POST CLOSURE PLAN

CFR 257.104(d)

Fly Ash Pond

Big Sandy Plant
Louisa, Kentucky

October, 2016
(Revised January 2022)

Prepared for : Kentucky Power – Big Sandy Plant

Louisa, Kentucky

Prepared by: American Electric Power Service Corporation

1 Riverside Plaza

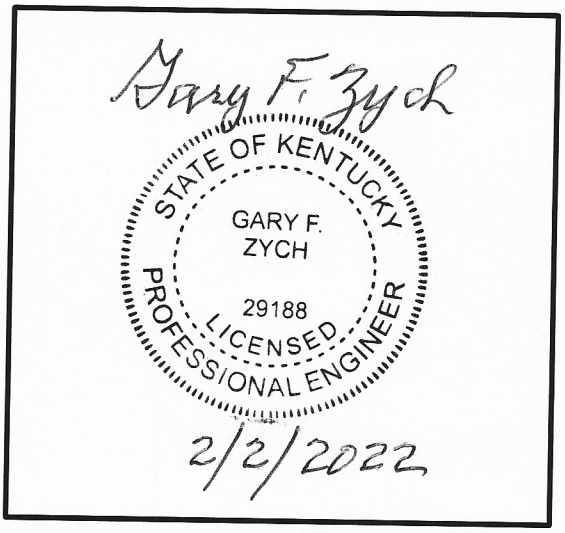
Columbus, OH 43215

POST CLOSURE PLAN
CFR 257.104(d)
BIG SANDY PLANT
FLY ASH POND

PREPARED BY Gary F. Zych DATE 1/31/2022
Gary F. Zych, P.E.

REVIEWED BY Brian G Palmer DATE 02/01/2022
Brian G Palmer, P.E.

APPROVED BY Gary F. Zych DATE 2/2/2022
Gary F. Zych, P.E.
Section 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

Table of CONTENTS

Revision: January 2022
Editorial changes to the inspection requirements.
Added the effective start date of the Post Closure Care period.
Added contact information now that the CCR unit is in the Post Closure Care period.

1.0 OBJECTIVE

This report was prepared by AEP- Geotechnical Engineering Services (GES) section to fulfill requirements of CFR 257.104(d) for Post Closure Plans of CCR units.

2.0 DESCRIPTION OF THE CCR IMPOUNDMENT

The Big Sandy Power Plant is located north of the City of Louisa, Lawrence County, Kentucky. It is owned and operated by Kentucky Power. The facility operates two surface impoundments for storing CCRs called the Fly Ash Pond and the Bottom Ash Pond. This report deals with the post-closure plan for the Fly Ash Pond.

The Fly Ash Pond is a valley impoundment with a main dam and a saddle dam. The Big Sandy Fly Ash Pond received sluiced fly ash and waste water from the plant via the bottom ash pond. Bottom Ash excavated from the Big Sandy Bottom Ash Pond is also placed within the Fly Ash Pond.

The Big Sandy Power Plant has ceased burning coal and has been refueled for natural gas. The Fly Ash Pond currently receives waste water from the plant for discharge through the permitted outfall.

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.]

The fly ash pond has been closed by closure in place. The post closure care period will be 30 years. The post closure care period began on November 5, 2021 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 will be scheduled quarterly to properly detect any issues so that repairs can be performed before significant harm occurs.

- Fly ash dam: The dam will be inspected for slides, settlement, subsidence, seepage, displacement, erosion and the condition of the riprap cover
- Cover: The final cover of the pond area 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.

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

- Erosion Damage Repair: Any areas exhibiting erosion will be repaired by replacing and compacting the material in-kind 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.
- Seepage: Seepage from the dam will be inspected, investigated, monitored, or repaired as deemed necessary.

3.2 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.]

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.]

Name: David Miller – AEP Service Corp.
Address: One Riverside Plaza
Telephone: 614-716-2281
Email: 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 related to the Post-Closure care activities.

November 4, 2021

Closure Completion Notification

Big Sandy Plant

Fly Ash Pond

On October 7, 2021, the Big Sandy Plant Fly Ash Pond was transitioned to closure status in accordance with 40 CFR 257.102. The CCR unit was closed in place and has initiated the written Post Closure Plan. This notice of completion of closure is being placed in the operating record in accordance with 40 CFR 257.102(h).

Effective with the Closure Completion Notification, the following operating record documents, as applicable, are no longer required going forward:

- Hazard Potential Classification
- Emergency Action Plan
- Face to Face Meeting Documentation for EAP
- History of Construction and Revisions for Surface Impoundments
- Structural Stability Assessments
- Safety Factor Assessments
- Fugitive Dust Plan
- Inflow Design Flood System Control Plan

CLOSURE CERTIFICATION BY QUALIFIED PROFESSIONAL ENGINEER

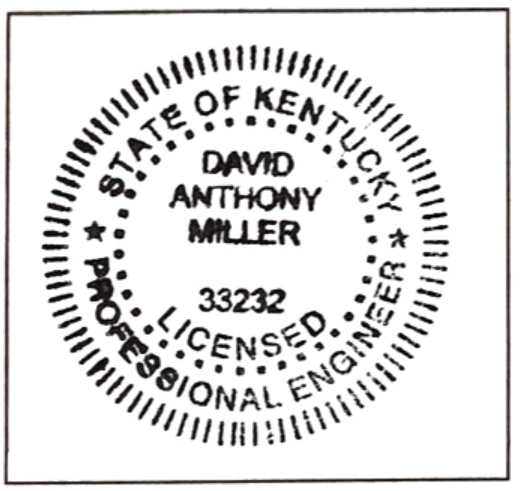
I certify that the Big Sandy Plant Fly Ash Pond (FAP) has been closed in accordance with the closure plan specified by paragraph 257.102(b) and the requirements of section 257.102.

