCALE:	1:369
DATE:	Jan 19, 2026
PROJECT NUMBER:	25170078

FIGURE NO. 3

INSTALL DATE: 08/21/2025
INSTALLER: A. UNVERZAGT
FIELD ENGINEER: M.S. ANSARI
B-01 PIEZOMETER

10' RISER (1-INCH PVC) INSTALLED
IN CONCRETE WITH 9.2' STICK UP
ABOVE GROUND SURFACE

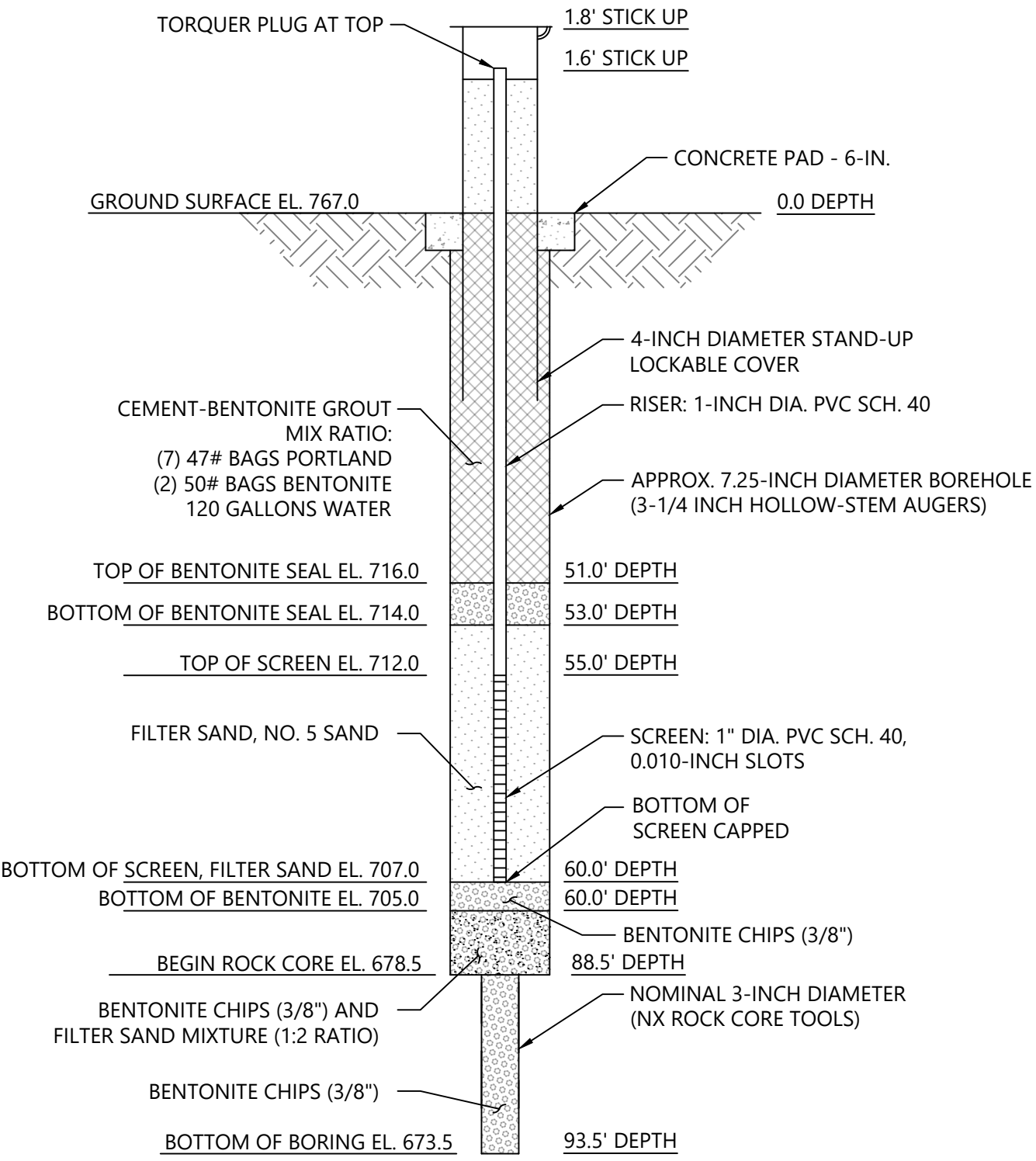


Drawing Path: T:\Columbus-1170\Projects\2025\25170078_AEP_Poston Legacy CCR Impoundment Eval\Civil\CAD\DWG\PIEZO.dwg

	PIEZOMETER B-1	SCALE: NTS	FIGURE NO. 4
	GEOTECHNICAL DATA REPORT POSTON PLANT LEGACY CCR IMPOUNDMENT YORK TOWNSHIP - ATHENS COUNTY, OHIO	DATE: 09/23/2025 PROJECT NUMBER 25170078	

INSTALL DATE: 08/25/2025
INSTALLER: A. UNVERZAGT
FIELD ENGINEER: W. BABIY
B-02 PIEZOMETER

10' RISER (1-INCH PVC) INSTALLED
IN CONCRETE WITH 9.2' STICK UP
ABOVE GROUND SURFACE

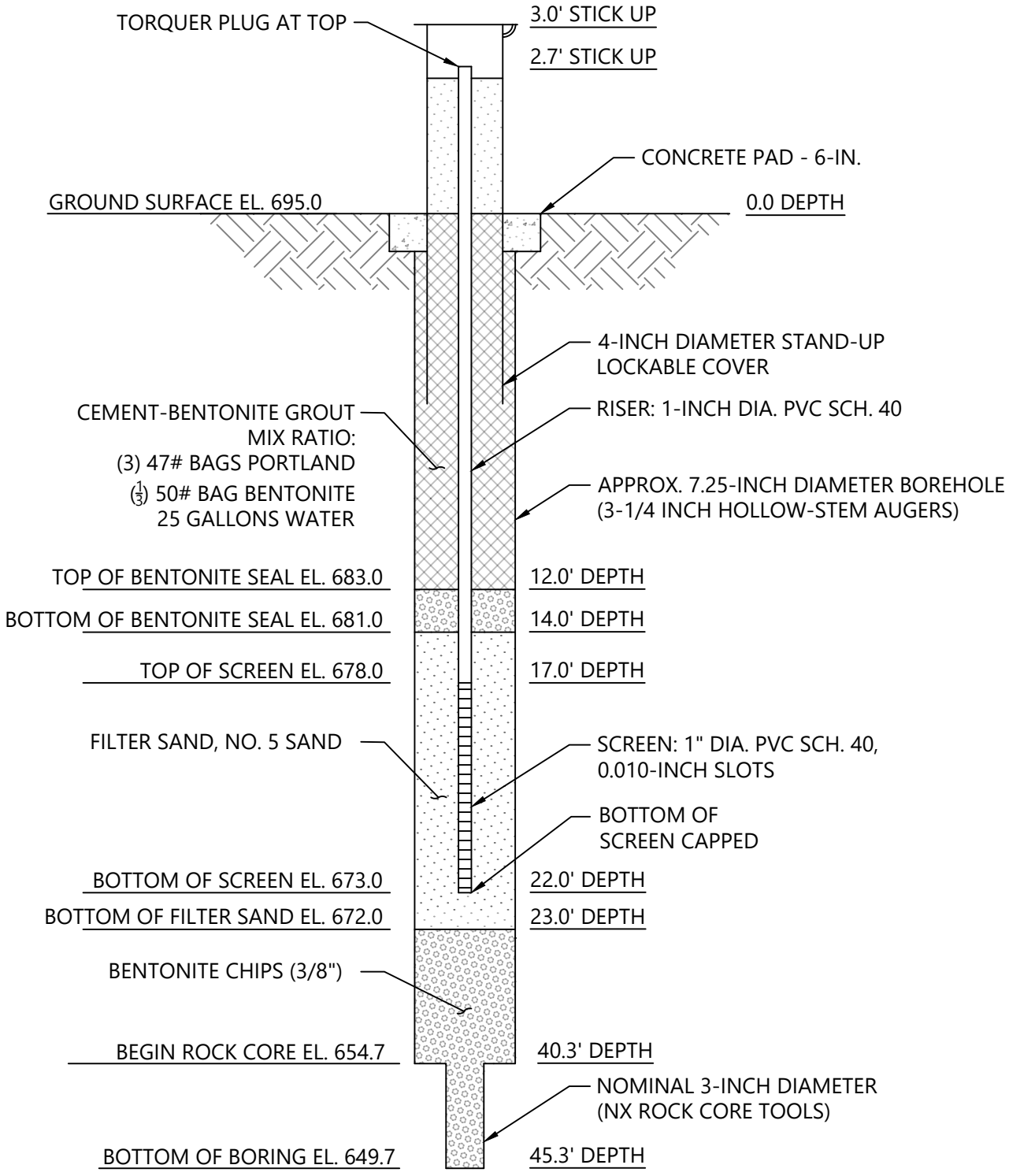


Drawing Path: T:\Columbus-1170\Projects\2025\25170078_AEP_Poston Legacy CCR Impoundment Eval\Civil\CAD\DWG\PIEZO.dwg

	PIEZOMETER B-2	SCALE: NTS	FIGURE NO. 5
	GEOTECHNICAL DATA REPORT POSTON PLANT LEGACY CCR IMPOUNDMENT YORK TOWNSHIP - ATHENS COUNTY, OHIO	DATE: 09/23/2025 PROJECT NUMBER 25170078	

INSTALL DATE: 08/29/2025
INSTALLER: A. UNVERZAGT
FIELD ENGINEER: M.S. ANSARI
B-03 PIEZOMETER

10' RISER (1-INCH PVC) INSTALLED
IN CONCRETE WITH 7.0' STICK UP
ABOVE GROUND SURFACE

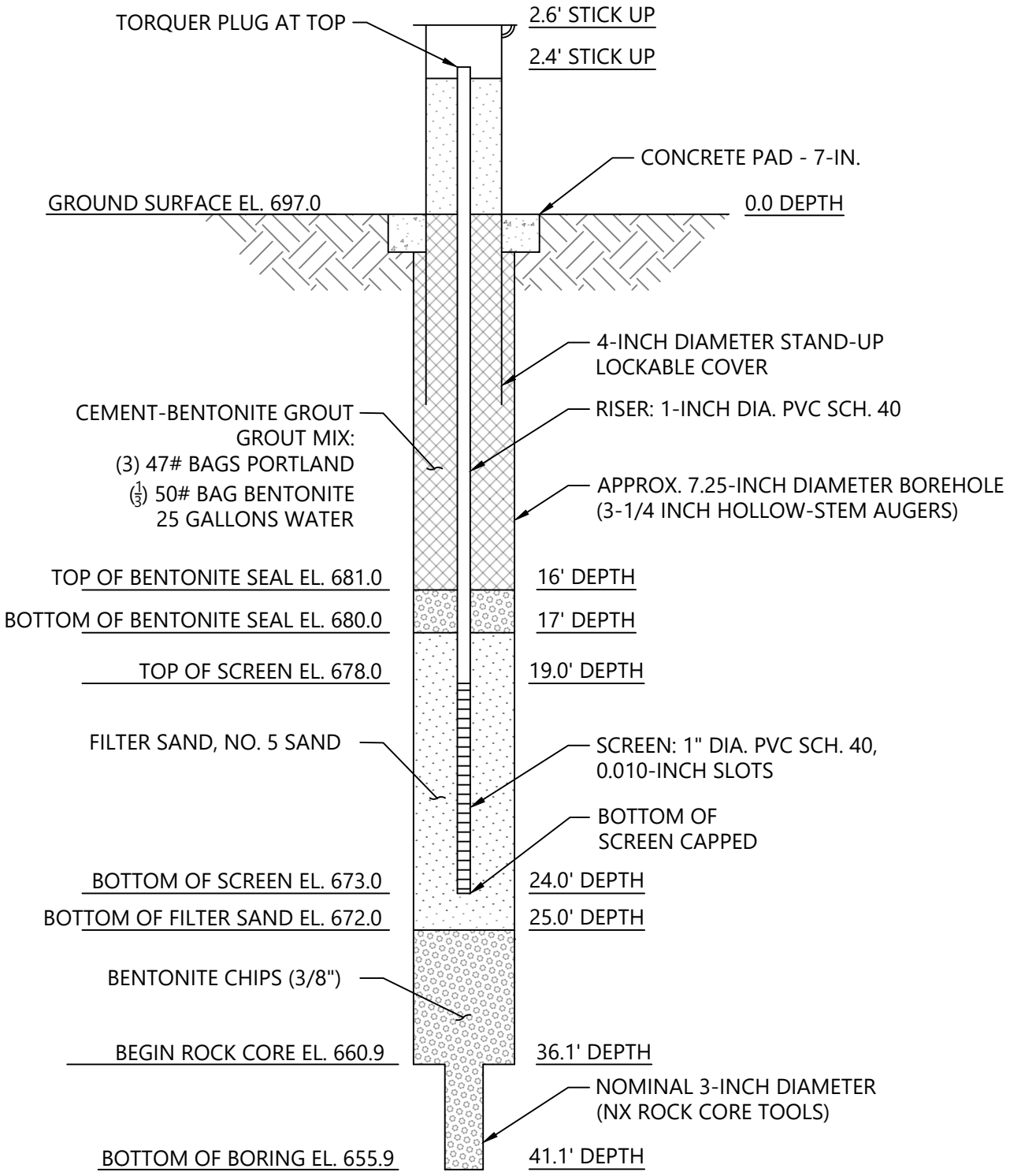


Drawing Path: T:\Columbus-1170\Projects\2025\25170078_AEP_Poston Legacy CCR Impoundment Eval\Civil\CAD\DWG\PIEZO.dwg

	PIEZOMETER B-3	SCALE: NTS	FIGURE NO. 6
	GEOTECHNICAL DATA REPORT POSTON PLANT LEGACY CCR IMPOUNDMENT YORK TOWNSHIP - ATHENS COUNTY, OHIO	DATE: 09/23/2025 PROJECT NUMBER 25170078	

INSTALL DATE: 08/29/2025
INSTALLER: A. UNVERZAGT
FIELD ENGINEER: M.S. ANSARI
B-04 PIEZOMETER

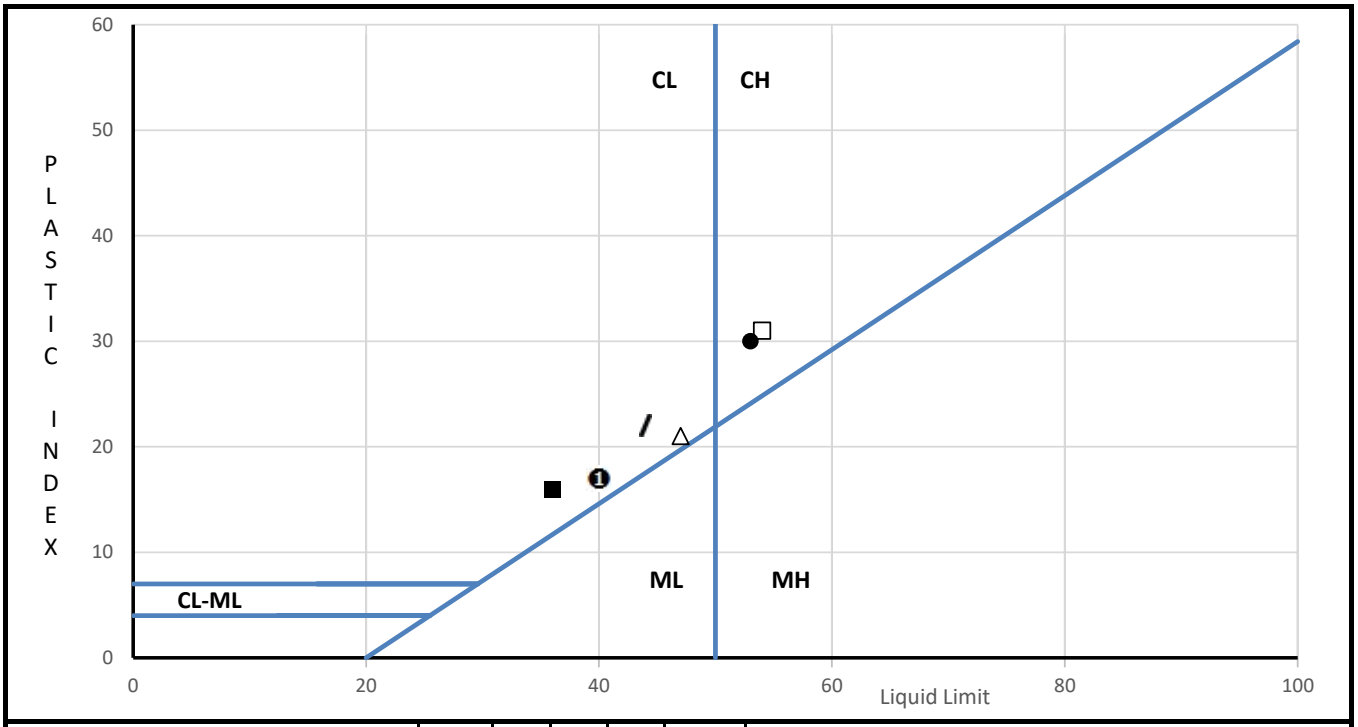
10' RISER (1-INCH PVC) INSTALLED
IN CONCRETE WITH 9.0' STICK UP
ABOVE GROUND SURFACE



Drawing Path: T:\Columbus-1170\Projects\2025\25170078_AEP_Poston Legacy CCR Impoundment Eval\Civil\CAD\DWG\PIEZO.dwg

	PIEZOMETER B-4	SCALE: NTS	FIGURE NO. 7
	GEOTECHNICAL DATA REPORT POSTON PLANT LEGACY CCR IMPOUNDMENT YORK TOWNSHIP - ATHENS COUNTY, OHIO	DATE: 09/23/2025 PROJECT NUMBER 25170078	

Appendix III – Laboratory Test Results

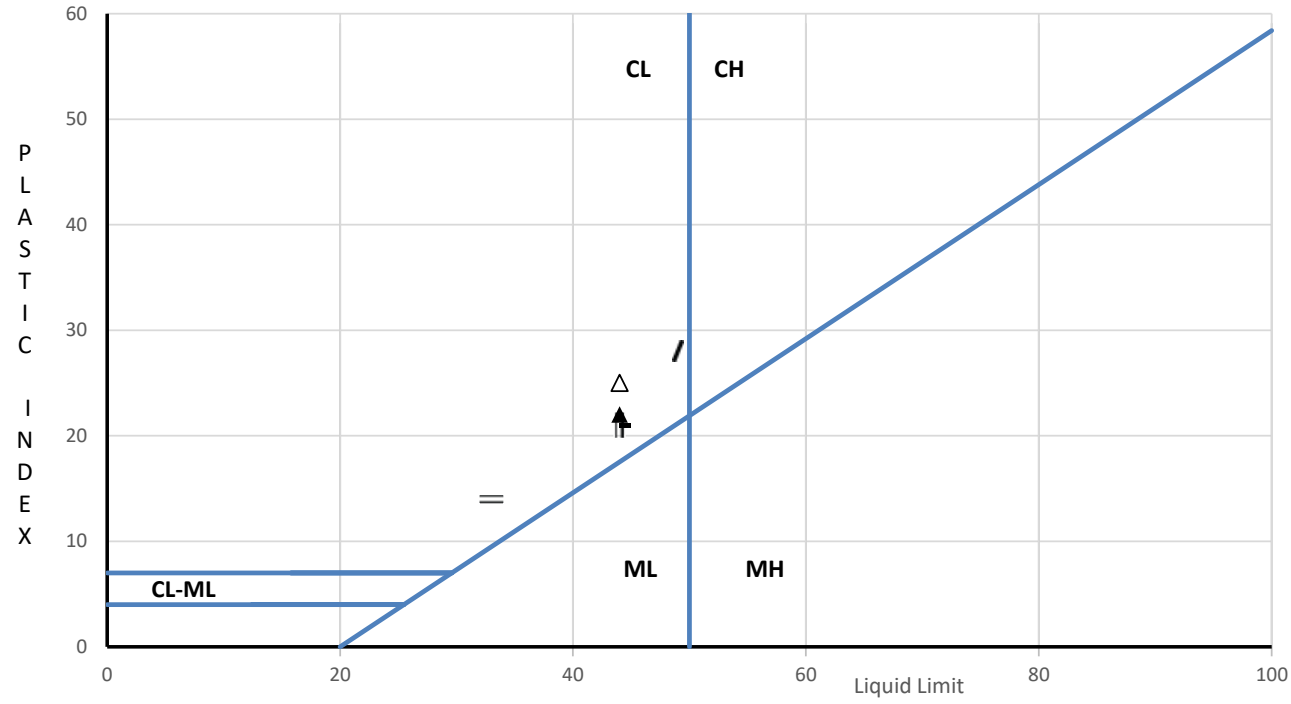


Specimen Identification				MC	LL	PL	PI	Fines	Classification (symbol is based on minus 40 material only when no grain size information is present.)	
	ID	No.	Top Depth						Symbol	Name
■	B-01	S-02	3.5	16.9	36	20	16		CL	
	B-01	S-04	7	17.5						
	B-01	S-06	11	19.9						
●	B-01	S-08	16	26.0	53	23	30		CH	
	B-01	S-10	21	14.1						
	B-01	S-12	26	17.9						
□	B-01	S-14	31	21.8	54	23	31	84.8	CH	FAT CLAY WITH SAND
	B-01	S-16	36	16.8						
△	B-01	S-18	41	20.7	47	26	21		CL	
	B-01	S-20B	45.2	21.2						
	B-01	S-22	48.5	18.3						
	B-01	S-27	58.5	19.2						
/	B-01	S-29	63.5	23.7	44	22	22		CL	
	B-01	S-31	68.5	18.5						
	B-01	S-36	78.5	15.2						
	B-01	S-38	83.5	18.6						
❶	B-01	S-40	88.5	19.0	40	23	17		CL	
	B-01	S-43	96	21.6						
	B-02	S-02	3.5	21.7						
	B-02	S-04	8.5	20.1						

INDEX TEST RESULTS

Project Name	Poston Plant Legacy CCR Impoundment
Project Number	25170078
Approved by	Date
Paula J Manning	10/23/2025

Report Date 12/10/2025



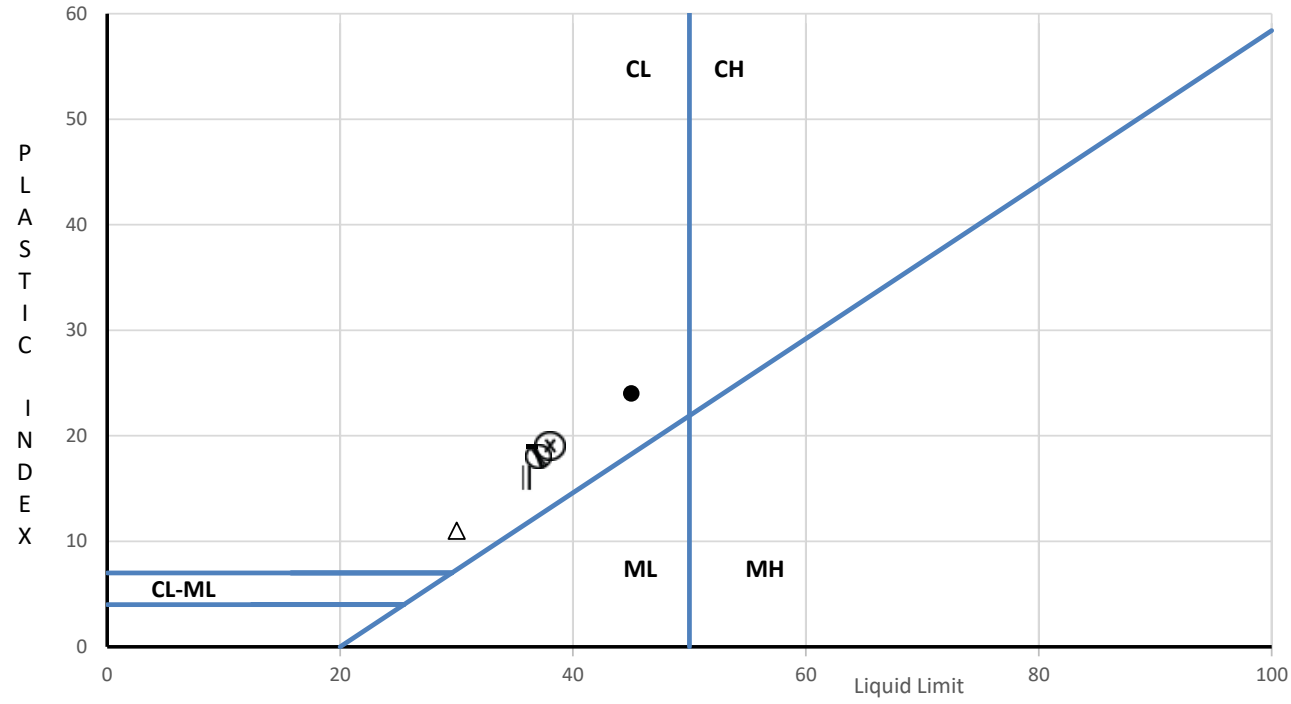
Specimen Identification				MC	LL	PL	PI	Fines	Classification (symbol is based on minus 40 material only when no grain size information is present.)	
	ID	No.	Top Depth						Symbol	Name
	B-02	S-08	16	21.2						
	B-02	S-10	21	21.5						
▲	B-02	S-12	26	20.4	44	22	22		CL	
	B-02	S-14	31	20.4						
▬	B-02	S-16	36	20.7	44	23	21	74.9	CL	LEAN CLAY WITH SAND
	B-02	S-18	41	19.9						
	B-02	S-20	46	20.5						
	B-02	S-22	51	21.9						
△	B-02	S-24	56	19.7	44	19	25		CL	
	B-02	S-27	61	18.2						
	B-02	S-29	66	19.1						
	B-02	S-31	71	19.3						
/	B-02	S-33	76	19.2	49	21	28	84.9	CL	LEAN CLAY WITH SAND
	B-02	S-35	81	20.3						
	B-03	S-02	1.5	18.0						
	B-03	S-04	4.5	14.6						
	B-03	S-06	7.5	19.5						
‖	B-03	S-08	10.5	17.0	44	23	21		CL	
=	B-03	S-10	13.5	12.0	33	19	14	52.8	CL	GRAVELLY LEAN CLAY WITH SAND
	B-03	S-12	16.5	13.8						

INDEX TEST RESULTS

Project Name	Poston Plant Legacy CCR Impoundment
Project Number	25170078

Approved by	Date
Paula J Manning	12/9/2025

Report Date 12/10/2025



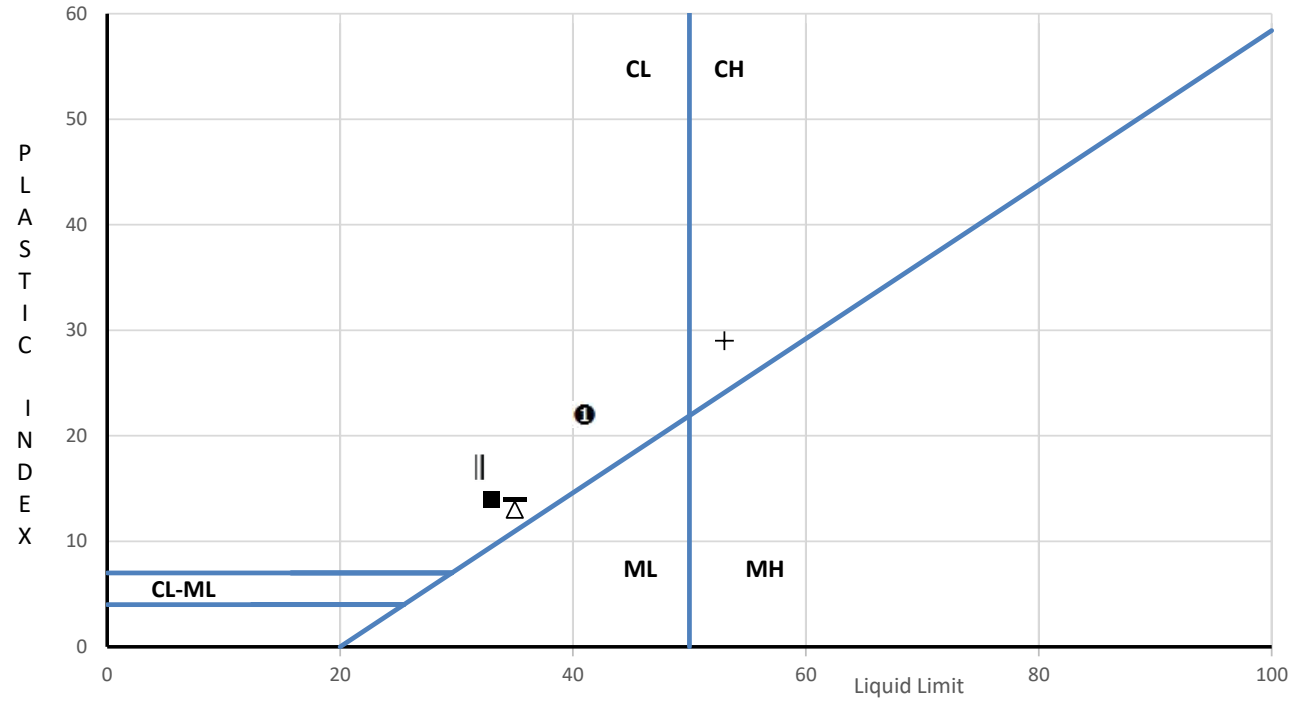
Specimen Identification				MC	LL	PL	PI	Fines	Classification (symbol is based on minus 40 material only when no grain size information is present.)	
	ID	No.	Top Depth						Symbol	Name
	B-03	S-14A	19.5					16.2		
	B-03	S-15	21	19.3						
	B-03	S-17	24	18.2						
●	B-03	S-19	27	22.6	45	21	24		CL	
▬	B-03	S-22	31.5	21.0	36	17	19		CL	
	B-03	S-24	34.5	18.2						
	B-04	S-01	0	16.3						
	B-04	S-03	3	13.7						
△	B-04	S-05	6	15.0	30	19	11	71.6	CL	LEAN CLAY WITH SAND
	B-04	S-07	9	14.8						
	B-04	S-09	12	20.4						
\	B-04	S-12	16.5	23.3	37	19	18		CL	
	B-04	S-13	18	2.1						
	B-04	S-15A	21					11.6		
	B-04	S-17	24	19.0						
⊘	B-04	S-19	27	19.6	37	19	18		CL	
	B-05	S-02	1.5	17.5						
‖	B-05	S-04	4.5	17.6	36	20	16		CL	
	B-05	S-05A	6					8.6		
⊗	B-05	S-06	7.5	17.8	38	19	19		CL	

INDEX TEST RESULTS

Project Name	Poston Plant Legacy CCR Impoundment
Project Number	25170078

Approved by	Date
Paula J Manning	12/10/2025

Report Date 12/10/2025

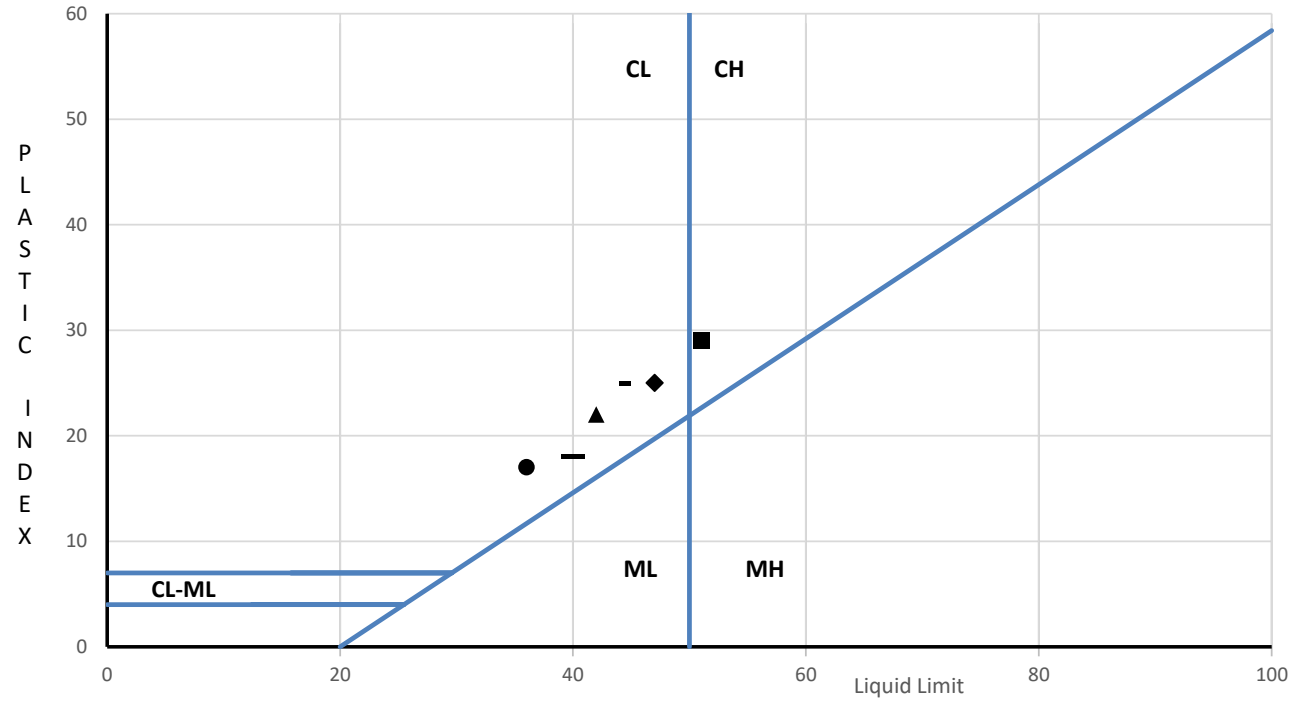


Specimen Identification				MC	LL	PL	PI	Fines	Classification (symbol is based on minus 40 material only when no grain size information is present.)	
	ID	No.	Top Depth						Symbol	Name
■	B-05	S-08	10.5	19.8	33	19	14		CL	
	B-05	S-10	13.5	22.3						
	B-05	S-12	16.5	18.9						
	B-05	S-14	19.5	12.3						
	B-06	S-02	1.5	10.7						
▬	B-06	S-03	3	14.0	35	21	14		CL	
	B-06	S-05	4.5					9.7		
	B-06	S-06	6	19.2						
△	B-06	S-08	9	22.2	35	22	13		CL	
	B-06	S-09	10.5	23.5						
	B-06	S-10	12	20.4						
	B-06	S-14	18	18.9						
	B-06	S-15	19.5	17.0						
	B-07	S-03	3	21.8						
+	B-07	S-04	4.5	21.5	53	24	29	78.9	CH	FAT CLAY WITH SAND
	B-07	S-06	8	25.9						
❶	B-07	S-08	11	18.0	41	19	22	88.1	CL	LEAN CLAY
‖	B-07	S-10	14	9.4	32	15	17		CL	

