

November 15, 2022

Richard Huggins
Branch Chief, Energy Recovery and Waste Disposal, U.S. EPA
One Potomac Yard
2777 S. Crystal Drive
Arlington, Virginia 22202-3553

Submitted via e-mail.

RE: Powerton Generating Station, Midwest Generation LLC
CCR Part A Demonstration, Request for New Cessation-of-Waste Deadline

Chief Huggins,

As detailed in the enclosed progress report, the purpose of this correspondence is to request a new cessation-of-waste deadline for the Ash Surge Basin at Midwest Generation LLC's (MWG) Powerton Generating Station ("Station"). Although MWG initially planned to have the Station's Bypass Basin retrofitted and operational by August 11, 2023, MWG anticipates delays in receiving a retrofit construction permit based upon recent discussion with the Illinois Environmental Protection Agency (Illinois EPA). This will require the Ash Surge Basin to operate beyond the deadline originally requested in MWG's Demonstration for a Site-Specific Alternative Deadline to Initiate Closure that was submitted on behalf of the Station on November 30, 2020.

Because there is no existing regulatory procedure for requesting an extension on a demonstration submitted pursuant to 40 CFR 257.103(f)(1) on which the U.S. EPA has yet to issue a final determination, MWG is requesting an extension via the enclosed progress report, prepared in a similar manner as the previous progress report submitted to the U.S. EPA on March 1, 2022. Per the enclosed report and updated project schedule, MWG anticipates the forecasted permitting delays will prevent the Bypass Basin from being operational until October 15, 2024. The enclosed report:

1. Discusses the progress MWG has made in retrofitting the Bypass Basin since the March 2022 progress report,
2. Discusses the delays necessitating a new cessation-of-waste deadline for the Station's Ash Surge Basin,
3. Provides justification for operating the Ash Surge Basin until October 15, 2024, and
4. Demonstrates pursuant to 40 CFR 257.103(f)(1)(vi)(B) that the Ash Surge Basin is an eligible unlined CCR surface impoundment and therefore qualifies to continue operating until October 15, 2024, if necessary.

We look forward to working with the U.S. EPA as we continue developing alternative disposal capacity for the Ash Surge Basin. Please contact me at (302)-540-0327 or david.bacher@nrgenergy.com to address any questions or concerns regarding this submittal.

Sincerely,

David Bacher
Senior Regional Manager
Environmental Business, NRG Energy, Inc.

Copies Furnished:

1. Frank Behan (U.S. EPA)
2. Laurel Celeste (U.S. EPA)
3. W. Stone (NRG)
4. S. Shealey (MWG)
5. J. Buckley (MWG)
6. W. Shander (MWG)
7. T. Dehlin (S&L)

Enclosures (2):

1. Midwest Generation LLC's Request for a New Cessation-of-Waste Deadline for the Ash Surge Basin at Powerton Generating Station
2. Engineering, Procurement and Construction Schedule, Bypass Basin Retrofit Project

MIDWEST GENERATION LLC'S REQUEST FOR A NEW CESSATION-OF-WASTE DEADLINE FOR THE ASH SURGE BASIN AT POWERTON GENERATING STATION

On November 30, 2020, Midwest Generation, LLC (MWG) submitted an alternative storage capacity demonstration ("Demonstration") to the U.S. Environmental Protection Agency (U.S. EPA or "Agency") pursuant to 40 CFR 257.103(f)(1) requesting an extension to the regulatory operating deadline for the Ash Surge Basin at MWG's Powerton Generating Station ("Powerton" or the "Station"). In the Demonstration, MWG detailed plans to replace the Ash Surge Basin with a multiple technology system consisting of four components: refurbished dewatering bins, a new concrete ash-settling tank, a new Recycle Cooling Water Basin, and a new Low-Volume Waste Basin.

On March 1, 2022, MWG submitted a report to the U.S. EPA in response to the Agency's request (received via e-mail on February 14, 2022) for additional information on the development of alternative disposal capacity to Powerton's Ash Surge Basin. This March 2022 progress report provided:

1. A narrative explaining the progress made and current activities and phase/step at the facility to achieve alternative capacity.
2. A discussion of the issues that led to the delay (if a delay has occurred) to the requested date to cease receipt of waste.
3. An updated requested date to cease receipt of waste (if the original date has changed).
4. An updated narrative justifying the new date to cease receipt of waste (if the original date requested has changed).

As discussed in the March 2022 progress report, MWG continued developing the multiple technology system proposed in the November 2020 Demonstration until February 4, 2021, when the Illinois Pollution Control Board (IPCB) published its Second Notice regulations for CCR surface impoundments to be codified in Title 35, Part 845 of the Illinois Administrative Code (35 Ill. Adm. Code 845), also known as the "Illinois CCR Rule." The IPCB's Second Notice regulations did not include a definition for a "de minimis unit," as MWG had expected. This meant that the Recycle Cooling Water Basin, which was to receive treated bottom ash sluice water from the concrete ash-settling tank, would likely be regulated as a CCR surface impoundment under the Illinois CCR Rule. Indeed, when the Illinois EPA issued their proposed regulations for the Illinois CCR Rule on March 30, 2020, the agency identified several ponds as CCR surface impoundments – including Powerton's Service Water Basin¹ – even though the subject ponds did not directly receive or treat CCR.