DAVID ANTHONY MILLER

Printed Name of Licensed Professional Engineer

David Anthony Miller

Signature



33232	KENTUCKY	11.04.21
License Number	Licensing State	Date

8. ENGINEER'S CERTIFICATION

ENGINEER'S CERTIFICATION

AECOM

KENTUCKY POWER BIG SANDY POWER PLANT

LAWRENCE COUNTY, KENTUCKY

FLY ASH POND PHASE I CLOSURE CONSTRUCTION

I, Thomas A. Kovacic, P.E., being a Registered Professional Engineer in accordance with the Kentucky's Professional Engineer's Registration do hereby certify to the best of my knowledge, information and belief, that the information contained in the accompanying AEP Big Sandy Plant Fly Ash Pond Closure Construction Quality Assurance Certification Report dated November 27, 2018 is true and correct and has been prepared in accordance with the accepted practice of engineering.

PE Thomas A. Kovacic DATE October 4, 2021

ADDRESS AECOM Technical Services, Inc.
1300 East 9th Street, Suite 500
Cleveland, OH 44114

TELEPHONE (216)-622-2300

8. ENGINEER'S CERTIFICATION

ENGINEER'S CERTIFICATION

AECOM

KENTUCKY POWER BIG SANDY POWER PLANT

LAWRENCE COUNTY, KENTUCKY

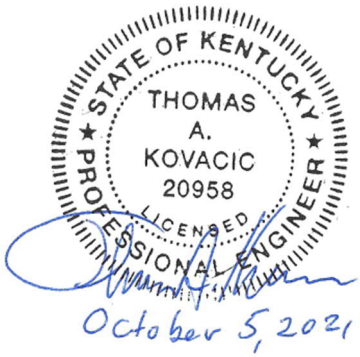
FLY ASH POND PHASE II AND PHASE III 2018 CLOSURE CONSTRUCTION

I, Thomas A. Kovacic, P.E., being a Registered Professional Engineer in accordance with the Kentucky Professional Engineer's Registration do hereby certify to the best of my knowledge, information and belief, that the information contained in the accompanying AEP Big Sandy Plant Fly Ash Pond Phase II and Phase III 2018 Closure Construction Quality Assurance Certification Report dated January, 2020, is true and correct and has been prepared in accordance with the accepted practice of engineering.

SIGNATURE Thomas . Kovacic DATE October 5, 2021

ADDRESS AECOM Technical Services, Inc.
1300 East 9th Street, Suite 500
Cleveland, OH 44114

TELEPHONE (216)-622-2300



9. ENGINEER'S CERTIFICATION

ENGINEER'S CERTIFICATION

AECOM

KENTUCKY POWER BIG SANDY POWER PLANT

LAWRENCE COUNTY, KENTUCKY

FLY ASH POND PHASE III AND PHASE IVA 2019 CLOSURE CONSTRUCTION

I, Thomas A. Kovacic, P.E., being a Registered Professional Engineer in accordance with the Kentucky Professional Engineer's Registration do hereby certify to the best of my knowledge, information and belief, that the information contained in the accompanying report is true and correct and has been prepared in accordance with the accepted practice of engineering.

SIGNATURE Thomas A. Kovacic DATE October 5, 2021

ADDRESS AECOM Technical Services, Inc.
1300 East 9th Street, Suite 500
Cleveland, OH 44114
TELEPHONE (216)-622-2300

9. ENGINEER'S CERTIFICATION

ENGINEER'S CERTIFICATION

AECOM

KENTUCKY POWER BIG SANDY POWER PLANT

LAWRENCE COUNTY, KENTUCKY

FLY ASH POND PHASE IV 2020 and 2021 AND FINAL CLOSURE CONSTRUCTION

I, Thomas A. Kovacic, P.E., being a Registered Professional Engineer in accordance with the Kentucky Professional Engineer's Registration do hereby certify to the best of my knowledge, information and belief, that the information contained in the accompanying AEP Big Sandy Plant Fly Ash Pond Phase IV 2020-2021 and Final Closure CQA Certification Report is true and correct and has been prepared in accordance with the accepted practice of engineering.

SIGNATURE Thomas A. Kovacic DATE October 7, 2021

ADDRESS AECOM Technical Services, Inc.
1300 East 9th Street, Suite 500
Cleveland, OH 44114

TELEPHONE (216)-622-2300