INDEX TEST RESULTS

Project Name	Poston Plant Legacy CCR Impoundment
Project Number	25170078
Approved by	Date
Paula J Manning	11/6/2025

Report Date 12/10/2025



Specimen Identification				MC	LL	PL	PI	Fines	Classification (symbol is based on minus 40 material only when no grain size information is present.)	
	ID	No.	Top Depth						Symbol	Name
■	B-01	S-03	5	25.8	51	22	29	90.0	CH	FAT CLAY
◆	B-01	S-25	55	19.5	47	22	25	78.1	CL	LEAN CLAY WITH SAND
▲	B-01	S-34	75	18.6	42	20	22	88.4	CL	LEAN CLAY
●	B-02	S-06	12.5	20.4	36	19	17	75.6	CL	LEAN CLAY WITH SAND
▬	B-02	S-37	85	21.2	44	19	25	83.4	CL	LEAN CLAY WITH SAND
▬	B-07	S-05	6	21.4	40	22	18	76.9	CL	LEAN CLAY WITH SAND

INDEX TEST RESULTS

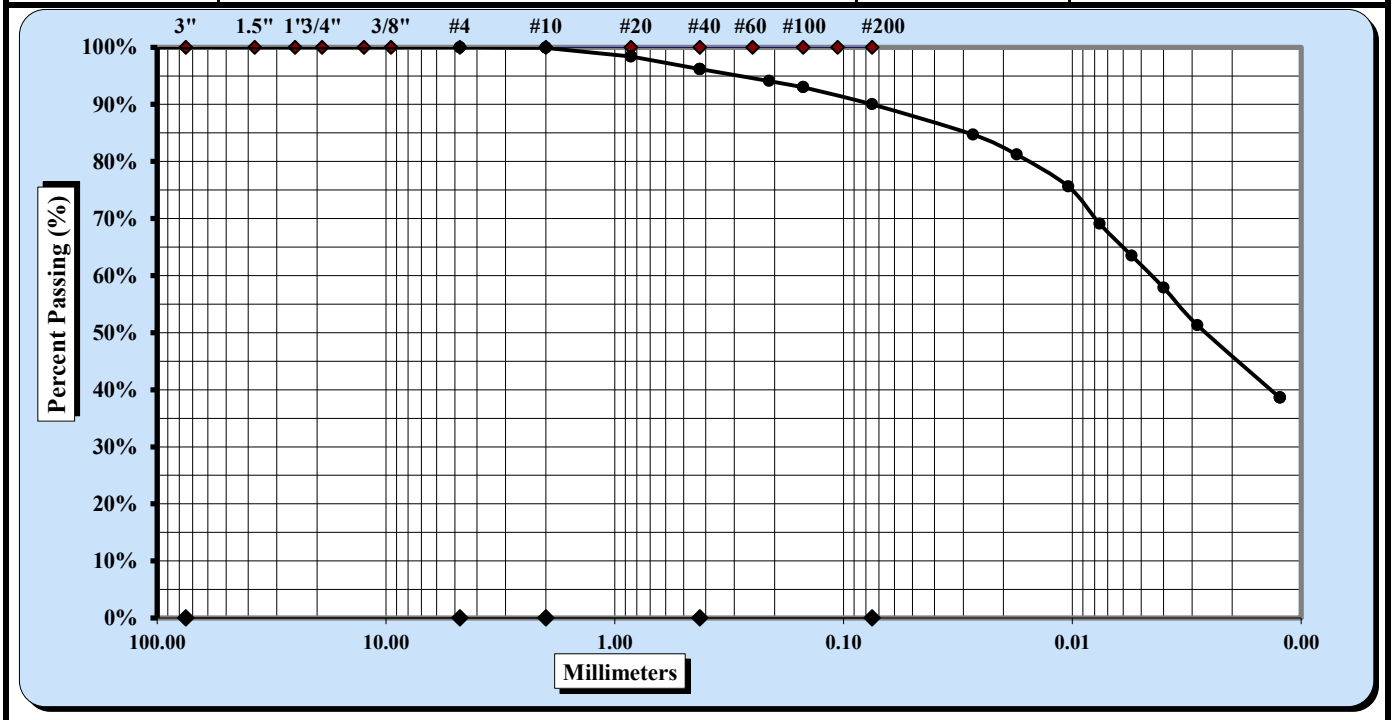
Project Name	Poston Plant Legacy CCR Impoundment
Project Number	25170078
Approved by	Date
Paula J Manning	1/5/2026

Report Date 1/13/2026

ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	1/12/2026
Test Date	12/16/2025
Sample Date	8/19/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS2025093091	Sample Type	UD
Location ID	B-01	Sample Top Depth	5
Sample Reference	S-03	Sample Base Depth	6.3
Description	FAT CLAY (CH), trace fine to coarse sand	Method	ASTM D422
Classification:	FAT CLAY (CH)		



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**2 mm**	Coarse Sand	0.1	Fine Sand	6.2
Gravel	0.0	Medium Sand	3.7	Silt & Clay	90.0
Liquid Limit	51	Plastic Limit	22	Plastic Index	29

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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EGoodyear — *Tested by* — *Columbus*

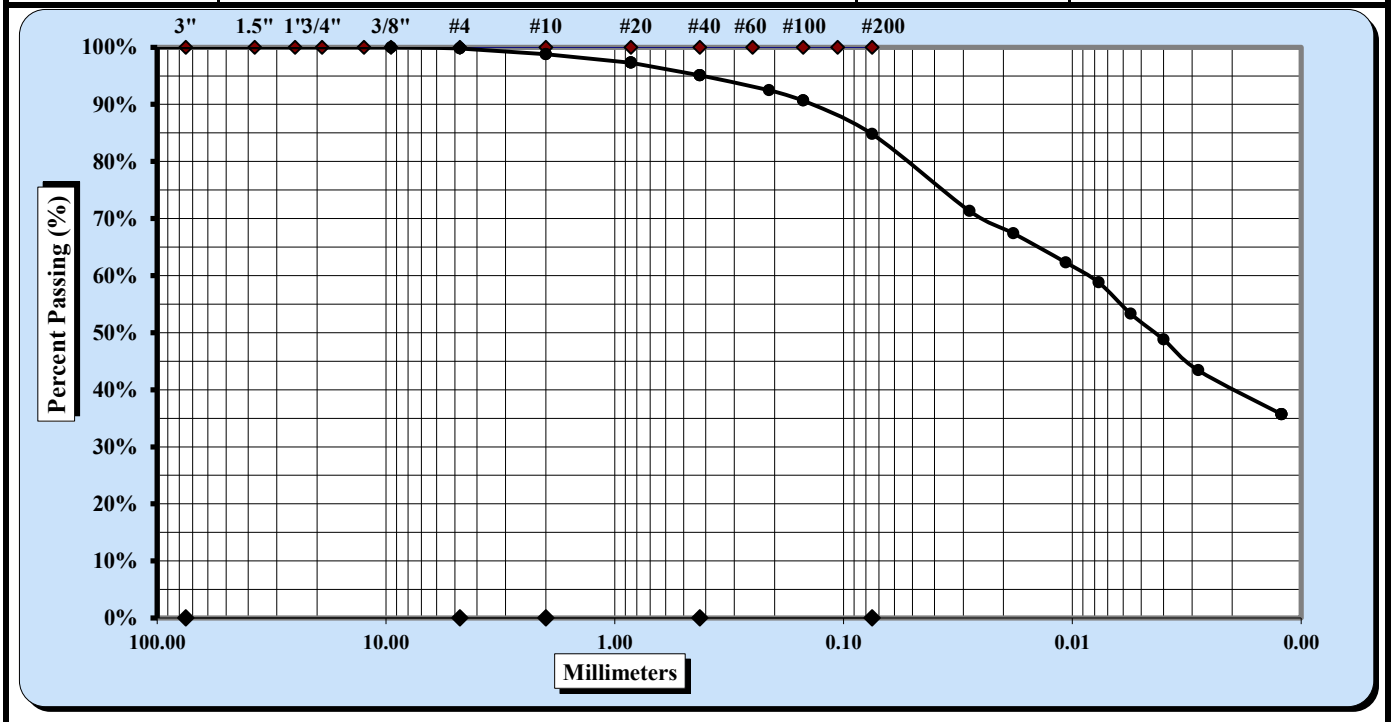
pmanning — *Approved by* — *6190 Enterprise Court, Dublin, OH 43016-7297*

Paula J. Manning — *Signature*

ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	12/10/2025
Test Date	10/14/2025
Sample Date	8/19/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS2025093078	Sample Type	SS
Location ID	B-01	Sample Top Depth	31
Sample Reference	S-14	Sample Base Depth	32.5
Description	FAT CLAY WITH SAND (CH), trace fine gravel	Method	ASTM D422
Classification:	FAT CLAY WITH SAND (CH)		



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**4.75 mm**	Coarse Sand	1.0	Fine Sand	10.3
Gravel	0.2	Medium Sand	3.7	Silt & Clay	84.8
Liquid Limit	54	Plastic Limit	23	Plastic Index	31

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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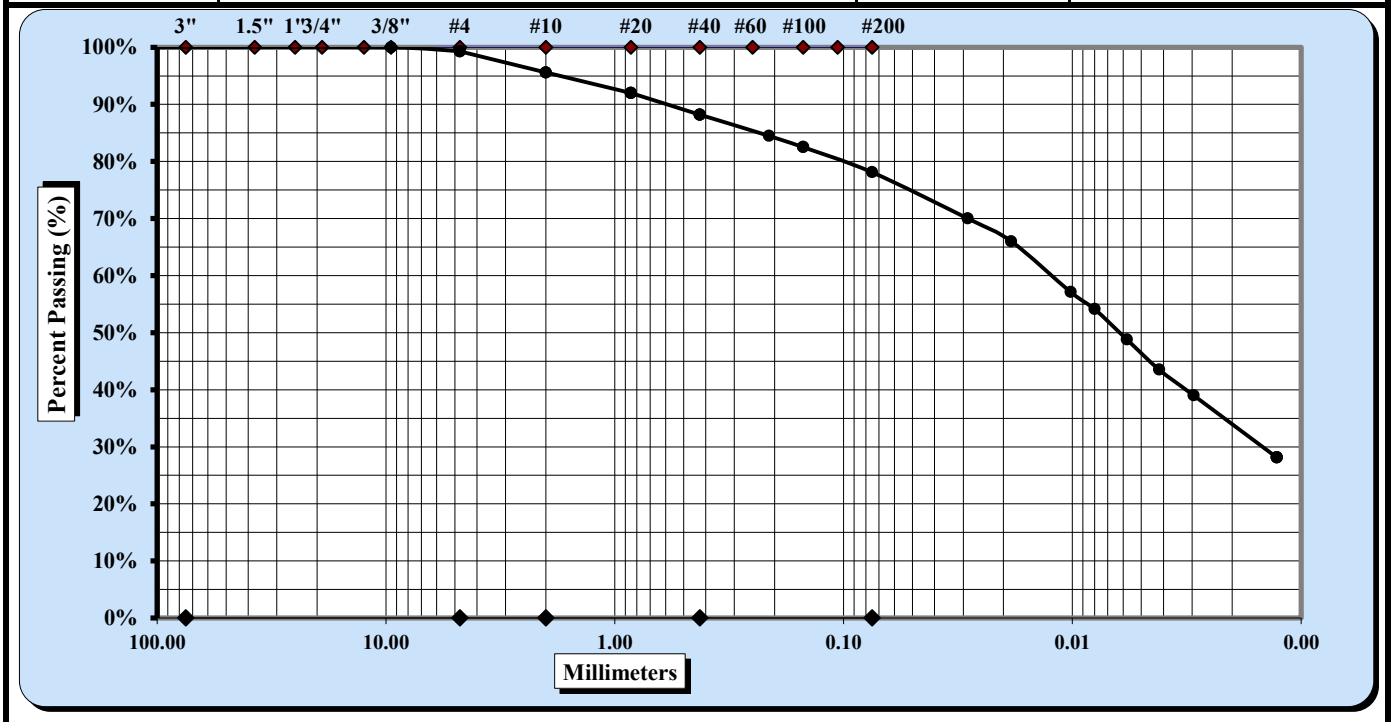
EGoodyear	pmanning	Paula J. Manning
Tested by	*Approved by*	*Signature*
Columbus	*6190 Enterprise Court, Dublin, OH 43016-7297*	

ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	1/12/2026
Test Date	12/30/2025
Sample Date	8/19/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS2025093092	Sample Type	UD
Location ID	B-01	Sample Top Depth	55
Sample Reference	S-25	Sample Base Depth	56.8
Description	LEAN CLAY WITH SAND (CL), trace fine gravel	Method	ASTM D422
Classification:	LEAN CLAY WITH SAND (CL)		



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**4.75 mm**	Coarse Sand	3.7	Fine Sand	10.1
Gravel	0.7	Medium Sand	7.4	Silt & Clay	78.1
Liquid Limit	47	Plastic Limit	22	Plastic Index	25

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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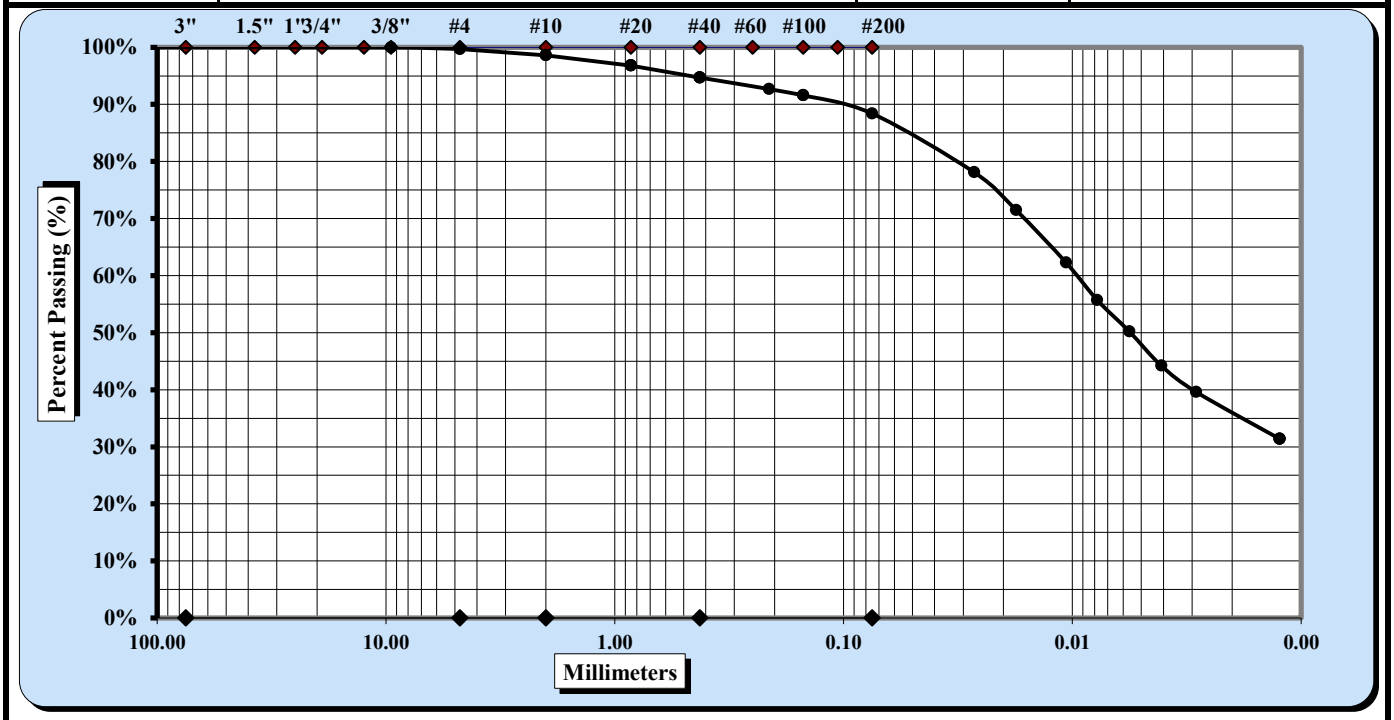
Columbus	*6190 Enterprise Court, Dublin, OH 43016-7297*	

ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	1/12/2026
Test Date	11/3/2025
Sample Date	8/19/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS2025093086	Sample Type	UD
Location ID	B-01	Sample Top Depth	75
Sample Reference	S-34	Sample Base Depth	76.3
Description	LEAN CLAY (CL), little fine to coarse sand, trace fine gravel	Method	ASTM D422
Classification:	LEAN CLAY (CL)		



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**4.75 mm**	Coarse Sand	1.1	Fine Sand	6.3
Gravel	0.3	Medium Sand	3.9	Silt & Clay	88.4
Liquid Limit	42	Plastic Limit	20	Plastic Index	22

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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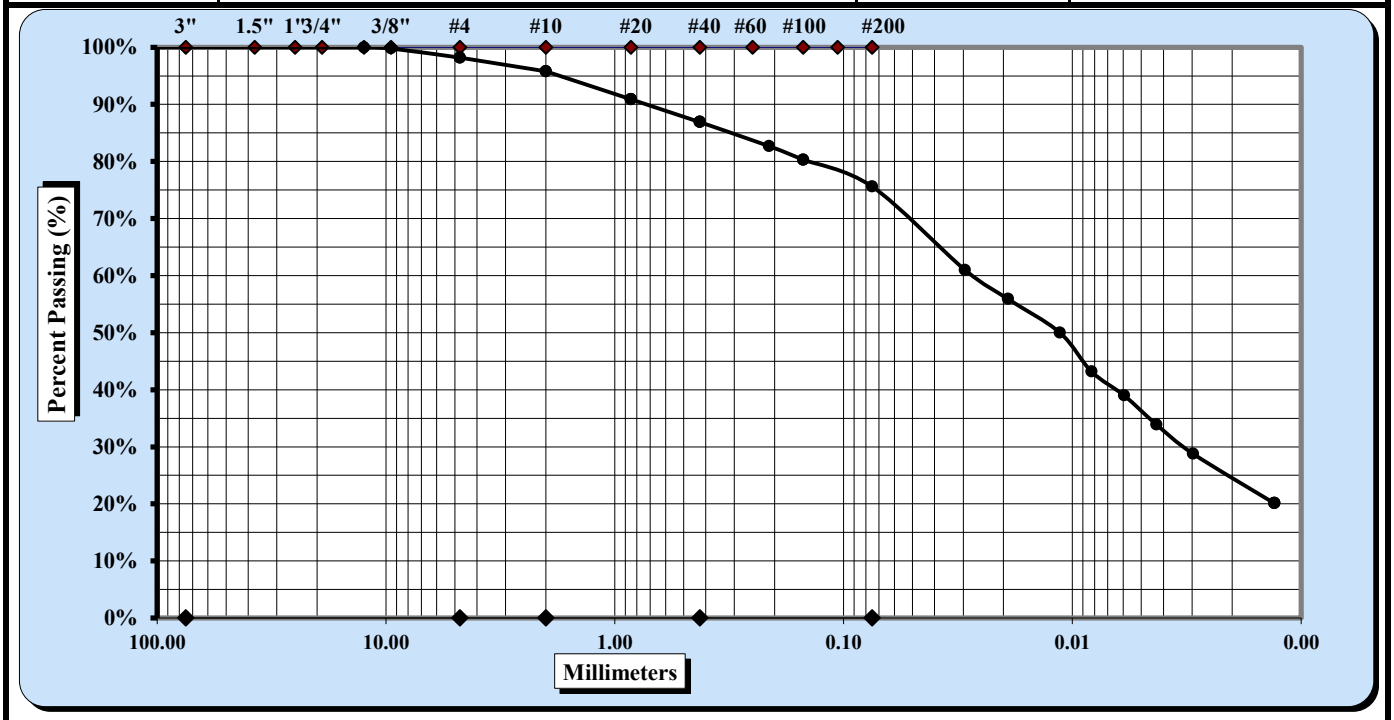
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	1/12/2026
Test Date	12/22/2025
Sample Date	8/20/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930109	Sample Type	UD
Location ID	B-02	Sample Top Depth	12.5
Sample Reference	S-06	Sample Base Depth	14.1
Description	LEAN CLAY WITH SAND (CL), trace fine gravel	Method	ASTM D422
Classification:	LEAN CLAY WITH SAND (CL)		



ASTM PARTICLE SIZE DEFINITIONS			
Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**9.5 mm**	Coarse Sand	2.4	Fine Sand	11.3
Gravel	1.8	Medium Sand	8.9	Silt & Clay	75.6
Liquid Limit	36	Plastic Limit	19	Plastic Index	17

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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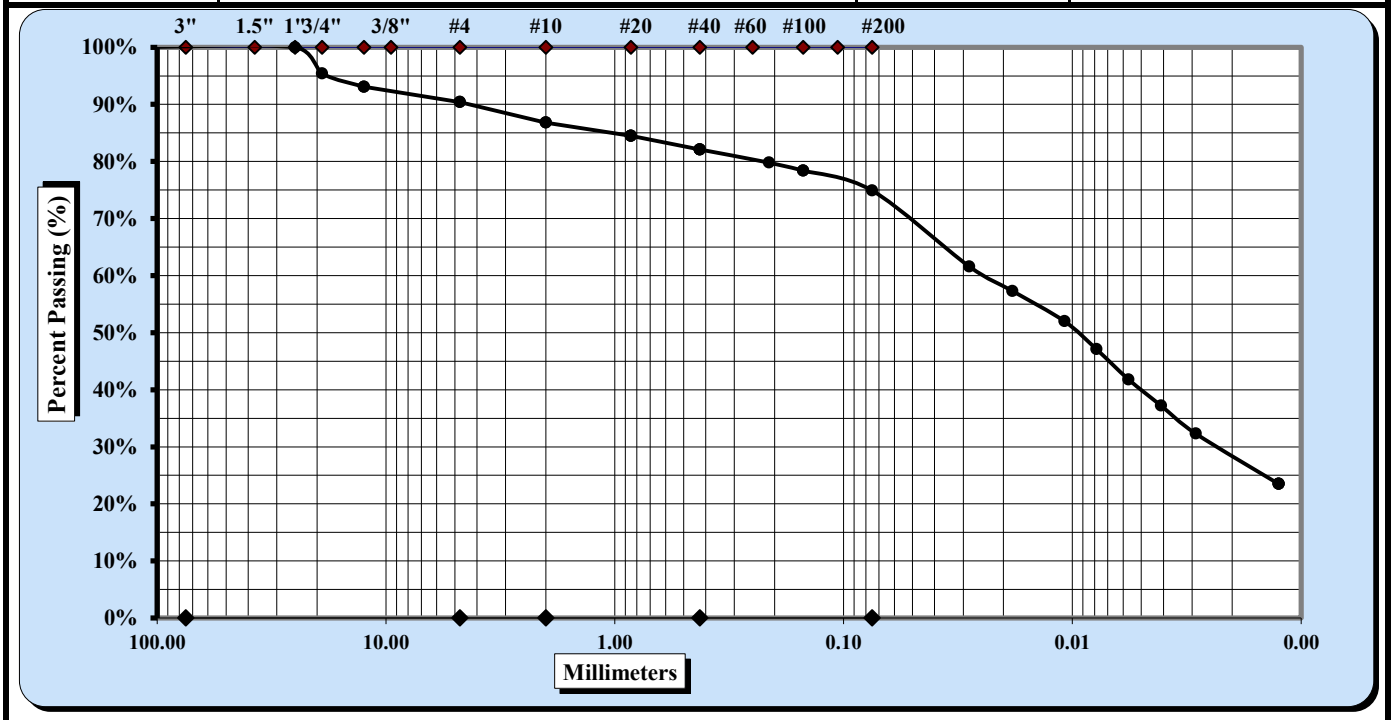
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	12/10/2025
Test Date	10/14/2025
Sample Date	8/20/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS2025093099	Sample Type	SS
Location ID	B-02	Sample Top Depth	36
Sample Reference	S-16	Sample Base Depth	37.5
Description	LEAN CLAY WITH SAND (CL), trace fine to coarse gravel	Method	ASTM D422
Classification:	LEAN CLAY WITH SAND (CL)		



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**25 mm**	Coarse Sand	3.6	Fine Sand	7.2
Gravel	9.6	Medium Sand	4.7	Silt & Clay	74.9
Liquid Limit	44	Plastic Limit	23	Plastic Index	21

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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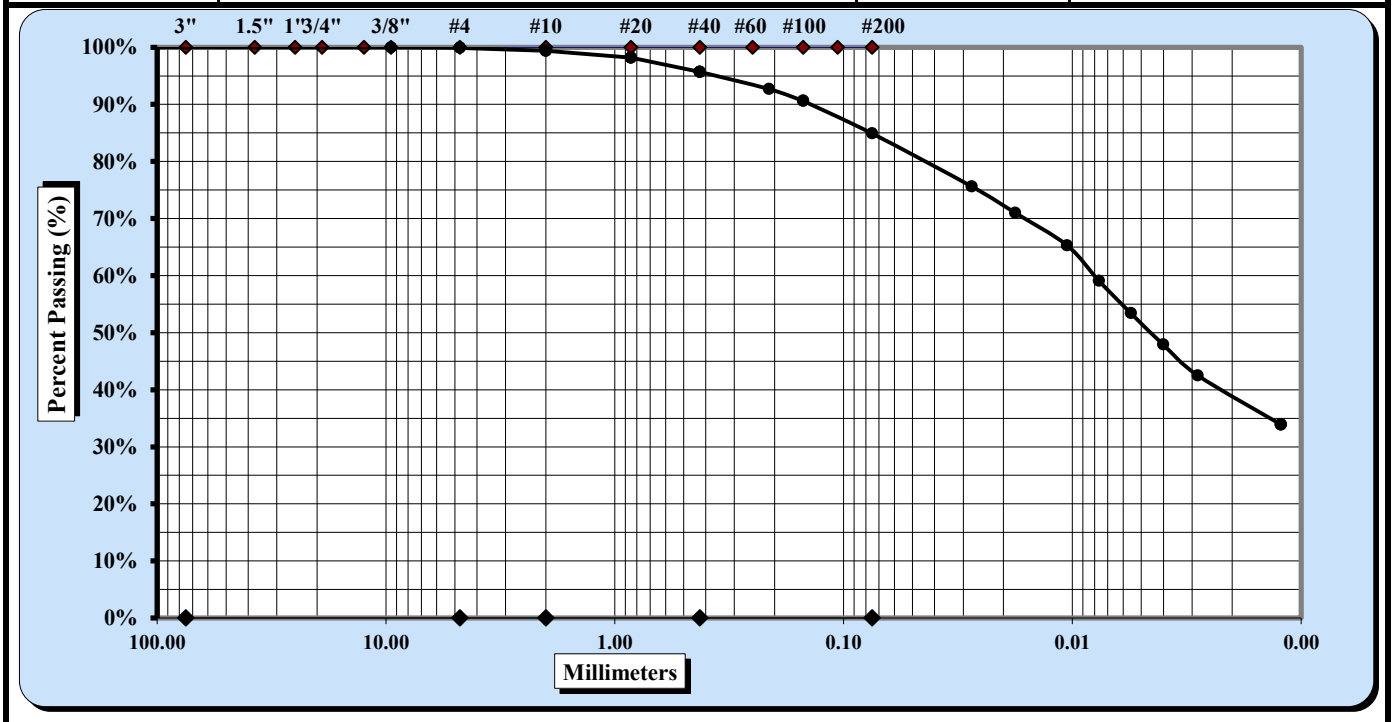
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	12/10/2025
Test Date	10/14/2025
Sample Date	8/20/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930107	Sample Type	SS
Location ID	B-02	Sample Top Depth	76
Sample Reference	S-33	Sample Base Depth	77.5
Description	LEAN CLAY WITH SAND (CL), trace fine gravel	Method	ASTM D422
Classification:	LEAN CLAY WITH SAND (CL)		



ASTM PARTICLE SIZE DEFINITIONS			
Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**2 mm**	Coarse Sand	0.5	Fine Sand	10.8
Gravel	0.1	Medium Sand	3.7	Silt & Clay	84.9
Liquid Limit	49	Plastic Limit	21	Plastic Index	28

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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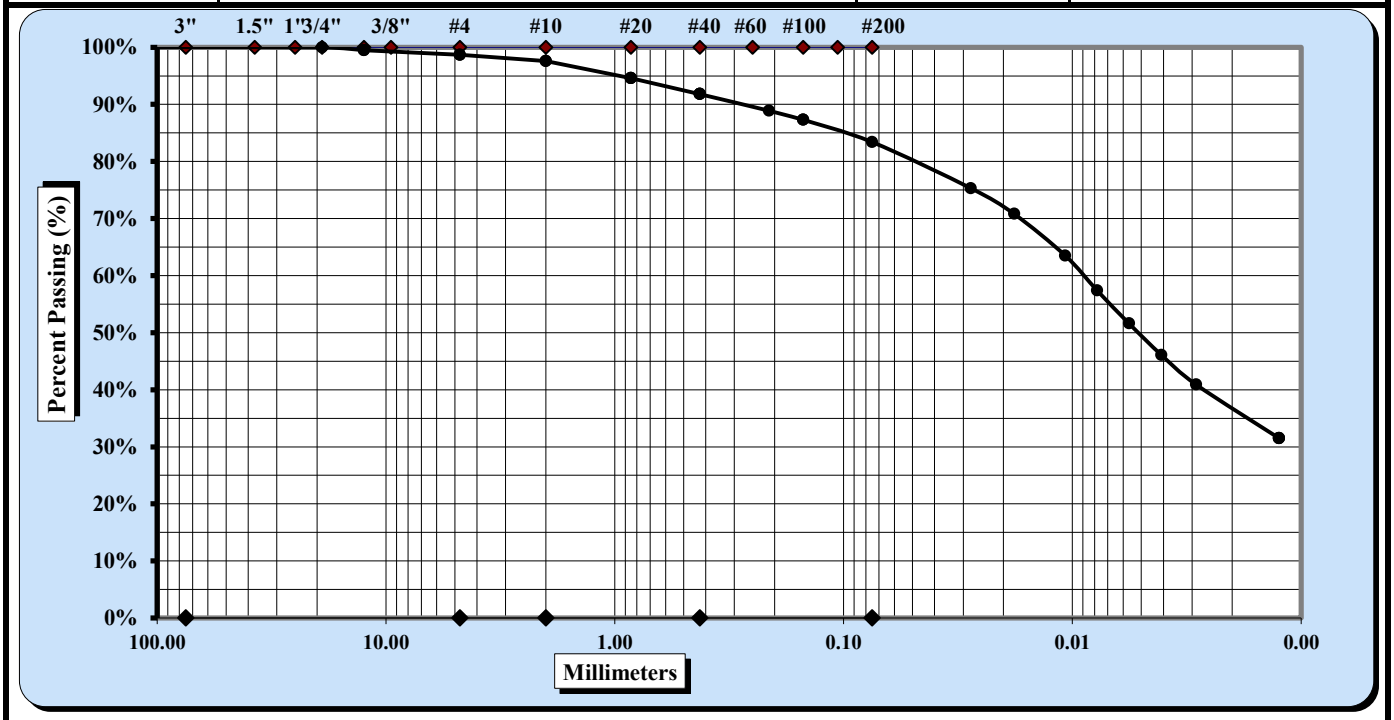
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	1/12/2026
Test Date	11/3/2025
Sample Date	8/20/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930110	Sample Type	UD
Location ID	B-02	Sample Top Depth	85
Sample Reference	S-37	Sample Base Depth	86.5
Description	LEAN CLAY WITH SAND (CL), trace fine gravel	Method	ASTM D422
Classification:	LEAN CLAY WITH SAND (CL)		



ASTM PARTICLE SIZE DEFINITIONS			
Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**12.5 mm**	Coarse Sand	1.1	Fine Sand	8.4
Gravel	1.3	Medium Sand	5.8	Silt & Clay	83.4
Liquid Limit	44	Plastic Limit	19	Plastic Index	25

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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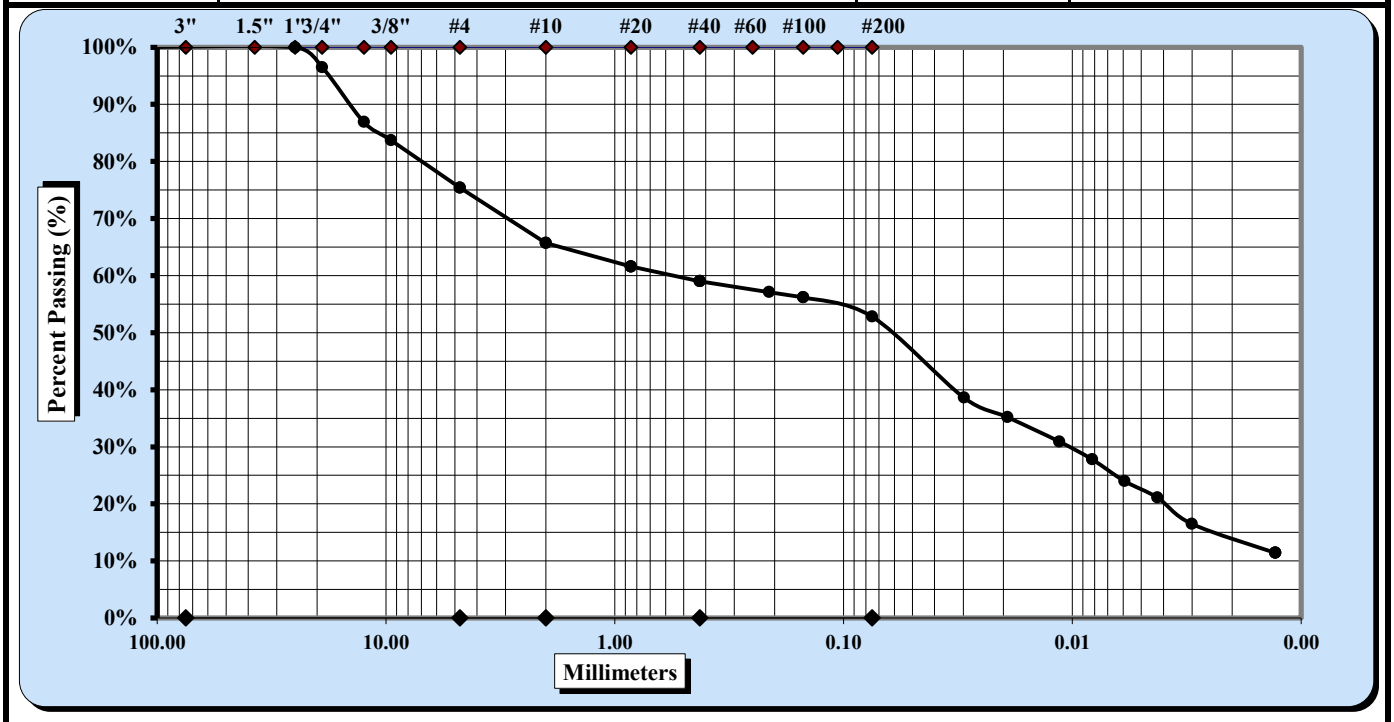
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	12/10/2025
Test Date	10/14/2025
Sample Date	8/28/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930115	Sample Type	SS
Location ID	B-03	Sample Top Depth	13.5
Sample Reference	S-10	Sample Base Depth	15
Description	GRAVELLY LEAN CLAY WITH SAND (CL)	Method	ASTM D422
Classification:	GRAVELLY LEAN CLAY WITH SAND (CL)		



