INITIAL STRUCTURAL STABILITY ASSESSMENT

40 CFR 257.73 (d)

East Fly Ash Pond

Kanawha River Site

Glasgow, WV

May, 2026

Prepared for: Appalachian Power Company

Prepared by: American Electric Power Service Corporation

1 Riverside Plaza

Columbus, OH 43215

Kanawha River Site

East Fly Ash Pond

Initial Structural Stability Assessment

PREPARED BY Dan Murphy Digitally signed by Dan Murphy DN: cn=Dan Murphy, c=US, email=dsmurphy1@aep.com Date: 2026.04.27 09:28:44 -04'00' DATE _____

Dan Murphy, P.E.

REVIEWED BY Blake Arthur, PE Digitally signed by Blake Arthur, PE DN: cn=Blake Arthur, PE, c=US, email=barthur@aep.com Date: 2026.04.27 09:30:04 -04'00' DATE _____

Blake Arthur, P.E.

APPROVED BY David Anthony Miller DATE 04.23.2026

David Anthony Miller, P.E.

Director- Ash Management Services

I certify to the best of my knowledge, information, and belief that the information contained in this structural stability assessment meets the requirements of 40 CFR § 257.73(d)

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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 an initial structural stability assessment document for each legacy CCR surface impoundment at the facility.

The East Fly Ash Pond at the Kanawha River Site is subjected to this rule.

2.0 DESCRIPTION OF THE CCR UNIT

The Kanawha River Site is located approximately 0.5 miles southeast of Glasgow, West Virginia. The latitude/longitude of the Bottom Ash Pond Complex is: 38° 12' 33.34"N / 81° 25' 25.52"W. Construction of the Kanawha River Plant began in October of 1950 and the plant reached commercial operation in August of 1953. The Kanawha River Plant ceased operating in May 2015.

The East Fly Ash Pond functioned as a surface impoundment for fly ash storage beginning around 1953. The crest of the dike was originally set to elevation 625 ft-msl. The original design embankment geometry included downstream slopes of 2.5H:1V, 10-foot-wide crest and an interior slope of 1.75 H: 1 V.

Sometime around 1960, the crest of dikes was raised vertically 25 feet to elevation 650 ft-msl to provide additional ash storage capacity. The embankment was raised with fly ash harvested from the pond and the exterior slope of the raised cross section received earth cover. It is believed ash storage ceased in the East Fly Ash Pond in the late 1970s when the facility reached capacity.

The East Fly Ash Pond was capped and closed by November 2017 under West Virginia Class F Industrial Landfill Permit WV0001066. During closure, the perimeter dikes were lowered back down to elevation 625 ft-msl and the site was graded in a configuration that does not retain ponded water. Stormwater structures and spillways were demolished or abandoned in place via grout placement. The cap consists of a 40-mil textured LLDPE geomembrane, geocomposite drainage layer, geotextile cushion layer and 2 feet of protective crushed stone cover.

Two sections of the exterior slope were repaired by construction of a riprap revetment in 2020 and similarly four sections of the exterior slope were repaired by construction of a riprap revetment in 2025.

3.0 STRUCTURAL STABILITY ASSESSMENT 257.73(d)

The Initial Structural Stability Assessment was prepared by WSP USA, Inc. and is included as Attachment A.

Based on the findings and general assessment in the Initial Structural Stability Assessment, the Kanawha River East Fly Ash Pond requires corrective action to address surface water runoff controls, vegetation removal and address marginally stable slopes.

AEP is evaluating options for addressing the corrective actions required to comply with the CCR rule..

ATTACHMENT A

Initial Structural Stability Assessment Report

REPORT

Initial Structural Stability Assessment

East Fly Ash Pond, Former Kanawha River Power Plant, Glasgow, West Virginia

Submitted to:

Mr. Dan Murphy

American Electric Power Company, Inc.
Project Manager
1 Riverside Plaza,
Columbus, OH 43215

Submitted by:

WSP USA Inc.

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US0041868.3860

April 10, 2025

Distribution List

Benjamin J Hackett (bjhackett@aep.com)

Jane Petrie (jpetrie@aep.com)

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FIGURES

APPENDICES

CERTIFICATION

Professional Engineer Certification Statement [40 CFR 257.73(d)]

I hereby certify that, having reviewed the attached documentation and being familiar with the provisions of Title 40 of the Code of Federal Regulations Section 257.73 (40 CFR Part 257.73(d)), I attest that this Structural Stability Assessment is accurate and has been prepared in accordance with good engineering practices, including the consideration of applicable industry standards, and with the requirements of 40 CFR Part 257.73(d) - Periodic Structural Stability Assessments.

WSP USA Inc.

Signature

April 10, 2025

Date of Report Certification

Steven J. Moeller, PE (AL, GA, NC, SC, TN, WV)

Name

27354

Professional Engineering Certification Number

1 INTRODUCTION

WSP USA Inc. (WSP) was retained by Appalachian Power Company, a subsidiary to American Electric Power Company, Inc. (AEP), to perform this initial Structural Stability Assessment for the Kanawha River East Fly Ash (EFA) Pond, an inactive Coal Combustion Residuals (CCR) surface impoundment. This assessment has been prepared in accordance with the requirements of 40 CFR Part §257, Subpart D, specifically §257.73(d).

The former Kanawha River Power Station (Plant), owned and operated by the Appalachian Power Company, is located along West Virginia State Route 60, adjacent to the Kanawha River (Figure 1). Operations at the Plant began in 1953 and ceased in 2015. The Plant and associated structures remain at the site, and the ash pond was closed in 2017 in compliance with applicable state regulations at that time. The overall facility is approximately 108 acres, and the EFA Pond covers approximately 22 acres and is surrounded by the former Plant, the Kanawha River, mostly undeveloped land, and commercial and residential properties.

