

# MWVG

Midwest Generation, LLC

Waukegan Generating Station

## Final Written Closure Plan for West Ash Pond

Revision 2

January 27, 2022

Issue Purpose: Use

Project No.: 12661-098

55 East Monroe Street  
Chicago, IL 60603-5780 USA  
312-269-2000  
[www.sargentlundy.com](http://www.sargentlundy.com)



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## 1.0 PURPOSE & SCOPE

**Illinois CCR Rule Reference: 35 Ill. Adm. Code 845.720(b)**

**Federal CCR Rule Reference: 40 CFR 257.102(b)**

### 1.1 PURPOSE

The West Ash Pond at Midwest Generation, LLC's (MWG) Waukegan Generating Station ("Waukegan" or the "Station") is an existing coal combustion residual (CCR) surface impoundment that is regulated by the Illinois Pollution Control Board's "Standards for the Disposal of Coal Combustion Residuals in CCR Surface Impoundments." These regulations are codified in Part 845 to Title 35 of the Illinois Administrative Code (35 Ill. Adm. Code 845, Ref. 1) and are also referred to herein as the "Illinois CCR Rule." The West Ash Pond is also regulated by the U.S. Environmental Protection Agency's (EPA) "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments," 40 CFR Part 257 Subpart D (Ref. 2), also referred to herein as the "Federal CCR Rule."

Pursuant to 35 Ill. Adm. Code 845.720(b) and 40 CFR 257.102(b), this document provides the final written closure plan for the West Ash Pond at Waukegan. MWG intends to close this CCR surface impoundment by removing CCR and CCR-mixed materials remaining in the pond at the time of closure and decontaminating affected areas pursuant to 35 Ill. Adm. Code 845.740(a) and 40 CFR 257.102(c). MWG then intends to repurpose the area as a new low volume waste pond for the Station. This plan describes the steps necessary to close and subsequently repurpose the West Ash Pond in this manner.

### 1.2 SCOPE

Per the 2016 Water Infrastructure Improvements for the Nation (WIIN) Act, the West Ash Pond will continue to be subject to both the Illinois and Federal CCR Rules until the U.S. EPA approves the Illinois EPA's CCR permit program. The Illinois EPA has yet to publish a timeline for submitting its proposed CCR permit program to the U.S. EPA for approval, and so this final written closure plan has been prepared pursuant to both sets of regulations.

## 2.0 CLOSURE PLAN NARRATIVE DESCRIPTION

**Illinois CCR Rule References: 35 Ill. Adm. Code 845.720(a)(1)(A) & 845.740(a)**

**Federal CCR Rule References: 40 CFR 257.102(b)(1)(i) & 257.102(c)**

MWG plans to close the West Ash Pond by removing CCR and CCR-mixed materials remaining in the pond at the time of closure and decontaminating affected areas pursuant to 35 Ill. Adm. Code 845.740(a) and 40 CFR 257.102(c). The West Ash Pond closure will be executed according to the following sequential steps:

1. Obtaining a construction permit from the Illinois EPA for closing the pond;
2. Removing the remaining CCR and the protective granular fill layer over the existing geomembrane liner from the pond and transporting the CCR and soil materials to a permitted disposal facility;
3. Inspecting and decontaminating the pond's existing geomembrane liner and appurtenant structures (e.g., concrete inlet and outlet structures) for re-use in accordance with the closure construction permit issued by the Illinois EPA, including submittal of visual inspection documentation and analytical testing results to demonstrate the existing liner and structures are no longer contaminated with CCR constituents;<sup>1</sup>
4. Sampling the groundwater at the pond site to verify the groundwater monitoring concentrations do not exceed the groundwater protection standards established for constituents in accordance with the operating permit issued by the Illinois EPA for the pond; and
5. Certifying (via a qualified professional engineer licensed in the State of Illinois) that the CCR has been removed from the pond and the CCR surface impoundment has been decontaminated in accordance with the closure plan in effect at the time of closure and in accordance with the corresponding construction permit issued by the Illinois EPA.

## 3.0 CCR REMOVAL & DECONTAMINATION PROCEDURES

**Illinois CCR Rule References: 35 Ill. Adm. Code 845.720(a)(1)(B) & 845.740(a)**

**Federal CCR Rule References: 40 CFR 257.102(b)(1)(ii) & 257.102(c)**

The plan for closing the West Ash Pond is to follow the sequential steps outlined in Section 2.0.

In June 2020, Waukegan took the West Ash Pond out of service for routine cleaning. MWG then began removing ash stored above the granular protective layer covering the pond's existing geomembrane liner in accordance with historical cleaning practices in the Station's ash pond maintenance program where ash is periodically removed from the pond to recover storage capacity. In September 2021, it was noted that most of the CCR previously stored in the West Ash Pond had been removed and minimal surface water remained

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<sup>1</sup> MWG has filed a Petition for an Adjusted Standard with the Illinois Pollution Control Board so that it may reuse the liner and ancillary equipment in the West Ash Pond. *In the Matter of Midwest Generation, LLC (Waukegan)*, PCB 21-03.

in the pond. Final closure activities will be performed in accordance with the closure plan in effect at the time of the closure work and the corresponding construction permit issued by the Illinois EPA.