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**25 mm**	Coarse Sand	9.7	Fine Sand	6.2
Gravel	24.6	Medium Sand	6.7	Silt & Clay	52.8
Liquid Limit	33	Plastic Limit	19	Plastic Index	14

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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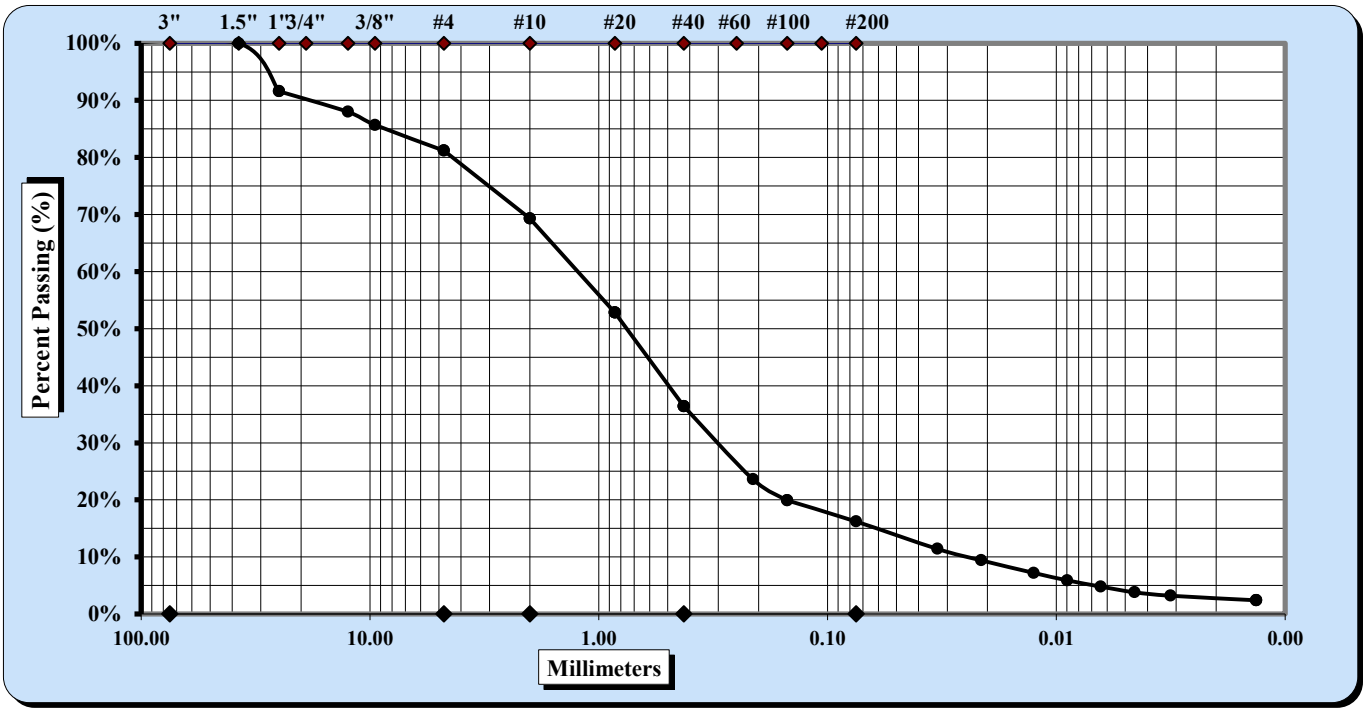
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	12/10/2025
Test Date	10/13/2025
Sample Date	8/28/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930117	Sample Type	SS
Location ID	B-03	Sample Top Depth	19.5
Sample Reference	S-14A	Sample Base Depth	21
Description	Visual: CLAYEY SAND WITH GRAVEL (SC)	Method	ASTM D422



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**37.5 mm**	Coarse Sand	11.9	Fine Sand	20.2
Gravel	18.8	Medium Sand	32.9	Silt & Clay	16.2
Liquid Limit	ND	Plastic Limit	ND	Plastic Index	ND

Cc = 3.00 **Cu = 50.75**

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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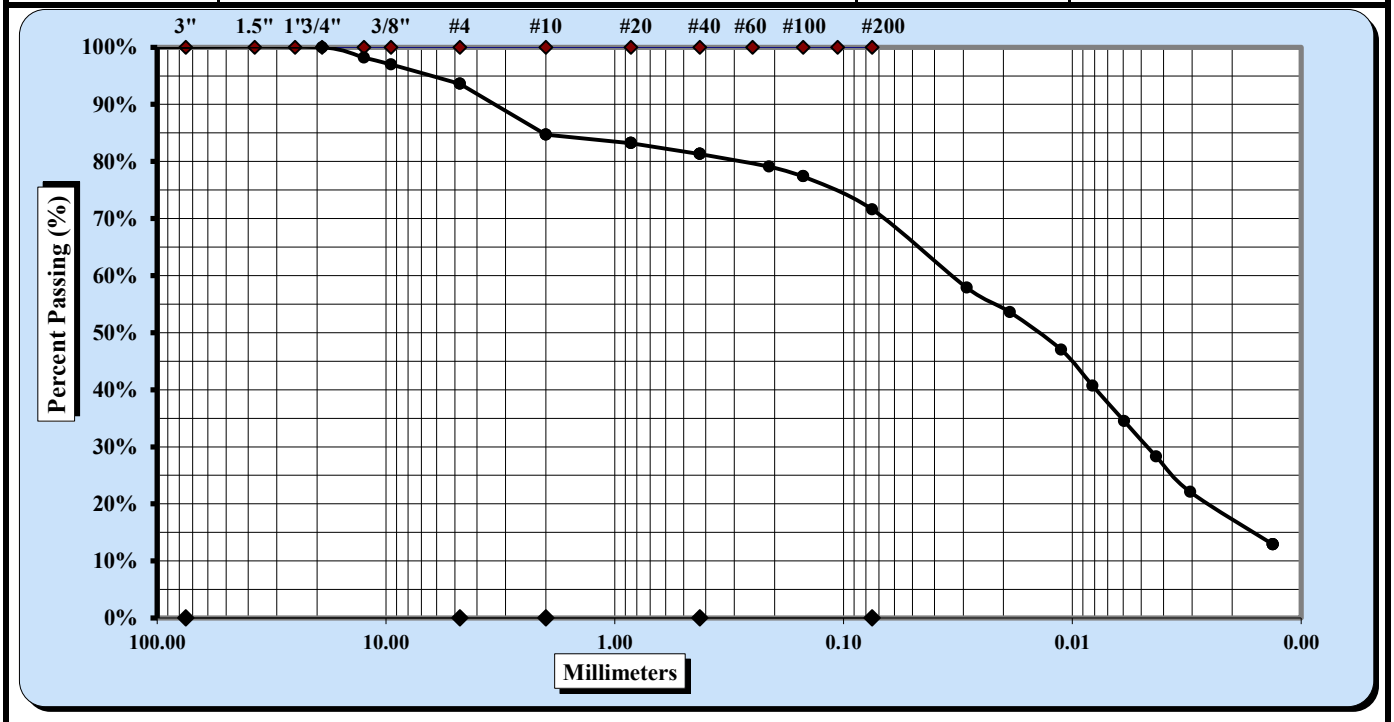
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	12/10/2025
Test Date	10/30/2025
Sample Date	8/27/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930125	Sample Type	SS
Location ID	B-04	Sample Top Depth	6
Sample Reference	S-05	Sample Base Depth	7.5
Description	LEAN CLAY WITH SAND (CL), trace fine gravel	Method	ASTM D422
Classification:	LEAN CLAY WITH SAND (CL)		



ASTM PARTICLE SIZE DEFINITIONS			
Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**19 mm**	Coarse Sand	8.9	Fine Sand	9.7
Gravel	6.4	Medium Sand	3.4	Silt & Clay	71.6
Liquid Limit	30	Plastic Limit	19	Plastic Index	11

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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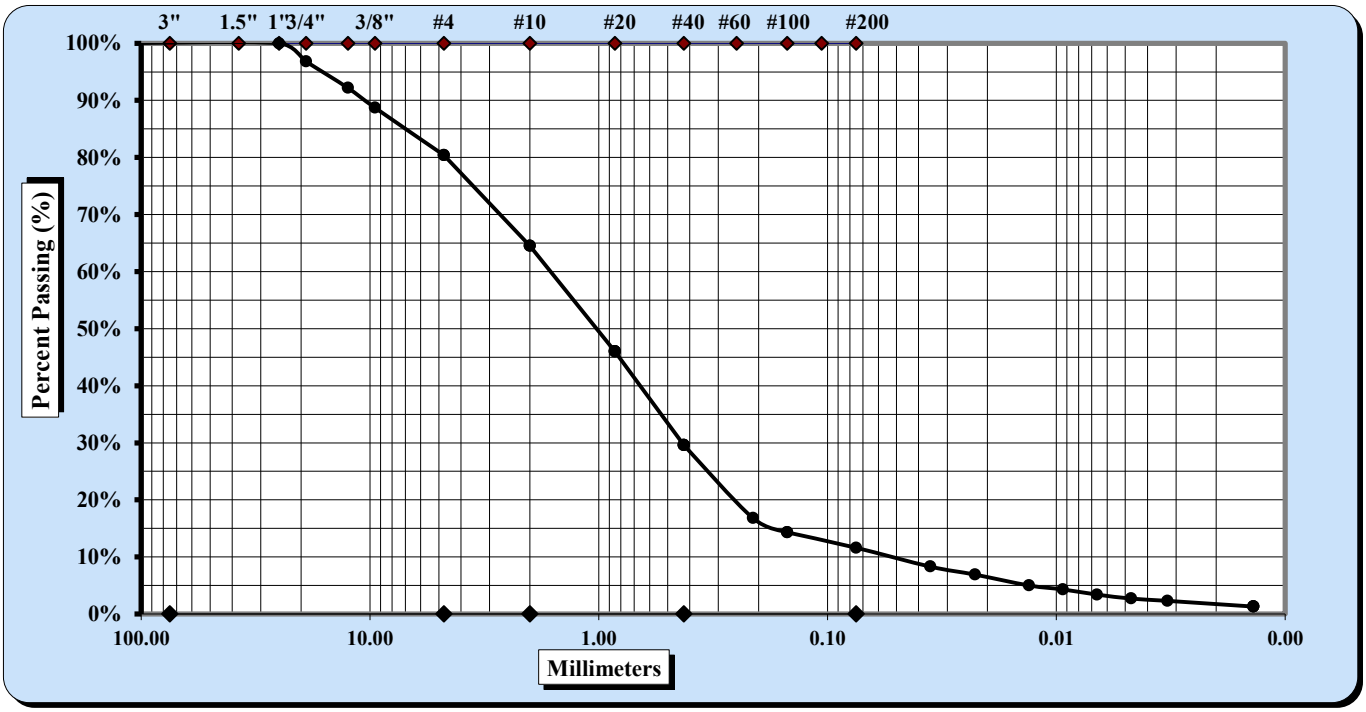
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	1/19/2026
Test Date	10/29/2025
Sample Date	8/27/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930130	Sample Type	SS
Location ID	B-04	Sample Top Depth	21
Sample Reference	S-15A	Sample Base Depth	22.5
Description	Visual: WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC)	Method	ASTM D422



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**25 mm**	Coarse Sand	15.9	Fine Sand	18.0
Gravel	19.6	Medium Sand	34.9	Silt & Clay	11.6
Liquid Limit	ND	Plastic Limit	ND	Plastic Index	ND

Cc = 2.20 **Cu = 31.09**

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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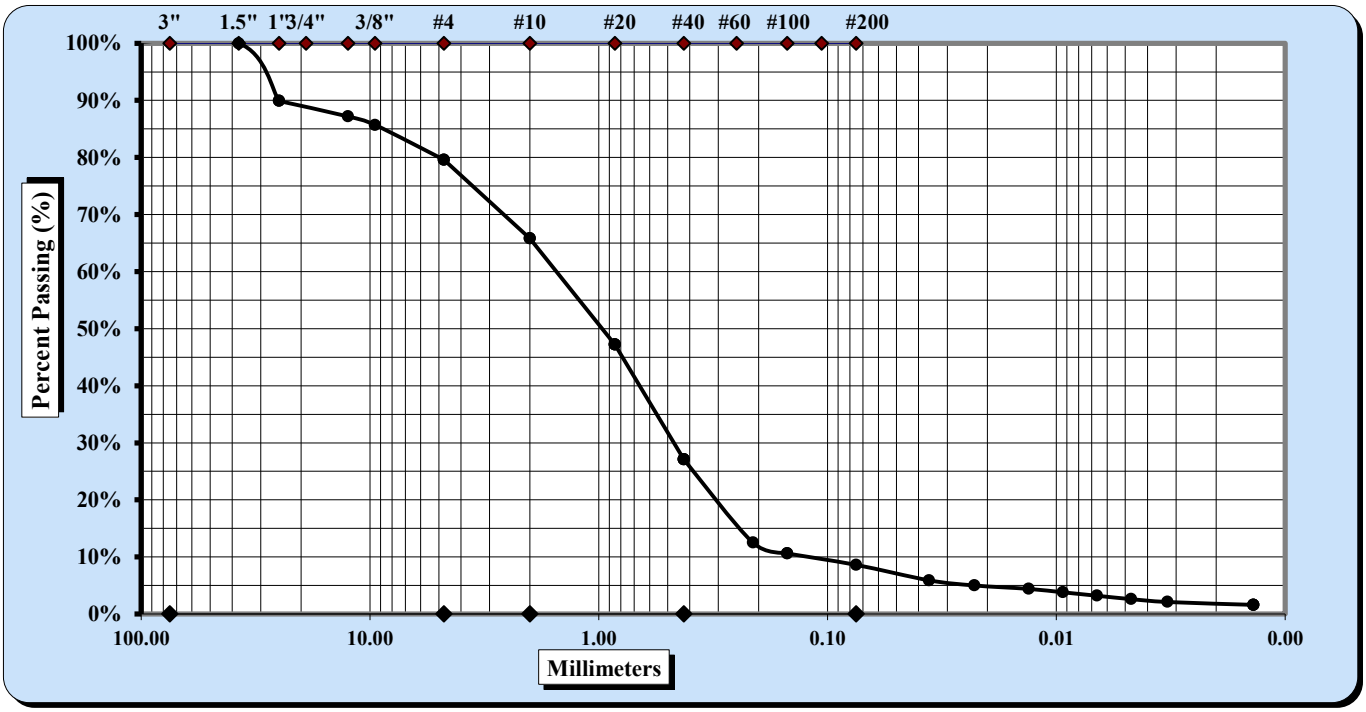
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	12/10/2025
Test Date	10/29/2025
Sample Date	8/26/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930135	Sample Type	SS
Location ID	B-05	Sample Top Depth	6
Sample Reference	S-05A	Sample Base Depth	7.5
Description	Visual: WELL GRADED SAND WITH SILT AND GRAVEL (SW-SM)	Method	ASTM D422



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**37.5 mm**	Coarse Sand	13.8	Fine Sand	18.5
Gravel	20.4	Medium Sand	38.7	Silt & Clay	8.6
Liquid Limit	ND	Plastic Limit	ND	Plastic Index	ND

Cc = 1.18 **Cu = 12.57**

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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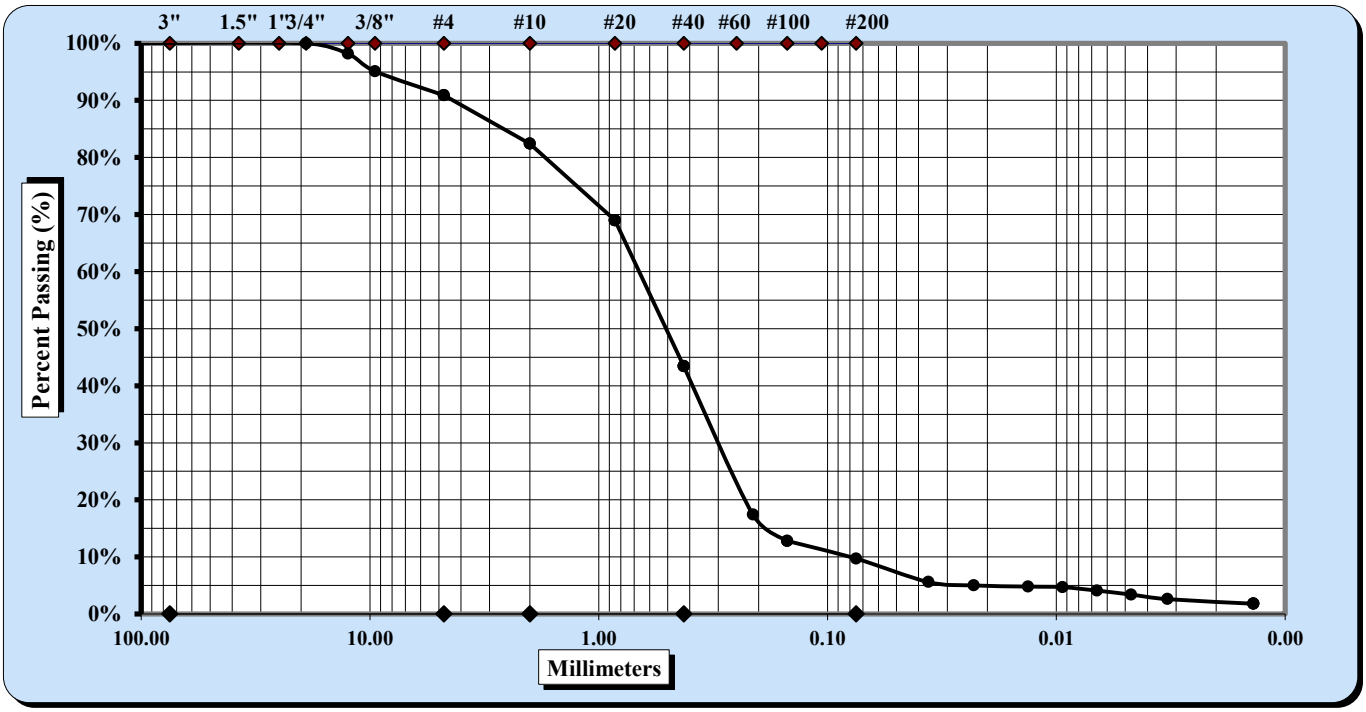
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	12/10/2025
Test Date	10/29/2025
Sample Date	8/27/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930143	Sample Type	SS
Location ID	B-06	Sample Top Depth	4.5
Sample Reference	S-05	Sample Base Depth	6
Description	Visual: WELL GRADED SAND WITH SILT (SW-SM), trace fine gravel	Method	ASTM D422



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**19 mm**	Coarse Sand	8.5	Fine Sand	33.7
Gravel	9.1	Medium Sand	39.0	Silt & Clay	9.7
Liquid Limit	ND	Plastic Limit	ND	Plastic Index	ND

Cc = 1.65 **Cu = 8.31**

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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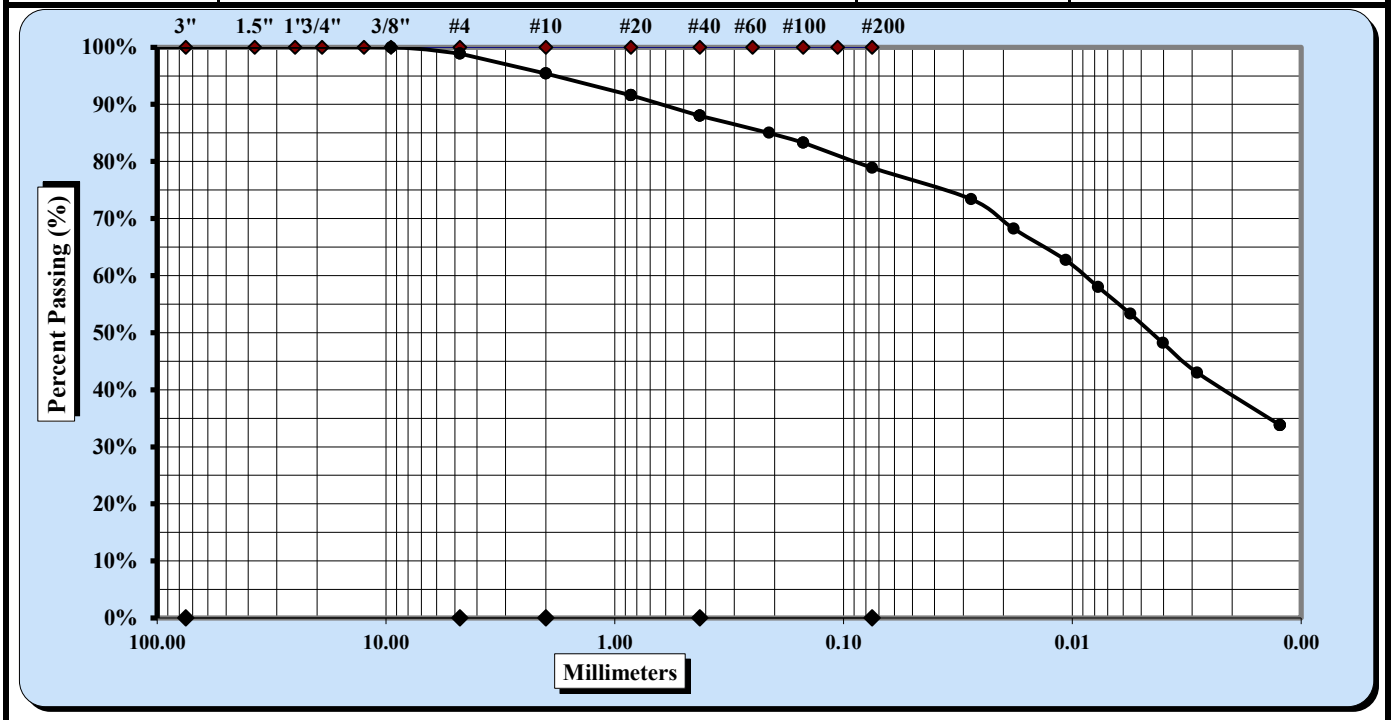
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	12/10/2025
Test Date	10/29/2025
Sample Date	8/19/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930151	Sample Type	SS
Location ID	B-07	Sample Top Depth	4.5
Sample Reference	S-04	Sample Base Depth	5.4
Description	FAT CLAY WITH SAND (CH), trace fine gravel	Method	ASTM D422
Classification:	FAT CLAY WITH SAND (CH)		



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**9.5 mm**	Coarse Sand	3.5	Fine Sand	9.1
Gravel	1.1	Medium Sand	7.4	Silt & Clay	78.9
Liquid Limit	53	Plastic Limit	24	Plastic Index	29

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer

References / Comments / Deviations:

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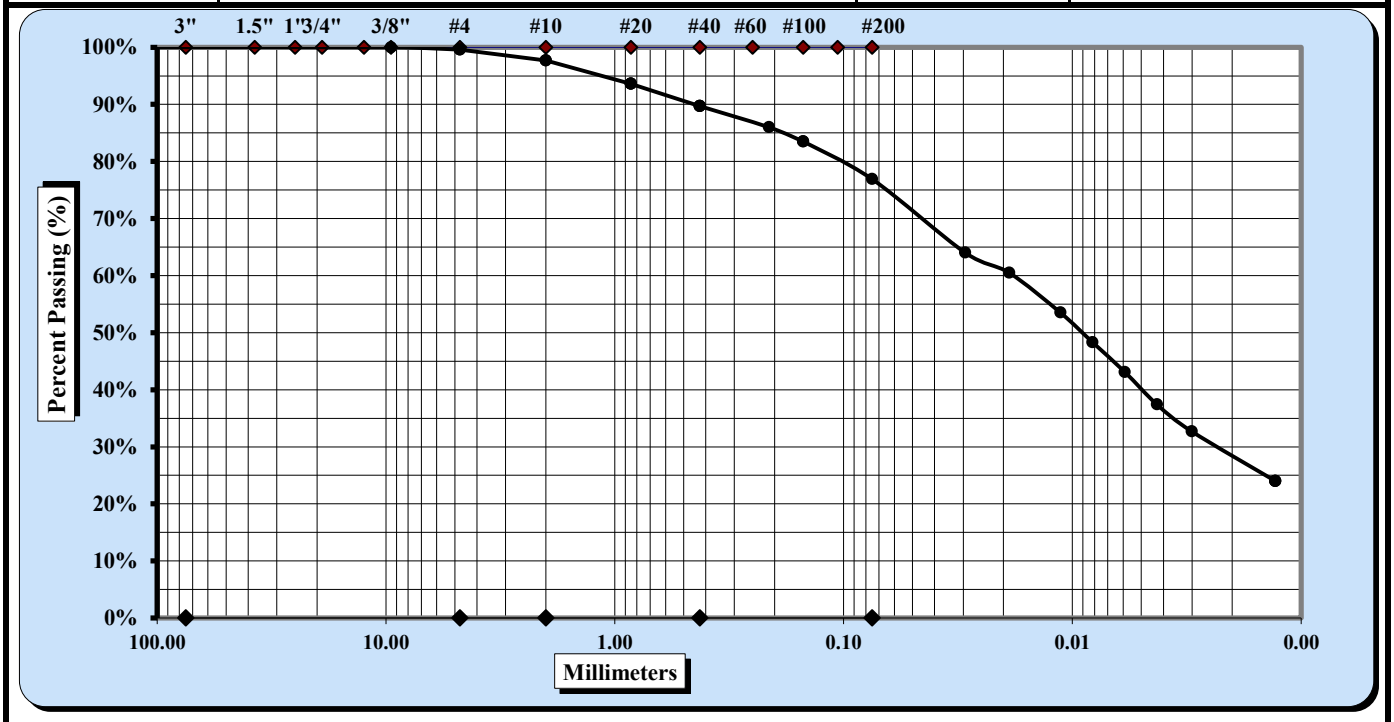
Tested by	*Approved by*	*Signature*
Columbus	*6190 Enterprise Court, Dublin, OH 43016-7297*	

ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	1/12/2026
Test Date	12/1/2025
Sample Date	8/19/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930155	Sample Type	UD
Location ID	B-07	Sample Top Depth	6
Sample Reference	S-05	Sample Base Depth	7.9
Description	LEAN CLAY WITH SAND (CL), trace fine gravel	Method	ASTM D422
Classification:	LEAN CLAY WITH SAND (CL)		



ASTM PARTICLE SIZE DEFINITIONS			
Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**4.75 mm**	Coarse Sand	1.9	Fine Sand	12.8
Gravel	0.4	Medium Sand	8.0	Silt & Clay	76.9
Liquid Limit	40	Plastic Limit	22	Plastic Index	18

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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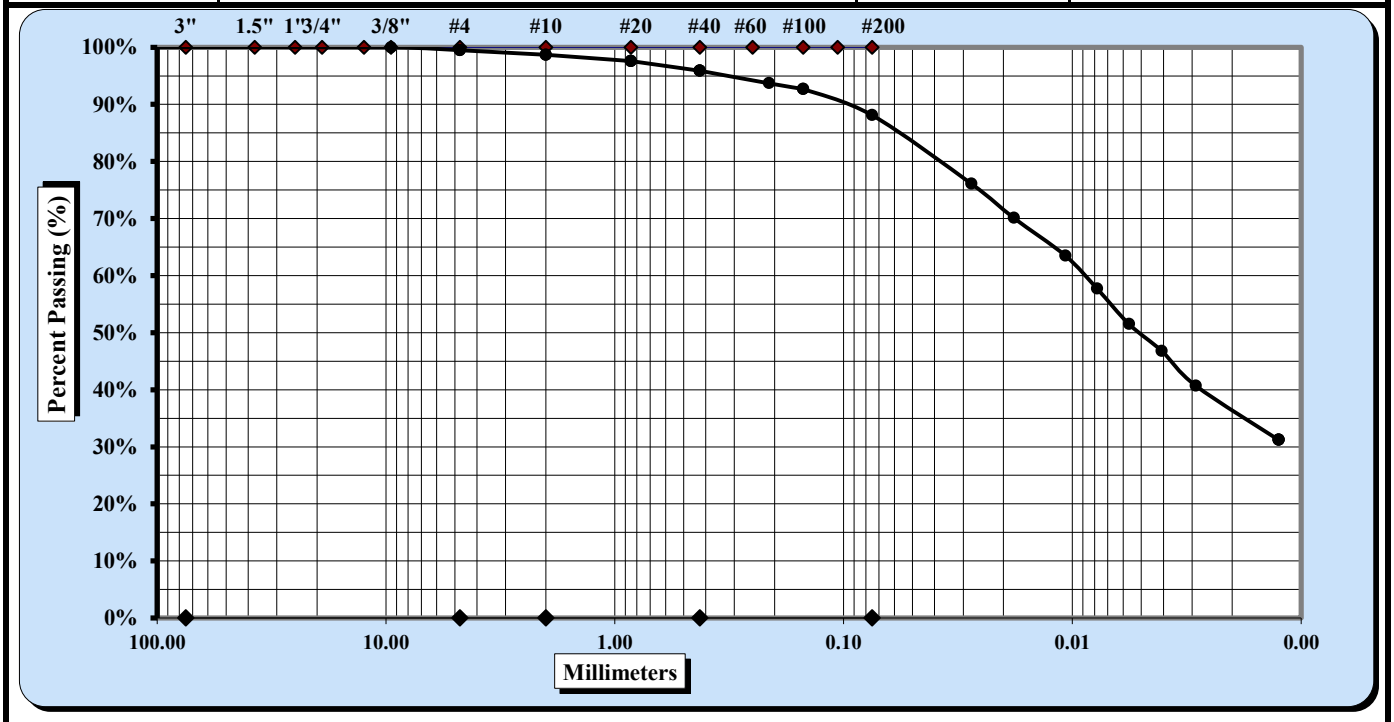
ASTM D422: Standard Test Methods for Particle-Size Distribution (Gradation) of Soils

Report Date	12/10/2025
Test Date	10/29/2025
Sample Date	8/19/2025

Project Number	25170078		
Project Name	Poston Plant Legacy CCR Impoundment		
Client Name	American Electric Power		
Client Address	8500 Smiths Mill Road, New Albany, Ohio 43054		
KeyLAB ID	CBUS20250930153	Sample Type	SS
Location ID	B-07	Sample Top Depth	11
Sample Reference	S-08	Sample Base Depth	12.5
Description	LEAN CLAY (CL), little fine to coarse sand, trace fine gravel	Method	ASTM D422
Classification:	LEAN CLAY (CL)		



ASTM PARTICLE SIZE DEFINITIONS

Cobbles	< 300 mm (12") and > 75 mm (3")	Medium Sand	< 2.00 mm and > 0.425 mm (#40)
Gravel	< 75 mm and > 4.75 mm (#4)	Fine Sand	< 0.425 mm and > 0.075 mm
Coarse Sand	< 4.75 mm and >2.00 mm (#10)	Silt & Clay	< 0.075

Maximum Particle Size	**4.75 mm**	Coarse Sand	0.8	Fine Sand	7.8
Gravel	0.5	Medium Sand	2.8	Silt & Clay	88.1
Liquid Limit	41	Plastic Limit	19	Plastic Index	22

Description of Sand & Gravel Particles: Rounded ☒ Angular ☐

Hard & Durable ☒ Soft ☐ Weathered & Friable ☐

Dispersion Method: Stirrer Dispersion Period: 1 min Dispersing Agent: Sodium Hexametaphosphate Solution

References / Comments / Deviations:

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pmanning — *Approved by* — *6190 Enterprise Court, Dublin, OH 43016-7297*

Paula J. Manning — *Signature*

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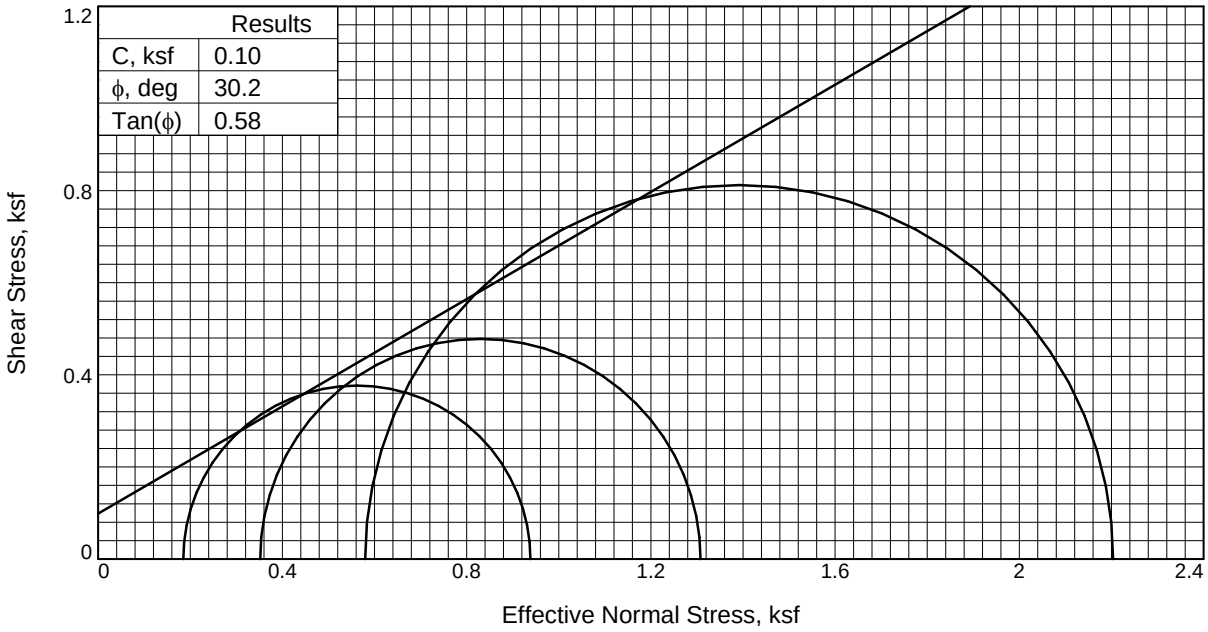