For this initial assessment, WSP performed a site visit on July 15, 2025, to observe current site conditions.

2 BACKGROUND

The former Kanawha Power Station utilized multiple surface impoundments, the EFA Pond and the Bottom Ash Pond (BAP), to manage sluiced ash. This Structural Stability Assessment evaluates the design, construction, operation, and maintenance of the EFA Pond. This impoundment is located east of the former Plant and is classified as a legacy CCR impoundment under the United States Environmental Protection Agency's (USEPA) Legacy CCR Final Rule (May 28, 2024), which established regulatory requirements for legacy CCR surface impoundments and CCR management units.

The area of the EFA Pond is approximately 22 acres and is located adjacent to the Kanawha River. The EFA Pond was operated as a surface impoundment from approximately 1953 to sometime prior to 1989. The EFA Pond is an inactive impoundment, which no longer impounds surface water, and is surrounded by an earthen berm with an approximate elevation of 628 feet above mean sea level (feet MSL) based on topographic data presented in Figure 2. Based on 1951 drawings (APPENDIX A), the original ground within the pond area ranged from 605 to 625 feet MSL. The pond area was excavated to an approximate elevation 605 feet MSL, and the pond bottom was sloped towards an outfall structure located in the southwest corner of the pond. While operating as a fly ash pond, the water elevation was controlled with this outfall structure, which, during periods of high flow, discharged water into the Kanawha River. In 1989, AEP submitted a permit to construct a landfill overlying the former EFA Pond, which was not constructed. A revised landfill permit was submitted to the State of West Virginia in 2017 that included a proposed Closure Plan for the facility, and subsequently, the landfill was capped and closed. According to the Ash Pond Closure drawings dated July 2015, the closure cover constructed on the in-place ash material consists of a textured high-density polyethylene (HDPE) geomembrane and drainage composite overlain by 24 inches of general fill and vegetative soil. However, based upon our site visit and discussions with AEP, the general fill and vegetative soil was replaced during construction of the cover system with approximately 3 to 6-inch surge stone as approved by the certifying professional engineer.

The thickness of the ash within the bermed area ranges between approximately 9 and 67 feet. The available EFA Pond closure design drawings are presented in APPENDIX A.

3 SITE VISIT

WSP conducted a site visit to the Kanawha River EFA Pond on July 15, 2025, to observe current site conditions. Mr. Steven Moeller and Mr. Naveen Kumar Ganji conducted the site visit on behalf of WSP. WSP personnel performed the following:

- Observed site conditions related to the structural stability of the impoundment, including berms, dikes, erosion protection, vegetation, slopes, stormwater drainage features, etc.
- Photographed site features (APPENDIX B)

During the site reconnaissance, the site observations were limited to features and structures that could be visually observed at the ground surface, and did not include invasive inspection, investigation, or exploration of the site, embankments, or structures. WSP noted the following observations at the site:

- The cover material (general soil and vegetative fill) shown in the closure design drawings on top of the former impoundment was replaced with surge stone. This design modification was implemented with the approval of the certifying professional pngineer and was documented in the final Construction Quality Assurance (CQA) Report prepared for the closure activities
- The entire impoundment area above the perimeter berm is cleared, well-maintained, and covered with 3-6-inch surge stone
- The perimeter berm along the northern side is mostly covered with riprap
- The southern slope of the ash pond along the Kanawha River and the southeastern slope are heavily wooded with trees and vegetation, making it difficult to inspect
- Areas of erosion were observed along the southern perimeter dike slope adjacent to the Kanawha River. Based on site observations, runoff from the surge stone cover system appears to concentrate stormwater flow and increase runoff velocities along the dike face, contributing to this localized erosion. At the time of the site visit, AEP was actively performing erosion repairs, including removal of disturbed material and backfilling with geotextile and riprap.

4 STRUCTURAL STABILITY ASSESSEMENT [CFR 40 §257.73(d)(1)(i)-(vii)]

The CCR Rule requires an initial structural stability assessment to be conducted by a qualified professional engineer to document whether the design, construction, operation, and maintenance are consistent with recognized and generally accepted good engineering practices for the maximum volume of CCR and CCR wastewater that can be impounded therein. The following sections provide documentation on the initial structural stability assessment and rely mainly on the recent site inspection performed at the site. The most recent inspection was completed by WSP in July 2025, specifically to assess the structural stability of the ash pond.

4.1 Foundations and Abutments [CFR 40 §257.73(d)(1)(i)]

CCR unit has been designed, constructed, operated, and maintained with stable foundations and abutments.

The stability of the foundations and abutments was evaluated by observing the legacy CCR impoundment and using soil data from previous field investigations performed at the site to assess the stability of the dike and foundations. There has been no indication of foundational or abutment instability or movement in the recent site inspection. However, recent stability calculations performed at the site indicate that the steeper slopes of the

perimeter dike and underlying alluvial soils adjacent to the Kanawha River from elevation 570 feet MSL to 628 feet MSL do not meet the prescribed factors of safety under the CCR Rule.

- Alluvial soils at the site were encountered below the CCR materials and dike fill materials and extend to an approximate elevation of 570 feet MSL. Based on the review of the standard penetration test (SPT) N-values, the alluvium below the EFA Pond can be divided into two layers – Alluvium-1 and Alluvium-2.
- Alluvium-1: Predominantly silty clay and silty sands. Field SPT N-values ranged from “weight of hammer” (WOH) over 18 inches to 24 blows per foot (bpf), with most values between 6 and 10 bpf, indicating loose to compact relative densities.
- Alluvium-2: Predominantly sands and gravel. Field SPT N-values ranged from 2 to >100 bpf, with most values between 27 and 48 bpf, indicating compact to dense relative densities.