Upon receipt of the construction permit from the Illinois EPA for closing the West Ash Pond, MWG will first remove the minimal CCR remaining in the pond and the 18-in.-thick granular protective layer covering the pond's existing geomembrane liner. These materials will then be loaded onto trucks and transported to a permitted disposal facility. The trucks transporting these materials off-site will carry manifests pursuant to 35 Ill. Adm. Code 845.740(c)(1)(A) and as specified in 35 Ill. Adm. Code 809. In addition, a CCR transportation plan will be prepared in accordance with 35 Ill. Adm. Code 845.740(c)(1)(B) which will include:

- Identification of the transportation method selected;
- The frequency, time of day, and routes of CCR transportation;
- Any measures to minimize noise, traffic, and safety concerns caused by the transportation of the CCR;
- Measures to limit fugitive dust from any transportation of CCR;
- Installation and use of a vehicle washing station;
- A means of covering the CCR for any mode of CCR transportation;
- A requirement that the CCR is transported by a permitted special waste hauler under 35 Ill. Adm. Code 809.201.

On-site fugitive dust control measures will also be implemented as necessary to minimize airborne CCR particulates while CCR and CCR-mixed materials are being handled. Pursuant to 35 Ill. Adm. Code 845.740(c)(2)(A), these dust control measures will include a water spray, commercial dust suppressant, or a combination of these.

Prior to the removal of the granular protective layer covering the West Ash Pond's existing geomembrane liner, signage will be posted at the Station's entrance warning of the hazards of CCR dust inhalation in accordance with 35 Ill. Adm. Code 845.740(c)(3)(A). Pursuant to 35 Ill. Adm. Code 845.740(c)(3)(B), a written notice will be issued to each of the local governments through which the CCR-mixed materials will be transported. This written notice will include an explanation of the hazards of CCR dust inhalation, the aforementioned CCR transportation plan, and a tentative transportation schedule.

After the granular protective layers in the pond have been removed, MWG will begin decontaminating the West Ash Pond's existing geomembrane liner to be re-used when the pond is repurposed as a new low volume waste pond for the Station. The pond's inlet trough, outlet structure, associated piping, etc. will also be decontaminated. At a minimum, decontamination procedures will include pressure washing of the geomembrane liner and pond appurtenances in a systematic manner to remove all CCR and residuals of CCR. Following decontamination, the existing geomembrane liner will be visually inspected and an electrical

leak location survey will be conducted to ensure the liner is competent. Analytical tests will also be conducted in accordance with the construction permit issued by the Illinois EPA at the time of the closure work to demonstrate that the liner is no longer contaminated with CCR constituents. The results from the visual inspection and analytical tests will be submitted to the Illinois EPA for approval of re-using the existing geomembrane liner when the West Ash Pond is repurposed as a new low volume waste pond.

In accordance with 35 Ill. Adm. Code 845.740(e) and 40 CFR 257.102(c), CCR removal and decontamination will be complete when constituent concentrations throughout the West Ash Pond and areas that may have been affected by releases from the pond have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standards established under 35 Ill. Adm. Code 845.600. After CCR removal and decontamination of the West Ash Pond has been completed, MWG will submit a report documenting the completion of CCR removal and decontamination of the unit, which will include a certification from a qualified professional engineer licensed in the State of Illinois that CCR removal and decontamination was completed in accordance with 35 Ill. Adm. Code 845.740.

In accordance with 35 Ill. Adm. Code 845.740(b), MWG will continue groundwater monitoring in accordance with Subpart F of the Illinois CCR Rule (“Groundwater Monitoring and Corrective Action”) for three years after the completion of CCR removal and decontamination. After groundwater monitoring has been completed, MWG will submit a report documenting the completion of groundwater monitoring, which will include a certification from a qualified professional engineer licensed in the State of Illinois that groundwater monitoring was completed in accordance with 35 Ill. Adm. Code 845.740.

## **4.0 ESTIMATED MAXIMUM INVENTORY OF CCR**

**Illinois CCR Rule Reference: 35 Ill. Adm. Code 845.720(a)(1)(D)**

**Federal CCR Rule Reference: 40 CFR 257.102(b)(1)(iv)**

Detailed records of the maximum inventory of CCR ever stored in the West Ash Pond are not available. For the purposes of this closure plan, the maximum inventory of CCR ever on-site over the active life of the West Ash Pond is conservatively based on the estimated maximum capacity of the pond: 223,000 cubic yards.