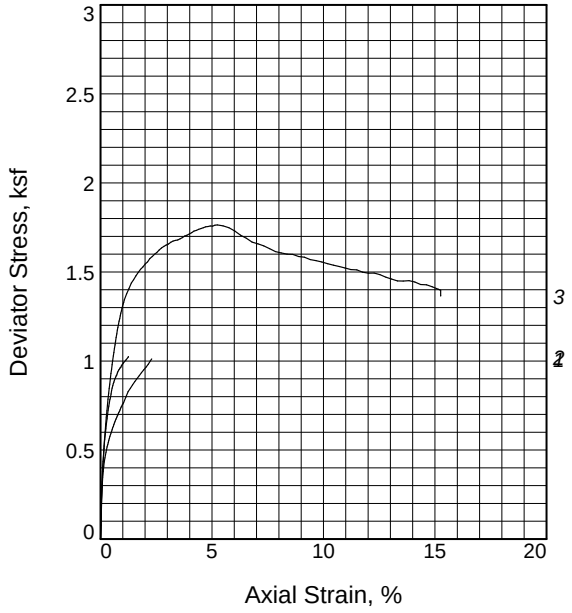

Sample No.		1	2	3
Initial	Water Content, %	21.9	21.9	21.9
	Dry Density, pcf	92.7	92.7	92.7
	Saturation, %	72.3	72.3	72.3
	Void Ratio	0.8176	0.8176	0.8176
	Diameter, in.	2.817	2.817	2.817
	Height, in.	5.980	5.980	5.980
At Test	Water Content, %	29.9	29.6	29.2
	Dry Density, pcf	93.2	93.7	94.3
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.8085	0.7982	0.7879
	Diameter, in.	2.812	2.840	2.852
	Height, in.	5.970	5.822	5.738
Strain rate, %/min.		0.0033	0.0033	0.0033
Back Pressure, psi		50.00	50.00	50.00
Cell Pressure, psi		53.26	56.09	62.00
Fail. Stress, ksf		0.75	0.96	1.62
Excess Pore Pr., ksf		0.28	0.53	1.15
Ult. Stress, ksf		1.01	1.03	1.76
Excess Pore Pr., ksf		0.32	0.51	1.20
$\bar{\sigma}_1$ Failure, ksf		0.94	1.31	2.20
$\bar{\sigma}_3$ Failure, ksf		0.18	0.35	0.58

Type of Test:
CU with Pore Pressures

Sample Type: Intact

Description: FAT CLAY (CH), trace fine to coarse sand

LL= 51 **PL=** 22 **PI=** 29

Assumed Specific Gravity= 2.7

Remarks: ASTM D4767 Multi Stage
Effective Stress Failure defined by Stress Ratio

Figure 1

Client: American Electric Power

Project: AEP Poston Legacy CCR Impound
Athens, Ohio

Location: B-01 Multi Stage

Sample Number: S-03 **Depth:** 5.0'-6.5'

Proj. No.: 25170078 **Date Sampled:** 8/19/2025

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Dublin, Ohio

Tested By: CJ

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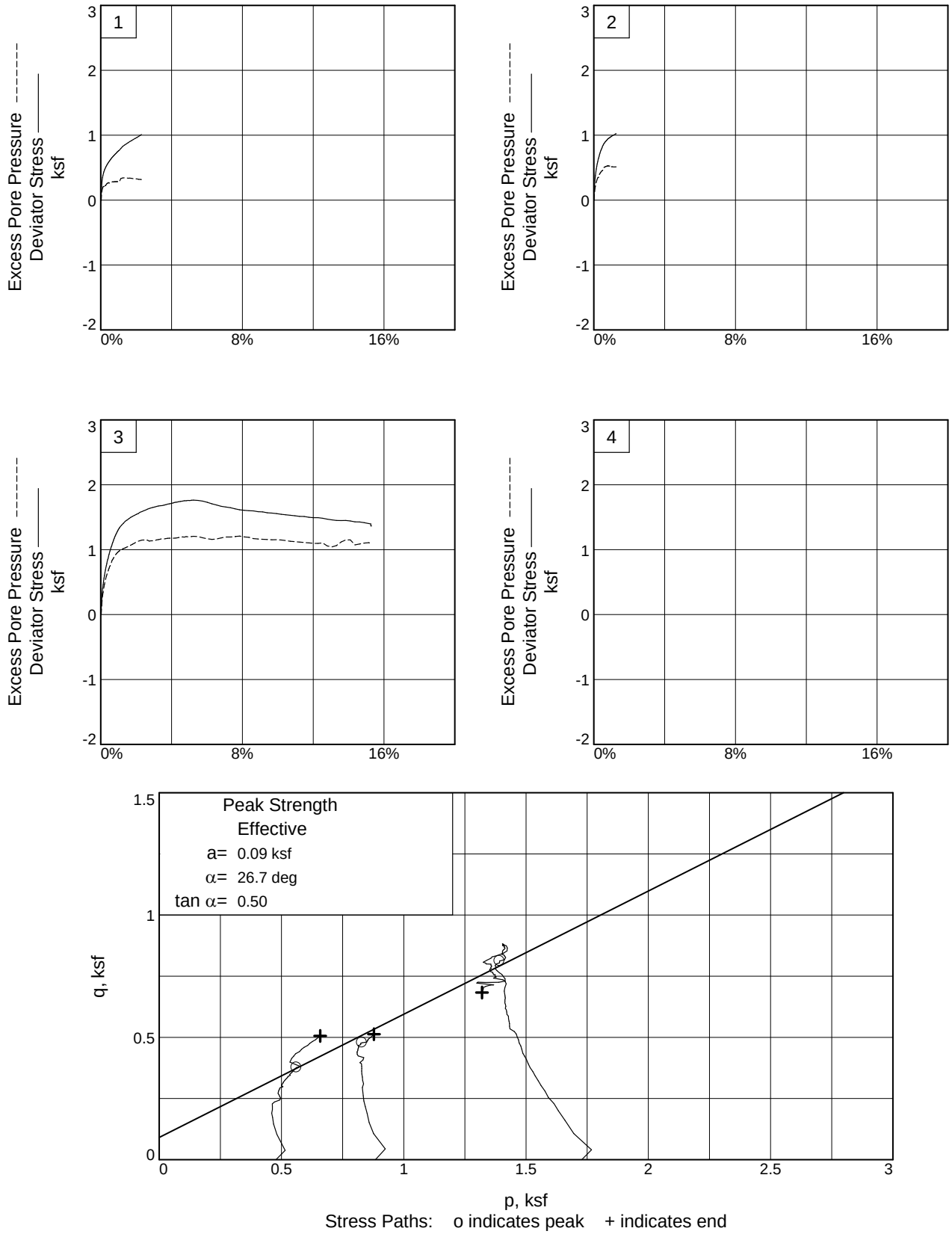

Client: American Electric Power
Project: AEP Poston Legacy CCR Impound
Location: B-01 Multi Stage **Depth:** 5.0'-6.5' **Sample Number:** S-03
Project No.: 25170078

Figure 2

S&ME, Inc.

Tested By: CJ

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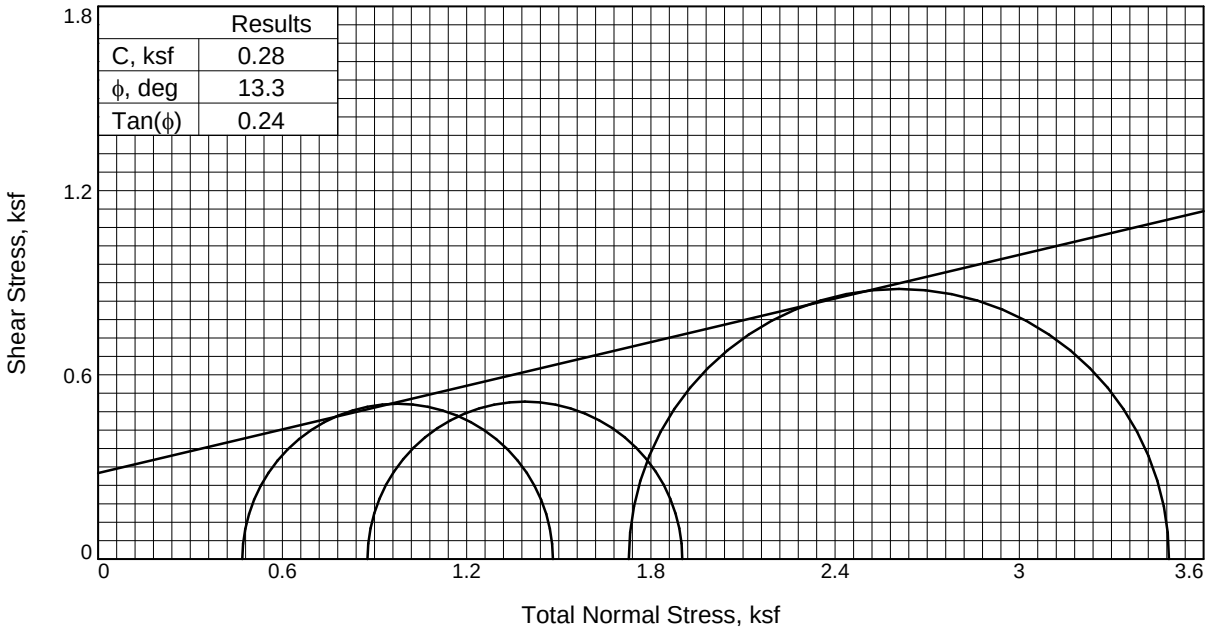

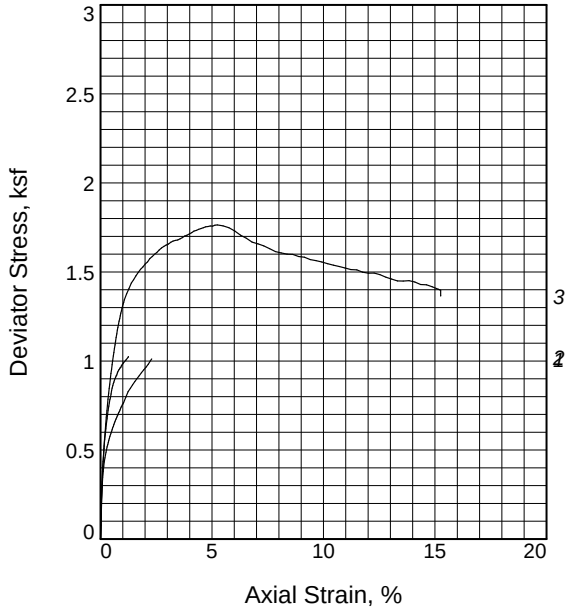

Sample No.		1	2	3
Initial	Water Content, %	21.9	21.9	21.9
	Dry Density, pcf	92.7	92.7	92.7
	Saturation, %	72.3	72.3	72.3
	Void Ratio	0.8176	0.8176	0.8176
	Diameter, in.	2.817	2.817	2.817
	Height, in.	5.980	5.980	5.980
At Test	Water Content, %	29.9	29.6	29.2
	Dry Density, pcf	93.2	93.7	94.3
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.8085	0.7982	0.7879
	Diameter, in.	2.812	2.840	2.852
	Height, in.	5.970	5.822	5.738
Strain rate, %/min.		0.0033	0.0033	0.0033
Back Pressure, psi		50.00	50.00	50.00
Cell Pressure, psi		53.26	56.09	62.00
Fail. Stress, ksf		1.01	1.03	1.76
Excess Pore Pr., ksf		0.32	0.51	1.20
Ult. Stress, ksf		0.75	0.96	1.62
Excess Pore Pr., ksf		0.28	0.53	1.15
$\bar{\sigma}_1$ Failure, ksf		1.16	1.39	2.28
$\bar{\sigma}_3$ Failure, ksf		0.15	0.37	0.53

Type of Test:
CU with Pore Pressures

Sample Type: Intact

Description: FAT CLAY (CH), trace fine to coarse sand

LL= 51 **PL=** 22 **PI=** 29

Assumed Specific Gravity= 2.7

Remarks: ASTM D4767 Multi Stage
Undrained Strength defined by Principal Stress Difference

Figure 1

Client: American Electric Power

Project: AEP Poston Legacy CCR Impound
Athens, Ohio

Location: B-01 Multi Stage

Sample Number: S-03 **Depth:** 5.0'-6.5'

Proj. No.: 25170078 **Date Sampled:** 8/19/2025

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Dublin, Ohio

Tested By: CJ

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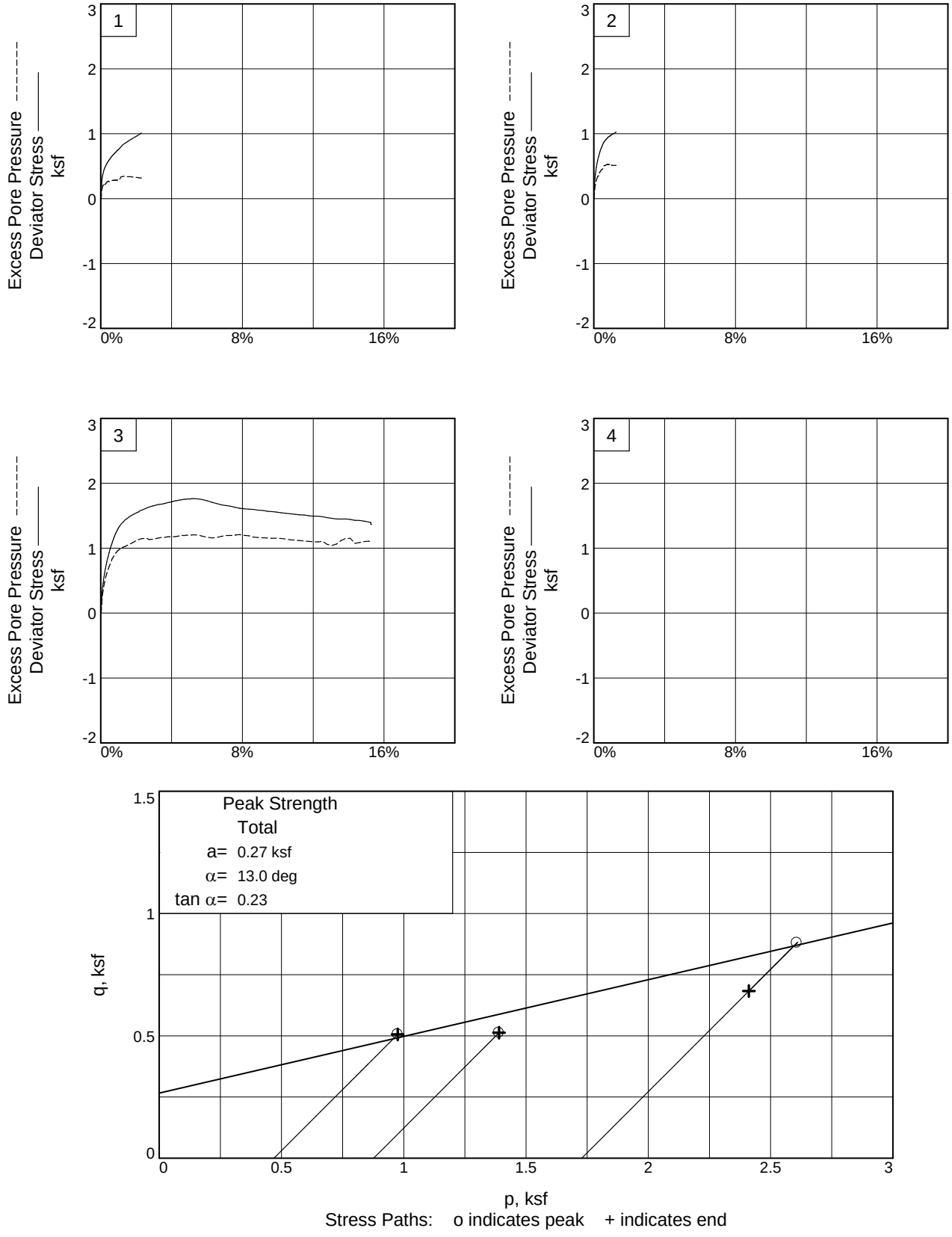

Client: American Electric Power
Project: AEP Poston Legacy CCR Impound
Location: B-01 Multi Stage **Depth:** 5.0'-6.5' **Sample Number:** S-03
Project No.: 25170078

Figure 2

S&ME, Inc.

Tested By: CJ

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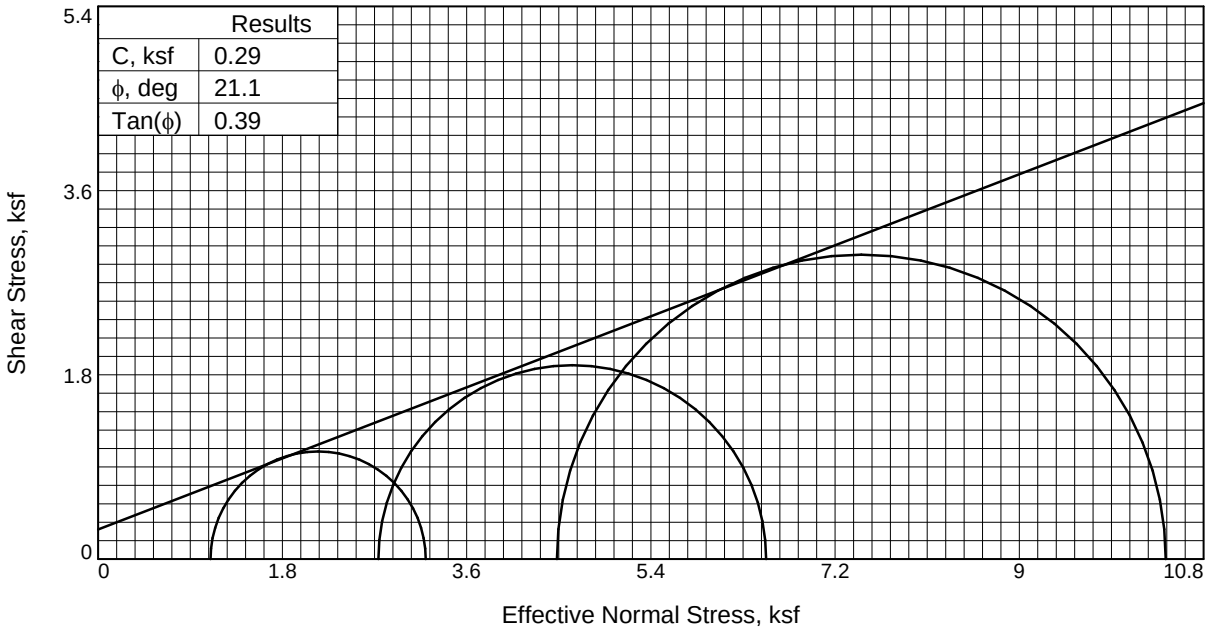
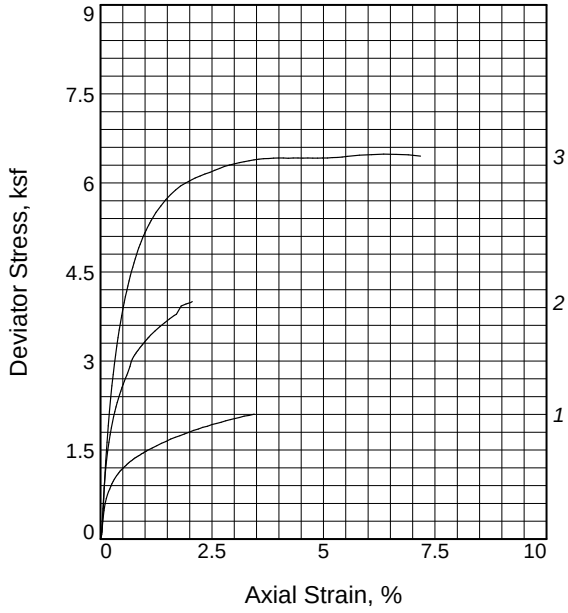




Sample No.		1	2	3
Initial	Water Content, %	18.9	18.9	18.9
	Dry Density, pcf	107.1	107.1	107.1
	Saturation, %	88.9	88.9	88.9
	Void Ratio	0.5731	0.5731	0.5731
	Diameter, in.	2.846	2.846	2.846
	Height, in.	5.862	5.862	5.862
At Test	Water Content, %	16.1	15.3	14.9
	Dry Density, pcf	117.5	119.4	120.2
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.4350	0.4123	0.4020
	Diameter, in.	2.760	2.794	2.816
	Height, in.	5.687	5.462	5.336
Strain rate, %/min.		0.0017	0.0017	0.0017
Back Pressure, psi		50.00	50.00	50.00
Cell Pressure, psi		70.04	89.83	117.75
Fail. Stress, ksf		2.1	3.8	5.9
Excess Pore Pr., ksf		1.8	3.0	5.3
Ult. Stress, ksf		2.1	3.8	6.5
Excess Pore Pr., ksf		1.8	3.0	6.0
$\bar{\sigma}_1$ Failure, ksf		3.2	6.5	10.4
$\bar{\sigma}_3$ Failure, ksf		1.1	2.7	4.5

Type of Test:
CU with Pore Pressures

Sample Type: Intact

Description: LEAN CLAY WITH SAND (CL), trace fine gravel

LL= 47 **PL=** 22 **PI=** 25

Assumed Specific Gravity= 2.7

Remarks: ASTM D4767 Multi Stage
Effective Stress Failure defined by Stress Ratio

Figure 1

Client: American Electric Power

Project: AEP Poston Legacy CCR Impound
Athens, Ohio

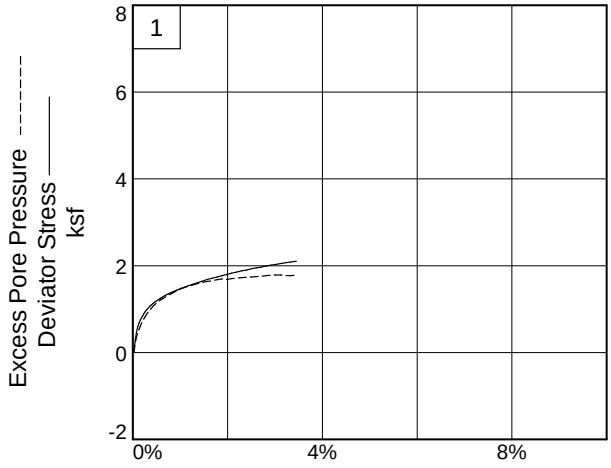
Location: B-01 Multi Stage

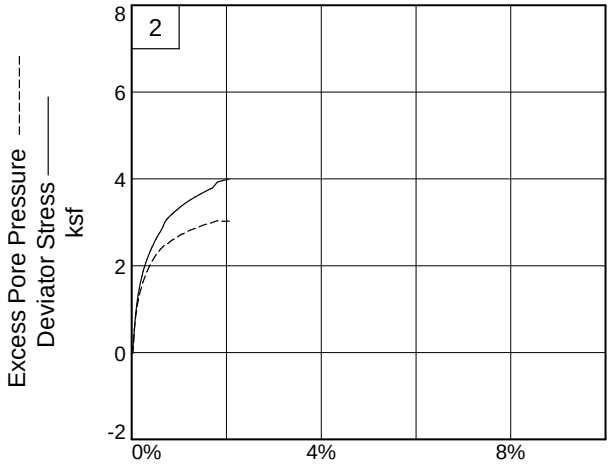
Sample Number: S-25 **Depth:** 55.0'-56.8'

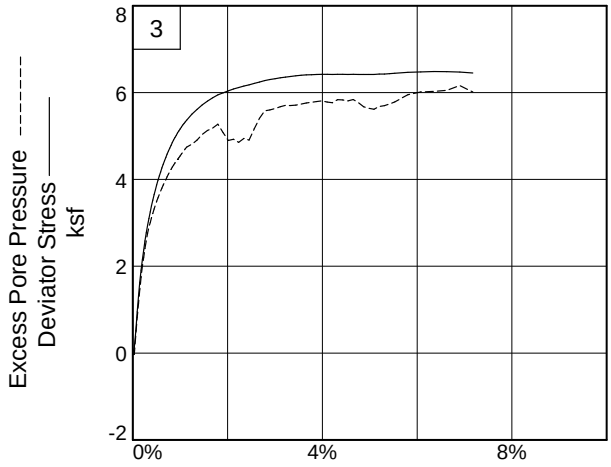
Proj. No.: 25170078 **Date Sampled:** 8/19/2025

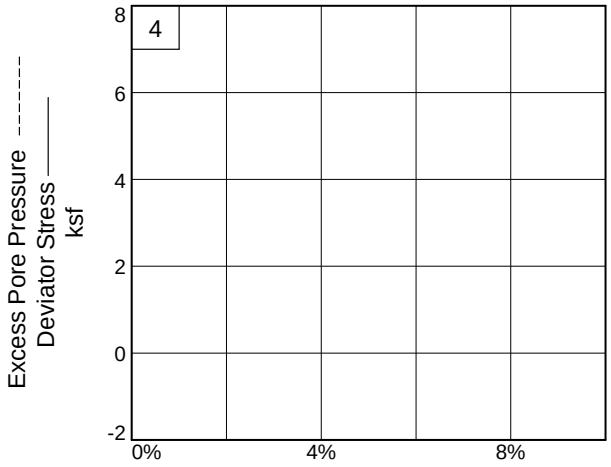
TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Dublin, Ohio

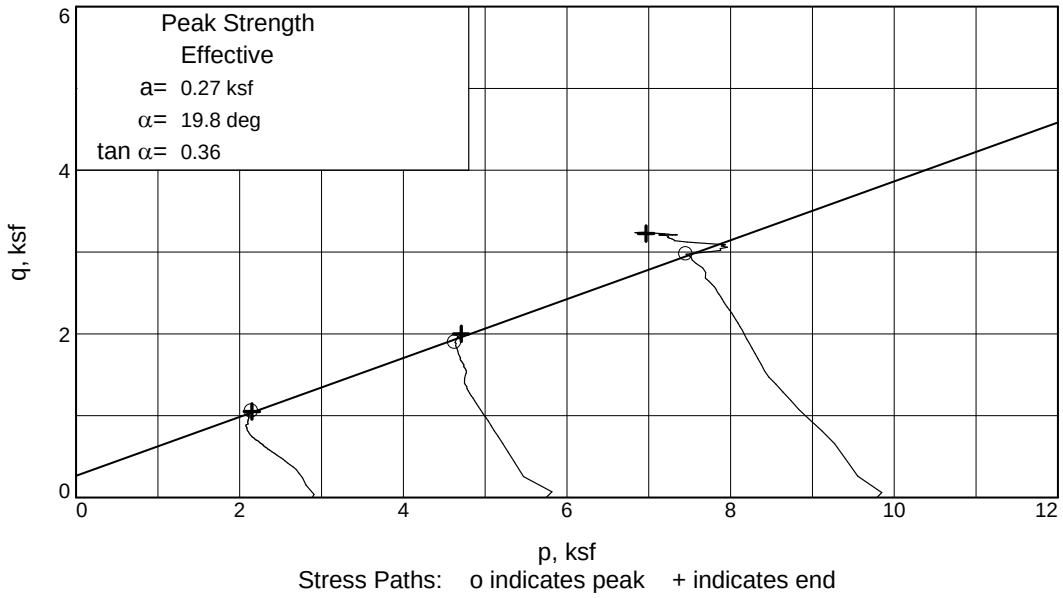
Tested By: CJ











Client: American Electric Power
Project: AEP Poston Legacy CCR Impound
Location: B-01 Multi Stage **Depth:** 55.0'-56.8' **Sample Number:** S-25
Project No.: 25170078

Figure 2

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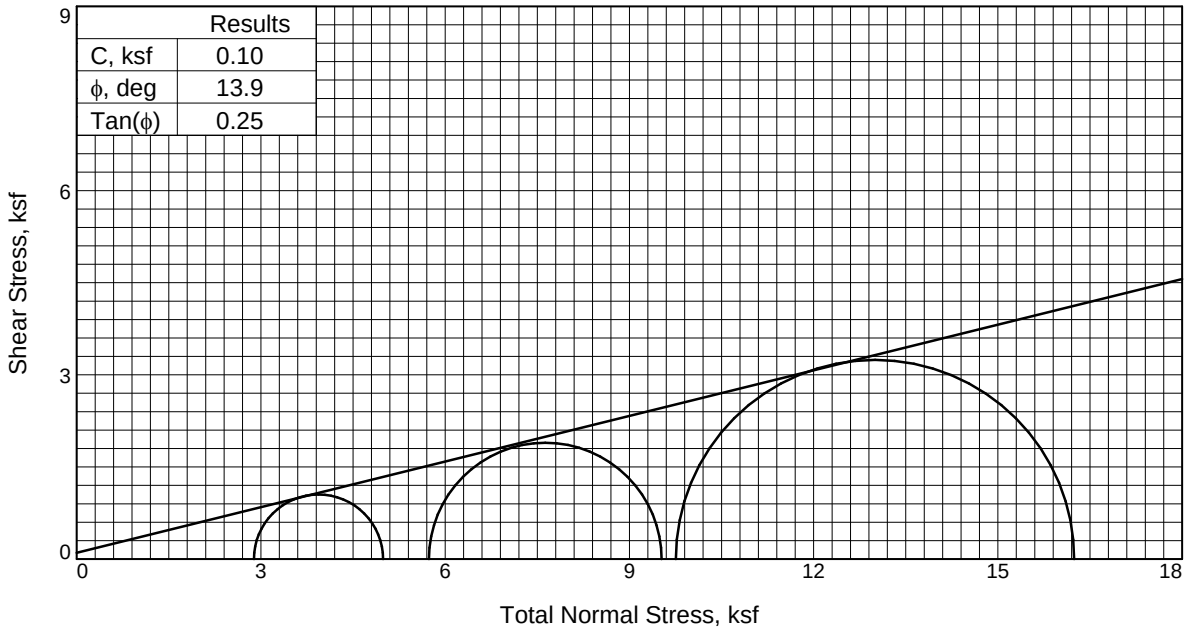

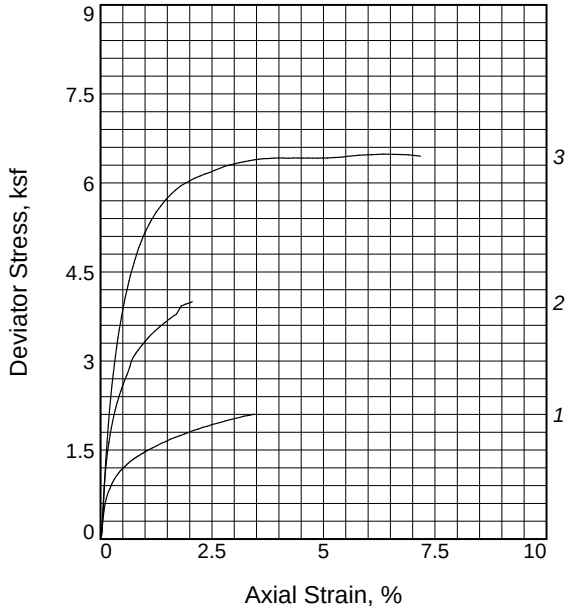

Sample No.		1	2	3
Initial	Water Content, %	18.9	18.9	18.9
	Dry Density, pcf	107.1	107.1	107.1
	Saturation, %	88.9	88.9	88.9
	Void Ratio	0.5731	0.5731	0.5731
	Diameter, in.	2.846	2.846	2.846
	Height, in.	5.862	5.862	5.862
At Test	Water Content, %	16.1	15.3	14.9
	Dry Density, pcf	117.5	119.4	120.2
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.4350	0.4123	0.4020
	Diameter, in.	2.760	2.794	2.816
	Height, in.	5.687	5.462	5.336
Strain rate, %/min.		0.0017	0.0017	0.0017
Back Pressure, psi		50.00	50.00	50.00
Cell Pressure, psi		70.04	89.83	117.75
Fail. Stress, ksf		2.1	3.8	6.5
Excess Pore Pr., ksf		1.8	3.0	6.0
Ult. Stress, ksf		2.1	3.8	5.9
Excess Pore Pr., ksf		1.8	3.0	5.3
$\bar{\sigma}_1$ Failure, ksf		3.2	6.5	10.2
$\bar{\sigma}_3$ Failure, ksf		1.1	2.7	3.7

Type of Test:
CU with Pore Pressures

Sample Type: Intact

Description: LEAN CLAY WITH SAND (CL), trace fine gravel

LL= 47 **PL=** 22 **PI=** 25

Assumed Specific Gravity= 2.7

Remarks: ASTM D4767 Multi Stage
Undrained Strength defined by Principal Stress Difference

Figure 1

Client: American Electric Power

Project: AEP Poston Legacy CCR Impound
Athens, Ohio

Location: B-01 Multi Stage

Sample Number: S-25 **Depth:** 55.0'-56.8'

Proj. No.: 25170078 **Date Sampled:** 8/19/2025

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Dublin, Ohio

Tested By: CJ

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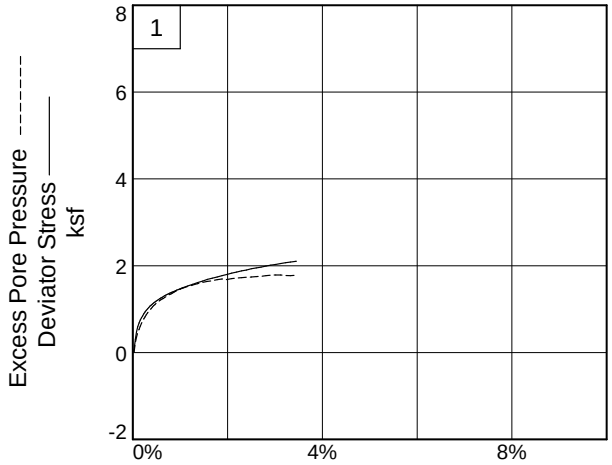

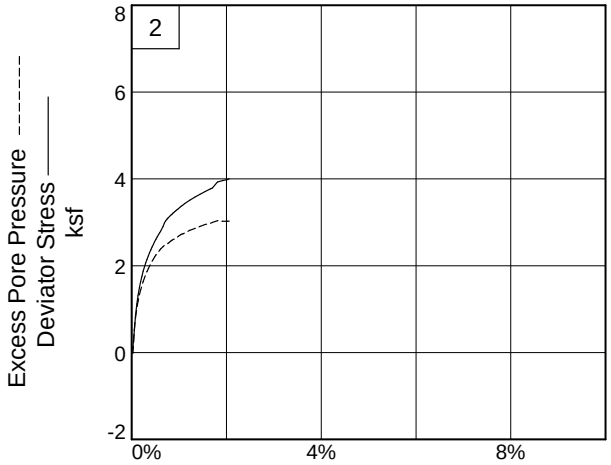

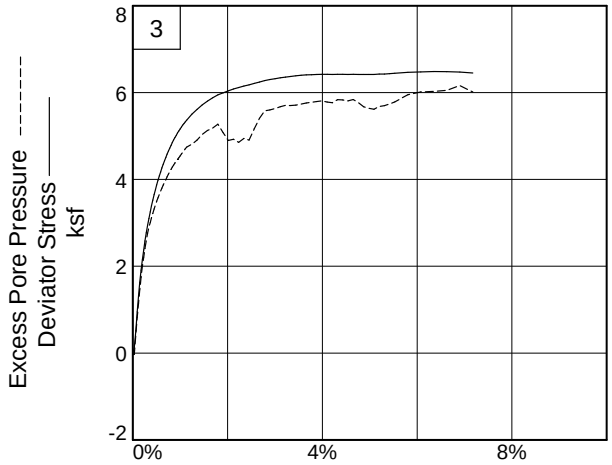

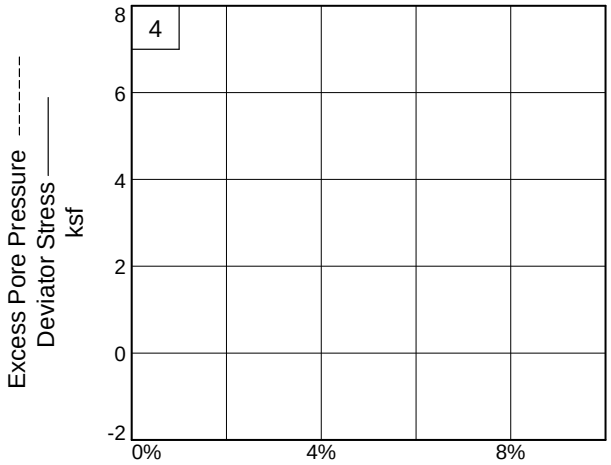

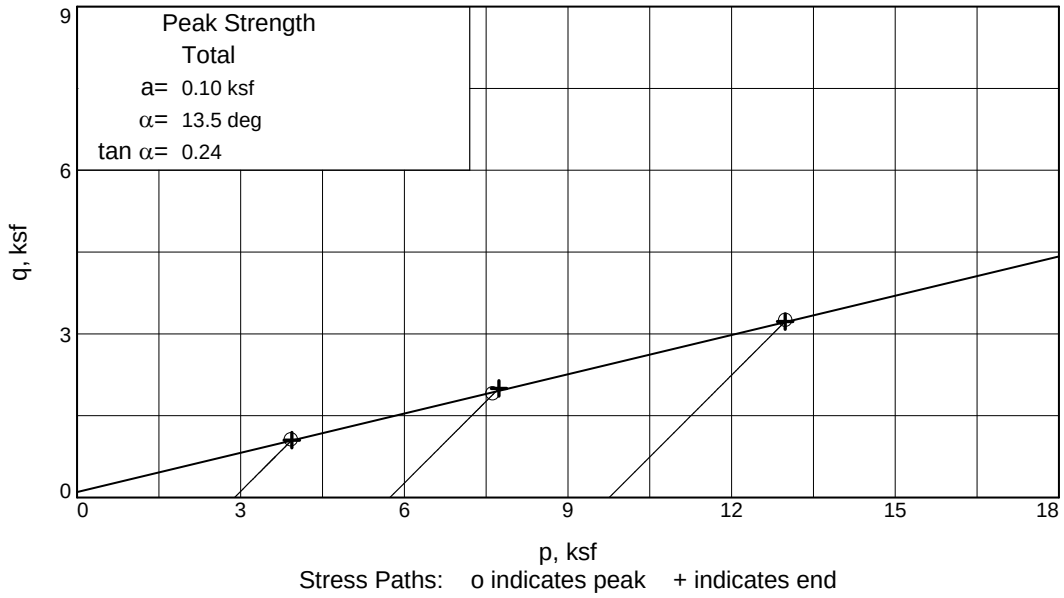

Client: American Electric Power
Project: AEP Poston Legacy CCR Impound
Location: B-01 Multi Stage **Depth:** 55.0'-56.8' **Sample Number:** S-25
Project No.: 25170078 **Figure** 2

S&ME, Inc.