Laboratory tests on alluvial soils indicated in-situ moisture contents ranging from 15% to 30%. Atterberg limits for these soils ranged from non-plastic (NP) to a liquid limit of 37% and a plasticity index up to 14%. Gradation tests showed 19% to 91% of the material passing the No. 200 sieve.

Modifications to the EFA will be required to meet the prescribed factors of safety for the site and demonstrate stable foundations. A detailed corrective action plan will be developed by AEP to address the identified stability deficiencies and demonstrate compliance with the CCR Rule.

4.2 Slope Protection [CFR 40 §257.73(d)(1)(ii)]

CCR unit has been designed, constructed, operated, and maintained with adequate slope protection to protect against surface erosion, wave action and adverse effects of sudden drawdown.

There are no interior slopes for the ash pond as the impoundment is full and no longer impounds water. The downstream slopes of the ash pond dike are protected from erosion and deterioration by the establishment of heavy vegetative cover and/or riprap. Thick vegetation is present over the downstream slope of the dike adjacent to the Kanawha River. Existing slopes have been inspected for erosion, signs of seepage, animal burrows, and sloughing. Significant erosion has occurred on the slope of the southern dike adjacent to the Kanawha River. It appears that this erosion has occurred from stormwater flowing from the EFA Pond cover system down the face of the dike slopes. Stormwater likely flows at a higher velocity through the cover system with the replacement of the cover soils with more porous surge stone. Additionally, although no evidence of significant erosion or wave action was observed along the ordinary high-water mark, there are areas along the dike above the normal pool level in the Kanawha River that show signs of erosion with over-steepened slopes above the erosion areas. Since the area was heavily wooded, it wasn’t possible to inspect the full extent of the slope. The larger trees will need to be removed to provide better access in order to fully inspect the downstream slopes. Although AEP has repaired the observed erosion features at the site, additional surface water control measures are required to better manage stormwater from the cover system over the long term. A detailed corrective action plan will be prepared by AEP to address the identified deficiencies and demonstrate compliance with the CCR Rule.

4.3 Dikes (Embankment) [CFR 40 §257.73(d)(1)(iii)]

CCR unit has been designed, constructed, operated, and maintained with dikes mechanically compacted to a density sufficient to withstand the range of loading conditions in the CCR unit.

As previously noted, certified drawings were not available for the original design of the EFA Pond. Based on subsurface investigation information, it is believed that the perimeter dike was constructed with standard earthwork equipment and is comprised of earth fill material consisting of re-compacted alluvial soils.

The EFA Pond is enclosed by an earthen dike with a crest elevation near 628 feet MSL. Historical drawings indicate that the original site grades ranged from 605 to 625 feet MSL. Earthfill was placed above the original grades to raise the perimeter dike to the current elevation. Earthfill is predominantly classified as silt clay, and silty sand. Field SPT N-values in this material ranged from 4 to 26 bpf, with most of the values ranging between 10 and 25 bpf, indicating loose to compact relative density. The average of SPT-N values for this material was 15 bpf. Laboratory tests indicated the in-situ moisture contents ranged from 11.7% to 14.4%. Gradation tests performed on three samples showed 34% to 57% of the material passing the No. 200 sieve.

Slope stability analyses were performed to evaluate slip surfaces passing through the dike over the range of expected loading conditions as defined within the section (§257.73). Calculations performed at the site indicate that the steeper slopes of the embankment do not meet the prescribed factors of safety under the CCR Rule. Based on the results of the stability analysis, the embankment dikes are not sufficient to withstand the range of loading conditions in the ash pond. A detailed corrective action plan will be developed by AEP to address the identified stability deficiencies and demonstrate compliance with the CCR Rule.

4.4 Vegetated Slopes [CFR 40 §257.73(d)(1)(iv)]

CCR unit has been designed, constructed, operated, and maintained with vegetated slopes of dikes and surrounding areas, except for slopes which have an alternate form or forms of slope protection.

The EPA has vacated the requirement that vegetative cover on surface impoundment dikes be maintained at no more than six inches. However, the heavy tree growth on the exterior slopes of the dike, specifically on the south end of the ash pond are not consistent with good engineering practices. These areas should be cleared such that appropriate monitoring of the perimeter dike can be performed.

Vegetation management activities should be performed in accordance with an appropriate work plan following applicable regulatory requirements, which may include development of a Stormwater Pollution Prevention Plan (SWPPP), compliance with seasonal environmental constraints (e.g., bat roosting windows), and coordination with applicable permitting agencies, if required. Clearing activities should be conducted in a manner that does not adversely impact embankment stability, with careful consideration given to whether tree stumps and root systems are left in place to avoid potential instability or removed and backfilled.

4.5 Spillways [CFR 40 §257.73(d)(1)(v)]

CCR unit has been designed, constructed, operated, and maintained with a single spillway or a combination of spillways configured as specified in paragraph (d)(1)(v)(A). The combined capacity of all spillways must be designed, constructed, operated, and maintained to adequately manage flow during and following the peak discharge.

The Kanawha River EFA Pond is an inactive impoundment that no longer retains or has the ability to retain water within the impoundment. Therefore, this section of the structural stability assessment is not applicable.

4.6 Hydraulic Structures [CFR 40 §257.73(d)(1)(vi)]

CCR unit has been designed, constructed, operated, and maintained such that the hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit maintain structural integrity and are free of significant deterioration, deformation, distortion, bedding deficiencies, sedimentation, and debris which may negatively affect the operation of the hydraulic structure.

