FINAL CLOSURE PLAN
FORMER ASH BASIN
POWERTON STATION
NOVEMBER 2022

This closure plan has been prepared in accordance with 40 CFR Part 257.102(b) for the Former Ash Basin (FAB) at the Powerton Station, operated by Midwest Generation, LLC in Pekin, IL. This closure plan describes the schedule and steps necessary for closure and methods for compliance with closure requirements for final closure of the FAB

1.0 Closure Narrative [257.102(b)(i)]

The Powerton FAB has been an inactive pond for several decades. In 2010, the FAB was bifurcated by an onsite rail loop into two separate ponds, the South Pond and the North Pond. The closure of the FAB will be by removal of the CCR from the North Pond in accordance with 257.102(c) along with placement and closing of the CCR in place in the South Pond in accordance with 257.102(d).

2.0 CCR Removal and Decontamination [257.102(c)]

Closure of the FAB will be through removal of CCR from the North Pond, which will then be consolidated with the CCR in the South Pond. The CCR may be removed through a combination of hydraulic and mechanical dredging of the North Pond. The hydraulic dredging will mix the CCR with the existing standing water in the North Pond to create a slurry that will be pumped to the South Pond. The decanted dredge water will be pumped from the South Pond into the North Pond where it will be reused to slurry and pump CCR from the North Pond. After the hydraulic dredging in the North Pond is complete, it will be dewatered, and any CCR remnants will be removed by means of mechanical dredging and placed in the South Pond.

CCR removal and decontamination will be considered complete when all the CCR has been removed from the North Pond, to the extent practicable and from any areas that may have been affected by releases from the pond.

3.0 Closure with CCR Left in Place [257.102(d)]

The CCR in the South Pond will be closed in place in accordance with 257.102(d). The closure of the South Pond will consist of filling the South Pond with CCR from the North Pond, and closing in place that CCR.

The CCR from the North Pond will be combined with the existing CCR in the South Pond through a combination of hydraulic dredging and mechanical. Any standing water in the North Pond may be used to create the CCR slurry so the material can be pumped to the South Pond. The CCR will be spread throughout the existing footprint of the South Pond. As much of the CCR will be pumped from the North Pond and South Pond as possible, at which point, the remaining CCR in the North

Pond will be mechanically excavated and placed in the South Pond. The CCR will be allowed to dewater and graded with a minimum slope of 4% to prevent the accumulation standing water on the final cover system (FCS). The CCR will be graded to connect the north edge of the CCR placement with the south embankment of the railroad berm along with the construction of west, east, and south drainage channels that will convey stormwater off the cover system. The CCR will be inspected to ensure it is free of stones, litter, irregularities, protrusions, and any abrupt changes in grade. The CCR will be compacted to ensure a solid base for the installation of the FCS after it has been placed and graded. The North Pond will be permanently stabilized (previously discussed in Section 4.0) once the CCR removal is complete.

The FCS will be installed over the CCR in accordance with 257.102(d). The FCS will achieve the closure performance standards in the following manner:

1. The CCR surface will be graded to ensure positive drainage towards the perimeter drainage channels;

2. The FCS will be installed to control, minimize, or eliminate, to the maximum extent feasible, the post-closure infiltration of liquids;

3. The positive drainage of the FCS surface will preclude the probability of future impoundment of water;

4. The selected geomembrane as part of the FCS will provide for slope stability and prevent the movement of the FCS during both closure and the post-closure period;

5. The design of the FCS will be done in a way to minimize the need for future maintenance of the FCS and the FAB; and

6. The closure will be performed using generally accepted good engineering practices.

The FCS will consist of a soil base and ClosureTurf, which is manufactured by Watershed Geosynthetics, LLC and provided by AGRU-America. The FCS that will be installed is described in the following paragraphs. ClosureTurf will be installed in accordance with the manufacturer's recommendations. The FCS will consist of the following components (from the bottom layer to the top layer):

- 6 inches of soil base, if necessary;

- A geomembrane liner;

- Engineered synthetic turf; and

- Sand infill within the synthetic turf.

The soil base will be 6 inches thick and consist of relatively homogeneous soil that is free of debris, foreign objects, excess silt, excess roots, and excess organics. The soil base will be less

than 3 inches in size based on a sieve analysis and contain no more than 3 percent organic matter. The soil base will be graded with a 4% slope and will be placed in a manner to ensure there are no abrupt changes in grade that could damage the geomembrane. The soil base will also be compacted to ensure a competent base on which to place the Closure Turf. If the CCR is relatively homogeneous and is deemed equivalent to the soil base, the Closure Turf may be placed directly on the CCR.

