

**POND 2 FINAL CLOSURE PLAN
JOLIET #29 STATION
OCTOBER 2025**

1.0 Introduction
[845.720(b)]

Midwest Generation, L.L.C (Midwest Generation) has ceased operating the natural gas-fired generating station, referred to as Joliet #29 Generating Station, located in Joliet, Illinois (“site” or “generating station”). MWG converted the generating station from coal to natural gas in 2016. As part of the previous coal-fired operations, the station operated two ponds (Ponds 1 and 2) and a service water basin (Pond 3). MWG removed all of the coal combustion residuals (“CCR”) from Pond 1 and decontaminated the liner before October 2015, and repurposed the pond as a low volume wastewater pond.¹ Pond 3 is a *de minimis* pond. Both Pond 1 and Pond 3 are not CCR surface impoundments, IPCB Order PCB21-1, May 18, 2023. Pond 2 was used for CCR management/storage until 2019. In 2019, the CCR was removed and all other portions of the exposed liner have been decontaminated. Because Pond 2 was used as a CCR surface impoundment after October 2015, Pond 2 is regulated under the newly promulgated Ill. Adm. Code Title 35, Part 845: Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments (State CCR Rule). Ponds 1 and 2 are no longer in service with no liquids, process system streams, or wastewater directed into the ponds, except for precipitation.

As required by 845.700(b), Midwest Generation will be closing Pond 2. A final closure plan was previously submitted as part of the Joliet 29 Pond 2 construction permit application to execute the closure of Pond 2. That closure plan consisted of closing Pond 2 based on an adjusted standard to reuse the existing geomembrane liner and use the pond as a low volume wastewater pond. Midwest Generation has since decided not to pursue the adjusted standard and close Pond 2 by removal in accordance with 845.740(a). This final closure plan has been revised to reflect this change and is executed in accordance with 845.720(b), which includes completing a closure alternatives analysis. Pursuant to 845.710, a closure alternatives analysis was completed prior to selecting the closure method that will be used for Pond 2. The closure alternatives analysis was performed to evaluate the closure methods involving closure by removal and closure in place. The closure alternatives analysis was completed prior to the currently submitted construction permit application. The closure alternatives analysis was not revised for this closure plan because the closure method discussed in this plan does not deviate from the analysis nor change the results of the analysis.

The previously completed closure alternatives analysis report evaluated three different closure methods. The three different methods evaluated consisted of the following:

- Closure by removal in accordance with Section 845.740;
- Closure by Removal based on Midwest Generation’s Adjusted Standard Petition;
- Closure in place with a final cover system in accordance with Section 845.740.

¹ As a low volume wastewater pond, Pond 1 receives wastewater from other sources at the Station except CCR.

The closure alternatives analysis identified that closure by removal based on Midwest Generation's Adjusted Standard Petition is as effective at protecting the environment when compared to the other two options and will cause the least disturbance to the surrounding neighborhood. However, Midwest Generation has selected closure by removal in accordance with Section 845.740 for Pond 2. This final closure plan identifies the steps necessary to execute the closure by removal and the schedule to complete the closure for Pond 2.

2.0 Closure Narrative **[845.720(a)(1)(A)]**

The closure of Pond 2 will be by removal in accordance with Ill. Adm. Code 35 Part 845.740(a). The CCR was previously removed from Pond 2 in 2019 and only the warning layer remains within the bottom of the pond. Executing the closure outlined in this plan would be to remove the remaining liner system and decontaminating affected areas in accordance with 35 Ill. Adm. Code 845.740(a).

Executing the closure by removal for Pond 2 is a multi-step process. First, the inlet and outlet structures will be decontaminated and demolished with the material hauled offsite for disposal. Next, the remaining warning layer and geomembrane will be removed from Pond 2 along with the remnants of the Poz-O-Pac present beneath the geomembrane liner. After removal, the liner slopes and base beneath where the geomembrane were, would be visually inspected and any identified CCR material would be excavated and hauled offsite for disposal.

Once the existing liner system is removed, the base of Pond 2 and portions of the southern berm will be graded towards the south so any stormwater drains to the existing Roof & Yard Runoff Basin.