There are no hydraulic structures located within the boundaries of the CCR unit. Historical culverts and hydraulic structures associated with former impoundment operations have been permanently abandoned in place by grouting as part of prior site closure activities. Therefore, this section of the structural stability assessment is not applicable.

4.7 Downstream Slopes Adjacent to Water Body [CFR 40 §257.73(d)(1)(vii)]

CCR unit has been designed, constructed, operated and maintained with, for CCR units with downstream slopes which can be inundated by the pool of an adjacent water body, such as a river, stream or lake, downstream slopes that maintain structural stability during low pool of the adjacent water body or sudden drawdown of the adjacent water body.

The Kanawha River EFA Pond is situated immediately adjacent to the Kanawha River. The river water elevation is regulated through a system of locks and gates, providing controlled flow conditions under normal and high-water scenarios. WSP reviewed USGS water gauge data both upstream and downstream of the site. The data indicate that prolonged flooding doesn't occur in this portion of the Kanawha River. As the river is a navigable channel, the river rises quickly during storm events, and then water is released, and the base flow conditions are re-established. Given this operational control, the occurrence of prolonged high-water levels sufficient to saturate the exterior slope of the dike (i.e., temporarily increasing the phreatic surface in the ash pond), followed by a sudden and significant drawdown, is not considered a credible loading condition. WSP reviewed available water level readings along the Kanawha River, which further suggests that significant water level changes in the alluvial soil do not occur.

Accordingly, a rapid drawdown stability analysis has not been performed, as this loading condition does not represent a realistic or governing case for the site.

5 STRUCTURAL STABILITY DEFICIENCIES [CFR 40 §257.73(d)(ii)]

The periodic assessment described in CFR 40 257.73(d)(i) must identify any structural stability deficiencies associated with the CCR unit in addition to recommending corrective measures. If a deficiency or a release is identified during the periodic assessment, the owner or operator unit must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken.

As indicated in the previous paragraphs, several structural deficiencies were noted at the Kanawha River EFA Pond. Corrective action plans will be developed by AEP to address these deficiencies, and AEP will implement these plans as soon as feasible and document the corrective measures taken.

Signature Page

WSP USA Inc.

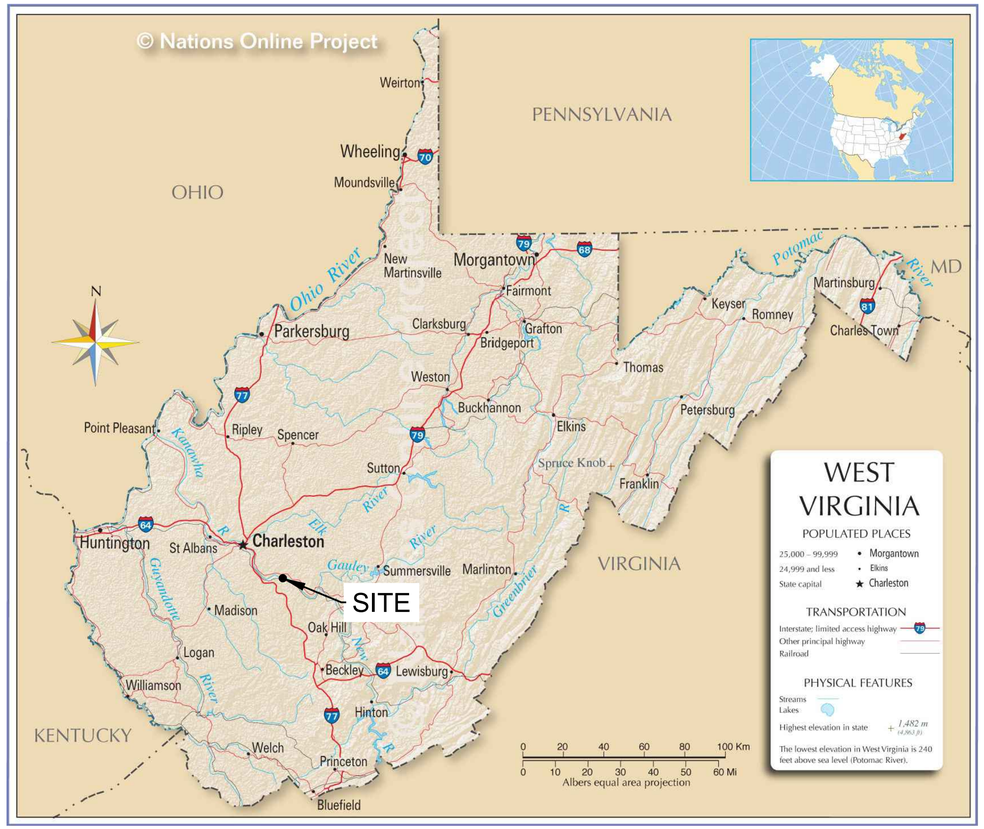
Naveen Kumar Ganji, PE (GA, TN, TX, VA)
Senior Consultant