ClosureTurf consists of a geomembrane overlain by engineered synthetic turf infilled with sand. The geomembrane is a 50-mil HDPE structured geomembrane combines a studded drain surface on the top side and spiked friction surface on the bottom side into one geomembrane liner. The 0.130-inches high studded drainage surface creates a drainage system integrated into the geomembrane for the conveyance of stormwater over the entire surface of the geomembrane and replaces the need for a separate drainage layer or stormwater conveyance system, such as drainage swales or channels. The drainage surface design keeps the conveyance of stormwater off the top of the sand infill minimizing the potential of the engineered turf sliding and the sand infill being washed away. The 0.175-inches high spiked friction surface has spikes spaced in a deliberate pattern that provides maximum interface friction and high factor of safety against sliding on steep slopes. The geomembrane has a permeability of 2.1×10^{-11} centimeters per second (cm/s), which is less than the required permeability of 1×10^{-7} cm/s.

The geomembrane will be covered with engineered synthetic turf. The engineered synthetic turf is dimensionally stable, has a high interface friction angle, is aesthetically pleasing, almost maintenance free and is resistant to extreme weather, UV light, and heat. The turf is manufactured to be stable regardless of which direction it is being pulled or moved. The high interface friction angle prevents it from sliding off the geomembrane because of gravity or other outside forces such as weather.

A specified sand infill will be placed between the blades of the engineered synthetic turf after the turf is in place on top of the geomembrane. The sand is placed to a uniform depth of at least 0.5-inches between the blades of the engineered synthetic turf. The sand infill will be a medium particle size sand meeting ASTM C-33 particle size requirements for fine aggregates. Based on ASTM C-33, the majority of the sand particle size would range from 300 micrometers (µm) to 9.5 millimeters (mm).

4.0 Maximum Inventory of CCR [257.102(b)(1)(iv)]

The estimated maximum inventory of CCR on-site contained in the North Pond and South Pond is estimated at 465,000 cubic yards (CY) and 240,000 CY, respectively.

5.0 Largest Area of CCR Requiring a Final Cover [257.102(b)(1)(v)]

The North Pond of the FAB will be closed by removing the CCR in accordance with 257.102(c); therefore, this section is not applicable to the North Pond. The South Pond will be closed with CCR in place and the FCS will cover a maximum area of approximately 15 acres.

6.0 Closure Schedule [257.102(b)(1)(vi)]

Implementation of closure through removal and closure in place of CCR is estimated to require 36 months. Closure is anticipated to begin in 2024 and estimated to be completed by the end of 2027. Closure design documents have been prepared to support applications for required local, state, and federal permits. Closure construction design documents include construction drawings for closure, technical specifications, and adequate CCR removal and closure-in-place confirmation procedures. The permits required for closure construction will be from IEPA. A preliminary schedule of anticipated closure activities is included below.

Closure Schedule

Activity No.	Closure Activity	Schedule
1	Project Permitting	15 months
2	Detailed Design Preparation & Contractor Procurement	3 months
3	Clear & Grub, Install Erosion Control Measures	2 months
4	CCR Consolidation	11 months
5	CCR Grading & Final Cover Install	3 months
6	Permanent Stabilization	1 month
7	Closure Completion Report	1 month

7.0 Closure Notices

Since the FAB is an inactive surface impoundment, a NOI to close the FAB had been placed in the facility's operating record, in accordance with §257.100(c)(1). As a result of the vacatur of this section of the rule, closure must now occur in accordance with §257.102 of the CCR rules. Prior to initiation of closure, an additional NOI to close will be prepared in compliance with §257.102(g) and will be placed in the facility's operating record.

7.1 Construction Completion Certification

Upon the completion of closure activities, a construction completion report will be submitted to IEPA. The construction completion report will be prepared in accordance 35 Ill. Adm Code Part 811.505(d). In addition, a notification of completion of closure of the FAB will be placed in the facility's operating record within 30 days of completing closure. The notification of completion of closure will include a written certification from a qualified professional engineer stating that the FAB was closed in accordance with the requirements of 40 CFR Part 257.102(h).

7.2 Deed Notice

Following closure of the FAB, Midwest Generation will record a notation on the deed to the property, or some other instrument that is normally examined during a title search. The notation on the deed will in perpetuity notify any potential purchaser of the property that the land has been used as a CCR unit and its use is restricted under the post-closure care requirements as provided by 257.104(d)(1)(iii).

8.0 Closure Plan Amendments

This Closure Plan may be amended in accordance with §257.102(b)(3) if a change in the operation of the FAB would substantially affect the content of this Closure Plan or if unanticipated events necessitate revision of the plan. If a change in operation requires amendment to the Closure Plan, the plan will be amended no later than 60 days prior to the change in operation being implemented. If an unexpected event occurs that requires amendment of the Closure Plan, the plan will be amended within 60 days of the unexpected event or within 30 days of the unexpected event if the event occurs after closure activities have commenced. Amendments to this Closure Plan will be certified by a professional engineer registered in the State of Illinois in accordance with §257.102(b)(4).

9.0 Professional Engineer's Certification [257.102(b)(4)]

This Closure Plan has been prepared to meet the requirements of 40 CFR 257.102(b)(1).

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