

# POST CLOSURE PLAN

**CFR 257.104(d)**

Pond 1

Clinch Power Plant  
Russell County, Virginia

November 2016  
(Revised January 2022)

Prepared for: Appalachian Power Company

Prepared by: American Electric Power Service Corporation

Columbus, Ohio



POST CLOSURE PLAN  
CFR 257.104(d)  
CLINCH POWER PLANT  
POND 1

PREPARED BY

*Gary F. Zych*

DATE 1/31/2022

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Gary F. Zych, P.E.

REVIEWED BY

*M.A.L.*

DATE 2/4/2022

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Mohammad A. Ajlouni, Ph.D., P.E.

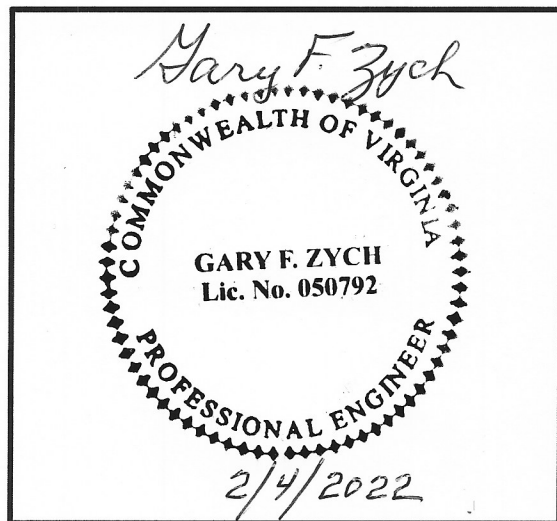
APPROVED BY

*Gary F. Zych*

DATE

*2/4/2022*

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Gary F. Zych, P.E.  
Manager - AEP Geotechnical Engineering



I certify to the best of my knowledge, information, and belief that the information contained in this post closure plan meets the requirements of 40 CFR § 257.104

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Revision: January 2022

Editorial changes to the inspection requirements.

Added the effective start date of the Post Closure Care period.

## **1.0 OBJECTIVE**

This report was revised by American Electric Power Service Corporation, Civil Engineering Department to fulfill requirements of CCR 257.104(d) for Post Closure Plans of CCR units.

## **2.0 DESCRIPTION OF THE CCR IMPOUNDMENT**

The Clinch River Plant is located in Russell County, Virginia near the community of Carbo, to the south of the intersection of Route 616 and Route 665, as shown in Figure 1, Site Location Map. Ash Pond 1 is approximately located to the northeast of the Clinch River Plant and north of the confluence of Dumps Creek and the Clinch River.

Pond 1 is considered a side-hill impoundment built around an existing hillside. Pond 1 was constructed by engineered earthen embankments approximately 65 feet (ft.) high on the west, south, and east sides and existing natural side slope topography along the north side. These embankments have been reconstructed and raised three times between 1955 and 1971 to provide additional storage volume. The pond was used for sluicing and settling of ash byproducts. Pond 1 is approximately 22.8 acres in size and consists of Pond 1A and Pond 1B that is separated by a splitter dike.

## **3.0 DESCRIPTION OF POST CLOSURE PLAN 257.104(d)(1)(i)**

*[A description of the monitoring and maintenance activities required in paragraph (b) of this section for the CCR unit, and the frequency at which these activities will be performed.]*

Pond 1 has been closed by closure in place. The post closure care period will be 30 years. The post closure care period began on August 2, 2018 based on the Notice of Closure Completion included at the end of this Plan.

### **3.1 SECTION 257.104(b)(1)**

*[Maintaining the integrity and effectiveness of the final cover system including making repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover.]*

Inspections are performed for the items noted below. The inspection frequencies are scheduled quarterly to properly detect any issues so that repairs can be performed before significant harm occurs.