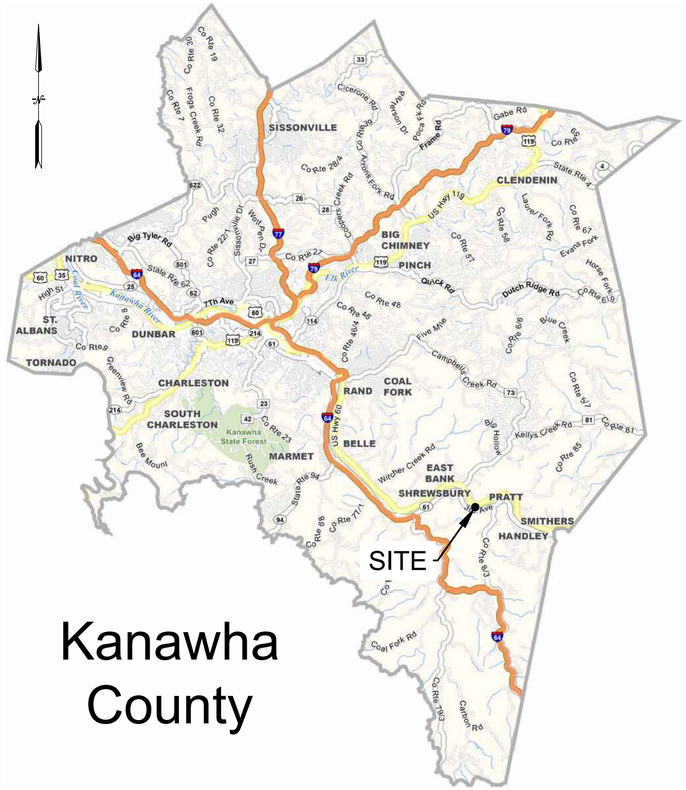
Steven J. Moeller, PE (AL, GA, NC, SC, TN, WV)
Senior Vice President

NG/SM/ng

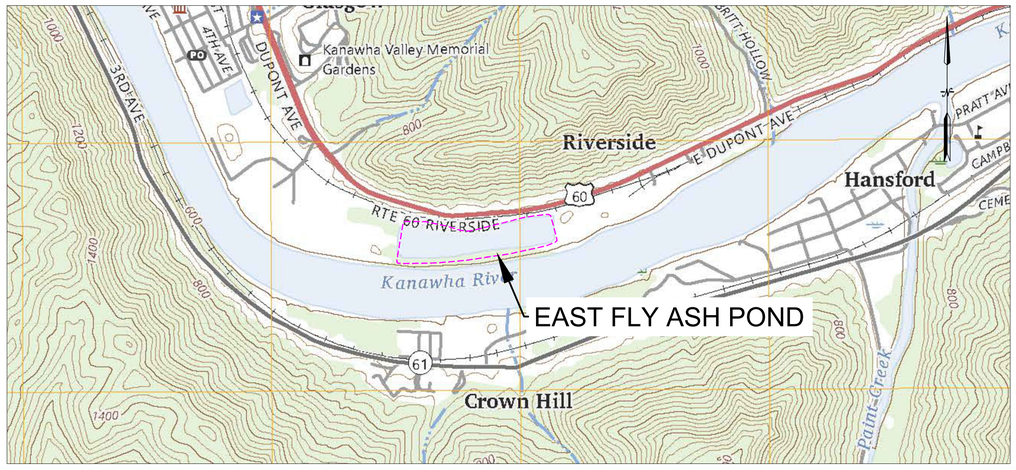
https://wsponlinenam.sharepoint.com/sites/us-aep-efa-kanawha-r/shared documents/5 technical work/structural stability assessment_efa/ssa_kanawha eastflyashpond_ccr_engsupport.docx

Figures





Kanawha County



REFERENCES:
USGS 7.5 MINUTE QUADRANGLE; CEDAR GROVE, 2023.

DATE	NO.	DESCRIPTION	APPD.

REVISIONS

THIS DRAWING IS CLASSIFIED AS:

REFERENCE AEP's CORPORATE INFORMATION SECURITY POLICY

APPALACHIAN POWER COMPANY

EAST FLY ASH POND
FORMER KANAWHA RIVER POWER PLANT

GLASGOW WEST VIRGINIA

SITE LOCATION PLAN

UNIT:	DRAWING NUMBER:	REV:
FEET	1 OF 2	–

SCALE:
DR: CCP
CH: NG
SUP: NG
ENG: SJM
DATE: 4/10/2026

APPROVED BY

STEVEN J. MOELLER REGISTERED 27354 STATE OF VIRGINIA PROFESSIONAL ENGINEER

wsp
3348 Peachtree Road NE
Suite 1100
Atlanta, GA 30326

AEP AMERICAN ELECTRIC POWER
AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

DRAWING NUMBER: 2 OF 2

LEGEND

- EXISTING CONTOURS
- EXISTING ROADS
- EXISTING TREE LINE
- APPROXIMATE EAST FLY ASH POND BOUNDARY

REFERENCES

1. EXISTING TOPOGRAPHIC SURFACES WITHIN THE EFA POND BOUNDARY WERE DERIVED FROM THE AERIAL LIDAR SURVEY PROVIDED BY AEP (JULY 2025).
2. THE AREAS OUTSIDE THE POND FOOTPRINT ARE REPRESENTED USING THE 2018 (USGS) TOPOGRAPHIC DATA.
3. BATHYMETRIC DATA FOR THE ADJACENT RIVERBED IS BASED ON SURVEY CONDUCTED BY AEP IN MARCH 2026.
4. AREAS BETWEEN LIMITS OF AERIAL LIDAR AND BATHYMETRIC DATA WERE INTERPOLATED USING SURVEY DATA IN THE SURROUNDING AREAS AND REASONABLE ENGINEERING ASSUMPTIONS CONSISTENT WITH AVAILABLE SITE DATA.
5. SITE BOUNDARY IS APPROXIMATE.

100 0 100 200 FT

DATE	NO.	DESCRIPTION	APPD.