Tested By: CJ

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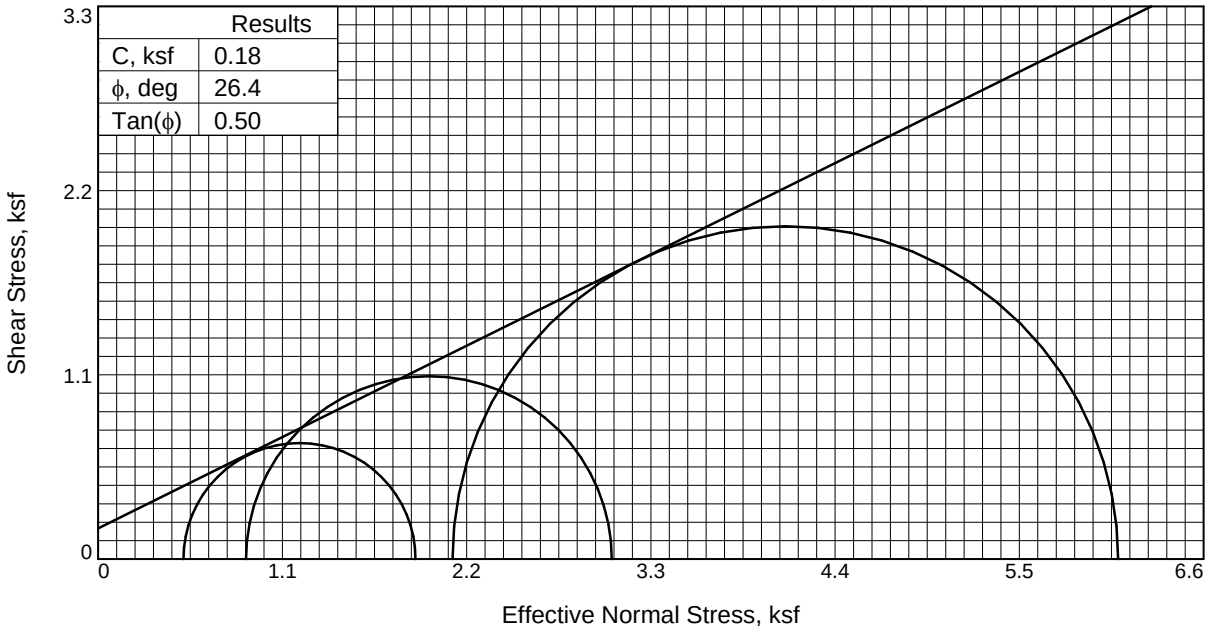
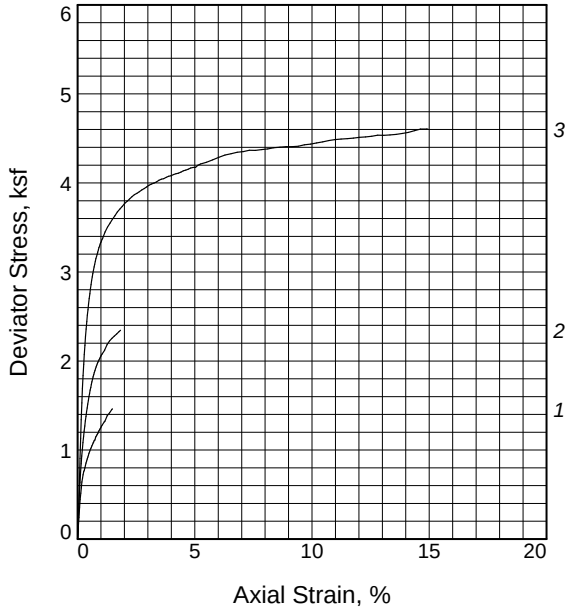




Sample No.		1	2	3
Initial	Water Content, %	15.0	15.0	15.0
	Dry Density, pcf	115.0	115.0	115.0
	Saturation, %	86.8	86.8	86.8
	Void Ratio	0.4657	0.4657	0.4657
	Diameter, in.	2.870	2.870	2.870
	Height, in.	5.835	5.835	5.835
At Test	Water Content, %	16.9	16.5	16.0
	Dry Density, pcf	115.8	116.7	117.8
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.4559	0.4445	0.4314
	Diameter, in.	2.864	2.878	2.895
	Height, in.	5.822	5.721	5.599
Strain rate, %/min.		0.0033	0.0033	0.0033
Back Pressure, psi		50.00	50.00	50.00
Cell Pressure, psi		55.92	62.00	74.06
Fail. Stress, ksf		1.39	2.18	3.97
Excess Pore Pr., ksf		0.34	0.85	1.35
Ult. Stress, ksf		1.46	2.35	4.61
Excess Pore Pr., ksf		0.31	0.77	0.64
$\bar{\sigma}_1$ Failure, ksf		1.89	3.07	6.09
$\bar{\sigma}_3$ Failure, ksf		0.51	0.88	2.12

Type of Test:
CU with Pore Pressures

Sample Type: Intact

Description: LEAN CLAY WITH SAND (CL), trace fine gravel

LL= 36 **PL=** 19 **PI=** 17

Assumed Specific Gravity= 2.7

Remarks: ASTM D4767 Multi Stage
Effective Stress Failure defined by Stress Ratio

Figure 1

Client: American Electric Power

Project: AEP Poston Legacy CCR Impound
Athens, Ohio

Location: B-02 Multi Stage

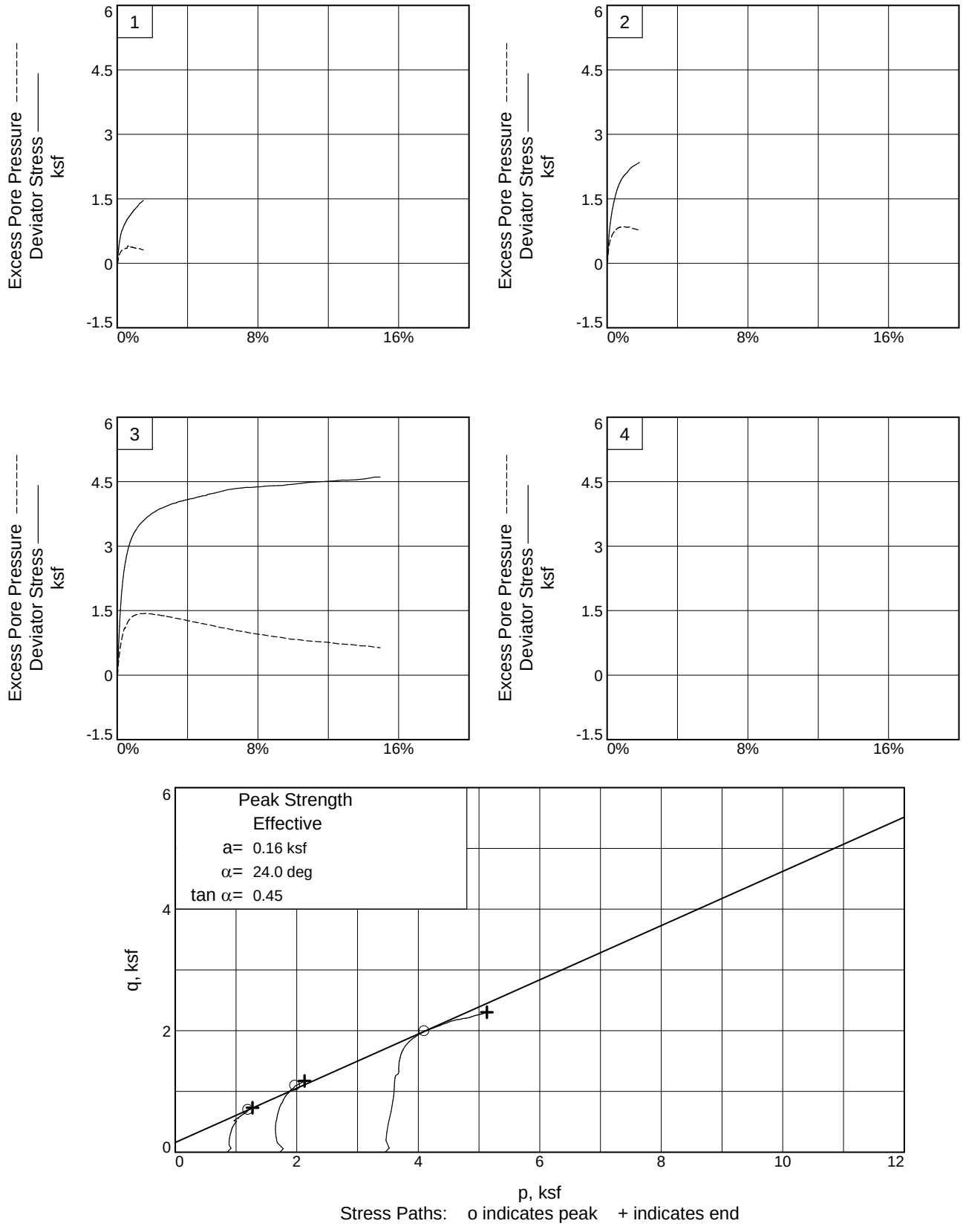
Sample Number: S-06 **Depth:** 12.5'-14.5'

Proj. No.: 25170078 **Date Sampled:** 8/20/2025

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Dublin, Ohio

Tested By: CJ

C and phi are not test results but an interpretation of the test results. The designer is responsible for interpreting test data as provided by S&ME.

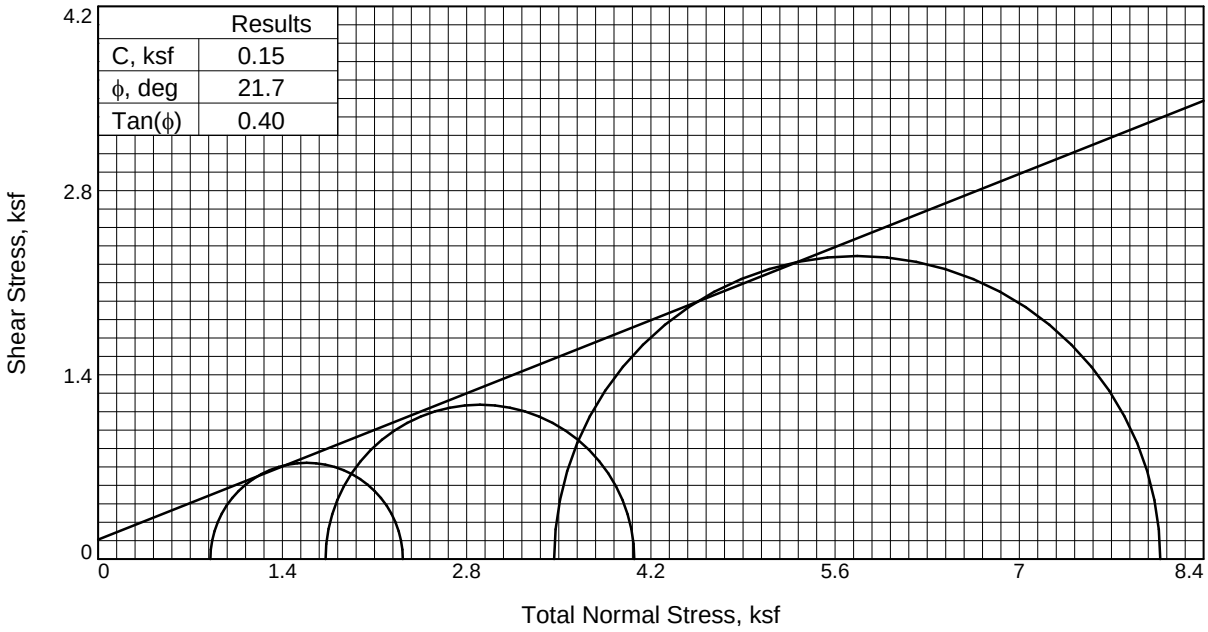


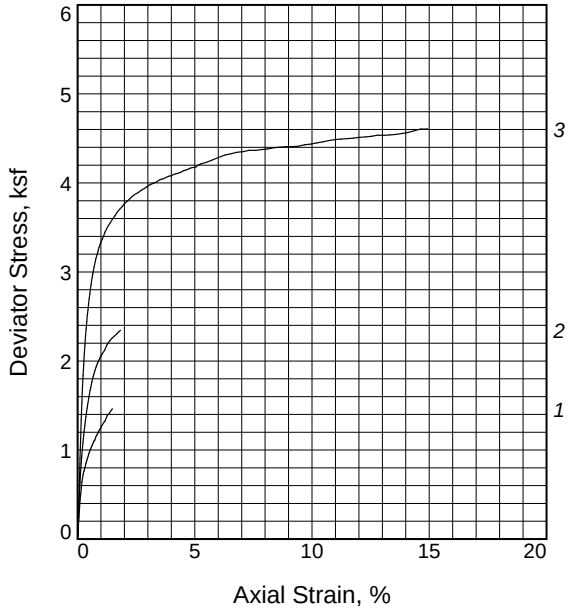
Client: American Electric Power
Project: AEP Poston Legacy CCR Impound
Location: B-02 Multi Stage **Depth:** 12.5'-14.5' **Sample Number:** S-06
Project No.: 25170078 **Figure** 2

S&ME, Inc.

Tested By: CJ

C and phi are not test results but an interpretation of the test results. The designer is responsible for interpreting test data as provided by S&ME.





Sample No.		1	2	3
Initial	Water Content, %	15.0	15.0	15.0
	Dry Density, pcf	115.0	115.0	115.0
	Saturation, %	86.8	86.8	86.8
	Void Ratio	0.4657	0.4657	0.4657
	Diameter, in.	2.870	2.870	2.870
	Height, in.	5.835	5.835	5.835
At Test	Water Content, %	16.9	16.5	16.0
	Dry Density, pcf	115.8	116.7	117.8
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.4559	0.4445	0.4314
	Diameter, in.	2.864	2.878	2.895
	Height, in.	5.822	5.721	5.599
Strain rate, %/min.		0.0033	0.0033	0.0033
Back Pressure, psi		50.00	50.00	50.00
Cell Pressure, psi		55.92	62.00	74.06
Fail. Stress, ksf		1.46	2.35	4.61
Excess Pore Pr., ksf		0.31	0.77	0.64
Ult. Stress, ksf		1.39	2.18	3.97
Excess Pore Pr., ksf		0.34	0.85	1.35
$\bar{\sigma}_1$ Failure, ksf		2.00	3.30	7.43
$\bar{\sigma}_3$ Failure, ksf		0.54	0.95	2.83

Type of Test:
CU with Pore Pressures

Sample Type: Intact

Description: LEAN CLAY WITH SAND (CL), trace fine gravel

LL= 36 **PL=** 19 **PI=** 17

Assumed Specific Gravity= 2.7

Remarks: ASTM D4767 Multi Stage
Undrained Strength defined by Principal Stress Difference

Figure 1

Client: American Electric Power

Project: AEP Poston Legacy CCR Impound
Athens, Ohio

Location: B-02 Multi Stage

Sample Number: S-06 **Depth:** 12.5'-14.5'

Proj. No.: 25170078 **Date Sampled:** 8/20/2025

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Dublin, Ohio

Tested By: CJ

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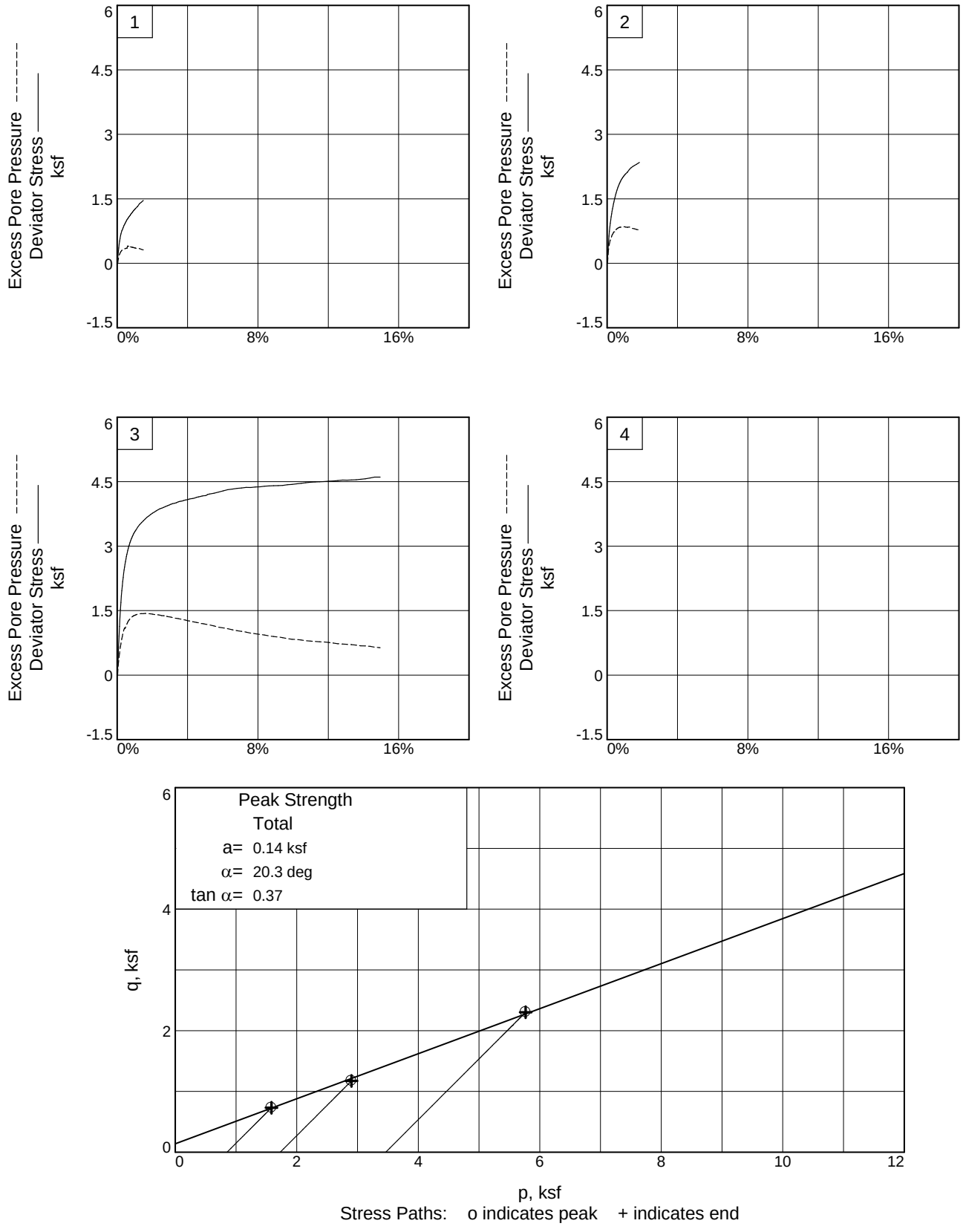


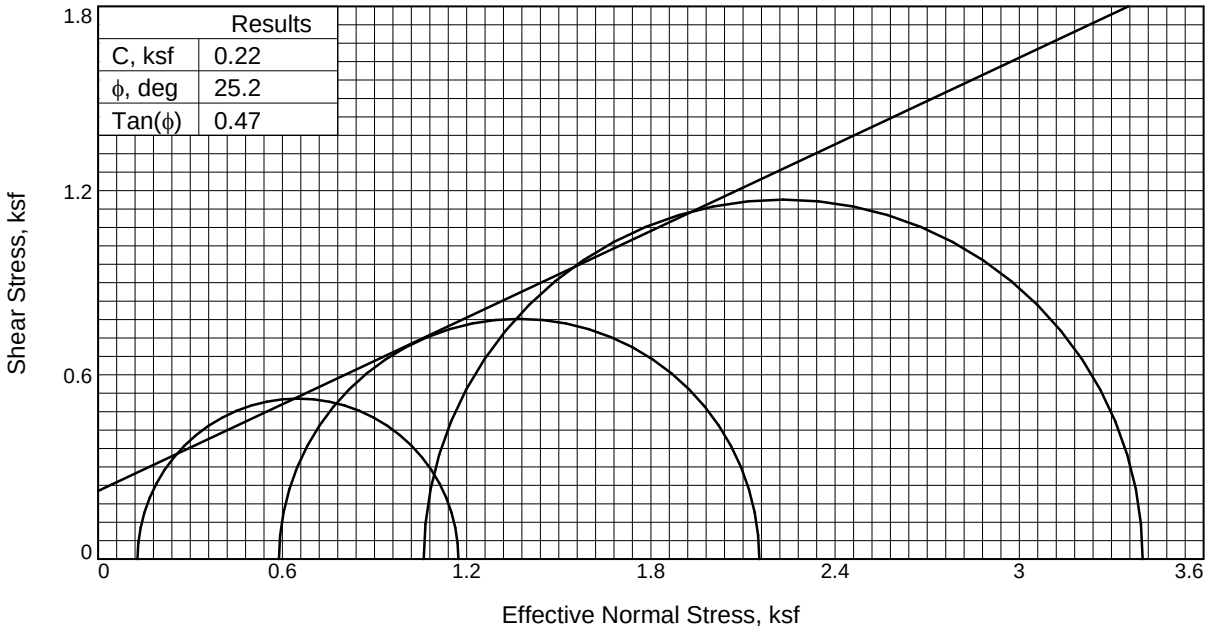
Client: American Electric Power
Project: AEP Poston Legacy CCR Impound
Location: B-02 Multi Stage **Depth:** 12.5'-14.5' **Sample Number:** S-06
Project No.: 25170078 **Figure** 2

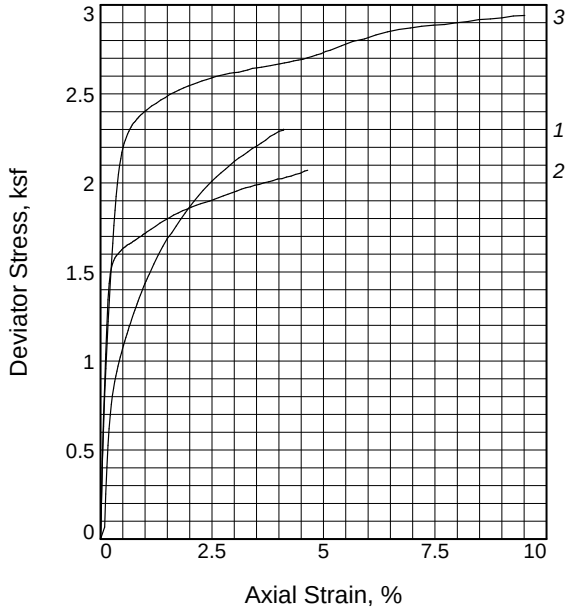
S&ME, Inc.

Tested By: CJ

C and phi are not test results but an interpretation of the test results. The designer is responsible for interpreting test data as provided by S&ME.

Results	
C, ksf	0.22
ϕ, deg	25.2
Tan(ϕ)	0.47





Sample No.		1	2	3
Initial	Water Content, %	21.2	21.2	21.2
	Dry Density, pcf	108.4	108.4	108.4
	Saturation, %	103.2	103.2	103.2
	Void Ratio	0.5542	0.5542	0.5542
	Diameter, in.	2.879	2.879	2.879
	Height, in.	6.085	6.085	6.085
At Test	Water Content, %	20.2	18.8	17.2
	Dry Density, pcf	109.0	111.9	115.0
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.5466	0.5068	0.4657
	Diameter, in.	2.874	2.910	2.952
	Height, in.	6.075	5.776	5.457
Strain rate, %/min.		0.02	0.02	0.02
Back Pressure, psi		50.00	50.00	50.00
Cell Pressure, psi		53.42	56.93	62.21
Fail. Stress, ksf		1.05	1.56	2.34
Excess Pore Pr., ksf		0.36	0.41	0.70
Ult. Stress, ksf		2.30	2.07	2.94
Excess Pore Pr., ksf		-0.09	-0.04	0.16
$\bar{\sigma}_1$ Failure, ksf		1.17	2.15	3.40
$\bar{\sigma}_3$ Failure, ksf		0.13	0.59	1.06

Type of Test:
CU with Pore Pressures

Sample Type: Intact

Description: LEAN CLAY WITH SAND (CL), trace fine gravel

LL= 40 **PL=** 22 **PI=** 18

Assumed Specific Gravity= 2.7

Remarks: ASTM D4767 Multi Stage
Effective Stress Failure defined by Shear Stress Ratio

Figure 1

Client: American Electric Power

Project: AEP Poston Legacy CCR Impound
Athens, Ohio

Location: B-07 Multi Stage

Sample Number: S-5 II **Depth:** 6.0'-8.0'

Proj. No.: 25170078 **Date Sampled:**

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Dublin, Ohio

Tested By: PJM

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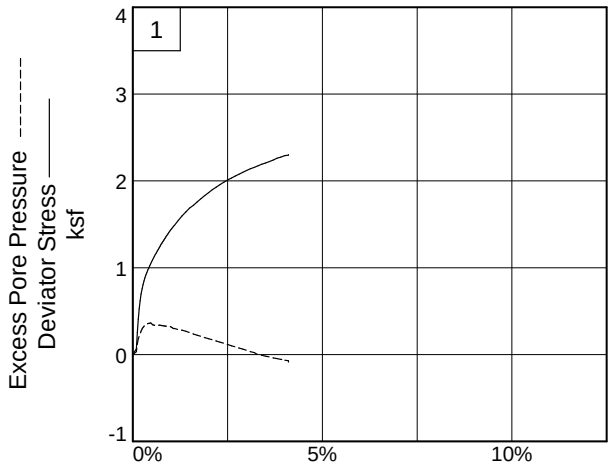
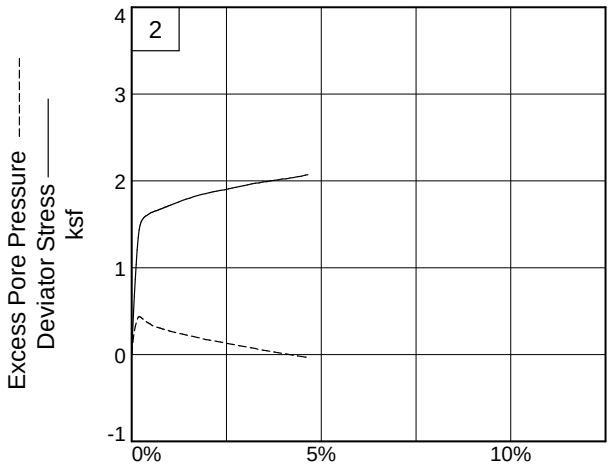
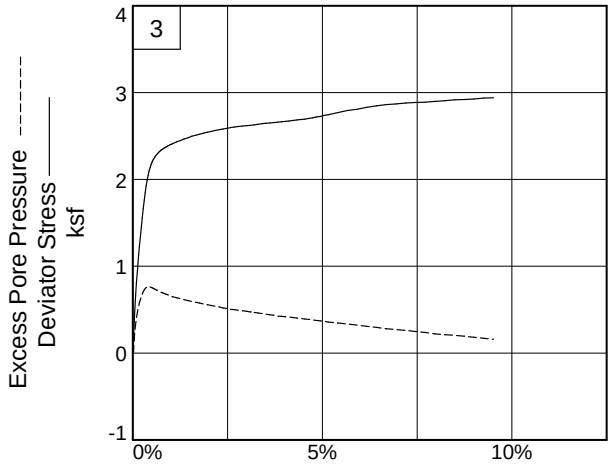
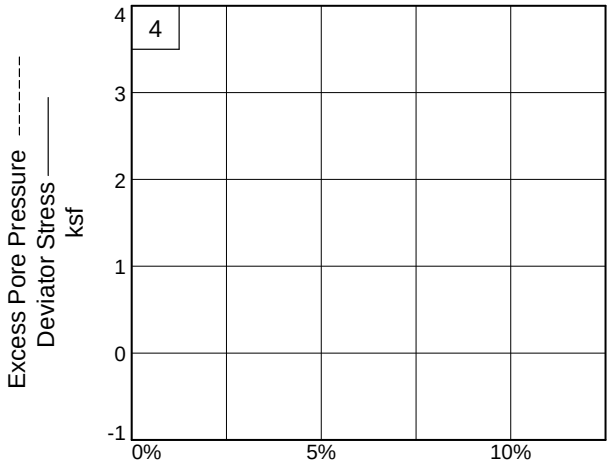
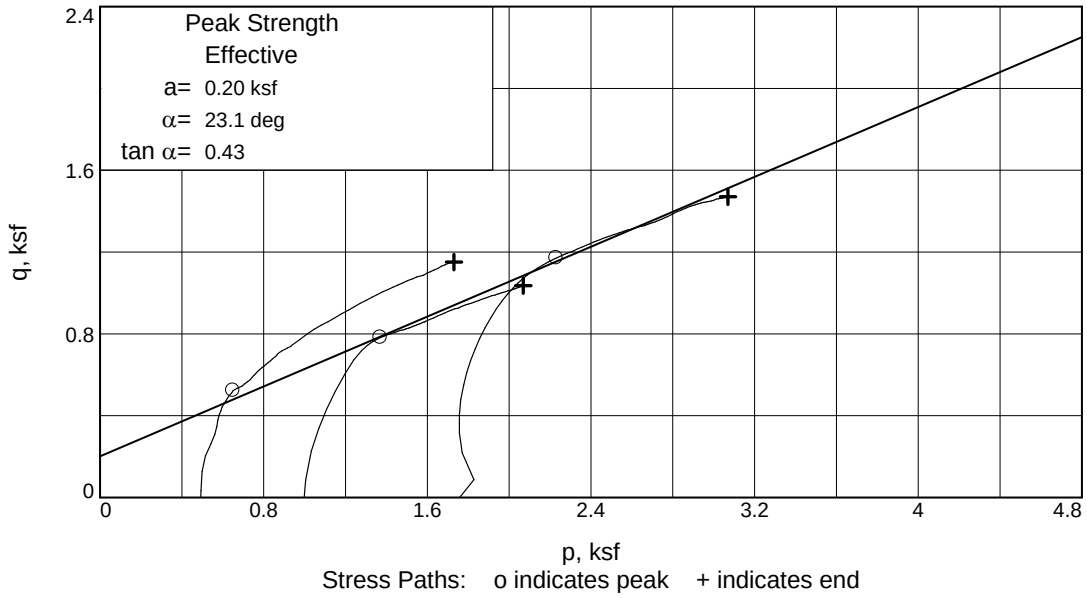








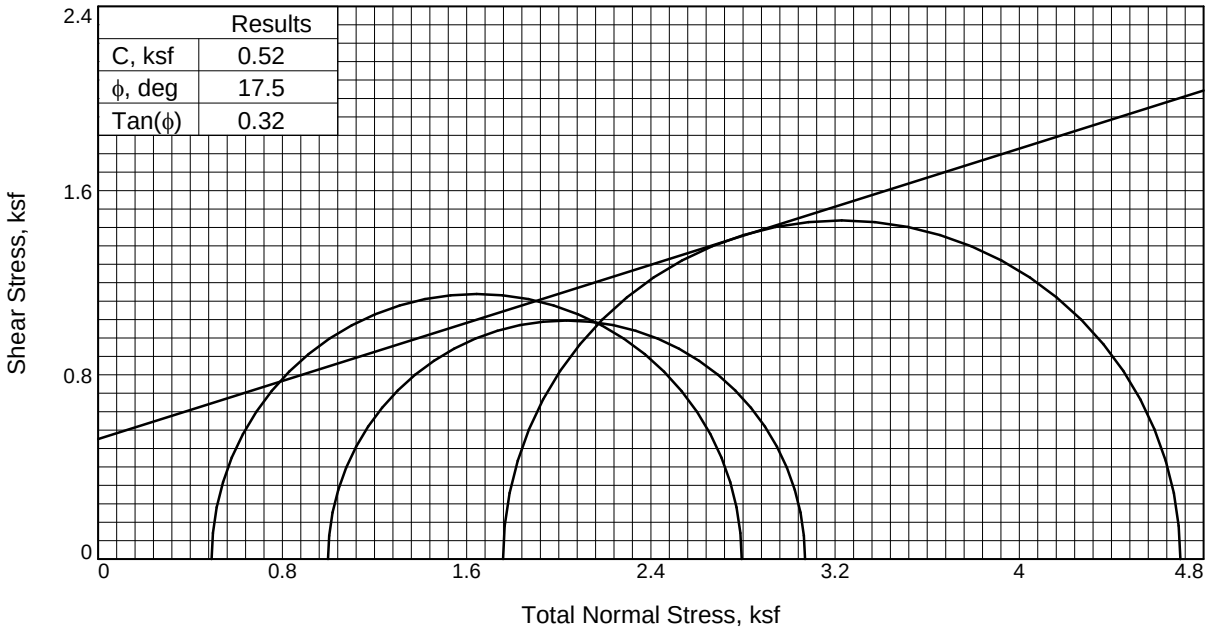


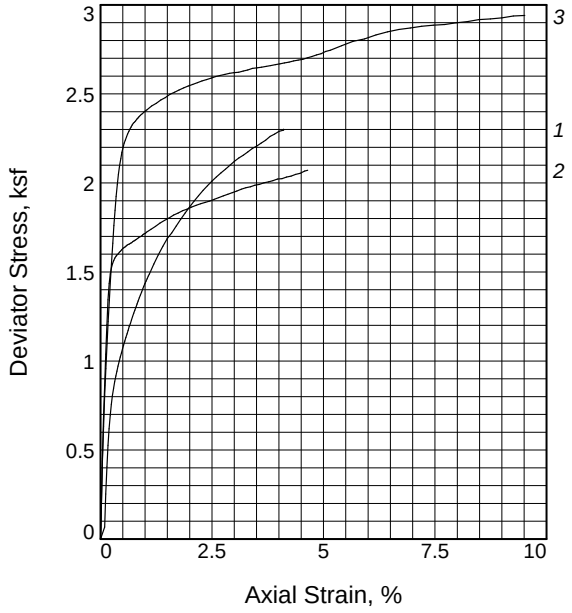
Client: American Electric Power
Project: AEP Poston Legacy CCR Impound
Location: B-07 Multi Stage **Depth:** 6.0'-8.0' **Sample Number:** S-5 II
Project No.: 25170078 **Figure** 2

S&ME, Inc.