Although MWG disagrees that an impoundment designed like the proposed Recycle Cooling Water Basin should be regulated as a CCR surface impoundment, MWG ultimately determined that the Illinois EPA would likely regulate the Recycle Cooling Water Basin as a CCR surface impoundment, which meant that the basin would need to have a composite liner system and leachate collection and removal system. Not only would this require more time to construct the Recycle Cooling Water Basin, but it would also eliminate the need for the concrete ash-settling tank since the Station has historically been able to operate in accordance with its NPDES permit when the existing Bypass Basin is the only ash-settling basin in service. Accordingly, MWG elected to retrofit the Bypass Basin to provide alternative disposal capacity to the Ash Surge Basin in lieu of constructing the multiple technology system proposed in the Demonstration. Despite this change in plans, MWG planned to retrofit Powerton's Bypass Basin by August 11, 2023, the original date requested in the November 2020 Demonstration.

MWG cannot retrofit Powerton's Bypass Basin nor operate the retrofitted unit until the Illinois EPA issues either separate retrofit construction and operating permits or a joint construction and operating permit for

¹ Ultimately, the Illinois EPA and IPCB agreed with MWG that the Service Water Basin is not a CCR surface impoundment.

the basin². Pursuant to 35 Ill. Adm. Code 845.230(d)(1), MWG submitted an initial operating permit application for the Bypass Basin to the Illinois EPA on October 29, 2021. Then, on July 18, 2022, MWG submitted a separate retrofit construction permit application for the Bypass Basin to the Illinois EPA. The agency received the operating and retrofit construction permit applications on November 3, 2021, and on July 20, 2022, respectively.

On October 18, 2022, MWG met with the Illinois EPA to discuss the statuses of the operating and retrofit construction permit applications that were submitted to the agency for Powerton's Bypass Basin. During this meeting, the agency stated that it has not finished reviewing any of the operating and construction permit applications submitted to date by facilities subject to the Illinois CCR Rule. The agency was not able to provide a timeframe for finishing its reviews of the operating and retrofit construction permit applications for the Bypass Basin. Given the agency is still reviewing these applications and the forthcoming public participation process, MWG now anticipates delays in permitting will require Powerton to operate the Ash Surge Basin beyond August 11, 2023. Accordingly, MWG is requesting a new alternative cessation-of-waste deadline for Powerton's Ash Surge Basin.

Because there is no existing regulatory procedure for requesting an extension on a demonstration submitted pursuant to 40 CFR 257.103(f)(1) on which the U.S. EPA has yet to issue a final determination³, MWG is requesting an extension via this progress report which has been prepared in a similar manner as the first progress report submitted to the Agency on March 1, 2022. Following the form in which the Agency requested additional information at that time, this progress report provides:

1. A narrative explaining the progress made and current activities and phase/step at the facility to achieve alternative capacity.
2. A discussion of the issues that led to the delay to the requested date to cease receipt of waste.
3. An updated requested date to cease receipt of waste.
4. An updated narrative justifying the new date to cease receipt of waste.

Item 1 discusses the progress MWG has made in retrofitting Powerton's Bypass Basin since the March 2022 progress report. As detailed in Item 2, MWG anticipates the time required for the Illinois EPA to issue a final joint retrofit construction and operating permit for Powerton's Bypass Basin will delay the development of alternative disposal capacity to the Station's Ash Surge Basin beyond August 11, 2023. After discussing the anticipated permitting timeframe with the Illinois EPA, MWG updated its project schedule for retrofitting the Bypass Basin in accordance with that discussion, regulatory timeframes under the Illinois CCR Rule, MWG's experience with similar permits, and the statuses of permit applications for other facilities currently being reviewed by the agency. The updated project schedule is enclosed herewith and ultimately indicates the anticipated permitting delays will prevent the Bypass Basin from being operational until October 15, 2024 (see Item 3). The justification for this new cessation-of-waste deadline for the Ash Surge Basin is provided in Item 4.

1. A narrative explaining the progress made and current activities and phase/step at the facility to achieve alternative capacity.

As indicated on the enclosed schedule, the Retrofitted Bypass Basin Project (the "Project") is currently in the permitting phase. The Illinois EPA is currently reviewing MWG's initial operating and retrofit construction permit applications for the Bypass Basin, which the Agency received on November 3, 2021, and July 20, 2022, respectively. The following paragraphs summarize the tasks MWG completed between March 1, 2022, when MWG submitted its first progress report to the U.S. EPA on the Project, and July 20,

² Per the Illinois Environmental Protection Act, "No person shall...construct, install, modify, operate, or close any CCR surface impoundment without a permit granted by the Agency." 415 ILCS 5/22.59(b)(2).

³ To date, the U.S. EPA has yet to issue the Agency's draft determination on MWG's Demonstration for Powerton's Ash Surge Basin. 40 CFR 257.103(f)(1)(vii) only applies to a demonstration for which an alternative cessation-of-waste deadline has been approved by U.S. EPA.

2022. Details on the previous progress MWG made to retrofit the Bypass Basin are provided in the March 2022 progress report.

Preliminary Construction Plans & Technical Specifications

At the time of the March 2022 progress report, MWG was preparing the conceptual construction plans and technical specifications for the Bypass Basin's retrofit construction permit application, which were scheduled to be completed by April 2022. The plans and specifications were both completed on April 15, 2022, on schedule, and were posted to MWG's public Illinois CCR Rule compliance website in accordance with 35 Ill. Adm. Code 845.240(e). The conceptual construction plans include a material removal and decontamination plan for the existing Bypass Basin, a grading plan to establish the required lines and grades for the basin's future leachate collection and removal system (LCRS), details for the new composite liner system and LCRS, and details for interfacing between existing and new infrastructure within the basin. Meanwhile, the two specifications prepared for the Project cover the technical requirements for (1) a General Work (GW) Contractor to retrofit the Bypass Basin in accordance with the conceptual construction plans and as described in the basin's written retrofit plan, and (2) for a third-party, independent Construction Quality Assurance (CQA) Contractor to provide assurance and documentation that the Bypass Basin has been retrofitted in accordance with the design drawings, technical specifications, and permit requirements.