REVISIONS

THIS DRAWING IS CLASSIFIED AS:

REFERENCE AEP's CORPORATE INFORMATION SECURITY POLICY

APPALACHIAN POWER COMPANY

EAST FLY ASH POND
FORMER KANAWHA RIVER POWER PLANT

GLASGOW WEST VIRGINIA

SITE TOPOGRAPHIC MAP

UNIT:	DRAWING NUMBER:	REV:
FEET	2 OF 2	-

SCALE: 1" = 100'

APPROVED BY

DR: CCP
CH: NG
SUP: NG
ENG: SJM
DATE: 4/10/2026

STEVEN J. MOZLEY REGISTERED 27354 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

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3348 Peachtree Road NE
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AEP AMERICAN ELECTRIC POWER

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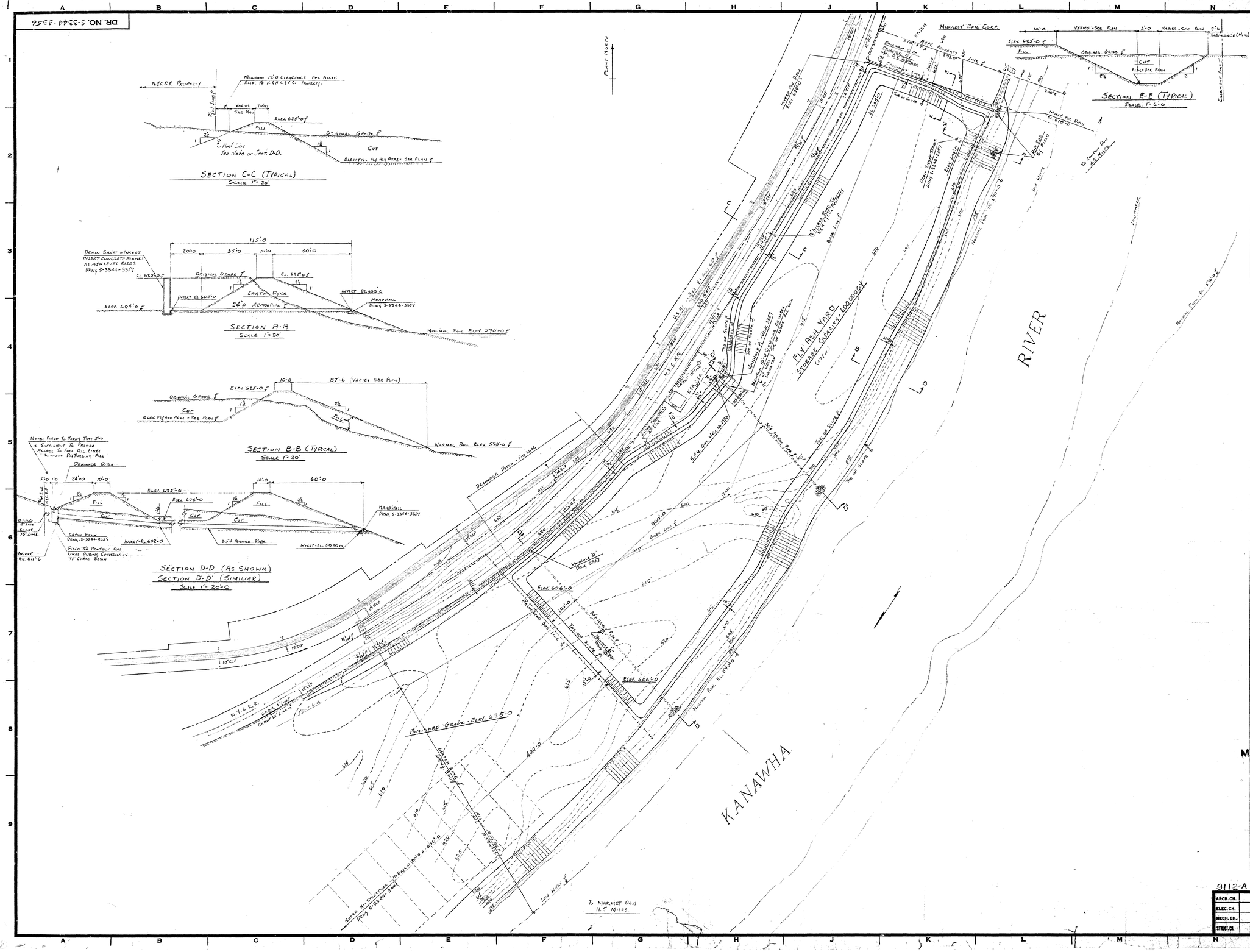
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

APPENDIX A

Historic Drawings



GENERAL NOTES

This Drwg Not To Be Scaled

QUANTITIES:

Excavation: 210,000 C.Y.

Fill (Including 15% Compaction): 308,000 C.Y.

NOTE:

The Above Quantities Are For The Area East of The Match-Line. Quantities of Earthwork, West of The Match Line, Are Shown on Drawing S-3344-3007. The Amount of Cut will Balance The Amount of Fill By Adding The Quantities Shown on This Drwg. & Drwg S-3344-3007

Earthwork & Drainage By: Boso & Ritchie

MATERIALS:

125 L.F. 24" Armco Pipe By: Field

1200 L.F. 30" Armco Pipe By: Field

REFERENCE DRAWINGS

S-3344-3007 Excavation & Grading Plan
3001 Plot Plan
3357 Ash Yard - Misc. Structures