## 5.0 CLOSURE SCHEDULE

**Illinois CCR Rule Reference: 35 Ill. Adm. Code 845.720(a)(1)(F)**

**Federal CCR Rule Reference: 40 CFR 257.102(b)(1)(vi)**

Closure activities for the West Ash Pond are expected to be completed in 2023. Table 1 lists the major milestones necessary for closing the pond and the expected duration for completing each milestone.

**Table 1 – Planning Level Schedule for Closing the West Ash Pond**

Activity	Estimated Duration
Prepare Closure Construction Design Documents	Complete
Obtain Closure Construction Permit from Illinois EPA	12 Months
Hire Contractor to Complete Closure Activities in Accordance with Illinois EPA Permit	4 Months
Remove Protective Granular Layers Above Existing Liner	1 Month
Decontaminate Existing Liner and Pond Appurtenances (Including Laboratory Testing)	2 Months
Obtain Approval from Illinois EPA to Re-Use Existing Liner for New Low Volume Waste Pond	3 Months
Submit Completion of CCR Removal and Decontamination Report and Certification to Illinois EPA	2 Weeks
Obtain Approval of Completion of CCR Removal and Decontamination Report from Illinois EPA	3 Months
Complete and Certify Closure of the West Ash Pond	--

## 6.0 AMENDMENTS TO CLOSURE PLAN

**Illinois CCR Rule Reference: 35 Ill. Adm. Code 845.720(a)(3)**

**Federal CCR Rule Reference: 40 CFR 257.102(b)(3)**

This closure plan will be amended in accordance with 35 Ill. Adm. Code 845.720(a)(3) and 40 CFR 257.102(b)(3) if a change in the operation of the West Ash Pond would substantially affect this closure plan or if an unanticipated event necessitates a revision to this closure plan. Any and all amendments to this closure plan will be certified by a qualified professional engineer registered in the State of Illinois in accordance with 35 Ill. Adm. Code 845.720(a)(4) and 40 CFR 257.102(b)(4).

## 7.0 COMPLETION OF CLOSURE ACTIVITIES

**Illinois CCR Rule Reference: 35 Ill. Adm. Code 845.760**

**Federal CCR Rule Reference: 40 CFR 257.102(f)**

Upon completion of all CCR removal and decontamination activities required by 35 Ill. Adm. Code Part 845 and 40 CFR 257.102(c) and approved by the Illinois EPA in a construction permit, a closure report and a closure certification for the West Ash Pond will be submitted to the Illinois EPA in accordance with 35 Ill. Adm. Code 845.760(e). The closure report will include (1) the engineering and hydrogeology reports containing any monitoring well completion reports, boring logs, all construction quality assurance (CQA) reports, certifications, designations of CQA officers-in-absentia required by 35 Ill. Adm. Code 845.290; (2) photographs with time, date, and location information relied upon for documentation of construction activities; (3) a written summary of the closure requirements and completed activities as stated in the closure plan in effect and 35 Ill. Adm. Code Part 845; and (4) any other information relied upon by the qualified professional engineer for the certification. Pursuant to 35 Ill. Adm. Code 845.760(e)(2) and 40 CFR 257.102(f)(3), the certification will be prepared by an independent, qualified professional engineer licensed in the State of Illinois and will verify that the West Ash Pond has been closed in accordance with the closure plan in effect at the time of the closure work, the requirements of 35 Ill. Adm. Code Part 845, and the requirements of 40 CFR 257.102. Finally, within 30 days of the Illinois EPA approving the closure report and closure certification, a notification of completion of closure will be prepared in accordance with 35 Ill. Adm. Code 845.760(f).



## 8.0 CERTIFICATION

**Illinois CCR Rule Reference: 35 Ill. Adm. Code 845.720(a)(4)**

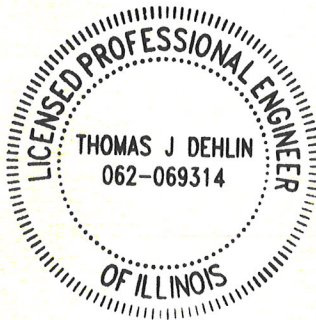
**Federal CCR Rule Reference: 40 CFR 257.102(b)(4)**

I certify that:

- This final written closure plan for the West Ash Pond was prepared by me or under my direct supervision.
- The work was conducted in accordance with the requirements of 35 Ill. Adm. Code Part 845 and with the requirements of 40 CFR 257.102.
- I am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas J. Dehlin Date: January 27, 2022

Seal:



*Th. Dehlin*  
1/27/2022  
Exp. 11/30/2023

## 9.0 REFERENCES

1. Illinois Pollution Control Board. "Standards for Disposal of Coal Combustion Residuals in CCR Surface Impoundments." 35 Ill. Adm. Code 845. Accessed January 26, 2022.
2. U.S. Environmental Protection Agency. "Standards for Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments." 40 CFR Part 257 Subpart D. <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-I/part-257/subpart-D>. Accessed January 26, 2022.