- Security Control Devices: The serviceability of the roadway barricades will be inspected during regular inspections.
- Earthen Dam: The dam will be inspected for slides, settlement, displacement, seepage, condition of the riprap and erosion.
- Cover: The final cover will be inspected for erosion and for the condition of the vegetated cover, i.e., gaps in vegetation or presence of undesirable trees or brush. The area will be inspected for any ponding of surface water runoff.
- Surface Drainage System: The surface drainage system, including channels, culverts, slope drains, etc., will be inspected for erosion, integrity of channel lining, ponding, and accumulated sediment.
- Interceptor Toe Drain and Reclaim Pond: Currently, the interceptor toe drains along the southwestern toe of Pond 1 gravity flow directly into the Reclaim Pond located directly south of

the Pond 1 dam structure, at the intersection of County Road 616 and County Road 665. Additionally, the interceptor toe drains along the southeastern toe of Pond 1 gravity flow to a central collection sump where the water is then pumped directly to the Reclaim Pond. The discharge pipes of the seepage collection system at the Reclaim Pond will be inspected for clogging or damage. Similarly, the Reclaim Pond will be inspected for general damage to the pond and perimeter slopes, and for accumulation of sediment in the pond.

- Groundwater Monitoring System: The groundwater monitoring system will be inspected for the general integrity of the wells, well casings, and protective casings.

Maintenance during the post-closure care period will be performed as discussed below, based upon the facility inspections described above.

- Security Control Devices: Any portions of the roadway barricades which might be damaged will be repaired or replaced as necessary.
- Erosion Damage Repair: Any areas exhibiting erosion will be repaired by filling and compacting the in-kind material to design grade/specifications, and reseeding the area to the specifications. Applications of additional fertilizer, selective herbicides, rodent control measures, etc. will be implemented as necessary. In the selection of fertilizers and herbicides, ensure their use will not impact the groundwater negatively. Follow-up monitoring of the repaired area will be conducted to ascertain the integrity of the repair.
- Settlement, Subsidence, Displacement: Any areas at the closed site exhibiting evidence of settlement, subsidence, or displacement will be examined to determine the cause of the movement. If backfilling or placing additional fill material is needed to maintain the integrity of the closed structure, it will be performed in accordance with the site/closure specifications, including seeding. If the condition reoccurs or persists, or if the severity of the condition initially is judged to warrant it, a detailed investigation of the cause will be performed and remedial action will be performed. Similarly, any areas of the soil dike exhibiting sliding, displacement, or seepage will be investigated. Repairs will be made as necessary. Follow-up monitoring of the area will be performed to ascertain that the problem has been corrected.
- Closure Cap Surface: Any areas that show signs of ponding water or flat contours will be examined and rectified.
- Surface Water Drainage System: The channel linings are designed to withstand the design velocities. Maintenance of the surface water drainage system will consist of removing sediment and/or undesirable vegetation from the surface water runoff control system (channels and culverts) as required. Eroded areas will be repaired by back-filling and reseeding according to the specifications. Damage to culverts will be repaired; structure replacement will be performed if needed.
- Interceptor Toe Drain and Reclaim Pond: Maintenance of the toe drain collection system, collection sump, Reclaim Pond, and pumps will consist of repairing and/or replacing in-kind any damaged or eroded portions of the system and pond, cleaning pipes, and removing sediment from the collection sump and the Reclaim Pond, as needed.

- Groundwater Monitoring Wells: Any damaged portions of the monitoring wells and/or their protective casings will be replaced in-kind. The protective casings are steel casings with locking covers to minimize tampering or damage due to vandalism.

### **3.1 SECTION 257.104(b)(3)**

*[Maintaining the groundwater monitoring system and monitoring the groundwater in accordance with the requirements of §§257.90 through 257.98. Alternative Time Frames will be adhered to for Inactive Surface Impoundments in accordance with §§257.100(e)(5)]*

The groundwater monitoring system will be inspected for the general integrity of the wells, well casings and well protective casings. Any damaged portions of the monitoring wells and/or their protective casings will be replaced in-kind.

Monitoring the groundwater will be in accordance with the groundwater monitoring plan for this facility and in accordance with the requirements of §§257.90 through 257.98.