DATE	No.	DESCRIPTION	APP'D.
6/15/51	1	Released For Construct.	GR

REVISIONS

AMERICAN GAS & ELECTRIC SERVICE CORPORATION
30 CHURCH STREET NEW YORK

FLY ASH YARD
PLAN AND SECTIONS

APPALACHIAN ELECTRIC P...
KANAWHA RIVER PLANT
GLASGOW, WEST VIRGINIA

9112-A

SCALE 1" = 100'
DATE 4/19/51

ARCH. CH.		DR. BY ME	APPROVED
ELEC. CH.		TR. BY	
MECH. CH.		CH. BY	
STRUCT. CH.		DR. No. S-3344-3356-1	

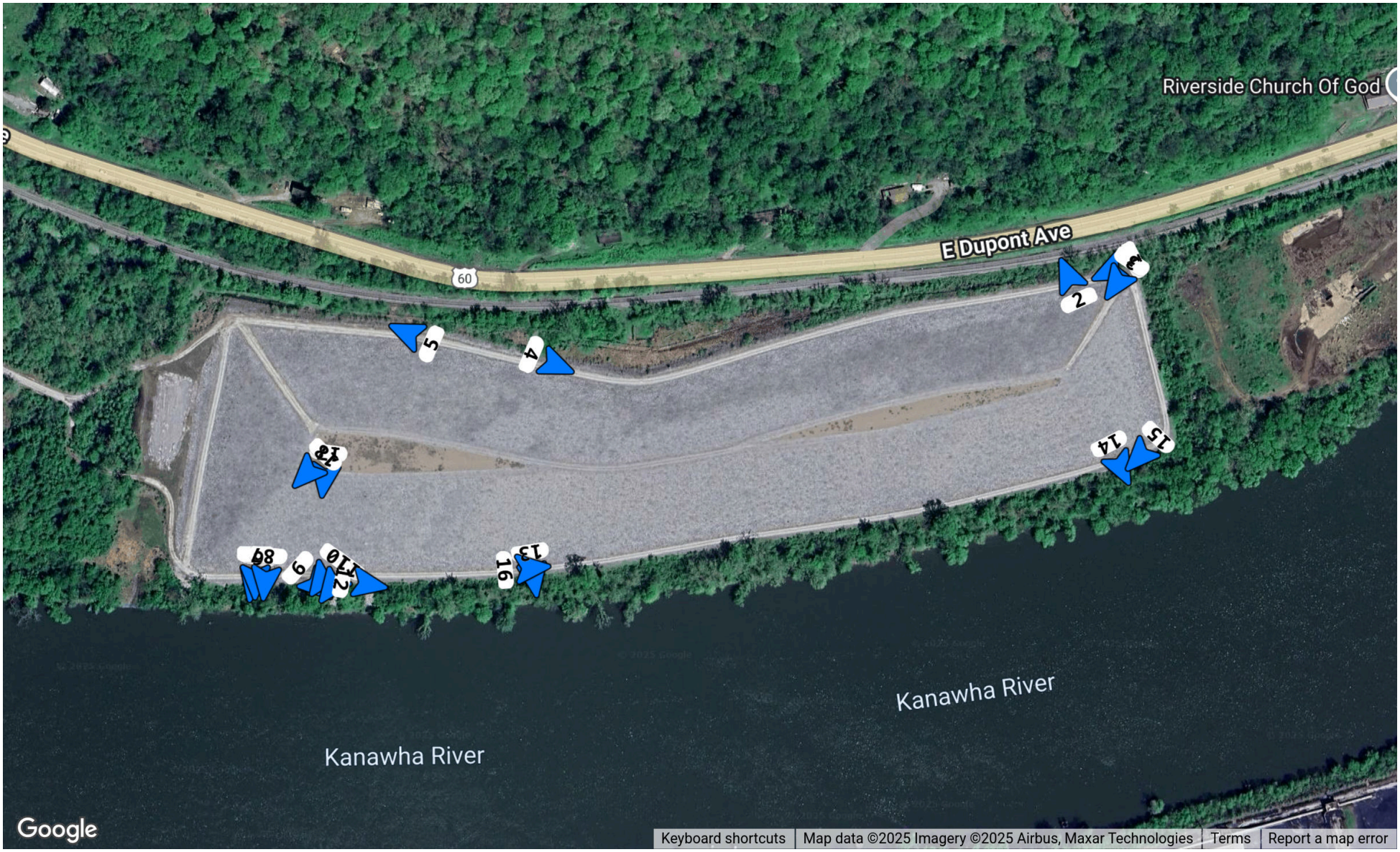
M

04-4 2

AEP Confidential - Moderate Risk - Approved - S3344-3356 - 06/15/1951 - krp_12_aep_s3344-3356_1.tif

APPENDIX B

Site Reconnaissance Photo Log



	Project Name: AEP Kanawha River (EFA)	
	Project Location: EFA, Former Kanawha Power Plant, Cabin Creek, WV	
	Client: AEP	Project Code: US0041868.3860
	Preparer: Naveen Kumar Ganji	Reviewer: Steven Moeller
	Report Date: 2025-12-18	Page Number: 1 of 10

Media 1: Northeastern slope on EFA looking west

Latitude: 38.2056	Weather: Cloudy
Longitude: -81.4098	Date Taken: 07/15/2025
Bearing: W	Taken By: Naveen Kumar Ganji

Tags: NA

Media 2: Northeastern slope on EFA showing the fence looking north

Latitude: 38.2055	Weather: Cloudy
Longitude: -81.4101	Date Taken: 07/15/2025
Bearing: N	Taken By: Naveen Kumar Ganji

Tags: NA

Project Name: AEP Kanawha River (EFA)	
Project Location: EFA, Former Kanawha Power Plant, Cabin Creek, WV	
Client: AEP	Project Code: US0041868.3860
Preparer: Naveen Kumar Ganji	Reviewer: Steven Moeller
Report Date: 2025-12-18	Page Number: 2 of 10

Media 3: existing stone riprap cover and path towards the eastern portion of EFA

Latitude: 38.2056
Longitude: -81.4097
Bearing: SW

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Media 4: Northern slope of EFA looking west shows riprap armoring on slope

