POST CLOSURE PLAN

OAC 252:517-15-9(d)

Bottom Ash Pond

Northeastern 3&4 Power Station
Oologah, Oklahoma

Initial: October, 2016
Revised: October, 2018

Prepared for: Public Service Company of Oklahoma

Oologah, Oklahoma

Prepared by: American Electric Power Service Corporation

1 Riverside Plaza

Columbus, OH 43215

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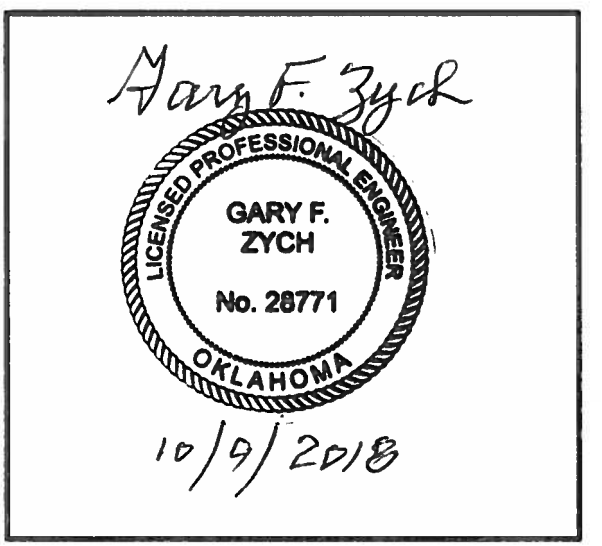
POST CLOSURE PLAN
OAC 252:517-15-9(d)
NORTHEASTERN 3&4 POWER STATION
BOTTOM ASH POND

PREPARED BY Adam Winebrenner DATE 10/9/2018
Adam Winebrenner

REVIEWED BY Gary F. Zych DATE 10/9/2018
Gary F. Zych, P.E.

APPROVED BY Gary F. Zych DATE 10/9/2018
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 OAC 252:517-15-9

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Revised Oct, 2018 – Updated document to reference ODEQ CCR regulations.

1.0 OBJECTIVE

This report was prepared by AEP- Geotechnical Engineering Services (GES) section to fulfill requirements of OAC 252:517-15-9(d) for Post Closure Plans of CCR units.

2.0 DESCRIPTION OF THE CCR IMPOUNDMENT

The Northeastern 3&4 Power Station is located near the City of Oologah, Rogers County, Oklahoma. It is owned and operated by Public Service Company of Oklahoma (PSO). The facility operates one surface impoundment for storing CCR called the Bottom Ash Pond.

The embankment is about 4,200 feet long, encompassing about 72 acres with about 34 acres of surface water. The dam crest gradually increases in elevation from about 630 feet-msl at the north berm east of the auxiliary spillway, to about elevation 639 feet-msl at the south berm where it meets the coal storage area on the east side. The embankment was constructed across a first order tributary to Fourmile Creek leaving the site to the south where the embankment is at its highest, 38 feet from the crest to the toe of the dam. A railroad track extends the length of the crest, typically used to remove empty coal cars from the site.

3.0 DESCRIPTION OF POST CLOSURE PLAN OAC 252:517-15-9(d)(1)(A)

[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.]

3.1 SECTION OAC 252:517-15-9(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 to properly detect any issues so that repairs can be performed before significant harm occurs.

- Embankment: The entire waste embankment, including top surface and side-slopes, will be inspected for slides, settlement, subsidence, displacement, and cover condition (see below).
- Soil Dike: The soil dike will be inspected for slides, displacement, seepage, 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 integrity of the cover drainage system will also be inspected.
- Final Cover Surface: The Final Cover surface will be inspected for any ponding of water or flat areas. Due to the design contours required to achieve the final cap grade, special attention will be focused to ensure that no settlement, subsidence, erosion, depressions or flat areas exist and that no water is allowed to pond above the cap system.
- 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. Due to the design contours required to achieve the final cap grade, special attention will be focused on the cap surface to ensure that any areas that hold water are re-graded to promote drainage, re-seeded to promote vegetative growth, and maintained to ensure that the ponding of water does not persist.
- 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.

3.2 SECTION OAC 252:517-15-9(b)(3)

[Maintaining the groundwater monitoring system and monitoring the groundwater in accordance with the requirements of OAC 252:517-9-1 through OAC 252:517-9-9.]

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 OAC 252:517-9-1 through OAC 252:517-9-9.

4.0 POST-CLOSURE CONTACT OAC 252:517-15-9 (d)(1)(B)

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

David A. Miller
Director Land Environmental & Remediation Services
American Electric Power Headquarters Building
1 Riverside Plaza
Columbus, OH 43215
(614)716-2281
damiller@aep.com

5.0 POST-CLOSURE PLANNED USE OAC 252:517-15-9 (d)(1)(C)

[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 Chapter…]

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. All other activities will be prohibited.