3.0 CCR Removal and Decontamination **[845.720(a)(1)(B)]**

Closure of Pond 2 will be through removal in accordance with 845.740(a). Pond 2 will be closed by removal of the existing liner system and decontaminating affected areas in accordance with 35 Ill. Adm. Code 845.740(a). As noted in the previous construction permit application, the CCR was removed from Pond 2 in 2019 and hauled offsite for disposal with the warning layer was left in place. The anticipated steps to execute the closure by removal are listed below.

1. Obtain a construction permit from the Illinois EPA for closing Pond 2.
2. Dewater any accumulated precipitation through Pond 2's existing discharge structure.
3. Remove existing warning layer, cushion layer, geomembrane, and Poz-O-Pac and haul offsite for disposal.

4. Inspect the area beneath the removed components for CCR material.
5. Decontaminate and remove the basin's appurtenant structures (e.g., inlet structure, concrete apron, outlet structure, and piping).
6. Remove the existing sluice pipes, concrete pipe trench, and concrete retaining wall.
7. Grade the ponds' embankments, floor, and southwest slope to establish the desired elevations and slopes for the drainage of water from the pond to the Roof & Yard Runoff Basin. As necessary, additional fill material will be used to establish the desired elevations and slopes.

Dewatering

Accumulated stormwater will be removed with temporary pumps, process through the wastewater treatment system and discharged in accordance with the NPDES permit.

Existing Liner System Removal and Decontamination.

Pond 2's existing liner system consists of the following components (from bottom to top): the Poz-O-Pac, a geotextile cushion, a 60-mil HDPE geomembrane liner, a geotextile cushion, a 12-inch thick sand cushion layer, and a 6-inch thick limestone warning layer. After dewatering, the next steps would be to remove the cushion layer and warning layer from the base of Pond 2 using an excavator or front-end loader and haul off-site for disposal. The cushion layer and warning layer are present across the bottom and extends approximately 4 feet up the side slopes of the pond. The cushion layer consists of 12 inches of sand on top of the geomembrane with 6 inches of limestone screenings on top of the sand, for a total of 18 inches thick. Once the warning layer material is removed from the base, the geomembrane will be removed. It is likely that portions of the geomembrane will be removed along with the warning layer, especially on the base of the pond. As the warning layer is removed, portions or all of the geomembrane on the sides may be removed. Any geomembrane that is not removed with the warning layer will be removed after the warning layer is removed along with the Poz-O-Pac that lies beneath.

It is estimated approximately 12,000 cubic yards (CY) will be hauled offsite to dispose of the geomembrane, cushion layer, warning layer, and Poz-O-Pac. The removed geomembrane, cushion layer, warning layer, and Poz-O-Pac will be handled and hauled offsite for disposal in accordance with 35 Ill. Adm. Code 845.740(c), which includes specifications for proper manifests for each transported truckload, a transportation plan, on-site fugitive dust controls, signage and public notices, and managing stormwater to prevent contamination of surface water and groundwater.

The liner slopes and base beneath where the geomembrane were, would be visually inspected and any identified CCR material would be excavated and hauled offsite for disposal. Based on boring logs previously done at the site, CCR material was not identified in the subsurface soils beneath the existing liner system.

Decontamination and removal of the Appurtenant Structures

Along with removing the warning layer, cushion layer, geomembrane liner, and the Poz-O-Pac, the basin's existing inlet structure, inlet apron, outlet structure, and piping surrounding the pond, etc. will be decontaminated. At a minimum, decontamination procedures will include pressure

washing of the pond appurtenances in a systematic manner to remove all CCR remnants. Following decontamination, the pond appurtenances will be demolished with the demolished material being hauled offsite. Since the pond appurtenances are constructed of concrete and will be decontaminated, it is likely the material will be hauled for disposal at a clean construction and demolition debris landfill.

The piping near the inlet structure and a portion of the piping along the south side of Pond 2 will be removed and decontaminated to remove any CCR remnants. Once decontaminated, the piping may remain at the station or will be hauled offsite for disposal. Pond 2's existing outlet piping is underground, where it will remain, but the pipe will be plugged to prevent water from entering it.