Tested By: PJM

C and phi are not test results but an interpretation of the test results. The designer is responsible for interpreting test data as provided by S&ME.





Sample No.		1	2	3
Initial	Water Content, %	21.2	21.2	21.2
	Dry Density, pcf	108.4	108.4	108.4
	Saturation, %	103.2	103.2	103.2
	Void Ratio	0.5542	0.5542	0.5542
	Diameter, in.	2.879	2.879	2.879
	Height, in.	6.085	6.085	6.085
At Test	Water Content, %	20.2	18.8	17.2
	Dry Density, pcf	109.0	111.9	115.0
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.5466	0.5068	0.4657
	Diameter, in.	2.874	2.910	2.952
	Height, in.	6.075	5.776	5.457
Strain rate, %/min.		0.02	0.02	0.02
Back Pressure, psi		50.00	50.00	50.00
Cell Pressure, psi		53.42	56.93	62.21
Fail. Stress, ksf		2.30	2.07	2.94
Excess Pore Pr., ksf		-0.09	-0.04	0.16
Ult. Stress, ksf		1.05	1.56	2.34
Excess Pore Pr., ksf		0.36	0.41	0.70
$\bar{\sigma}_1$ Failure, ksf		2.88	3.10	4.54
$\bar{\sigma}_3$ Failure, ksf		0.58	1.03	1.60

Type of Test:
CU with Pore Pressures

Sample Type: Intact

Description: LEAN CLAY WITH SAND (CL), trace fine gravel

LL= 40 **PL=** 22 **PI=** 18

Assumed Specific Gravity= 2.7

Remarks: ASTM D4767 Multi Stage
Undrained Failure defined by Principal Stress Difference

Figure 1

Client: American Electric Power

Project: AEP Poston Legacy CCR Impound
Athens, Ohio

Location: B-07 Multi Stage

Sample Number: S-5 II **Depth:** 6.0'-8.0'

Proj. No.: 25170078 **Date Sampled:**

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Dublin, Ohio

Tested By: PJM

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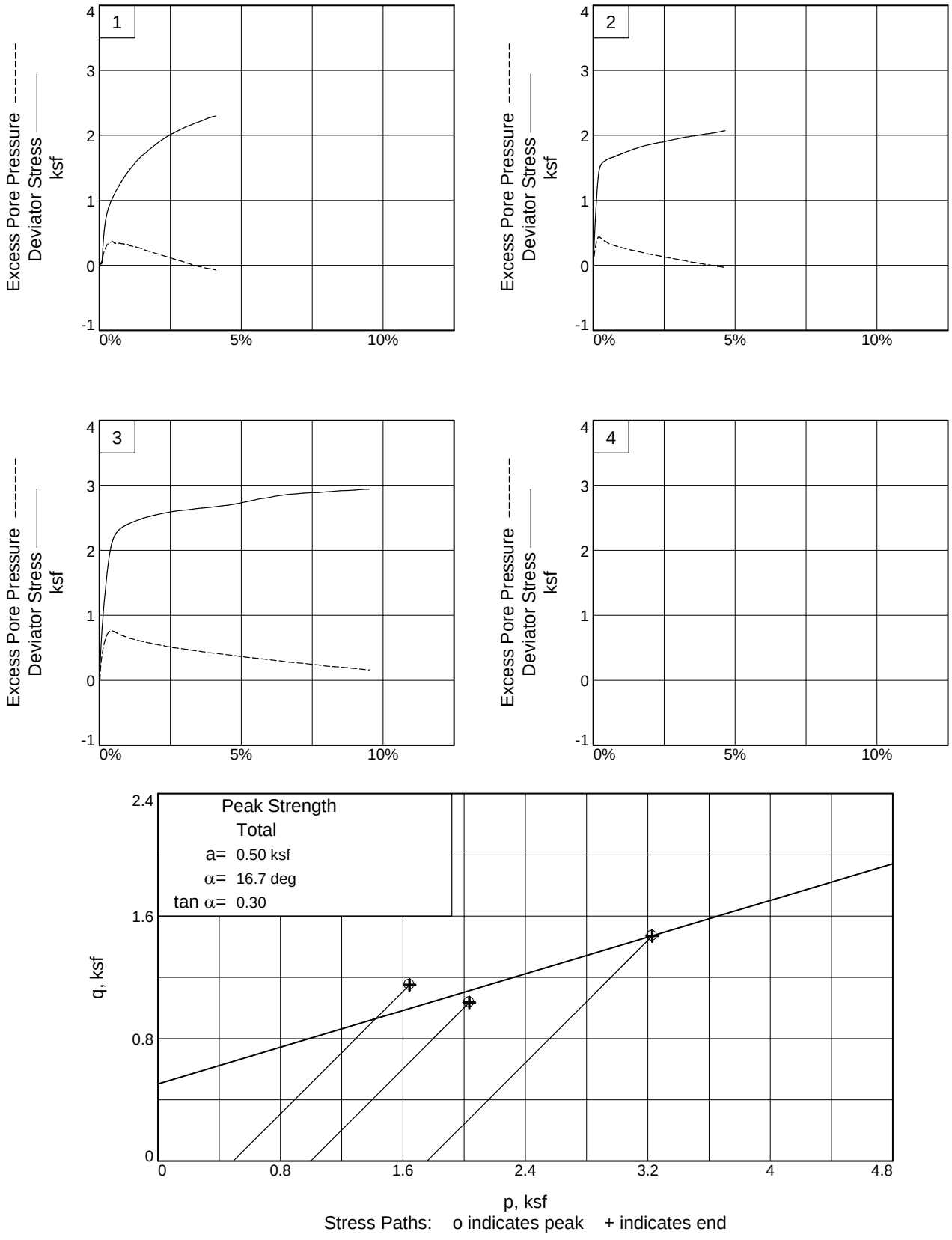


Client: American Electric Power

Project: AEP Poston Legacy CCR Impound

Location: B-07 Multi Stage **Depth:** 6.0'-8.0' **Sample Number:** S-5 II

Project No.: 25170078 **Figure** 2

S&ME, Inc.

Tested By: PJM

Form No. WS-D5084-1
Revision No. : 0
Revision Date: 03/11/15

ASTM D5084 Flex Wall Perm Method C

Test Data

S&ME, Inc. Columbus Branch, 6190 Enterprise Ct., Dublin, Ohio 43016

Project No:	25170078	Report Date:	1/9/2026
Project Name:	AEP Poston Legacy CCR Impound	Test Date:	1/5/2026
Client Name:	American Electric Power	Sample Date:	8/19/2025
Client Address:	8500 Smiths Mill Rd., New Albany, OH 43054	Log No:	17-67-25
Sample ID:	B-01 ST-25 55.0'-56.8' III	Sample Type:	Intact
Description:	LEAN CLAY WITH SAND (CL), trace fine gravel		

Sample Info:	Assumed SG:	2.70	Percentage Passing 200:	78.1	Maximum Particle Size:	**4.75 mm**
	Liquid Limit:	47	Plastic Limit:	22	Plastic Index:	25

				Final Specimen Conditions			
Length (cm):	**10.32**	Wet Density (PCF):	**126.9**	Length (cm):	**10.32**	Wet Density (PCF):	**122.4**
Diameter (cm):	**7.26**	Dry Density (PCF):	**98.8**	Diameter (cm):	**7.24**	Dry Density (PCF):	**99.3**
Area (cm^2)	**41.42**	Percent Saturation:	**100.0%**	Area (cm^2)	**41.22**	Percent Saturation:	**90.2%**
Volume (cm^3)	**427.57**			Volume (cm^3)	**425.47**	B-Parameter:	**0.95**
Wet weight (grams)	**869.4**	Void Ratio:	**0.706**	Wet weight (grams)	**834.5**	Void Ratio:	**0.697**
Dry Weight (grams)	**676.8**	Porosity:	**0.414**	Dry Weight (grams)	**676.8**	Porosity:	**0.411**
Percent Moisture:	**28.4%**			Percent Moisture:	**23.3%**		
Test Parameters:	Effective Consolidation Stress (psi):		**45.0**	Permeant Liquid Used:		Deaired Water	
Burette Area (cm^2):	**0.874**	Cell Pressure (psi):	**95.0**	Influent Pressure (psi):	**65.0**	Effluent Pressure (psi):	**50.0**

Time (24-hr)			**Temperature (°C)**				**Measurements**						**Initial Gradient**	**Final Gradient**	**K-Value (cm/sec)**	
Start	**End**	**Time (sec)**	**Initial**	**Final**	**Avg.**	**Factor**	**$h_{out}1$**	**$h_{in}1$**	**$h_{out}2$**	**$h_{in}2$**	**h1**	**h2**			**Uncorrected K-Value**	**Corrected K-Value**
12:47:00	16:28:30	13290	18.5	18.7	18.6	1.0355	47.15	7.28	47.00	7.40	1100.0	1099.6	106.58	106.55	2.30E-09	2.39E-09
16:28:30	10:27:00	64710	18.7	18.6	18.7	1.0342	47.00	7.40	46.30	8.20	1099.6	1097.9	106.55	106.38	2.63E-09	2.72E-09
10:27:00	13:21:45	10485	18.6	19.2	18.9	1.0278	46.30	8.20	46.20	8.30	1097.9	1097.7	106.38	106.36	2.17E-09	2.23E-09
13:21:45	17:44:45	15780	19.2	19.4	19.3	1.0176	46.20	8.30	46.00	8.46	1097.7	1097.3	106.36	106.32	2.59E-09	2.64E-09
Notes:												***Averages:***	***106.46***	***106.40***	***2.42E-09***	***2.5E-09***

Technician: PJM
Technical Responsibility: Erica Goodyear

Erica Goodyear
signature

Position: T3

Form No. WS-D5084-1
Revision No. : 0
Revision Date: 03/11/15

ASTM D5084 Flex Wall Perm Method C

Test Data

S&ME, Inc. Columbus Branch, 6190 Enterprise Ct., Dublin, Ohio 43016

Project No:	25170078	Report Date:	1/9/2026
Project Name:	AEP Poston Legacy CCR Impound	Test Date:	10/27/2025
Client Name:	American Electric Power	Sample Date:	8/19/2025
Client Address:	8500 Smiths Mill Rd., New Albany, OH 43054	Log No:	17-67-25
Sample ID:	B-01 ST-34 75.0'-76.3' I	Sample Type:	Intact
Description:	LEAN CLAY (CL), little fine to coarse sand, trace fine gravel		

Sample Info:	Assumed SG:	2.70	Percentage Passing 200:	88.4	Maximum Particle Size:	**4.75 mm**
	Liquid Limit:	42	Plastic Limit:	20	Plastic Index:	22

				Final Specimen Conditions			
Length (cm):	**14.91**	Wet Density (PCF):	**133.3**	Length (cm):	**14.88**	Wet Density (PCF):	**134.2**
Diameter (cm):	**7.23**	Dry Density (PCF):	**113.5**	Diameter (cm):	**7.25**	Dry Density (PCF):	**113.3**
Area (cm^2)	**41.11**	Percent Saturation:	**97.3%**	Area (cm^2)	**41.28**	Percent Saturation:	**100.0%**
Volume (cm^3)	**613.03**			Volume (cm^3)	**614.22**	B-Parameter:	**0.95**
Wet weight (grams)	**1309.5**	Void Ratio:	**0.485**	Wet weight (grams)	**1321.1**	Void Ratio:	**0.487**
Dry Weight (grams)	**1114.9**	Porosity:	**0.326**	Dry Weight (grams)	**1114.9**	Porosity:	**0.328**
Percent Moisture:	**17.5%**			Percent Moisture:	**18.5%**		
Test Parameters:	Effective Consolidation Stress (psi):		**40.0**	Permeant Liquid Used:		Deaired Water	
Burette Area (cm^2):	**0.874**	Cell Pressure (psi):	**90.0**	Influent Pressure (psi):	**65.0**	Effluent Pressure (psi):	**50.0**

Time (24-hr)			**Temperature (°C)**				**Measurements**						**Initial Gradient**	**Final Gradient**	**K-Value (cm/sec)**	
Start	**End**	**Time (sec)**	**Initial**	**Final**	**Avg.**	**Factor**	$h_{out}1$	$h_{in}1$	$h_{out}2$	$h_{in}2$	**h1**	**h2**			**Uncorrected K-Value**	**Corrected K-Value**
9:22:00	12:26:00	11040	19.8	20.6	20.2	0.9954	49.40	2.00	49.30	2.10	1108.5	1108.3	74.51	74.49	2.93E-09	2.92E-09
12:26:00	15:01:00	9300	20.6	21.6	21.1	0.9740	49.30	2.10	49.22	2.20	1108.3	1108.1	74.49	74.48	3.14E-09	3.05E-09
15:01:00	17:42:00	9660	21.6	22.4	22.0	0.9533	49.22	2.20	49.10	2.30	1108.1	1107.9	74.48	74.46	3.69E-09	3.52E-09
17:42:00	9:39:00	57420	22.4	19.9	21.2	0.9728	49.10	2.30	48.60	2.80	1107.9	1106.7	74.46	74.38	2.82E-09	2.75E-09
Notes:												***Averages:***	***74.48***	***74.45***	***3.15E-09***	***3.1E-09***

Technician: Paula J. Manning
Technical Responsibility: Erica Goodyear

Erica Goodyear
signature

Position: T3

Form No. WS-D5084-1
Revision No. : 0
Revision Date: 03/11/15

ASTM D5084 Flex Wall Perm Method C

Test Data

S&ME, Inc. Columbus Branch, 6190 Enterprise Ct., Dublin, Ohio 43016

Project No:	25170078	Report Date:	1/9/2026
Project Name:	AEP Poston Legacy CCR Impound	Test Date:	10/27/2025
Client Name:	American Electric Power	Sample Date:	8/20/2025
Client Address:	8500 Smiths Mill Rd., New Albany, OH 43054	Log No:	17-67-25
Sample ID:	B-02 ST-37 85.0'-87.0' II	Sample Type:	Intact
Description:	LEAN CLAY WITH SAND (CL), trace fine gravel		

Sample Info:	Assumed SG:	2.70	Percentage Passing 200:	83.4	Maximum Particle Size:	**12.5 mm**
	Liquid Limit:	44	Plastic Limit:	19	Plastic Index:	25

				Final Specimen Conditions			
Length (cm):	**14.56**	Wet Density (PCF):	**125.8**	Length (cm):	**14.19**	Wet Density (PCF):	**128.9**
Diameter (cm):	**7.22**	Dry Density (PCF):	**98.3**	Diameter (cm):	**7.01**	Dry Density (PCF):	**106.9**
Area (cm^2)	**40.92**	Percent Saturation:	**100.0%**	Area (cm^2)	**38.60**	Percent Saturation:	**96.3%**
Volume (cm^3)	**595.55**			Volume (cm^3)	**547.82**	B-Parameter:	**0.99**
Wet weight (grams)	**1200.6**	Void Ratio:	**0.714**	Wet weight (grams)	**1131.2**	Void Ratio:	**0.576**
Dry Weight (grams)	**938.3**	Porosity:	**0.416**	Dry Weight (grams)	**938.3**	Porosity:	**0.366**
Percent Moisture:	**27.9%**			Percent Moisture:	**20.6%**		
Test Parameters:	Effective Consolidation Stress (psi):		**50.0**	Permeant Liquid Used:		Deaired Water	
Burette Area (cm^2):	**0.874**	Cell Pressure (psi):	**100.0**	Influent Pressure (psi):	**70.0**	Effluent Pressure (psi):	**50.0**

Time (24-hr)			**Temperature (^oC)**				**Measurements**						**Initial Gradient**	**Final Gradient**	**K-Value (cm/sec)**	
Start	**End**	**Time (sec)**	**Initial**	**Final**	**Avg.**	**Factor**	**$h_{out}1$**	**$h_{in}1$**	**$h_{out}2$**	**$h_{in}2$**	**h1**	**h2**			**Uncorrected K-Value**	**Corrected K-Value**
9:24:15	12:27:15	10980	19.8	20.6	20.2	0.9954	49.70	1.40	49.45	1.70	1461.1	1460.4	102.94	102.90	6.28E-09	6.25E-09
12:27:15	15:04:15	9420	20.6	21.6	21.1	0.9740	49.45	1.70	49.20	1.90	1460.4	1459.9	102.90	102.86	5.99E-09	5.84E-09
15:04:15	17:43:15	9540	21.6	22.4	22.0	0.9533	49.20	1.90	48.90	2.15	1459.9	1459.3	102.86	102.82	7.24E-09	6.90E-09
17:43:15	9:39:15	57360	22.4	19.9	21.2	0.9728	48.90	2.15	47.50	3.50	1459.3	1456.2	102.82	102.60	6.02E-09	5.86E-09
Notes:												***Averages:***	***102.88***	***102.80***	***6.38E-09***	***6.2E-09***

Technician: Paula J. Manning
Technical Responsibility: Erica Goodyear

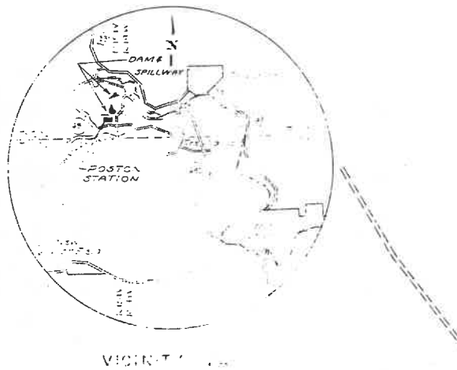
Erica Goodyear
signature

Position: T3

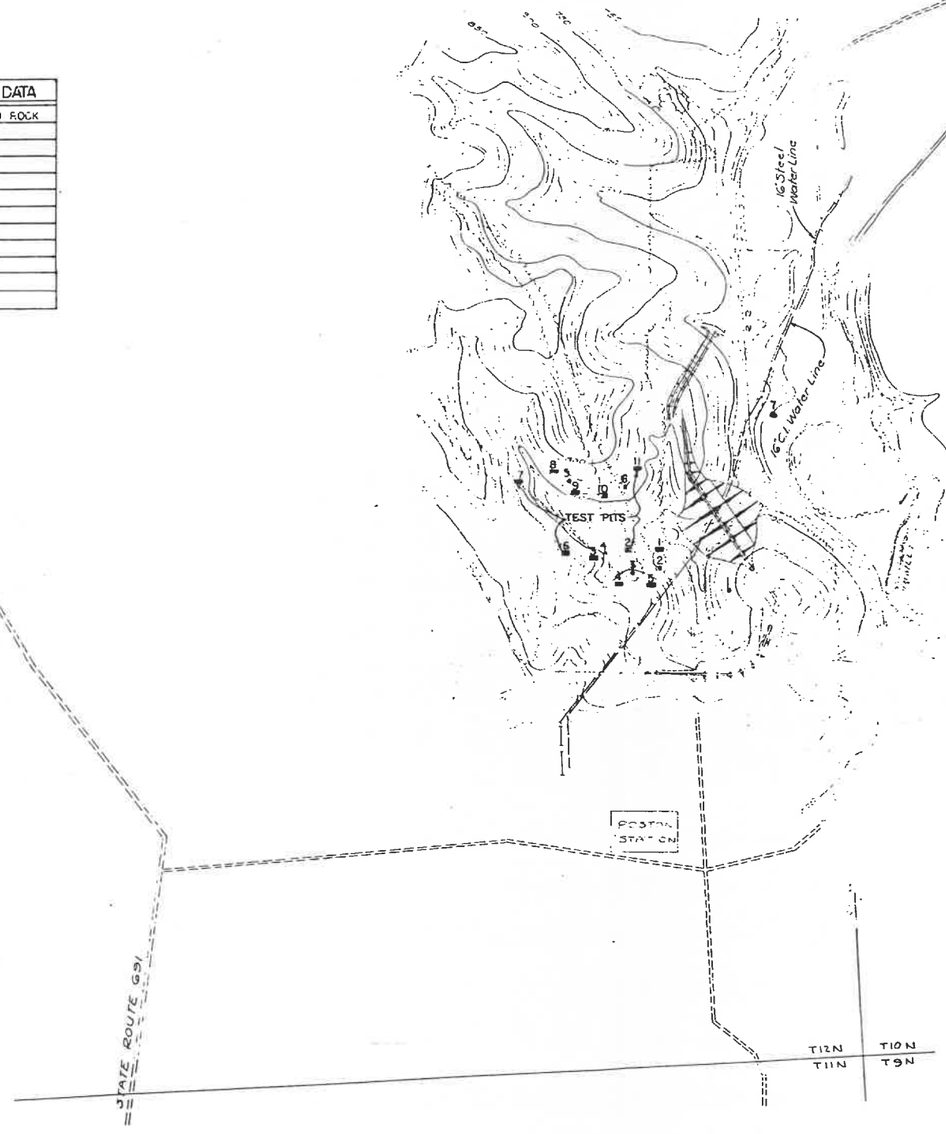
ATTACHMENT C

DESIGN DRAWINGS

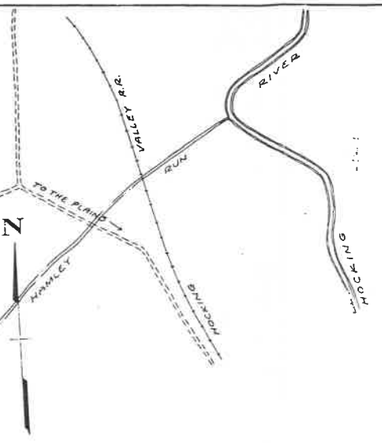
TEST PIT DATA	
NO.	DEPTH TO ROCK
1.	4 FEET
2.	6 FEET
3.	3 FEET
4.	4 FEET
5.	4 FEET
6.	4 FEET
7.	6 FEET
8.	6 FEET
9.	7 FEET
10.	3 FEET
11.	4 FEET

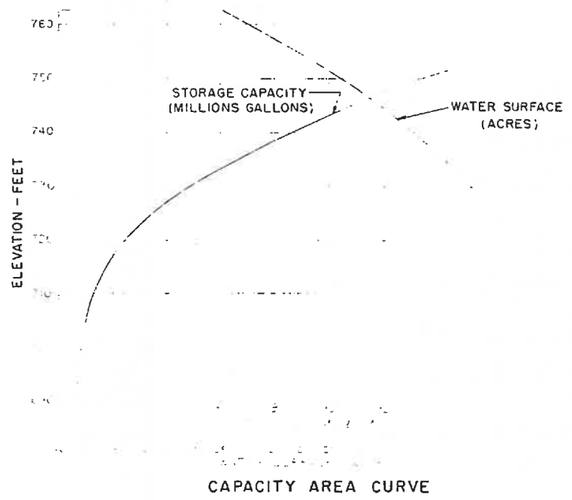


VICINITY MAP



GENERAL LOCATION PLAN
SCALE 1" = 400'





CAPACITY AREA CURVE

FIGURE 3

BURGESS AND NIPLE CONSULTING ENGINEERS COLUMBUS, OHIO		
COLUMBUS AND SOUTHERN OHIO ELECTRIC CO. E. M. POSTON STATION FLY ASH STORAGE DAM **GENERAL LOCATION PLAN AND VICINITY MAP**		
REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY DBC
JULY 1956	SCALE AS NOTED	SHEET 1 OF 21

50,000 Gallon Water Tank

B.M. S.E. CORNER VALVE PIT AT ELEVATED STORAGE TANK ELEVATION 765.67

North-South Base Line 817.19'

Existing 16" Steel Water Line

Existing 16" C.I. Water Line

B MATCH LINE B

Existing Cyclone Fence to be moved to here

436.63'

20'

765

760

755

750

2:1

Riprap Delicious Material

Elev. 760.0 Water Level

TEST HOLE NO. 12

TEST HOLE NO. 11

TEST HOLE NO. 10

TEST HOLE NO. 9

Cyclone Fence

16" C.I. Water Line

88.76

25.57

42.37

B.M. SOUTH SIDE RADIO COMMUNICATION STATION ON CONCRETE SILL BENEATH DOOR. ELEVATION 787.89

Grout Hole No. B-13

Grout Hole No. B-12

Grout Hole No. B-10

Grout Hole No. B-11

Grout Hole No. B-7

Grout Hole No. B-6

Grout Hole No. B-14

STA. 10+50

MATCH LINE A

765

770

775

780

785

Radio Communication Station

+12.86

POSTON STATION

East-West Base Line

Water Elev. 730.7

No. 3

No. 2

No. 1

Borrow Areas

Water Elev. 760.0

Water Tank

N.S. Base Line 817.19

436.63'

16" Steel Water Line

R.R. Siding

16" C.I. Water Line

Cyclone Fence

SITE PLAN

SCALE: 1" = 300'

NOTE-

15/1 STATIONS AS SUCH, ON ORIGINAL TRAVERSE LINE.

15/1 STATIONS AS SUCH, ON CENTER LINE OF PROPOSED DAM.

△ TACKED HUB, ON ORIGINAL TRAVERSE LINE.

FIGURE 4

BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

GENERAL PLAN

REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY W.R.D.
JULY 1956	SCALE: 1" = 50'	SHEET 2 OF 23

TEST HOLE NO. 14

NOTE- P.I. ON ORIGINAL TRAVERSE LINE = STA. 22+50
P.I. ON PROPOSED CENTER LINE = STA. 22+71.74

B.M. PK. IN EAST POWER POLE IN BANK OF THREE STA 22+45 ±55 EAST OF SURVEY LINE EL. 769.77

TEST HOLE NO. 13

TEST HOLE NO. 6

TEST HOLE NO. 5

TEST HOLE NO. 4

TEST HOLE NO. 1

TEST HOLE NO. 2

TEST HOLE NO. 3

TEST HOLE NO. 7

TEST HOLE NO. 8

CURVE DATA
Δ = 35° 00'
L = 184.21
R = 301.56
D = 19° 00'
T = 95.08

B.M. PK. IN ROOT OF 18" OAK STA. 17+70 24' EAST OF SURVEY LINE EL. 757.61

For Encasement of Water Lines See Detail Sheet N°20

B.M. PK. IN STUMP AT BOTTOM OF WEST SLOPE NEAR ℄ EL. 703.56

B.M. PK. IN TREE NORTH OF STA. 13+00 EL. 694.91

Inlet

Existing 16" Steel Water Line

Existing 16"C.I. Water Line

Main Toe Drain Type B See Detail Sheet N°17

Sand Blanket In Shaded Area

Headwall

Lateral Drain 3

Main Toe Drain Type A See Detail Sheet N°17

Existing Drainage Ditch

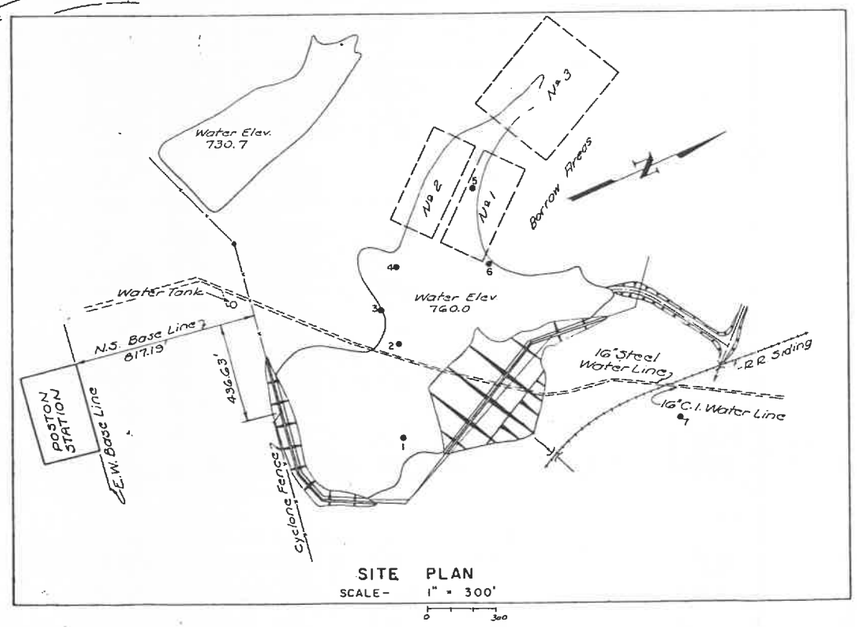
SWAMPY AREA

SEEPAGE

MATCH LINE

STA. 10+50

NOTE: SWAMPY AREA AND SEEPAGE ADDED BY GAI.



SITE PLAN
SCALE- 1" = 300'

NOTE
"D" DISTANCE FROM TOE OF DOWNSTREAM SLOPE TO CENTERLINE OF DAM.
STATIONS AS SUCH, ON ORIGINAL TRAVERSE LINE.
STATIONS AS SUCH, ON CENTER LINE OF PROPOSED DAM.
TACKED HUB, ON ORIGINAL TRAVERSE LINE.

FIGURE 5

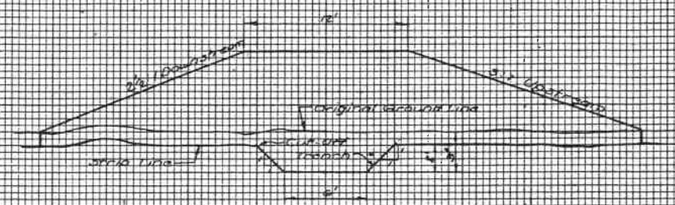
BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

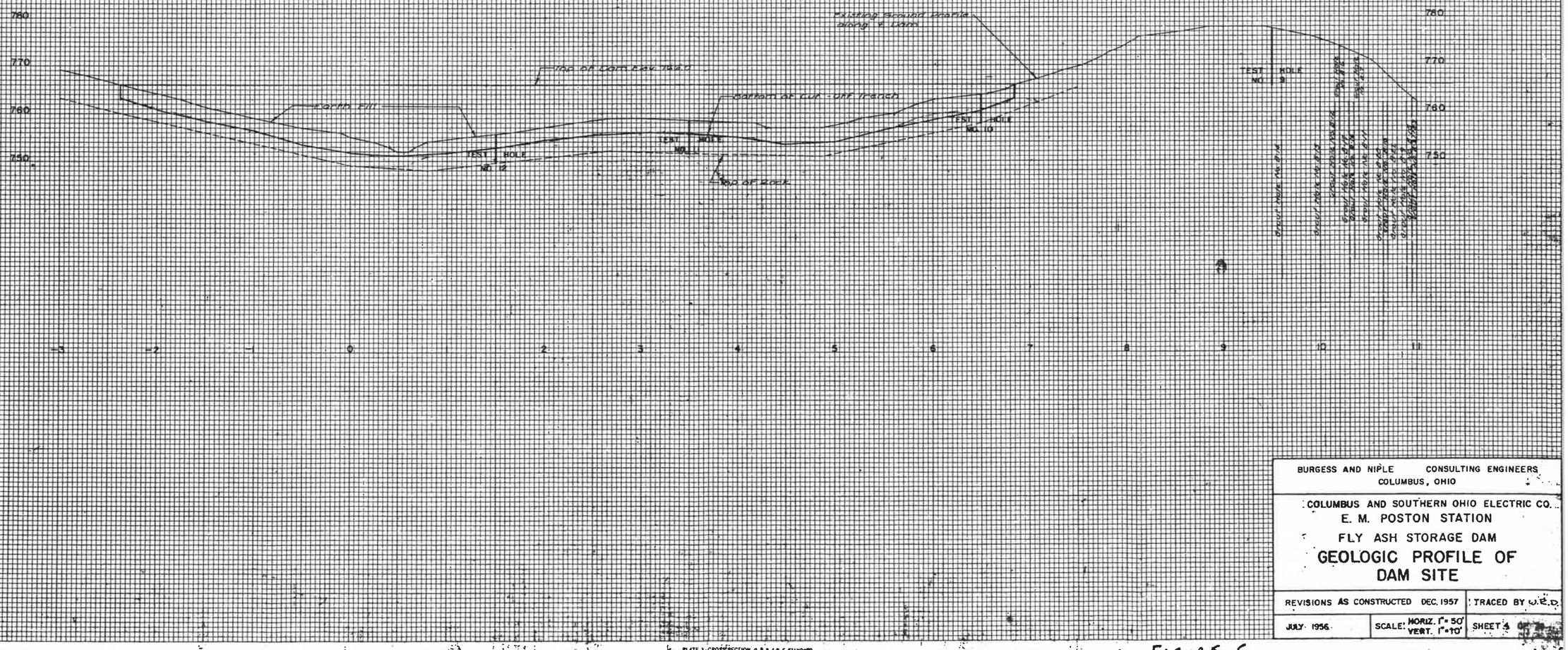
GENERAL PLAN

REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY D.J.L.
JULY 1956	SCALE 1"=50' UNLESS NOTED	SHEET 3 OF 21

GAI NOTE: FIELD OBSERVATIONS INDICATED A DIKE CREST WIDTH OF ABOUT 20' (SIMILAR TO THAT SHOWN ON FIGURE 4) INSTEAD OF THE 12' SHOWN AT THE LEFT.