Public Meetings

Following publication of MWG's plans for retrofitting Powerton's Bypass Basin on its website for public review, MWG held two public meetings to discuss these plans in accordance with 35 Ill. Adm. Code 845.240(a). Concurrent with developing the conceptual construction plans and technical specifications, MWG worked with a third-party organization to prepare for the meeting, to make the necessary reservations for a physical meeting location, and to setup a virtual meeting space for persons who could not or chose not to physically attend either meeting. Pursuant to 35 Ill. Adm. Code 845.240(e), the earliest the two public meetings could be held was 30 days after MWG posted the conceptual design documents for the Project on its public Illinois CCR Rule compliance website, *i.e.*, Sunday, May 15, 2022. To allow for MWG's representatives and consultants to travel to the location selected for the meetings near the Station in Pekin, Illinois, MWG held the meetings on Wednesday, May 18 and Thursday, May 19. In accordance with 35 Ill. Adm. Code 845.240(b), MWG issued public notices for the meetings on April 14, 2022 to all residents within at least one mile of the Station, which totaled 986 residential mailing addresses.

Review of Public Comments & Submission of Construction Permit Application

Immediately following the public meetings in mid-May 2022, MWG assembled, reviewed, and summarized the public comments received on its proposed plan for retrofitting the Bypass Basin. In accordance with 35 Ill. Adm. Code 845.240(g), MWG prepared and issued this summary of the public meetings on June 2, 2022.

Following issuance of the public meeting summary and review of public comments, MWG began finalizing the conceptual design documents presented at the public meetings and began preparing the construction permit application for the Project. On July 18, 2022, MWG formally submitted its application for a retrofit construction permit for the Powerton Bypass Basin to the Illinois EPA. Two hard copies of the application were submitted to the agency, which the agency received on July 20, 2022.

2. A discussion of the issues that led to the delay (if a delay has occurred) to the requested date to cease receipt of waste.

As shown in the enclosed visual timeline representation of MWG's schedule for retrofitting Powerton's Bypass Basin, the Illinois EPA's review of the initial operating permit application, retrofit construction permit application, and all subsequent permitting activities are on the critical path for completing the

Project. Given the critical nature of these activities, MWG contacted the Illinois EPA in September 2022 and requested to have a meeting to discuss (1) the status of each permit application, (2) any questions or comments the agency had on either application to facilitate their review, and (3) the agency's forecasted timeframes for completing future permitting tasks and reviewing future construction quality assurance documentation. This meeting was held on October 18, 2022 and was attended by three representatives from the Illinois EPA, three representatives from MWG, and two representatives from MWG's engineering consultant, Sargent & Lundy.

During the meeting, the Illinois EPA informed MWG that the agency has not finished reviewing any of the operating and construction permit applications submitted to the agency to date by facilities subject to the Illinois CCR Rule. The agency stated that it planned to, as a first step towards issuing tentative determinations on operating and construction permits, issue requests for additional information (RAIs) to some facilities on their permit applications by Thanksgiving 2022. The agency noted that it hoped to issue RAIs to the remaining facilities by the end of 2022. Beyond its forecasts for issuing RAIs, the Illinois EPA's representatives were unable to provide an estimated timeframe for completing their reviews of the initial operating permit and retrofit construction permit applications for Powerton's Bypass Basin. However, they did indicate that they planned to issue a joint construction and operating permit for the basin as permitted under 35 Ill. Adm. Code 845.200(a)(6). This will allow the agency to consolidate the public participation process for both permits into one period, allowing for a more efficient means of obtaining and responding to public comments.

Even with the agency planning to issue a joint construction and operating permit for the Project, MWG still expects the Illinois EPA's initial review to be lengthy and to ultimately delay the Project such that MWG cannot meet its original deadline of August 11, 2023, for ceasing the receipt of waste in the Ash Surge Basin. Including the two permit applications MWG has submitted for Powerton's Bypass Basin, the Illinois EPA has received 49 operating permit applications, 19 closure construction permit applications, and one retrofit construction permit application (the application for the Bypass Basin)⁴. Forty-six of the 49 operating permits were submitted between October 28 and November 3, 2021, meaning that the Agency has taken more than a year to review these applications without issuing any tentative determinations or draft permits. Meanwhile, 12 of the closure construction permit applications were submitted by February 1, 2022, and therefore have been before the Illinois EPA for almost 10 months without the agency issuing any tentative determinations or draft permits.

While MWG understands the Illinois EPA has limited resources to review almost 70 very-detailed permit applications, MWG must, per 40 CFR 257.103(f)(1)(iv)(A)(2), develop and maintain a "schedule for the Project that represents the fastest technically feasible to complete the measures necessary for alternative capacity to be available" to replace Powerton's Ash Surge Basin. In the absence of specific input from the Illinois EPA on when the agency expects to issue a draft joint construction and operating permit for the Project, MWG had to make an assumption on when this draft permit would be issued to be able to forecast when the subsequent activities could start and ultimately finish. Based on the above facts, MWG has assumed that the Illinois EPA will not issue a draft joint construction and operating permit for the Project until July 21, 2023, which is one year after the Agency received MWG's application.