Site Grading

After Pond 2's liner system has been removed, the site grading will occur so that precipitation does not accumulate within the former Pond 2. The west portion of Pond 2's south berm will be cut down and that material along with existing site soils and clean material, as needed, will be placed, graded, and compacted to achieve the desired grades and slopes necessary so stormwater will drain from Pond 2. The stormwater draining from Pond 2 will be directed towards the existing Roof & Yard Runoff Basin (R&YRB). Note that this grading effort will include a catch basin and culvert beneath a site access road to convey waters from the former Pond 2 location to the R&YRB. It is estimated up to 13,000 CY of mostly on-site soil will be used for the site grading. If necessary, off-site soil will be brought on-site to replace unsuitable on-site soils. Whether on-site soils are considered unsuitable will be determined at the time of construction. Riprap will be placed on the edge of the R&YRB where stormwater runoff will enter to prevent erosion. The site grading will allow for stormwater to gravity drain from Pond 2 to the R&YRB.

As the site grading is occurring, field CQA inspections will be performed to ensure construction complies with the approved construction permit.

4.0 Closure with CCR Left in Place **[845.720(a)(1)(C)]**

Closure of Pond 2 will be through removal of CCR and decontamination of areas affected by CCR. Therefore, this requirement is not applicable.

5.0 Maximum Inventory of CCR **[845.720(a)(1)(D)]**

The estimated maximum inventory of CCR on-site contained in Pond 2 is approximately 45,000 cubic yards based upon the estimated quantity prior to the pond's cleaning in the spring of 2019.

6.0 Largest Area of CCR Requiring a Final Cover [845.720(a)(1)(E)]

Pond 2 will be closed by removing the CCR in accordance with 845.740; therefore, this section is not applicable to this closure plan.

7.0 Closure Schedule [845.720(a)(1)(F)]

Implementation of closure through removal of CCR is estimated to require 31 months. Closure is anticipated to begin in 2024 with submittal of the permit application and estimated to be completed sometime in 2027. Prior to initiation of closure, a notice of intent to close will be prepared in accordance with §845.730(d) and an Illinois Environmental Protection Agency (IEPA) construction permit will be obtained. A preliminary schedule of anticipated closure activities is included below. Some of the activities noted in the table below can occur at the same time and the schedule time listed is the anticipated time to complete both activities.

Closure Schedule

Closure Activity	Estimated Duration
Complete Closure Construction Documents and Obtain IEPA Closure Construction Permit	15 months
Decontaminate and Demolish Pond Inlet & Outlet Structures, Remove Sluice Piping	2 months
Dewater	1 month
Excavate Liner System including culvert	6 months
Site Grading	2 months
Closure Certification and Report	5 months

8.0 Initiation and Completion of Closure Activities [845.730 & 845.760]

Closure activities will commence when one or more of the following conditions have occurred:

- No later than 30 days after the date on which the CCR unit received the known final receipt of CCR or non-CCR waste;
- No later than 30 days after the removal of the known final volume of CCR for the purpose of beneficial use;
- Within two years of the last receipt of waste for a unit that has not received CCR or non-CCR waste; or

- Within two years of the last removal of CCR material for the purposes of beneficial use.

Upon completion of the IEPA approved closure activities, a closure report and closure certification will be submitted to IEPA in accordance with 845.760(e). The closure report will contain the following information, 1) engineering and hydrogeology reports, including monitoring well completion reports and boring logs, all CQA reports, certifications, and designations of CQA officers-in-absentia required by Section 845.290; 2) photographs, including time, date and location information of the photographs, of the liner system excavation, site grading, and any other photographs relied upon to document construction activities; 3) a written summary of closure requirements and completed activities as stated in the closure plan and in Part 845; and 4) any other information relied upon by the qualified professional engineer in making the closure certification.

In accordance with 845.760(f), notification of closure of a CCR unit will be made within 30 days of IEPA's approval of the submitted closure report and closure certification. The notification will include certification from a qualified professional engineer, as required by 845.760(e)(2) and will be placed in the facility's operating record.

9.0 Closure Plan Amendments **[845.720(a)(3)]**

This Closure Plan will be amended in accordance with 845.720(a)(3). If a change in the operation of Pond 2 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 845.720(a)(4).

10.0 Professional Engineer's Certification **[845.720(a)(4)]**

This Closure Plan has been prepared to meet the requirements of Ill. Adm. Code Title 35 845.720(b).



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