### **4.0 POST-CLOSURE CONTACT 257.104 (d)(1)(ii)**

*[The name, address, telephone number and email address of the person or office to contact about the facility during the post-closure care period.]*

Contact Name: Mr. David A Miller, P.E.  
Director, Land Environment and Remediation Services  
1 Riverside Plaza  
Columbus, Ohio 43215  
Telephone: (614) 716-2281  
Email: [DAMiller@AEP.com](mailto:DAMiller@AEP.com)

### **5.0 POST-CLOSURE PLANNED USE 257.104 (d)(1)(iii)**

*[A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this subpart...]*

The post-closure use of the property will be undisturbed vacant land space. The only activities occurring on the closed CCR unit will be those related to Post-Closure care. All other activities will be prohibited.

# Closure Completion Notification

for the

## Clinch River Ash Pond 1

In accordance with 40 CFR 257.102(h)

Prepared for:



An **AEP** Company

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*BOUNDLESS ENERGY*<sup>SM</sup>

Clinch River Plant  
Cleveland, Virginia

Prepared by:

American Electric Power  
1 Riverside Plaza  
Columbus, OH 43215

**August 2, 2018**

July 26, 2018



American Electric Power  
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**Subject: Final Report of Construction Quality Assurance and Quality Control Services  
AEP Clinch River Plant – Ash Pond 1 Closure  
Russell County, Virginia  
Amec Foster Wheeler Project No. 3050-17-0343**

Dear Mr. Pizzino:

This report presents a summary of the construction quality assurance (CQA) and construction quality control (CQC) services for the American Electric Power – Clinch River Plant Ash Pond 1 (Pond 1) Closure as required by Permit #620 by the Virginia Department of Environmental Quality (VDEQ) and by the Virginia Department of Conservation and Recreation (VDCR) dam alteration permit. The report includes the Pond 1 Closure associated with the geomembrane cap system and diversion collection system. This report certifies that the closure of the Pond 1 facility was performed in compliance with the Federal Register 40 CFR Part 257.102, the Clinch River Plant Pond 1 Closure Plan, VDEQ Permit #620, and the VDCR Alteration Permit High Hazard Dam, Inventory Number 16703.

The Pond 1 Closure Report provides documentation of all work that was performed in accordance with the Federal Register 40 CFR Part 257.102, the Clinch River Pond 1 Closure Plan, VDEQ Permit #620, and VDCR alteration permit. Included with the report are the required observations, testing information, and summary of the construction and installation activities. The Appendices contain all applicable field test data, documentation of the geosynthetics installation, and the CQA record as-built drawings of the Pond 1 Closure.

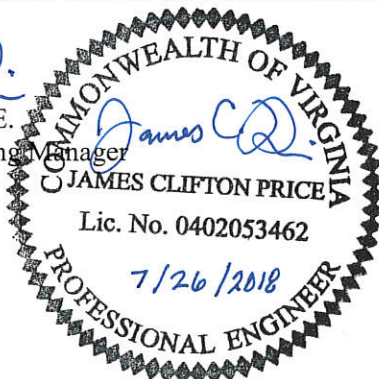
This report certifies that the approved CQA plan for the AEP Clinch River Pond 1 Closure, as outlined in the Federal Register 40 CFR Part 257.102, the Clinch River Pond 1 Closure Plan, VDEQ Permit #620, and the VDCR alteration permit, has been successfully carried out and the constructed unit meets all the requirements of the permitted CQA Plan.

Amec Foster Wheeler appreciates the opportunity to provide services to you and we look forward to serving as your consultant in the future. Please contact us with questions regarding the information presented.

Sincerely,  
Amec Foster Wheeler Environment & Infrastructure, Inc.

Handwritten signature of James Clifton Price in blue ink.

James Price, P.E.  
CQA Engineering Manager



Handwritten signature of Jonathan T. McDaniel in blue ink.

Jonathan T. McDaniel, P.E.  
CQA Certifying Engineer