Compared to the permitting timeframes assumed in the Demonstration, this updated timeframe for the Illinois EPA to issue a draft permit for the Project is one month shorter than the duration MWG initially assumed the entire permitting process would take.⁵ While this timeframe may seem lengthy, it should also be noted that the Agency has stated that some final permits for CCR surface impoundments could

⁴ Based on "Facility Specific Documents and Information" on the Illinois EPA's "Coal Combustion Residual Surface Impoundments" web page, <https://www2.illinois.gov/epa/topics/water-quality/watershed-management/ccr-surface-impoundments/Pages/default.aspx> (accessed October 31, 2022).

⁵ See "Time Required to Issue Final Construction Permit" in MWG's response to Question 2 in the progress report submitted to the U.S. EPA on March 1, 2022.

take years to issue.⁶ While MWG does not consider its retrofit construction permit application for the Bypass Basin to be of the complexity that it will take years to receive a final permit, it is important to note that the Agency's initial review of permit applications and development of responses to corresponding public comments can be lengthy. Indeed, during the October 18, 2022 meeting with the agency, the Illinois EPA indicated that responses to public comments can take 6 to 12 months to complete.

Given the updated assumption for receiving a draft permit from the Illinois EPA is only three weeks before the original alternative cessation-of-waste deadline MWG requested for Powerton's Ash Surge Basin in its November 2020 Demonstration, this presumed delay in the permitting phase of the project will require the Ash Surge Basin to operate beyond August 11, 2023. Therefore, MWG needs to request a new alternative cessation-of-waste deadline for Powerton's Ash Surge Basin.

3. An updated requested date to cease receipt of waste (if the original date has changed).

After updating the baseline assumption for obtaining a draft joint construction and operating permit from the Illinois EPA for the Bypass Basin, MWG updated its schedule for the Project to determine a new alternative cessation-of-waste deadline for Powerton's Ash Surge Basin. This revised schedule is enclosed herewith. Based on this updated schedule and the corresponding narrative provided in Item 4 below, MWG is requesting the U.S. EPA allow the Station to continue operating the Ash Surge Basin until October 15, 2024. During this period, the following CCR and non-CCR wastestreams would be placed into the Ash Surge Basin since, as detailed in the Demonstration, they do not currently have alternate disposal options at Powerton or offsite:

- Unit 5 and 6 dewatering bin effluent,
- Unit 5 and 6 slag tank overflow water,
- East Yard Runoff Basin overflow water,
- Makeup Treatment Plant effluent, and
- Metal Cleaning Waste Treatment System effluent.

Pursuant to 40 CFR 257.103(f)(1)(vi), the Ash Surge Basin must cease receiving all wastestreams no later than October 15, 2023 unless it qualifies as an "eligible unlined CCR surface impoundment," in which case the maximum operating deadline extension is October 15, 2024. Therefore, in addition to providing a narrative in Item 4 below that justifies operating the Ash Surge Basin until October 15, 2024, MWG is providing the following demonstration that the Ash Surge Basin meets the definition of an "eligible unlined CCR surface impoundment."

Per 40 CFR 257.53, an "eligible unlined CCR surface impoundment" is a CCR surface impoundment that meets all of the following conditions.

(a) The owner or operator has documented that the CCR unit is in compliance with the location restrictions specified under 40 CFR 257.60 through 257.64.

As documented in the location restrictions assessment completed by Geosyntec Consultants in October 2018, the Ash Surge Basin is in compliance with the location restrictions specified under 40 CFR 257.60 through 257.64.

⁶ See *Midwest Generation, LLC v. Illinois EPA*, PCB21-108 (Variance-Land), Hearing Transcript, pp. 117:10-11; 119:6-15 (July 27, 2021).

(b) The owner or operator has documented that the CCR unit is in compliance with the periodic safety factor assessment requirements under 40 CFR 257.73(e) and (f).

As documented in the initial assessment completed in October 2016 by Geosyntec Consultants and the subsequent periodic assessment completed in October 2021 by Sargent & Lundy, the Ash Surge Basin is in compliance with the periodic safety factor assessment requirements under 40 CFR 257.73(e) and (f).

(c) No constituent listed in Appendix IV to 40 CFR Part 257 has been detected at a statistically significant level exceeding a groundwater protection standard defined under 40 CFR 257.95(h).

As documented in the annual groundwater monitoring and corrective action reports prepared by KPRG & Associates, Inc. since January 2018 in accordance with 40 CFR 257.90(e), no constituent listed in Appendix IV to 40 CFR Part 257 has been detected in the Ash Surge Basin's groundwater monitoring well network at a statistically significant level exceeding a groundwater protection standard defined under 40 CFR 257.95(h) that is attributable to the Ash Surge Basin.

Based on the preceding demonstration, the Ash Surge Basin meets all three criteria to qualify as an eligible unlined CCR surface impoundment. Thus, pursuant to 40 CFR 257.103(f)(1)(vi), the Ash Surge Basin can continue operating beyond October 15, 2023, up to October 15, 2024, if the Station needs additional time to complete retrofitting the Bypass Basin. Per the narrative in the following Item 4, MWG expects the Station will need until the October 15, 2024 deadline to finish retrofitting the Bypass Basin.