TYPICAL SECTION FOR CUT-OFF TRENCH
STA. -2+36 TO STA. 6+90
SCALE 1"=5'



FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

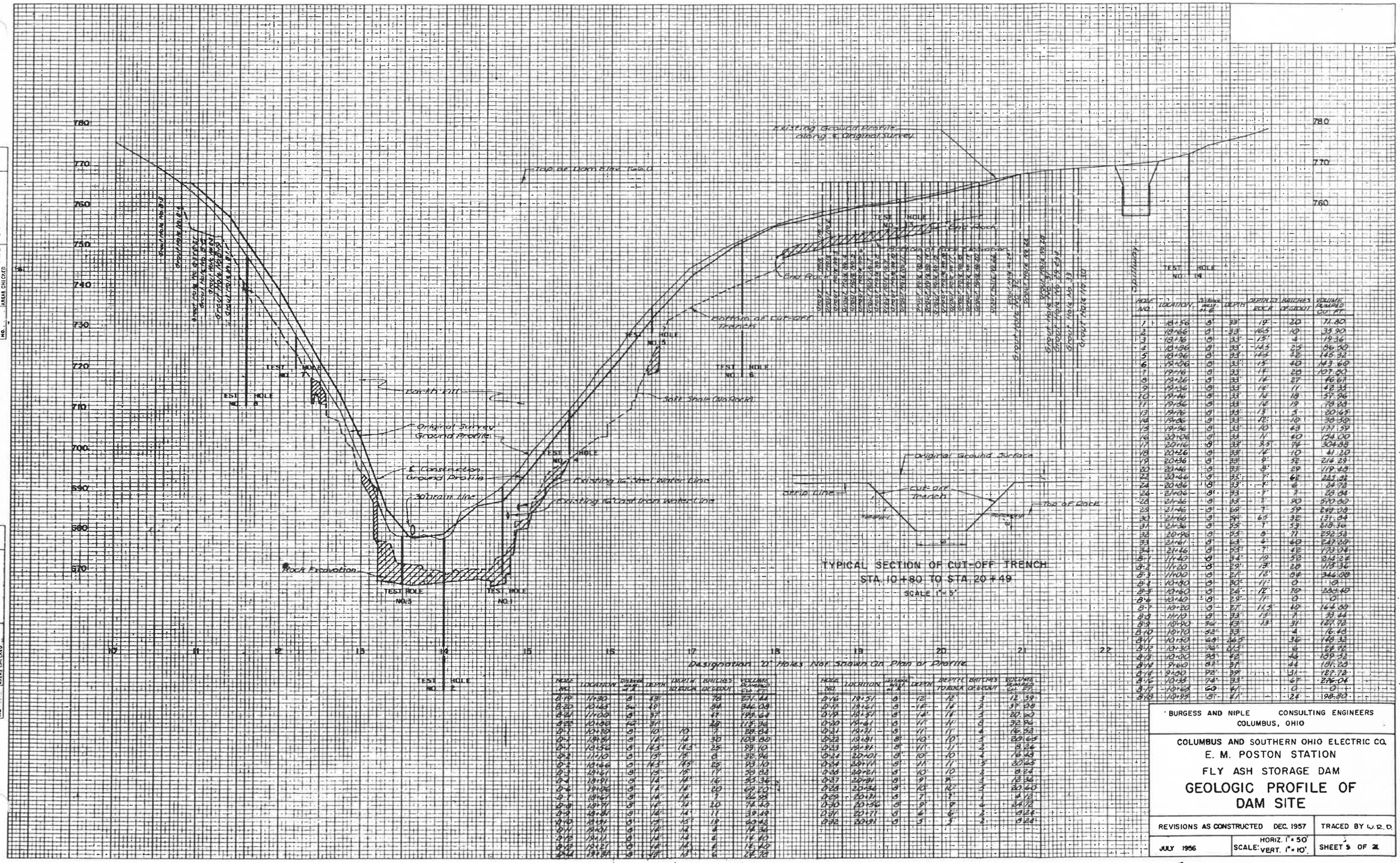
BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM
GEOLOGIC PROFILE OF DAM SITE

REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY W.E.D.
JULY 1956	SCALE: HORIZ. 1"=50' VERT. 1"=10'	SHEET 4

PLATE 3 - CROSS SECTION, O. P. R. & R. E. STANDARD
KRUESS & ESSER CO., NEW YORK.

FIGURE 6



TYPICAL SECTION OF CUT-OFF TRENCH
STA. 10+80 TO STA. 20+49
SCALE 1" = 5'

Designation "T" Holes Not Shown On Plan or Profile

HOLE NO.	LOCATION	DISTANCE WEST OF ℄	DEPTH	DEPTH TO ROCK	BROKEN OR SOFT ROCK	VOLUME DRILLED CU. FT.
B-19	11+30	8'	45'		78	357.44
B-20	10+43	54'	49'		84	346.08
B-21	11+00	8'	37'		47	193.64
B-22	10+65	42'	31'		28	115.36
D-1	10+10	8'	10'	10'	2	8.24
D-1	19+54	8'	14'	14'	30	109.80
D-1	10+56	8'	14.5'	14.5'	25	99.10
D-2	11+10	8'	19'	19'	8	32.96
D-2	10+66	8'	14.5'	14.5'	25	93.10
D-3	10+61	8'	19'	19'	17	70.03
D-4	19+91	8'	14'	14'	16	65.36
D-6	19+96	8'	14'	14'	20	82.20
D-7	19+67	8'	14'	14'	7	28.28
D-9	19+77	8'	14'	14'	20	74.40
D-9	10+84	8'	14'	14'	11	39.49
D-10	19+91	8'	19'	15'	18	60.48
D-11	19+01	8'	14'	14'	4	16.36
D-13	19+11	8'	14'	14'	4	16.40
D-13	10+27	8'	14'	14'	4	16.40
D-14	19+31	8'	19'	13'	6	24.78

HOLE NO.	LOCATION	DISTANCE WEST OF ℄	DEPTH	DEPTH TO ROCK	BROKEN OR SOFT ROCK	VOLUME DRILLED CU. FT.
D-15	19+51	8'	12'	12'	3	12.39
D-17	19+61	8'	16'	16'	8	37.98
D-19	19+51	8'	14'	14'	5	20.20
D-20	19+41	8'	11'	11'	8	32.96
D-21	19+11	8'	11'	11'	4	16.52
D-22	19+01	8'	10'	10'	5	20.65
D-23	19+91	8'	11'	11'	2	8.24
D-24	20+01	8'	10'	10'	4	16.48
D-26	20+11	8'	11'	11'	5	20.65
D-35	20+21	8'	10'	10'	2	8.24
D-37	20+31	8'	9'	9'	3	12.36
D-28	20+36	8'	10'	10'	5	20.60
D-29	20+11	8'	7'	7'	1	4.12
D-30	20+56	8'	9'	9'	4	24.72
D-31	20+11	8'	6'	6'	2	8.24
D-32	20+91	8'	5'	5'	2	8.24

HOLE NO.	LOCATION	DISTANCE WEST OF ℄	DEPTH	DEPTH TO ROCK	BROKEN OR SOFT ROCK	VOLUME PUMPED CU. FT.
1	18+56	8'	33'	19'	20	71.80
2	18+66	8'	33'	16.5	10	35.90
3	18+76	8'	33'	13'	4	19.36
4	18+86	8'	33'	14.5	25	86.30
5	18+96	8'	33'	14.5	42	146.32
6	19+06	8'	33'	15'	40	143.60
7	19+16	8'	33'	14'	28	107.80
8	19+26	8'	33'	14'	27	96.67
9	19+36	8'	33'	14'	11	42.35
10	19+46	8'	33'	14'	18	57.96
11	19+56	8'	33'	14'	19	78.28
13	19+76	8'	33'	13'	5	20.65
14	19+86	8'	33'	12'	10	30.60
15	19+96	8'	33'	10'	43	177.52
16	20+06	8'	33'	11'	40	154.00
17	20+16	8'	33'	3.5'	74	304.88
18	20+26	8'	33'	14'	10	41.20
19	20+36	8'	33'	8'	52	214.24
20	20+46	8'	33'	8'	29	119.49
22	20+46	8'	33'	7'	62	255.32
24	20+86	8'	33'	1'	6	24.72
26	21+06	8'	33'	1'	7	28.84
28	21+26	8'	33'	1'	90	370.80
29	21+46	8'	69'	7'	59	243.08
30	21+66	8'	34'	6.5'	32	131.84
31	21+36	8'	33'	1'	53	218.36
32	20+96	8'	33'	8'	71	292.52
33	21+61	8'	63'	6'	60	247.20
34	21+46	8'	33'	1'	42	173.04
B-1	11+40	8'	34'	19'	50	206.00
B-2	11+20	8'	29'	19'	28	115.36
B-3	11+00	8'	27'	15'	84	346.08
B-4	10+80	8'	10'	0'	4	16.48
B-5	10+60	8'	24'	12'	50	206.00
B-6	10+40	8'	29'	11'	0	0
B-7	10+20	8'	27'	11.5'	40	164.80
B-8	11+10	91'	23'	15'	7	33.64
B-9	10+90	34'	49'	13'	31	127.72
B-10	10+70	52'	33'		4	16.48
B-11	10+50	69'	26.5'		36	148.32
B-12	10+30	76'	21'		6	24.96
B-13	10+00	93'	28'		46	189.52
B-14	9+80	87'	31'		44	181.28
B-15	9+60	92'	39'		44	181.28
B-16	10+35	74'	33'		67	276.04
B-17	10+65	60'	41'		0	0
B-18	10+95	51'	41'		24	98.80

BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

GEOLOGIC PROFILE OF DAM SITE

REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY W.R.D.
JULY 1956	SCALE: HORIZ. 1" = 50' VERT. 1" = 10'	SHEET 5 OF 21

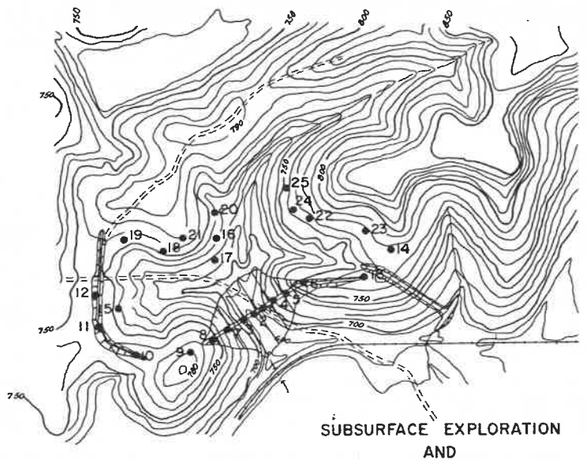
PLATE 3-CROSS SECTION O.P.R. & R.C. STANDARDS
AMERICAN ARENA CO. NEW YORK.

FIGURE 7

LEGEND AND CLASSIFICATION FOR PROJECT

AVERAGE RESULTS OF TESTS

DESCRIPTION	CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	APPROX. MAX. DRY WTS.	APPROX. OPT. MOIST.	SAMPLES TESTED
SILT	A4b	0	3	8	62	27	28	8	100 Lbs. per cu. ft.	19%	1
SANDY SILT	A4a	11	11	18	38	24	29	8	110 Lbs. per cu. ft.	15%	9
SILT & CLAY	A6	2	7	8	47	36	35	14	107 Lbs. per cu. ft.	17%	6
CLAY	A7-6	1	5	4	37	51	49	26	101 Lbs. per cu. ft.	21%	6
SHALE	—		CLASSIFIED BY VISUAL INSPECTION								
SANDSTONE			CLASSIFIED BY VISUAL INSPECTION								



SUBSURFACE EXPLORATION AND SITE PLAN

SCALE: 1" = 400'

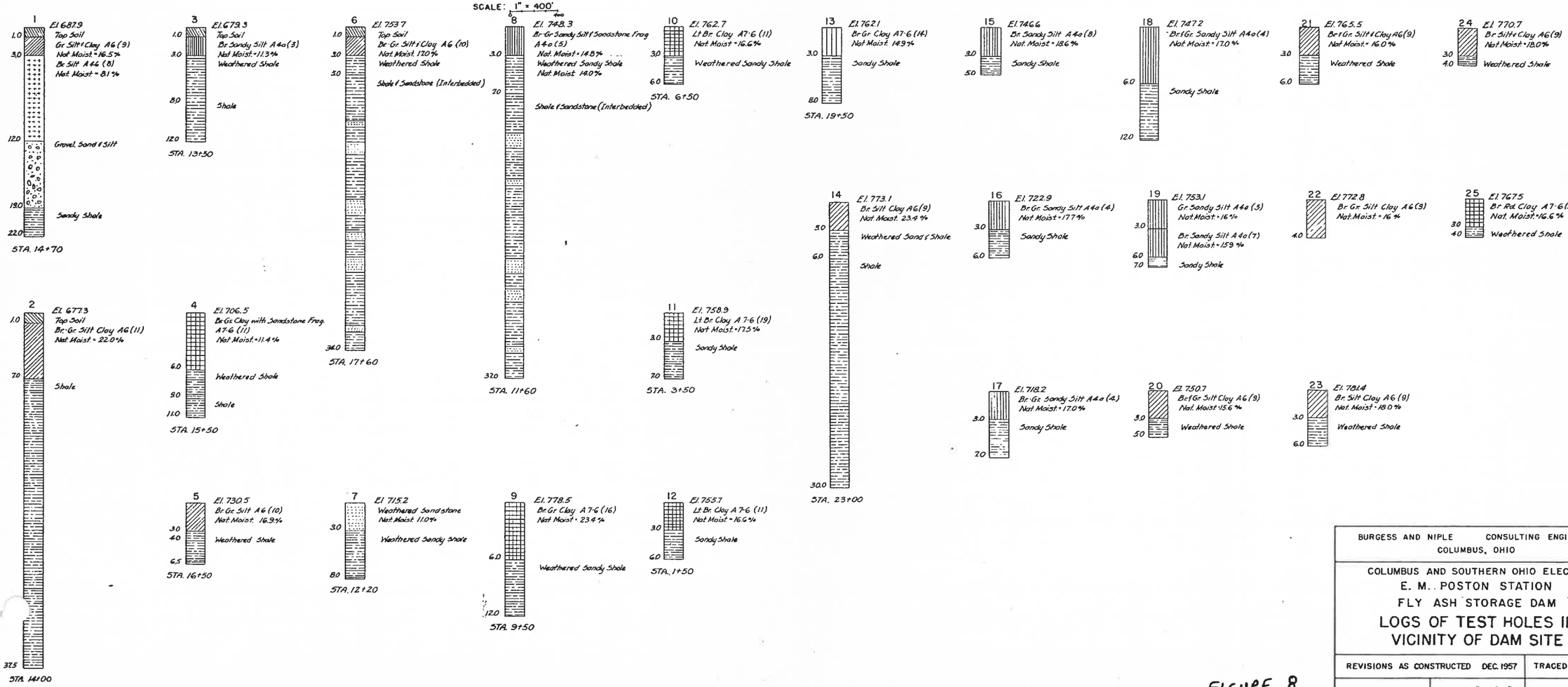


FIGURE 8

BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

LOGS OF TEST HOLES IN VICINITY OF DAM SITE

REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY D.E.S.
JULY 1956	SCALE: 1" = 5'-0"	SHEET 6 OF 21

SURVEY | PLOTTED | NOTE BOOK | TRIPLATE | AREA | AREAS CHECKED | NO.

Concrete Retaining Wall

Approx. Rock Elevation

+12.00%

-10.00%

50' V.C.

Ground Profile over Northwest face of Spillway

-20.00%

-8.00%

PROFILE ALONG NORTHWEST FACE OF SPILLWAY, LOOKING NORTHWESTERLY

Approx. Rock Elevation

+12.00%

-10.00%

50' V.C.

Ground Profile over E. Spillway

-20.00%

-8.00%

Elevations at C of Spillway

PROFILE ALONG ℄ OF SPILLWAY, LOOKING NORTHWESTERLY

Approx. Rock Elevation

Concrete Retaining Wall

+12.00%

-10.00%

50' V.C.

Ground Profile over Southeast edge of Spillway

-20.00%

-8.00%

PROFILE ALONG SOUTHEAST FACE OF SPILLWAY, LOOKING NORTHWESTERLY

℄ +35 ℄ OF EXISTING CREEK STREAM BED ELEV. APPROX. 695

GRADE SPILLWAY TO MEET EXISTING CREEK FROM END OF VERTICAL CURVE

BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

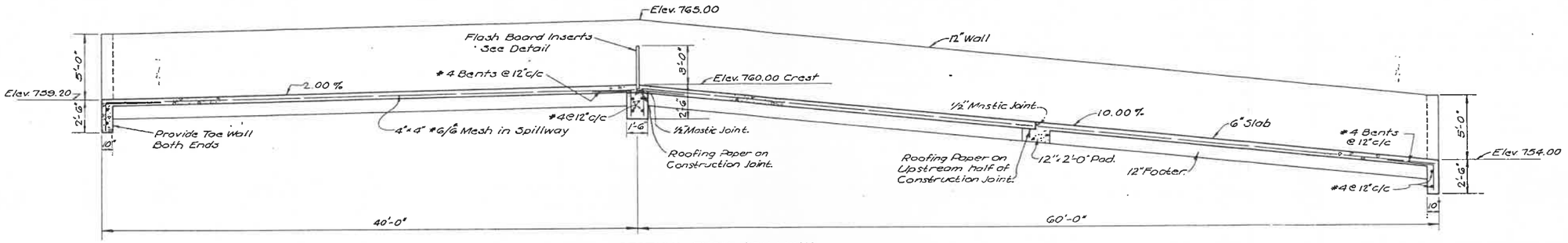
COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

SPILLWAY PROFILES

REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY DBC
JULY 1956	SCALE 1" = 20'	SHEET 15 OF 21

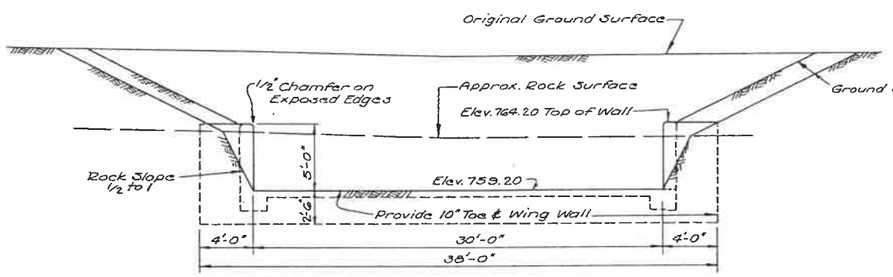
PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK
KEE Co. No. 348-30

FIGURE 9



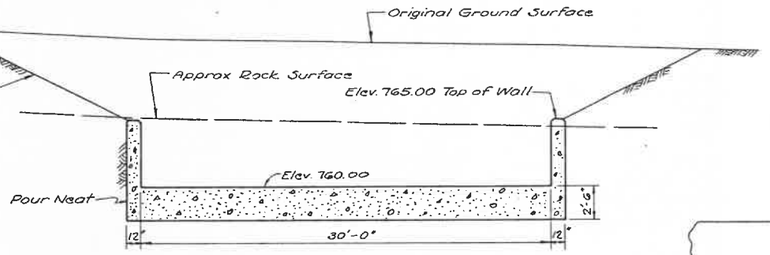
SECTION THRU SPILLWAY

SCALE 1/4" = 1'-0"



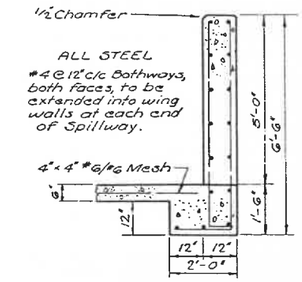
SECTION OF SPILLWAY AT STA. 0-40

SCALE: 1" = 5'



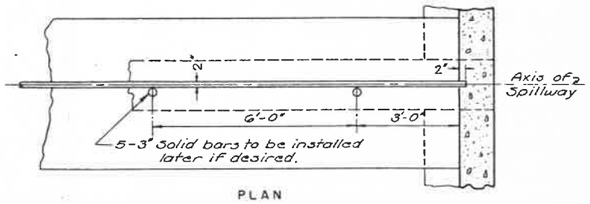
SECTION OF SPILLWAY AT CREST STA. 0+00

SCALE: 1" = 5'

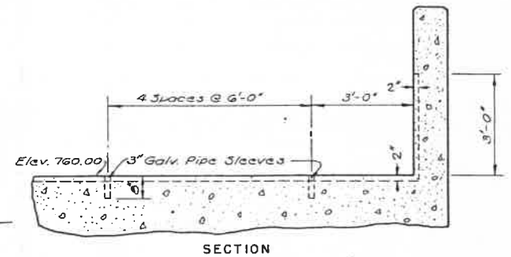


TYPICAL WALL STEEL

SCALE: 1/2" = 1'-0"



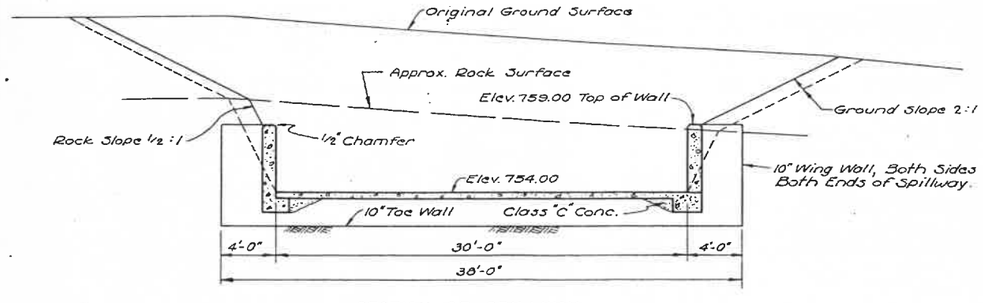
PLAN



SECTION

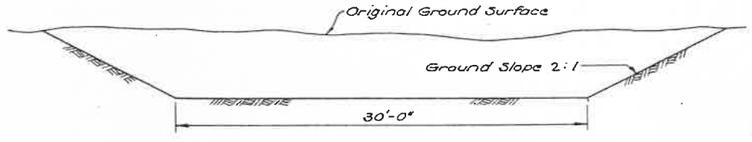
FLASH BOARD INSERTS

SCALE: 1/2" = 1'-0"



SECTION OF SPILLWAY STA. 0+60

SCALE: 1" = 5'



TYPICAL SPILLWAY SECTION

SCALE 1"=5'

BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.

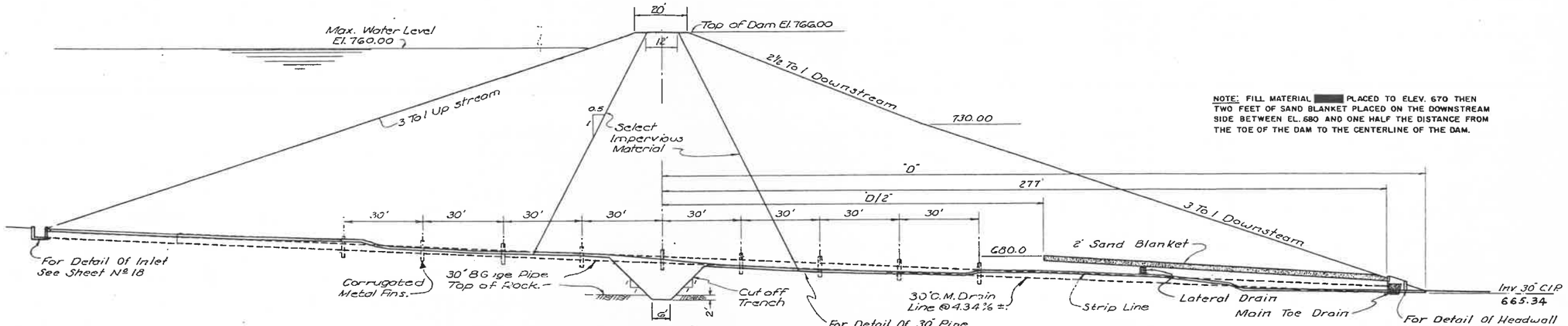
E. M. POSTON STATION

FLY ASH STORAGE DAM

SPILLWAY DETAILS

REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY BGC.
JULY 1956	SCALE: AS NOTED	SHEET 16 OF 21

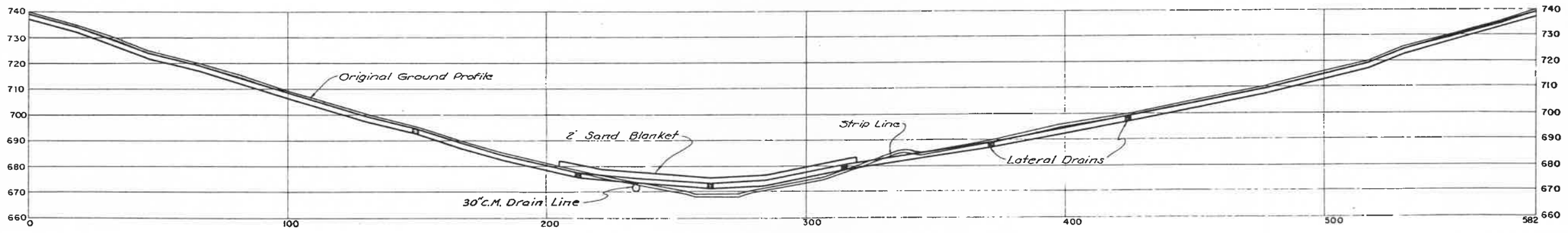
FIGURE 10



NOTE: FILL MATERIAL [redacted] PLACED TO ELEV. 670 THEN TWO FEET OF SAND BLANKET PLACED ON THE DOWNSTREAM SIDE BETWEEN EL. 680 AND ONE HALF THE DISTANCE FROM THE TOE OF THE DAM TO THE CENTERLINE OF THE DAM.

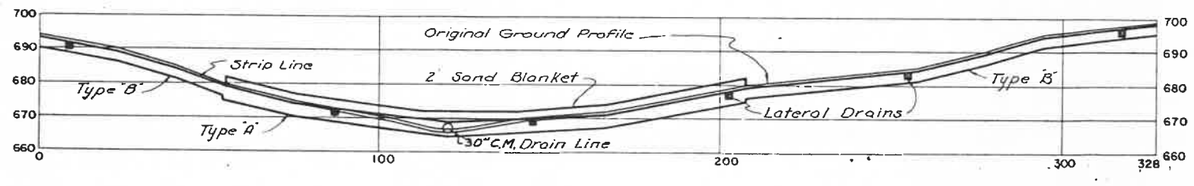
TYPICAL SECTION THRU DAM

SCALE 1" = 20'



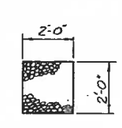
PROFILE OF LATERAL DRAIN - LOOKING WEST

SCALE 1" = 20'

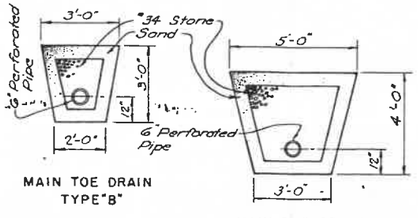


PROFILE OF MAIN TOE DRAIN - LOOKING WEST

SCALE 1" = 20'



LATERAL DRAIN



MAIN TOE DRAIN TYPE "B"

MAIN TOE DRAIN TYPE "A"

DRAIN DETAILS

SCALE 3/8" = 1'-0"

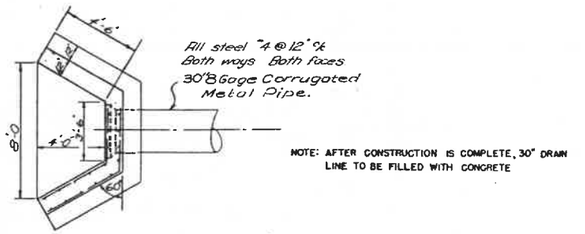
FIGURE 11

BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

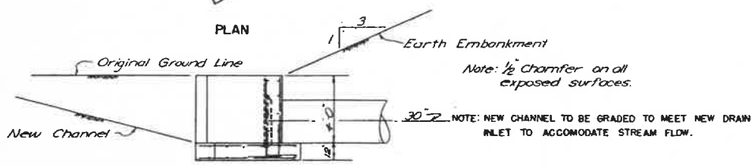
EARTH EMBANKMENT AND GRAVEL DRAIN DETAILS

REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY DBC
JULY 1956	SCALE AS NOTED	SHEET 17 OF 21



NOTE: AFTER CONSTRUCTION IS COMPLETE, 30" DRAIN LINE TO BE FILLED WITH CONCRETE

PLAN

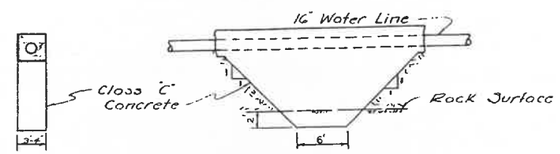


NOTE: NEW CHANNEL TO BE GRADED TO MEET NEW DRAIN INLET TO ACCOMODATE STREAM FLOW.

ELEVATION

DETAIL OF DRAIN INLET

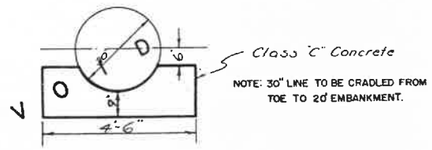
SCALE 1/4" = 1'-0"



ELEVATION

DETAIL OF 16" WATER LINE SUPPORTS THRU CUT-OFF TRENCH

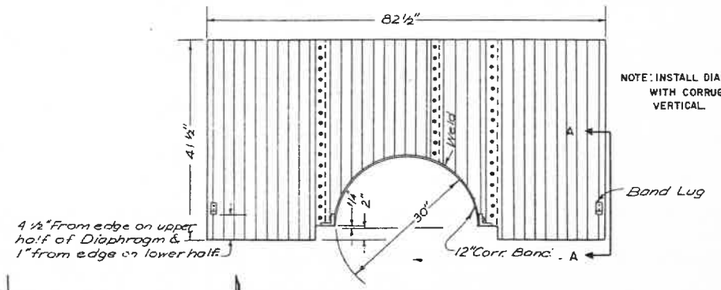
SCALE 1/8" = 1'-0"

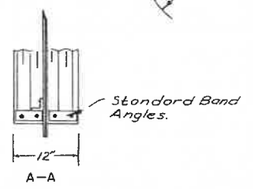


NOTE: 30" LINE TO BE CRADLED FROM TOE TO 2d EMBANKMENT.

DETAIL OF CONCRETE CRADLE ON 30" C.I. DRAIN

SCALE 1/2" = 1'-0"

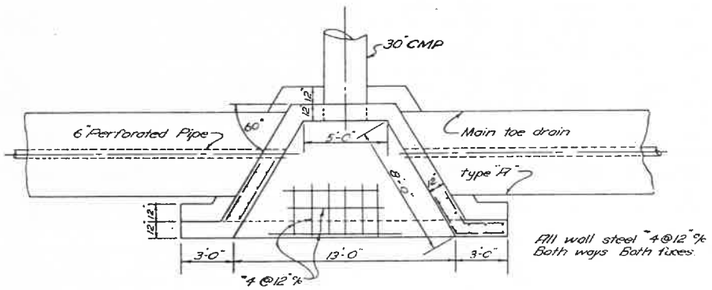




NOTE: ONE HALF OF DIAPHRAGM SHOWN, OTHER HALF IDENTICAL EXCEPT BAND LUG LOCATION.

DIAPHRAGM FOR CORRUGATED METAL PIPE (30").

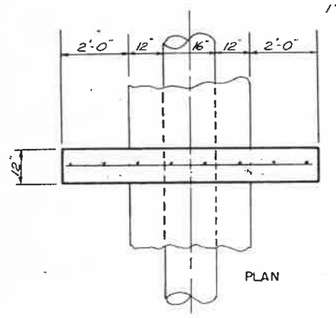
NOT TO SCALE



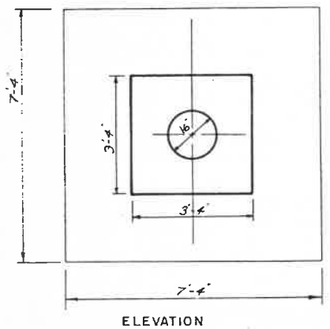
NOTE: 16" LINE TO BE CRADLED FROM TOE TO 6' EMBANKMENT. (DOWNSTREAM ONLY.)

DETAIL OF CONCRETE CRADLE ON 16" WATER LINE

SCALE 1/2" = 1'-0"



PLAN



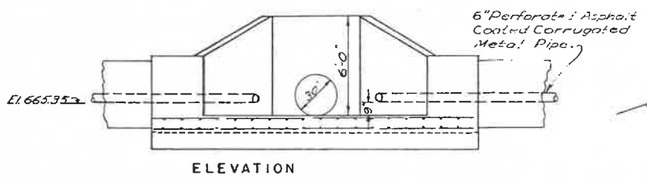
ELEVATION

DETAIL OF ENCASEMENT AND COLLARS FOR 16" WATER LINES

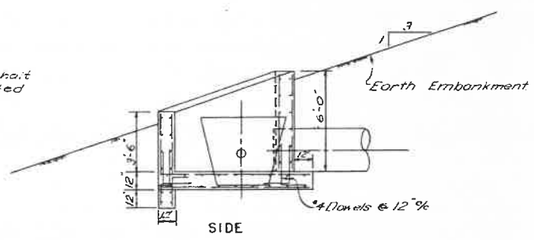
SCALE 1/2" = 1'-0"

NOTE: ON DOWN STREAM SIDE OF DAM 16" LINES TO BE ENCASED WHERE EMBANKMENT OF DAM IS 6 FEET OR MORE OVER PIPE LINE; PIPE TO BE CRADLED FROM THERE TO TOE.

Note: ¾" Chamfer on all exposed surfaces.