Latitude: 38.2051
Longitude: -81.4140
Bearing: E

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Project Name: AEP Kanawha River (EFA)	
Project Location: EFA, Former Kanawha Power Plant, Cabin Creek, WV	
Client: AEP	Project Code: US0041868.3860
Preparer: Naveen Kumar Ganji	Reviewer: Steven Moeller
Report Date: 2025-12-18	Page Number: 3 of 10

Media 5: Northern slope of the EFA looking west. Showing riprap armoring on the slope

Latitude: 38.2052
Longitude: -81.4150
Bearing: NW

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Media 6: Southern slope of EFA looking towards the Kanawha River. Showing erosion repairs on steeper dike slopes

Latitude: 38.2038
Longitude: -81.4162
Bearing: S

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Project Name: AEP Kanawha River (EFA)

Project Location: EFA, Former Kanawha Power Plant, Cabin Creek, WV

Client: AEP

Project Code: US0041868.3860

Preparer: Naveen Kumar Ganji

Reviewer: Steven Moeller

Report Date: 2025-12-18

Media 7: Southern slope of EFA looking towards the Kanawha River showing riprap repair section on dike and soil/vegetative slope below

Latitude: 38.2038
Longitude: -81.4162
Bearing: S

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Media 8: Southern slope of EFA showing erosion damage on perimeter dike adjacent to the Kanawha River

Latitude: 38.2038
Longitude: -81.4161
Bearing: S

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Project Name: AEP Kanawha River (EFA)

Project Location: EFA, Former Kanawha Power Plant, Cabin Creek, WV

Client: AEP

Project Code: US0041868.3860

Preparer: Naveen Kumar Ganji

Reviewer: Steven Moeller

Report Date: 2025-12-18

Media 9: Southern slope of EFA showing repaired erosion area along the Kanawha River

Latitude: 38.2038
Longitude: -81.4158
Bearing: SE

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Media 10: Southern slope of EFA showing repaired erosion area along the Kanawha River

Latitude: 38.2038
Longitude: -81.4157
Bearing: SW

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Project Name: AEP Kanawha River (EFA)

Project Location: EFA, Former Kanawha Power Plant, Cabin Creek, WV

Client: AEP

Project Code: US0041868.3860

Preparer: Naveen Kumar Ganji

Reviewer: Steven Moeller

Report Date: 2025-12-18

Media 11: Southern slope of EFA showing repaired erosion area along the Kanawha River. Repairs extend to the water level

Media 12: Southern slope of EFA along the Kanawha River showing erosion repair that was backfilled with geotextile and riprap

Latitude: 38.2038 Longitude: -81.4156 Bearing: SW	Weather: Cloudy Date Taken: 07/15/2025 Taken By: Naveen Kumar Ganji	Latitude: 38.2038 Longitude: -81.4154 Bearing: E	Weather: Cloudy Date Taken: 07/15/2025 Taken By: Naveen Kumar Ganji
Tags: NA		Tags: NA	

	Project Name: AEP Kanawha River (EFA)	
	Project Location: EFA, Former Kanawha Power Plant, Cabin Creek, WV	
	Client: AEP	Project Code: US0041868.3860
	Preparer: Naveen Kumar Ganji	Reviewer: Steven Moeller
	Report Date: 2025-12-18	Page Number: 7 of 10

Media 13: Southern slope of EFA along the Kanawha River showing erosion repair that was backfilled with geotextile and riprap

Latitude: 38.2038
Longitude: -81.4141
Bearing: S

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Media 14: Southeast corner of EFA from top of access road (top of dike) looking towards the Kanawha River

Latitude: 38.2045
Longitude: -81.4098
Bearing: SE

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Project Name: AEP Kanawha River (EFA)	
Project Location: EFA, Former Kanawha Power Plant, Cabin Creek, WV	
Client: AEP	Project Code: US0041868.3860
Preparer: Naveen Kumar Ganji	Reviewer: Steven Moeller
Report Date: 2025-12-18	Page Number: 8 of 10

Media 15: Southeast corner of EFA from top of access road (top of dike) looking west at crest of dike

Latitude: 38.2045
Longitude: -81.4096
Bearing: SW

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Media 16: Southern slope of EFA along dike crest showing stone base for access road and heavily vegetated area on slope

Latitude: 38.2039
Longitude: -81.4142
Bearing: E

Weather: Cloudy
Date Taken: 07/15/2025
Taken By: Naveen Kumar Ganji

Tags: NA

Project Name: AEP Kanawha River (EFA)	
Project Location: EFA, Former Kanawha Power Plant, Cabin Creek, WV	
Client: AEP	Project Code: US0041868.3860
Preparer: Naveen Kumar Ganji	Reviewer: Steven Moeller
Report Date: 2025-12-18	Page Number: 9 of 10

Media 17: Top of EFA cover looking south towards the Kanawha River. Showing surge stone on top of the geosynthetic cover system

Latitude: 38.2044	Weather: Cloudy
Longitude: -81.4157	Date Taken: 07/15/2025
Bearing: S	Taken By: Naveen Kumar Ganji

Tags: NA

Media 18: Top of EFA looking southwest towards the Kanawha River (surge stone cover material)

Latitude: 38.2044	Weather: Cloudy
Longitude: -81.4158	Date Taken: 07/15/2025
Bearing: SW	Taken By: Naveen Kumar Ganji

Tags: NA

Project Name: AEP Kanawha River (EFA)	
Project Location: EFA, Former Kanawha Power Plant, Cabin Creek, WV	
Client: AEP	Project Code: US0041868.3860
Preparer: Naveen Kumar Ganji	Reviewer: Steven Moeller
Report Date: 2025-12-18	Page Number: 10 of 10

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