4. An updated narrative justifying the new date to cease receipt of waste (if the original date requested has changed).

Per the narrative provided in Item 1, MWG has completed the engineering design for the retrofitted Bypass Basin and has submitted an initial operating permit application and a retrofit construction permit application to the Illinois EPA for the basin. The following narrative describes the future steps and sequencing necessary to retrofit the Bypass Basin, which is supported by the enclosed visual timeline representation of MWG's schedule for the Project.

Permitting

As noted in Item 2, MWG is assuming that the Illinois EPA will issue a draft joint construction and operating permit for the Project by July 21, 2023. Upon issuing this draft permit, the Illinois EPA will then prepare and distribute a public notice of its tentative decision to issue the permit. Per 35 Ill. Adm. Code 845.260(b), the Illinois EPA cannot issue this notice until at least 15 days after issuing the draft permit, *i.e.*, early-to-mid August 2023. Once the public notice has been distributed, the public comment period on the draft permit will commence. In accordance with 35 Ill. Adm. Code 845.260(c), the public comment period must last at least 45 days and may be extended at the discretion of the agency. Therefore, the minimum public comment period on the draft permit for the Project is expected to span from mid-August 2023 to late September 2023.

During the public comment period, any person may request a public hearing be held on the draft retrofit construction permit. Per 35 Ill. Adm. Code 845.260(d)(1), the Illinois EPA must hold this public hearing if "there exists a significant degree of public interest in the proposed permit." During the August 12, 2020 IPCB hearing held during the rulemaking process for the Illinois CCR Rule, an Illinois EPA representative stated that the agency has historically held a public hearing for NDPEs draft permits if anyone request such a hearing. The representative added, "I can't think of a recent example where we have denied anyone." ⁷ Given this agency precedent; the statutory mandate in Illinois Public Act 101-0171 that the

⁷ Transcript of August 12, 2020 Hearing. Illinois Pollution Control Board Case No. R20-19. 08/12/2020.

IPCB adopt final CCR regulations that “specify meaningful public participation procedures for the issuance of CCR surface impoundment construction and operating permits, including, but not limited to...an opportunity for a public hearing prior to permit issuance”⁸; and the general level of public participation during the rulemaking process for the Illinois CCR Rule, MWG presumes that a public hearing will be requested during the 45-day public comment period for the draft permit and that the Illinois EPA will grant the public hearing.

Pursuant to 35 Ill. Adm. Code 845.260(e)(1), the Illinois EPA cannot hold a public hearing sooner than 30 days after notifying the public of the hearing date. Assuming it takes the agency approximately 30 days to schedule the hearing (e.g., reserving a location, establishing physical and/or virtual meeting logistics), the public hearing cannot occur until at least 60 days after the Illinois EPA agrees to hold one. Presuming a public hearing will be called near the end of the public comment period in late September 2023, and accounting for the Thanksgiving holiday, it is anticipated that the public hearing will be held the last week of November 2023.

At the end of the public comment period and after the public hearing, the Illinois EPA will begin reviewing all timely public comments and preparing written responses to those comments. During MWG’s meeting with the agency on October 18, 2022, an Illinois EPA representative noted that the time it takes the agency to respond to all public comments and issue a final permit can take just as long as the agency’s initial review. Citing the fact that the Illinois CCR Rule is a new permitting program for the agency, and noting that the number of public comments is expected to vary amongst the different regulated facilities, the Illinois EPA’s representatives could not offer a specific estimate for how long it would take the agency to review and develop responses to public comments on the draft joint construction and operating permit for the retrofitted Bypass Basin. However, they also noted that the agency generally takes 6 to 12 months to issue a final permit after the public comment period ends under similar permit programs (e.g., NPDES). Therefore, MWG is assuming six months is the fastest technically feasible timeframe under which the Illinois EPA will issue a final joint construction and operating permit for the retrofitted Bypass Basin after the corresponding public comment period ends. Thus, MWG anticipates the earliest that the Illinois EPA would issue a final permit for the Project would be late May 2024.

MWG would like to emphasize that, in MWG’s recent experience and per the agency’s guidance on during the October 18, 2022 meeting, the Illinois EPA has generally taken several months to issue final NPDES permits for MWG’s power plants after the public comment period concludes. Moreover, the Illinois EPA has often extended the public comment period beyond the public hearing date (typically 30 days), which would be permitted under 35 Ill. Adm. Code 845.260(c)(4). In addition, in response to a question submitted to the agency ahead of the August 2020 IPCB hearings on the Illinois CCR Rule, the Illinois EPA stated, “The proposed permitting process was modeled after the existing NPDES permit program, which also does not include a time frame for a final Agency decision. The complex nature of these applications, public notice requirements, and the opportunity for a public hearing, make it difficult to complete the process within a defined timeframe. Like the NPDES program, robust public participation is an essential part of this proposal. Not having a specific deadline allows for the maximum flexibility during the public notice and hearing processes.”⁹ Therefore, the Illinois EPA may require more time to finalize the joint construction and operating permit for the Project than the six months MWG has assumed.

Contractor Selection

MWG intends to hire one General Work (GW) Contractor to retrofit the Bypass Basin, who is expected to subcontract the composite liner system and LCRS work to a company experienced in installing geosynthetic materials. MWG also intends to hire a third-party, independent Construction Quality Assurance (CQA) Contractor to inspect the GW Contractor’s work for the purpose of assuring MWG and the Illinois EPA that the retrofitted Bypass Basin meets the performance standards specified in the

⁸ Illinois Public Act 101-0171, “Coal Ash Pollution Prevention,” Effective 07/30/2019.