ELEVATION



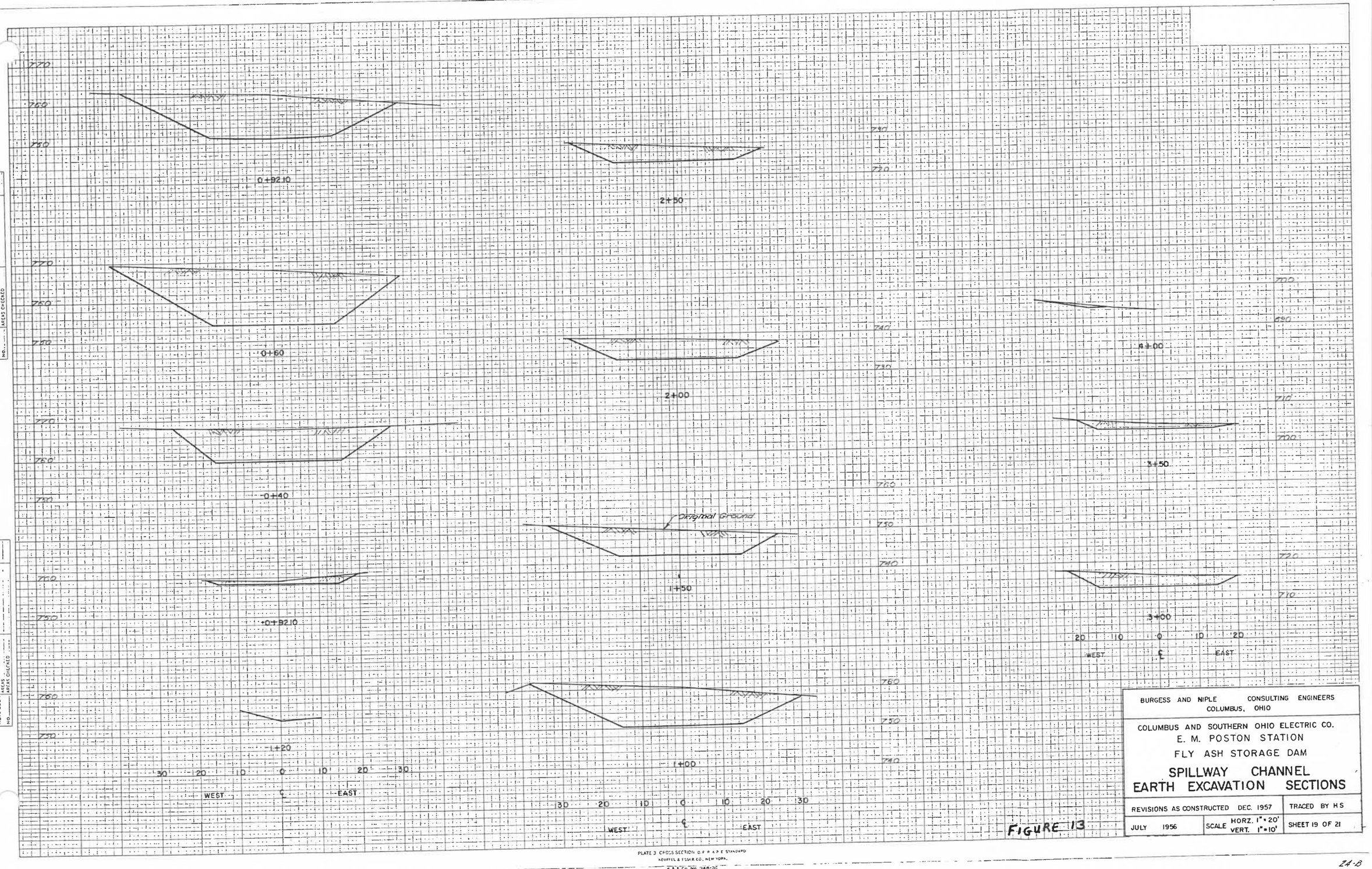
SIDE

DETAIL OF HEADWALL

SCALE 1/4" = 1'-0"

FIGURE 12

BURGESS AND NIPLE CONSULTING ENGINEERS COLUMBUS, OHIO		
COLUMBUS AND SOUTHERN OHIO ELECTRIC CO. E. M. POSTON STATION FLY ASH STORAGE DAM MISCELLANEOUS DETAILS		
REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY R.T.M.
JULY 1956	SCALE: AS NOTED	SHEET 18 OF 21



FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

PLATE 3 CROSS SECTION O.F.P.A.P.E STANDARD
KEUFFEL & ESSER CO., NEW YORK.
A.S.E.Co No 248-3C

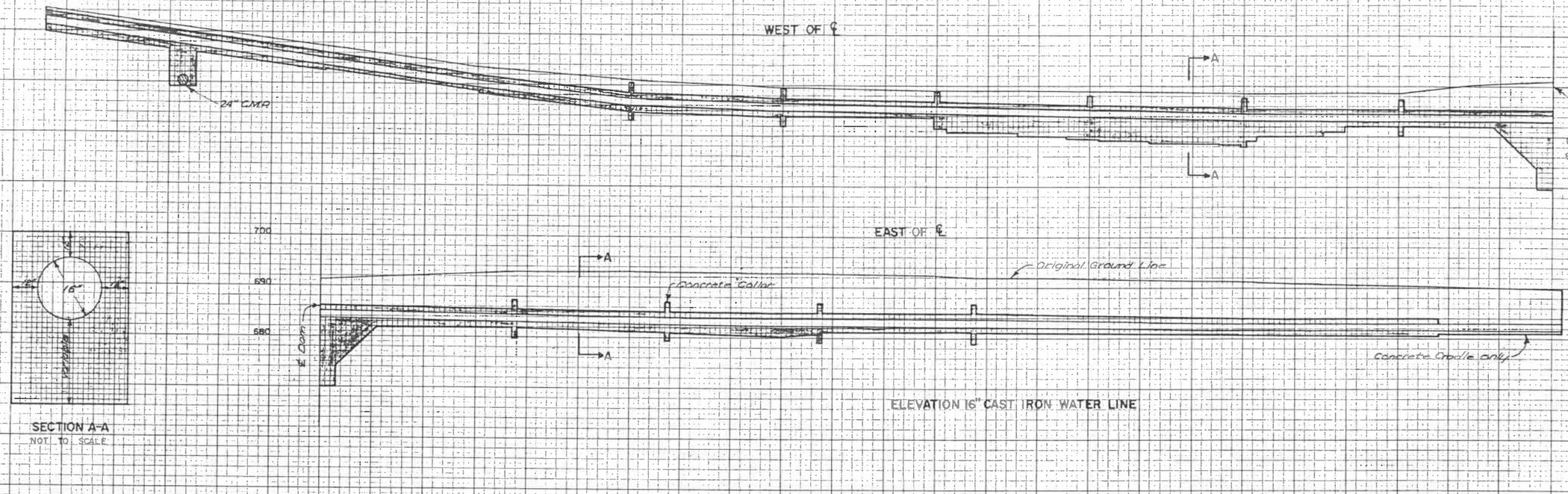
BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

SPILLWAY CHANNEL EARTH EXCAVATION SECTIONS

REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY H.S
JULY 1956	SCALE HORZ. 1"=20' VERT. 1"=10'	SHEET 19 OF 21

FIGURE 13



SECTION A-A
NOT TO SCALE

FINAL SURVEY
DATE
SURVEYED
PLOTTED
TRACED
CHECKED
NOTE BOOK
NO.

ORIGINAL SURVEY
DATE
SURVEYED
PLOTTED
TRACED
CHECKED
NOTE BOOK
NO.

BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

CONCRETE ENCASEMENT AND COLLARS FOR 16" WATER LINE.

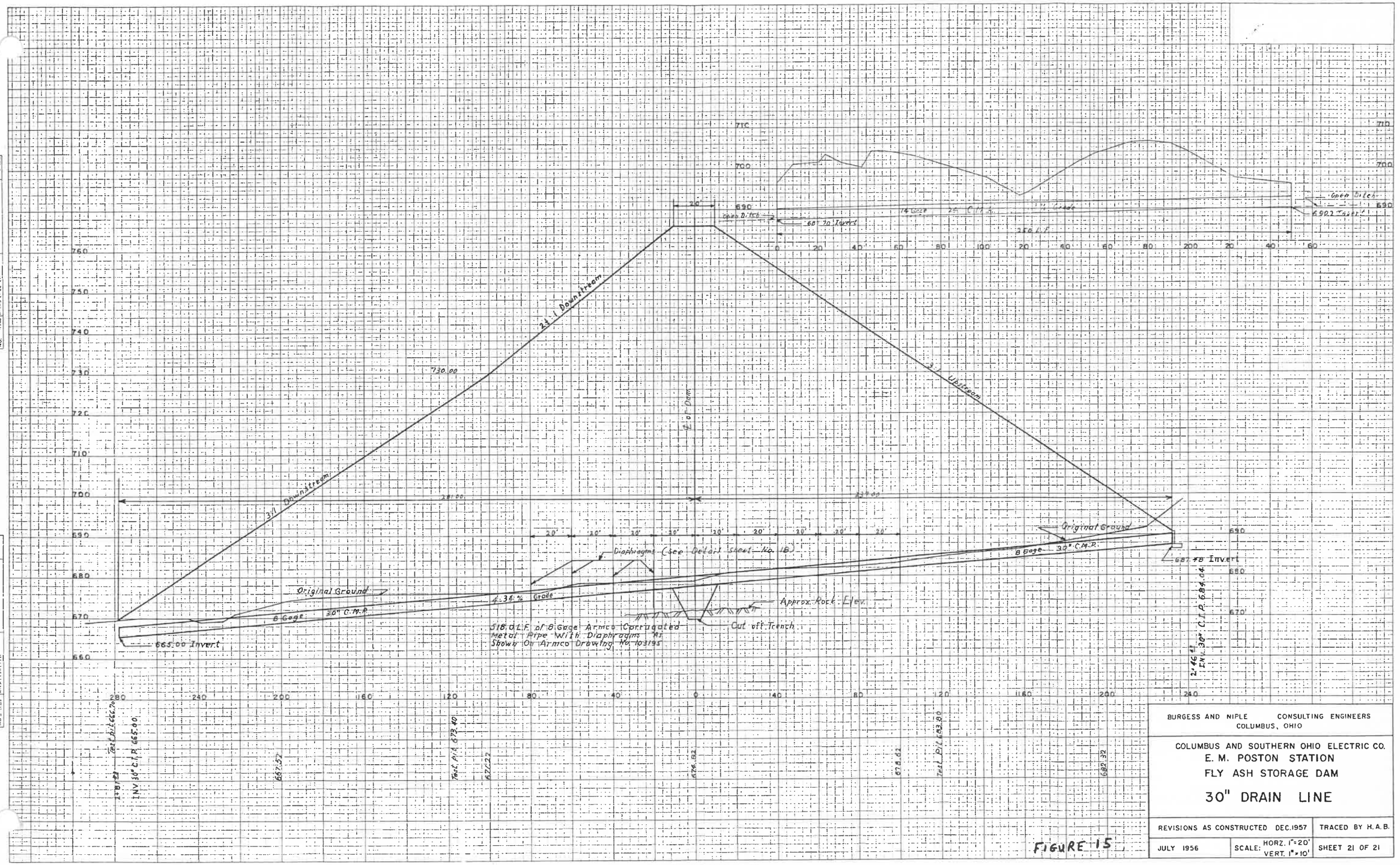
REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY HS
JULY 1956	SCALE: 1" = 10'	SHEET 20 OF 21

FIGURE 14

PLATE - CONSTRUCTION OF C.F.A.R.E. STANDARD
MOFFETT & ESSER, INC. NEW YORK
K & E CO. No. 348-3C

FINAL SURVEY — SURVEYED ____ PLOTTED ____ TRACED ____ NOTE BOOK ____ TENTATIVE ____ APPR. ____ APPR. CHECKED ____ NO. ____

ORIGINAL SURVEY — SURVEYED ____ PLOTTED ____ TRACED ____ NOTE BOOK ____ TENTATIVE ____ APPR. ____ APPR. CHECKED ____ NO. ____ DATE ____ BY ____



BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

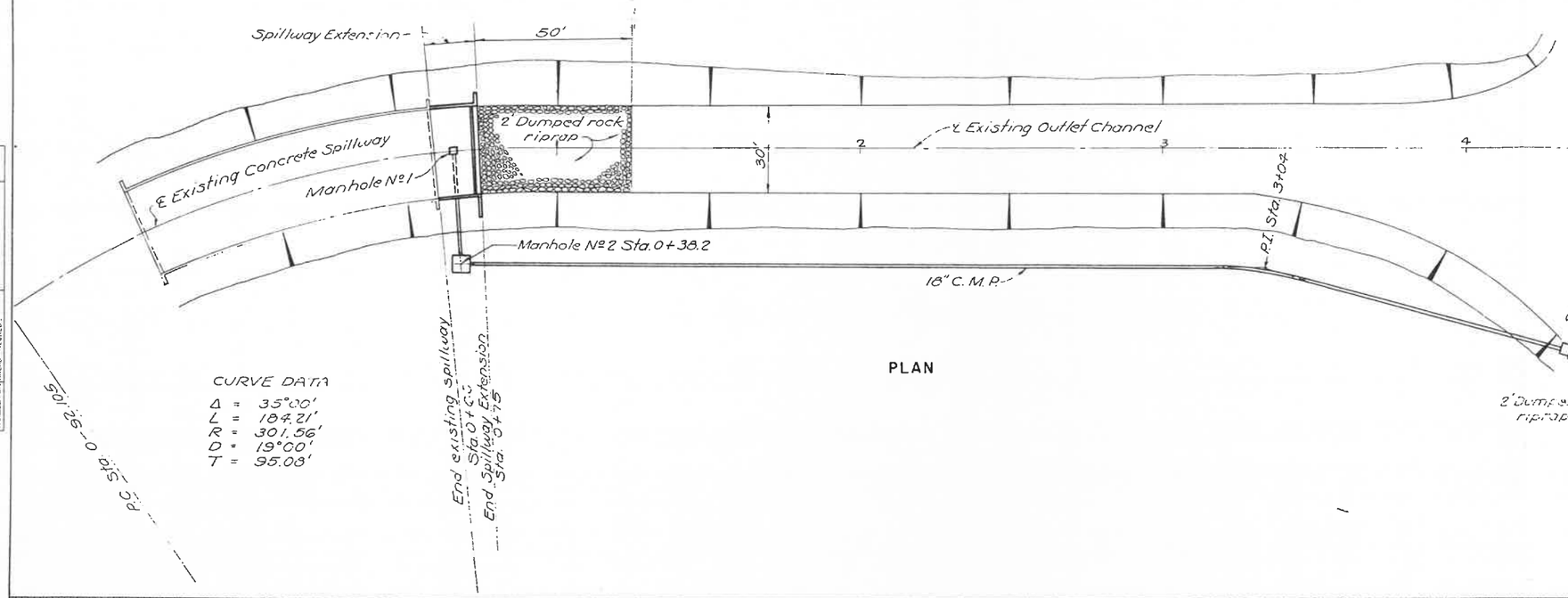
30" DRAIN LINE

REVISIONS AS CONSTRUCTED DEC. 1957		TRACED BY H.A.B.
JULY 1956	SCALE: HORZ. 1"=20' VERT. 1"=10'	SHEET 21 OF 21

FIGURE 15

PLATE 3 CROSS SECTIONS OF R & E STANDARD
SPECIFICATIONS
R & E Co. No. 348-56

Note: Corrugated metal pipe between manhole No.1 and manhole No.2 encased in concrete. See detail on sheet 3.



PLAN

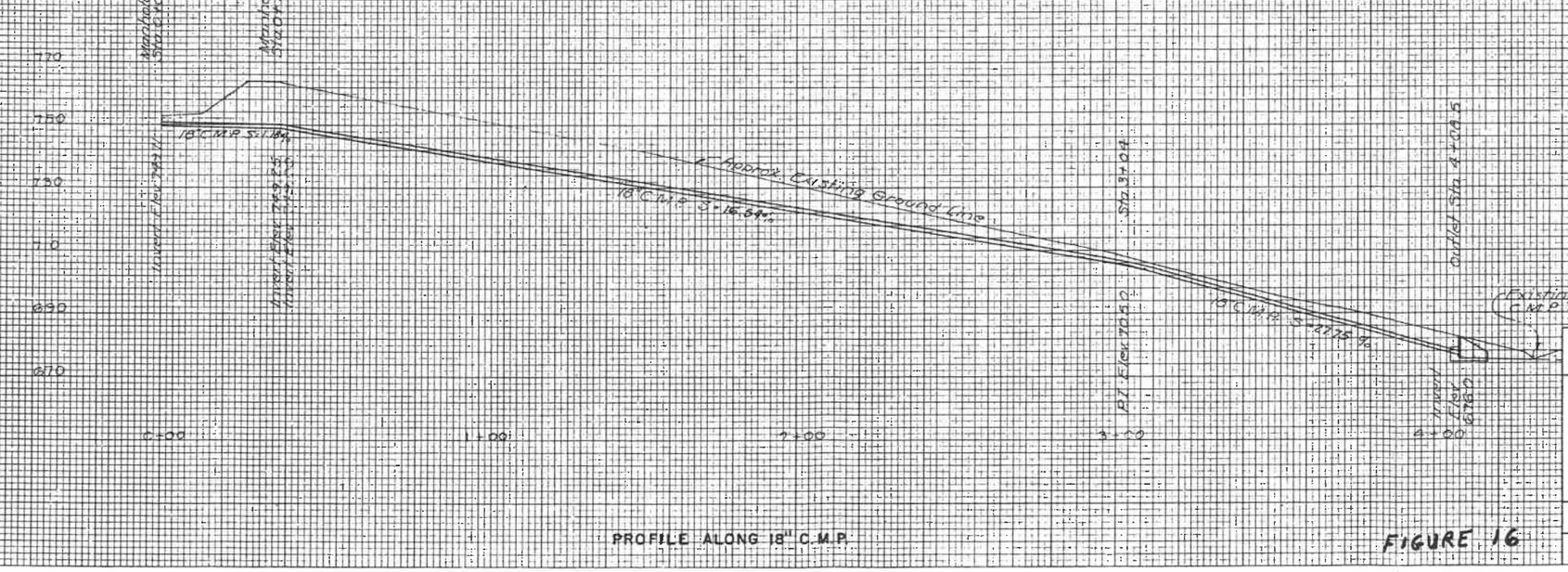
CURVE DATA

Δ = 35°00'
L = 184.21'
R = 301.56'
D = 19°00'
T = 95.08'

Corrugated Metal Pipe - All pipe shall be 18" diameter, 16 gage galvanized, fully bituminous coated corrugated metal pipe equal in quality to that produced by Armco Drainage & Metal Products, Inc. Coupling bands shall be standard 5 corrugation 12 gage galvanized, bituminous coated

Concrete - All concrete shall conform to the "Concrete Specifications for the Fly Ash Dam and Storage Reservoir" previously constructed. The spillway extension, manholes no. 1 and no. 2 shall be Class "A" Concrete and the pipe fins shall be Class "B" Concrete as described in the above referenced specifications.

Riprap - The 2' dumped rock riprap in the bottom of the existing outlet channel and at the end of the stilling basin shall conform to the section of the Specifications entitled "Riprap" except that the filter bed blanket is not required. The riprap stone shall be placed directly on the excavated foundation as shown in these drawings.



PROFILE ALONG 18" C.M.P.

FIGURE 16

BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

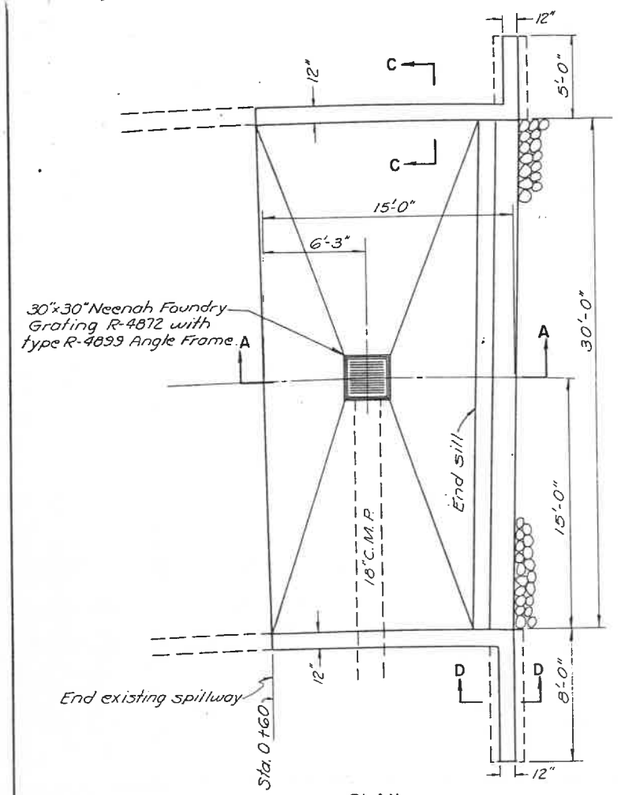
COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM
PLAN AND PROFILE OF 18" C.M.P. SPILLWAY DRAINAGE SYSTEM

		TRACED BY
AUGUST 1959	SCALE 1" = 20'	SHEET 1 OF 3

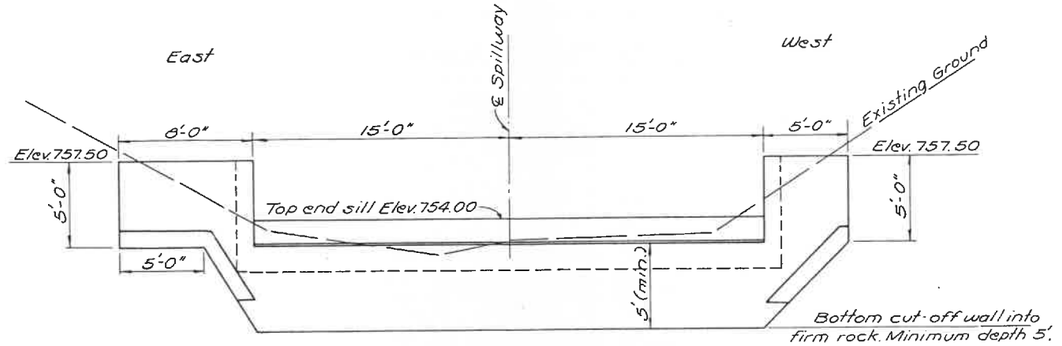
FINAL SURVEY — SURVEYED, PLOTTED, TRIPLICATE, NOTE BOOK, NO., BY, DATE, AREAS CHECKED

ORIGINAL SURVEY — SURVEYED, PLOTTED, TRIPLICATE, NOTE BOOK, NO., BY, DATE, AREAS CHECKED

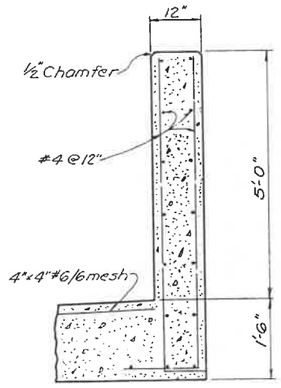
PLATE 4-CROSS SECTION OF R.S.R.E. STANDARD
KENTFIELD & KUEHN CO., NEW YORK
K & K Co. No. 348-4C



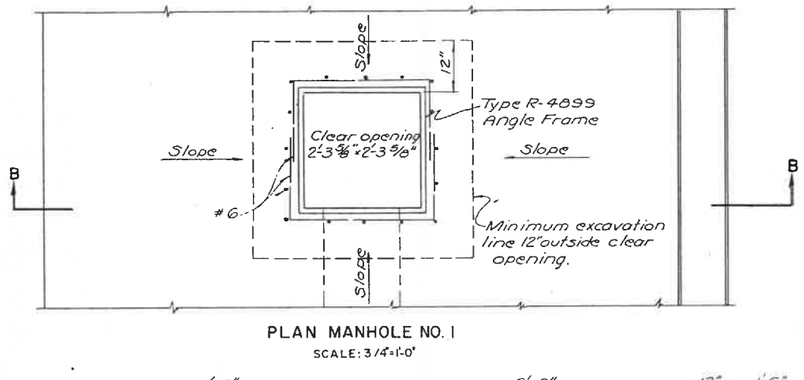
PLAN



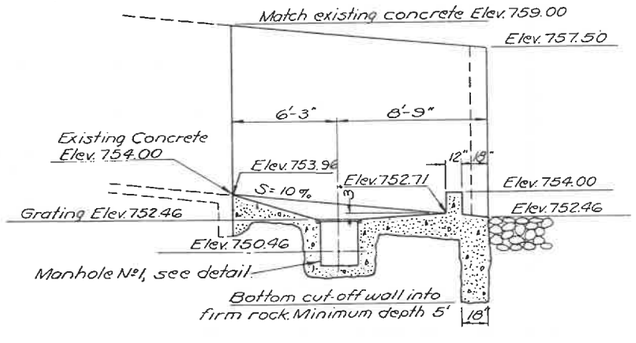
FRONT ELEVATION
SCALE: 1/4"=1'-0"



SECTION C-C
SCALE: 3/4"=1'-0"

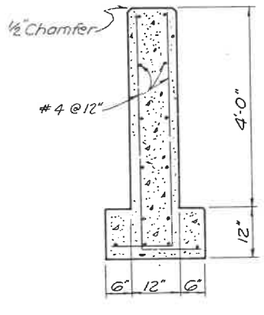


PLAN MANHOLE NO. 1
SCALE: 3/4"=1'-0"

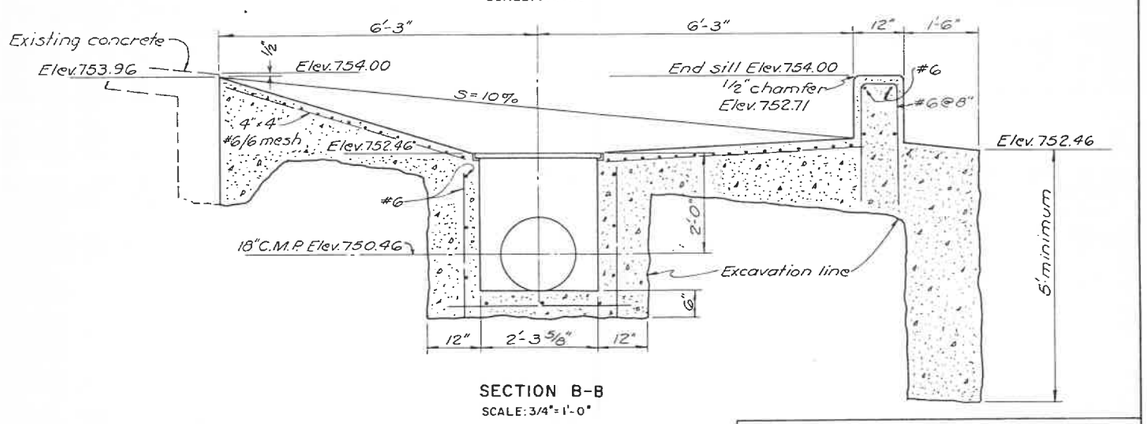


SECTION A-A

SPILLWAY EXTENSION
SCALE: 1/4"=1'-0"



SECTION D-D
SCALE: 3/4"=1'-0"



SECTION B-B
SCALE: 3/4"=1'-0"

Note - All concrete Class "A".

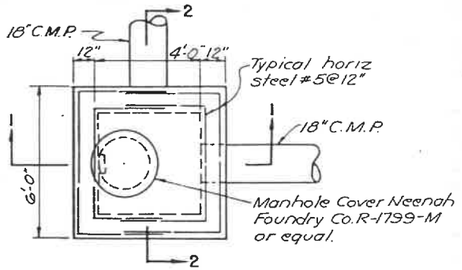
BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

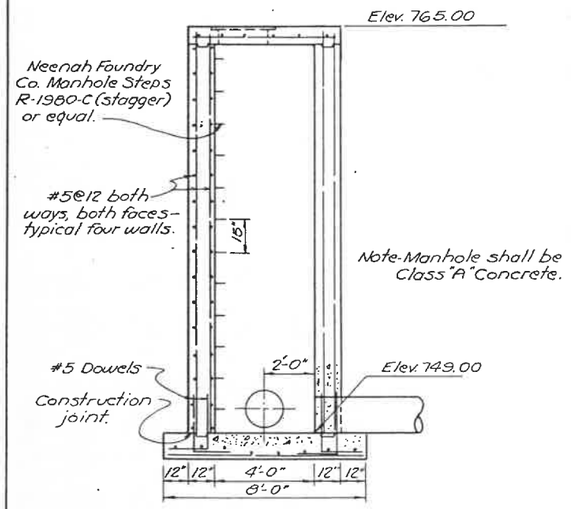
SPILLWAY EXTENSION DETAILS

		TRACED BY
AUGUST 1959	SCALE: AS INDICATED	SHEET 2 OF 3

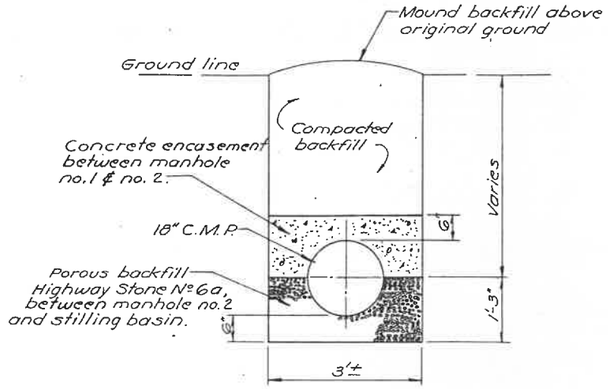
FIGURE 17



PLAN

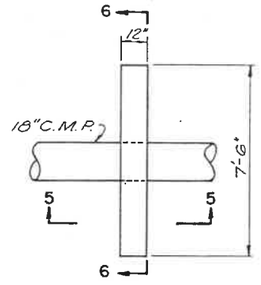


SECTION 1-1

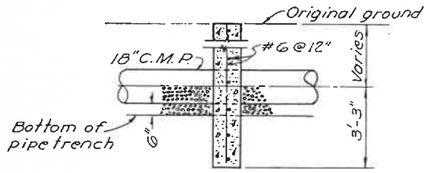


TYPICAL PIPE TRENCH DETAIL

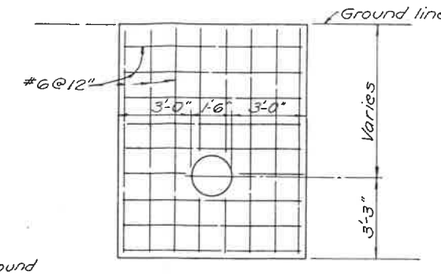
SCALE: 3/4"=1'-0"



PLAN



SECTION 5-5

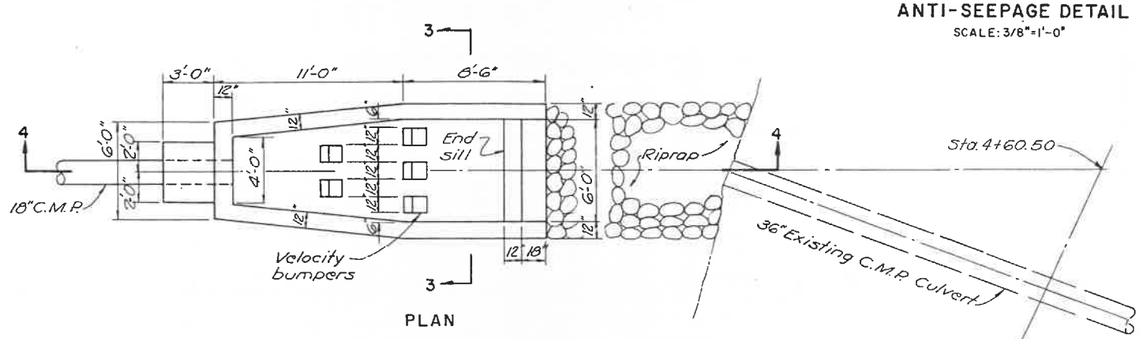


SECTION 6-6

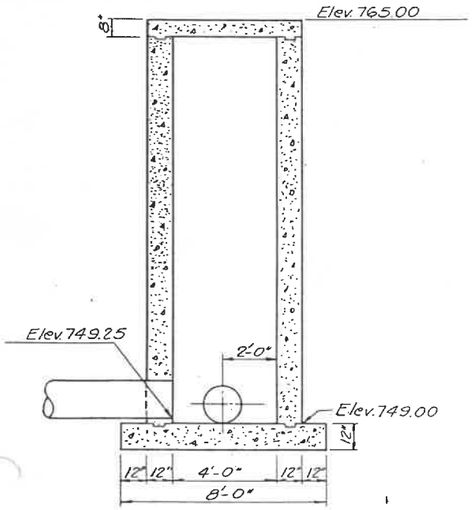
Note - One anti seepage fin required, located at center of each section of pipe. Fins to be Class 'B' concrete.

ANTI-SEEPAGE DETAIL

SCALE: 3/8"=1'-0"



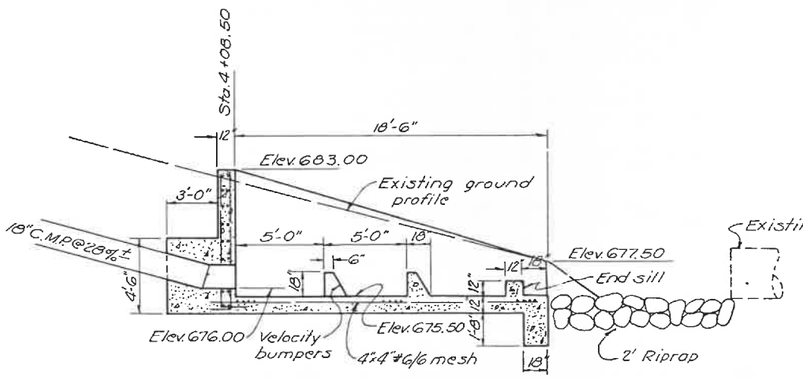
PLAN



SECTION 2-2

MANHOLE NO. 2 DETAILS

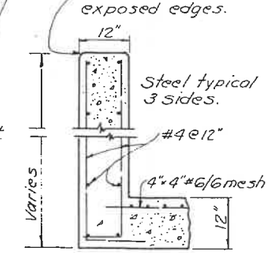
SCALE: 3/8"=1'-0"



SECTION 4-4

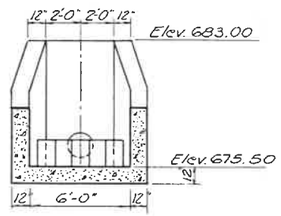
STILLING BASIN DETAIL

SCALE: 1/4"=1'-0"

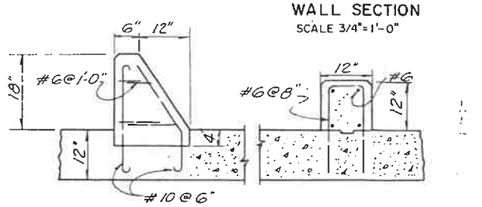


STILLING BASIN WALL SECTION

SCALE 3/4"=1'-0"



SECTION 3-3



VELOCITY BUMPER & END SILL SECTION

SCALE 3/4"=1'-0"

FIGURE 18

BURGESS AND NIPLE CONSULTING ENGINEERS
COLUMBUS, OHIO

COLUMBUS AND SOUTHERN OHIO ELECTRIC CO.
E. M. POSTON STATION
FLY ASH STORAGE DAM

STILLING BASIN, MANHOLE NO. 2 AND PIPE TRENCH DETAILS

		TRACED BY
AUGUST 1959	SCALE: AS INDICATED	SHEET 3 OF 3

ATTACHMENT D

INSTRUMENTATION LOCATION MAP

Poston Dam Instrumentation

N

0 0.01 0.03 0.06 Miles