

Prepared for:  
Gavin Power, LLC

# Amended Post-Closure Plan—40 CFR 257.104(d)

Gavin Bottom Ash Pond

Gavin Plant

Cheshire, Ohio

15 April 2020

Project No.: 0545239

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**Signature Page**

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# **Amended Post-Closure Plan—40 CFR 257.104(d)**

## **Gavin Bottom Ash Pond**

Gavin Plant

Cheshire, Ohio



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### Professional Engineer Certification – Bottom Ash Pond Post-Closure Plan

I hereby certify that I am familiar with the provisions of the final rule to regulate the disposal of coal combustion residuals (CCR) and that I or an agent under my review has prepared this Amended Bottom Ash Pond Post-Closure Plan. I attest that this plan has been prepared in accordance with good engineering practices and meets the intent of 40 CFR 257.104(d). To the best of my knowledge, the information contained in this plan is true, complete, and accurate.



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**James A. Hemme, P.E.**  
*State of Ohio License No.: 72851*

Date: 4/15/2020

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### Acronyms and Abbreviations

Name	Description
BAC	Bottom Ash Complex
BAP	Bottom Ash Pond
CCR	Coal Combustion Residual
CCR Rule	40 CFR 257
CFR	Code of Federal Regulations
ERM	ERM Consulting & Engineering, Inc.
Gavin	Gavin Power, LLC

## 1. OBJECTIVE

ERM Consulting & Engineering, Inc. (ERM) has prepared this report on behalf of Gavin Power, LLC (Gavin) to fulfill the requirements of 40 Code of Federal Regulations (CFR) 257 (CCR Rule), specifically 257.104(d), which describes the criteria for a written plan describing post-closure care for coal combustion residual (CCR) units. ERM has adapted this report from American Electric Power Service Corporation's October 2016 *Post Closure Plan* (AEP 2016) to clarify that the Reclaim Pond, while a part of the Bottom Ash Complex (BAC), is not a regulated CCR surface impoundment, and that this post-closure plan only applies to the Bottom Ash Pond (BAP).

## 2. DESCRIPTION OF CCR IMPOUNDMENT

The BAC is adjacent to Ohio State Route 7, immediately south of the Gavin plant, and west of the Ohio River. The BAC is accessed by plant roads and is owned and operated by Gavin. The facility has two surface impoundments for storing CCR: the BAP and the fly ash reservoir.

The BAC consists of two aboveground reservoirs surrounded by continuous earthen dikes: the 57.8-acre BAP and the 6.7-acre Reclaim Pond (ERM 2019).

The BAP is a CCR surface impoundment subject to the CCR Rule; it is the focus of this post-closure plan.

The Reclaim Pond does not receive significant amounts of CCR from the BAP; was not designed to hold an accumulation of CCR; and does not treat, store, or dispose of CCR; therefore, it is not subject to the CCR Rule.

The dike height around the BAP and Reclaim Pond varies from 22 to 36 feet; the lowest crest elevation is 586 feet above mean sea level. The BAP and Reclaim Pond pool levels are kept at approximately 578 feet and 576 feet, respectively, above mean sea level.

Operationally, bottom ash slurry is pumped into the BAP, and the water is decanted through a reinforced concrete drop inlet structure into the Reclaim Pond. The water in the reclaim pond is either pumped to the plant for reuse or discharged to the Ohio River via an overflow structure, per Gavin's National Pollution Discharge Elimination System permit.

## 3. DESCRIPTION OF POST-CLOSURE PLAN—40 CFR 257.104(d)(1)(i)

### 3.1 Maintaining Integrity and Effectiveness of Final Cover System— 40 CFR 257.104(b)(1)

The items noted below will be inspected at a frequency (i.e., minimum annually) that will allow issues to be properly detected and repaired before significant harm occurs:

- **Embankment** — The waste embankment, including top surface and side-slopes, will be inspected for slides, settlement, subsidence, displacement, and cover condition (see below).
- **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 surface water drainage system will also be inspected.
- **Final Cover Surface** — The final cover surface will be inspected for ponding water or similar indications of poor surface drainage. Special attention will be given to prevent settlement, subsidence, erosion, depressions, flat areas, or ponding water above the cap system.

- **Surface Water Drainage System** — The surface water drainage system, including channels, culverts, and slope drains, will be inspected for restrictions, erosion, channel lining integrity, ponding, and accumulated sediment.

The following maintenance will be performed during the post-closure care period, based on the facility inspections described above:

- **Erosion Damage Repair** — Areas exhibiting erosion will be repaired by replacing and compacting the material in-kind to design grade/specifications, and reseeding the area. Additional fertilizer, selective herbicides, and rodent control measures will be applied as necessary (fertilizers and herbicides that will not adversely affect groundwater will be used). The repaired area will be monitored to verify the integrity of the repair.
- **Settlement, Subsidence, and Displacement** — Areas at the closed site that show 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 and closure plan specifications, including revegetation. If the condition reoccurs or persists, or if the condition is initially severe enough to warrant it, then there will be a detailed investigation and remedial action plan developed. Repairs will be made as necessary and follow-up monitoring will be performed to ascertain if the problem has been corrected.
- **Closure Cap Surface** — Areas that show signs of ponding water or flat contours will be examined and rectified. Due to the design contours required for the final cap grade, inspections will focus on the cap surface so that any areas that hold water will be regraded to promote drainage, reseeded to promote vegetative growth, and maintained to keep water from ponding.
- **Surface Water Drainage System** — The channel linings will be designed to hold estimated design flow rates and withstand the design velocities. Surface water drainage system maintenance will consist of removing sediment and undesirable vegetation from the channels and culverts, as required, to prevent run-on and run-off from eroding or otherwise damaging the final cover. Eroded areas will be repaired by backfilling and replacement of lining materials or reseeding according to the specifications. Damage to culverts and associated drainage structures will be repaired or replaced as needed.
- **Seepage** — The closure cap and exterior embankment slopes will be inspected for seepage. Indications of seepage will be inspected, investigated, monitored, and repaired, as necessary.

### 3.2 Groundwater Monitoring and System Maintenance—40 CFR 257.104(b)(3)

The general integrity of the wells, well casings, and well protective casings will be inspected. Damaged portions of monitoring wells or their protective casings will be replaced in-kind.

Groundwater will be monitored in accordance with the groundwater monitoring plan for this facility, and in accordance with the requirements of 40 CFR 257.90 through 257.98.

## 4. POST-CLOSURE CONTACT—40 CFR 257.104(d)(1)(ii)

The current post-closure contact regarding the Facility is the Plant Environmental Coordinator at 740-925-3015. The name, address, and telephone number of the person to contact about the Facility during the post-closure period shall be provided upon notice of closure.

## 5. POST-CLOSURE PLANNED USE—40 CFR 257.104(d)(1)(iii)

Post-closure, the property will be undisturbed vacant land. Activities that will occur on the closed CCR unit will be related to post-closure care. Other activities will be prohibited.

## 6. REFERENCES

American Electric Power Service Corporation (AEP). 2016. *Post Closure Plan CCR 257.102(b): Bottom Ash Complex Gavin Plant, Cheshire, Ohio*. Document number GERS-16-022. Prepared for AEP Generation Resources. Columbus, Ohio: American Electric Power Service Corporation. October 2016.

ERM Consulting & Engineering, Inc. 2019. *Draft Conceptual Engineering Options Evaluation: Bottom Ash Pond*. Prepared for Gavin Power, LLC. Boston, MA: ERM Consulting & Engineering, Inc. 14 August 2019.

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