⁹ “Illinois EPA’s Pre-Filed Answers.” Illinois Pollution Control Board Case No. R2020-019. 08/03/2020.

construction documents and final permit. MWG expects to procure both contractors within the same timeframe discussed in the following paragraphs and as shown in the enclosed visual timeline representation of the Project schedule.

MWG plans to start retrofitting the Bypass Basin as soon as possible after receiving a final joint construction and operating permit from the Illinois EPA. Given that the permit will establish the agency's requirements and expectations for retrofitting the basin, MWG will begin preparing the technical requirements and commercial terms and conditions upon receipt of the draft permit in late July 2023.

Given the public comment period and likely public hearing that will be held between the Illinois EPA's issuance of the draft and final permits for the Project, MWG does not plan on issuing the corresponding bid package until after the public hearing, at which time MWG will have some reasonable certainty that the Project will be approved as proposed or will require some modifications. Bidding the work beforehand would leave MWG susceptible to potential material changes to MWG's retrofit plan required by the Illinois EPA which would then require MWG to rebid the work, causing unavoidable delays to the Project. Thus, MWG does not anticipate issuing either the GW or CQA work package for the Project until approximately two weeks after the public hearing on the Illinois EPA's draft permit is held in late November 2023.

MWG intends to provide the prospective GW and CQA contractors approximately six weeks to review their respective bid package materials. After the bid period concludes in late January 2024, MWG anticipates needing six to eight weeks to thoroughly review and evaluate the submitted bids. This bid evaluation period will allow enough time for (1) MWG to ask the bidders any technical and/or commercial questions and (2) bidders to respond to MWG's questions. Thus, MWG anticipates selecting a GW Contractor and a CQA Contractor by mid-March 2024.

After selecting the GW and CQA Contractors, MWG will begin negotiating commercial terms and conditions with the selected contractors, which will include conforming the technical specifications to the agreed upon commercial terms and conditions. MWG anticipates formally awarding the GW and CQA contracts for the Project within one month of starting these negotiations, *i.e.*, by mid-April 2024. Although this date occurs approximately one month before MWG expects to have the final joint construction and operating permit from the Illinois EPA for the Project, MWG expects to have received enough input from the agency and the public to incorporate specific conditions that may be imposed by the final permit into the contracts with the GW and CQA Contractors. Given the Bypass Basin needs to be retrofitted by October 15, 2024, and given the presumed permitting timeframes, MWG believes awarding the GW and CQA contracts before a final permit is issued in mid-May 2024 will be a necessary step to ensure both contractors can provide the labor, materials, and equipment, required to execute the Project by the maximum cessation-of-waste deadline permitted by the Federal CCR Rule for the Ash Surge Basin.

It is important to note that bids from GW and CQA Contractors are usually valid for only a specific timeframe, typically 60 to 90 days. Because MWG is planning on awarding the GW and CQA contracts before a final permit has been issued by the Illinois EPA for the Project, there is inherent risk that the permit will not be issued before either contractor's quoted price expires. This will require MWG to re-negotiate commercial terms and conditions with the selected contractor, which could lead to further delays in completing the Project.

Equipment Fabrication & Delivery

After MWG awards the contract for the Project, it is expected that the selected GW Contractor will immediately begin finalizing orders for the materials required to retrofit the Bypass Basin. The key materials for this Project are the geosynthetics for the basin's new composite liner system and LCRS; aggregates for the structural fill supporting the new liner and for the sand filter and protective warning layers; and piping for the LCRS. The following subsections discuss how MWG anticipates these materials will be furnished for the Project.

Sand, Gravel, and Riprap

The sand, gravel, and riprap required for the retrofitted Bypass Basin's upper layers and for the structural fill supporting the new composite liner system are expected to come from suppliers near the Project site. Although the designated supplier (or suppliers) will ultimately be selected by the GW Contractor (as approved by MWG), it is noted that more than 10 suppliers within the Peoria metropolitan area that are qualified by the Illinois Department of Transportation for producing the coarse aggregate materials specified for the Project.¹⁰ Therefore, it is expected that the sources for sand, gravel, and riprap will be furnished by suppliers located within 40 miles of Powerton.

Given that MWG anticipates awarding the construction contract in mid-April 2024, it is expected the GW Contractor will finalize orders for the required aggregate materials in late April 2024. The GW Contractor will not need the structural fill material until the Illinois EPA approves the Bypass Basin's existing HDPE geomembrane liner for re-use as a supplemental liner in the retrofitted basin, which is scheduled to occur by late August 2024. Thus, it is anticipated that the aggregate materials will be produced and delivered by late August 2024. However, given the material sources are expected to be near the Station, it will likely be feasible to produce and deliver these materials sooner if the Illinois EPA approves re-using the basin's existing HDPE geomembrane liner by late June 2024.

Leachate Collection Pipes

Like the aggregate materials, it is expected that the leachate collection pipes for the retrofitted Bypass Basin's LCRS will be furnished from suppliers located near the Project site. Although the designated supplier will ultimately be selected by the GW Contractor (as approved by MWG), a desktop study identified several potential suppliers within the Peoria metropolitan area. Therefore, it is expected that the leachate collection pipes for the Project will be furnished by suppliers located within 40 miles of Powerton.

Given that MWG anticipates awarding the construction contract in mid-April 2024, it is expected the GW Contractor will finalize orders for the leachate collection pipes in late April 2024. The GW Contractor will not need the leachate collection pipes until the Bypass Basin's new composite liner system is installed, which is scheduled to occur by early September 2024. Thus, it is anticipated that the aggregate materials will be produced and delivered by early September 2024. However, given the pipe supplier is expected to be near the Station, it will likely be feasible to procure the leachate collection pipes sooner (by late June 2024) if the Bypass Basin's new composite liner system is installed ahead of schedule.

Geosynthetic Materials

The geosynthetics required for retrofitting the Bypass Basin are GCL, 60-mil textured HDPE geomembrane, and drainage geocomposite. These materials are expected to be fabricated by manufacturers located between 900 and 1,200 miles from Powerton and are expected to be long lead-time items. Based on lead-times for geosynthetics on similar projects, correspondence with manufacturers of these materials, and the continued demand anticipated for geosynthetic materials for CCR surface impoundment and landfill projects, MWG anticipates the lead time for GCL, HDPE geomembrane, and drainage geocomposite to be between 4 and 5 months.

Based on the anticipated lead times for these geosynthetic materials and the expectation that the GW contract will not be awarded until mid-April 2024, MWG plans on ordering the geosynthetic materials itself. Although this is atypical practice for MWG and in general, MWG believes this is a necessary step to ensure the retrofitted Bypass Basin is operational by October 15, 2024. The earliest MWG plans to order these materials is after the public hearing in late November 2023, at which point MWG will be able to incorporate the Illinois EPA's draft permit conditions and the public's comments on those conditions into the material requirements for the Project. Assuming MWG orders the geosynthetic materials by mid-December 2023, it is expected the materials would be delivered to Powerton by mid-April 2024. However,

¹⁰ <https://idot.illinois.gov/Assets/uploads/files/Doing-Business/Specialty-Lists/Highways/Materials/Materials-&-Physical-Research/Aggregate/approvedaggregatesources.pdf>

because these materials will not be needed until after the Illinois EPA approves re-use of the basin's existing HDPE geomembrane liner (expected late August 2024), MWG will be able to order the geosynthetic materials in the first quarter of 2024 should MWG deem it necessary to have continued correspondence with the Illinois EPA on the geosynthetic material requirements before finalizing their order.

Construction

After being awarded the contract, the GW Contractor will start developing a plan for mobilizing its personnel and equipment to the Project site. It should be noted that the contractor will not be expected to fully mobilize until after the Illinois EPA has issued a final joint construction and operating permit in mid-May 2024. Therefore, construction is anticipated to start in early June 2024 and is expected to follow a multi-phase approach as described in the following subsections. The construction schedule described below and illustrated in the enclosed visual timeline representation assumes the GW Contractor and its subcontractors will normally work five days per week at 10 hours per day.

CCR Removal & Liner Decontamination

Upon mobilizing the site, the GW Contractor will initiate the retrofit work by first removing the granular protective layers covering the Bypass Basin's existing geomembrane liner: a 6-in.-thick gravel warning layer and a 12-in.-thick sand cushion layer. In total, approximately 1,000 cubic yards of material will be removed from the basin floor. These soil materials will be carefully excavated, loaded onto trucks, and transported to an off-site permitted disposal facility. Although these granular protective layers comprise a relatively small quantity, the excavation rate is expected to be slower than normal to ensure the Bypass Basin's existing HDPE geomembrane liner is not damaged during excavation work. Thus, it is expected that the GW Contractor will have these granular protective materials excavated within a week of mobilizing to the site, *i.e.*, by mid-June 2024.

Because the Bypass Basin has been out of service since early October 2020, no significant surface water is expected to be present in the basin when the GW Contractor mobilizes to the site. However, if a significant volume of stormwater is present in the basin at the time construction commences, the GW Contractor will first draw down the surface water by pumping the water to the basin's outlet structure. The gravel warning layer and sand cushion layer materials will also be dewatered as necessary prior to allow for transportation to and disposal in an off-site disposal facility.

After the existing granular protective layers in the Bypass Basin have been removed, the basin's existing HDPE geomembrane liner will be decontaminated so that it can be re-used as a supplemental liner under the new composite liner that will be installed in the basin. The basin's inlet and outlet structures, associated piping, *etc.* will also be decontaminated. At a minimum, decontamination procedures will include pressure washing the geomembrane liner and the basin's appurtenances in a systematic manner to remove all CCR and residuals of CCR. Following decontamination, the CQA Contractor will visually inspect the liner and conduct an electrical leak location survey over the liner to ensure the liner is competent.

Pursuant to 35 Ill. Adm. Code 845.770(a)(4), MWG will need to demonstrate to the Illinois EPA that the Bypass Basin's existing HDPE geomembrane liner is not contaminated with CCR constituents and is competent and must receive approval from the agency prior to re-using the existing liner as a supplemental liner under the Bypass Basin's new composite liner system. To support this demonstration, analytical tests will be conducted as follows:

1. The CQA Contractor will cut-out and remove a minimum of three samples of the decontaminated geomembrane liner. The GW Contractor will patch the geomembrane liner at these sample locations.
2. All samples will be analyzed by a certified laboratory in accordance with EPA SW-846 Test Method 1311: Toxicity Characteristic Leaching Procedure.

- a. If the concentrations of CCR constituents measured by the test method meet the groundwater protection standards specified in the future operating permit issued by the Illinois EPA for the Bypass Basin, or otherwise meet alternative standards stipulated by the Illinois EPA in the construction permit issued for retrofitting the Bypass Basin, then the area of the existing geomembrane liner represented by the given sample is considered to be decontaminated.
 - b. If the preceding standards are not met, then the area of existing geomembrane liner represented by the given sample is not considered to be decontaminated.
3. The GW Contractor will reclean any areas that analytical testing indicates are not decontaminated. After recleaning a given area, the CQA Contractor will collect and test one additional sample from the area.

Given the Bypass Basin is approximately 0.83 acre in area, it is anticipated that the decontamination and sampling work will be completed in late June 2024, approximately one week after the granular protective layers have been removed from the basin. Based on recent experience with laboratory analysis of groundwater samples, MWG anticipates having test results for the decontaminated geomembrane liner samples within 2 to 3 weeks of sending them to the testing laboratory. Upon receiving the test results, MWG and the CQA Contractor will review them to verify they meet the acceptance criteria. After verifying the acceptance criteria have been met, the CQA Contractor will incorporate the test results into a report documenting all visual inspections, field tests, and laboratory tests that ultimately demonstrates to the Illinois EPA that the existing HDPE geomembrane liner has been decontaminated and is competent. MWG anticipates this report will be finalized within two weeks of receiving the laboratory test results for the decontaminated geomembrane liner samples. Thus, MWG anticipates submitting its demonstration that the Bypass Basin's existing HDPE geomembrane liner has been decontaminated to the Illinois EPA by mid-July 2024.

Illinois EPA Approval for Re-Using Existing Bypass Basin Liner

During the October 2022 meeting with the Illinois EPA, MWG inquired into an estimated timeframe for approving the re-use of the Bypass Basin's existing HDPE geomembrane liner as a supplemental liner under the basin's new composite liner system. Although the agency's representatives acknowledged that MWG's demonstration will likely make it clear that the acceptance criteria have been met, the representatives also stated that it could take four to six weeks to complete their review based on the Illinois EPA's limited resources and other reviews pending before the agency at that time. Therefore, based on issuing the demonstration to the Illinois EPA by mid-July 2024, MWG anticipates receiving approval from the Illinois EPA by mid- to late August 2024.

Structural Fill

After the Illinois EPA has approved re-using the Bypass Basin's existing HDPE geomembrane liner as a supplemental liner for the retrofitted basin, the GW Contractor will begin placing structural fill in the basin. The primary purpose of this fill is to establish a slope of at least 3% towards the leachate collection pipe to be installed along the center of the basin; the fill will also support the basin's new composite liner system. As structural fill material is placed into the basin, it will be graded and compacted to the design lines and grades. Prior to installing the basin's new composite liner system, the structural fill surface will be rolled smooth to ensure the surface is firm, clean, and smooth.

Approximately 1,500 cubic yards of structural fill will be required to establish the 3% slope for the LCRS. Although this is a relatively small quantity, this structural fill will be installed slower than normal production rates to ensure all earthwork activities (placement, compaction, grading) are performed in a manner to prevent tearing, ripping, or otherwise damaging the Bypass Basin's existing HDPE geomembrane liner. Moreover, structural fill material cannot be placed in the basin until the Illinois EPA approves re-use of the Bypass Basin's existing liner in case the agency requests more testing be performed to demonstrate the liner is decontaminated and/or competent. Therefore, it is anticipated that the GW Contractor will have the

structural fill layer installed within a week. Thus, given that MWG expects to receive this approval by mid-to late August 2024, it is anticipated that the structural fill supporting the Bypass Basin's new composite liner system will be installed by the end of August 2024.

Composite Liner System

After the structural fill has been placed over the basin's existing HDPE geomembrane liner, the GW Contractor will start installing the Bypass Basin's new composite liner system. The GW Contractor will first install the GCL panels that will form the lower component of the composite liner. These panels, which will be delivered to the site in rolls, will first be unrolled and then deployed directly over the recently-installed structural fill (along the basin floor) or directly over the basin's existing HDPE geomembrane liner (along the basin's sideslopes). Finally, the GW Contractor will complete the lower GCL component of the retrofitted Bypass Basin's new composite liner system by seaming adjacent GCL panels together. This will be accomplished by pouring dry granular bentonite along the overlap zones in accordance with the GCL manufacturer's recommendations.

As panels of GCL are being deployed, placed, and seamed, the GW Contractor will deploy the panels of the upper HDPE geomembrane liner component of the composite liner system. Similar to the GCL panels, the GW Contractor will first unroll the HDPE geomembrane liner panels and then deploy them directly over and in the same orientation as the installed GCL panels. Finally, the GW Contractor will complete the HDPE geomembrane liner component of the retrofitted Bypass Basin's new composite liner system by welding adjacent HDPE geomembrane panels together in accordance with the geomembrane manufacturer's recommendations.

Both components of the new composite liner system will be secured in an anchor trench along the crests of the Bypass Basin's embankments. The anchor trench will be approximately two feet deep and will be backfilled to anchor the GCL and HDPE geomembrane liner in place. The backfill soil will be properly compacted to prevent the geosynthetic components from pulling out of the anchor trench.

As the composite liner components are being unrolled, deployed, and seamed, and as the aforementioned anchor trench is being backfilled and compacted, the CQA Contractor will perform the necessary visual inspections, field tests, and laboratory tests to ensure the Bypass Basin's new composite liner system is being properly installed.

Including material required for overlap and seaming and accounting for waste, it is anticipated that approximately 0.90 acre of HDPE geomembrane liner and GCL (each) will be required to line the Bypass Basin. Based on recent experience with similar projects, it is anticipated that the GW Contractor will have the basin lined within one week. This duration should also provide adequate time for the CQA Contractor to test and qualify all seams for the HDPE geomembrane liner and sufficient time for the GW Contractor to make any necessary repairs to defects identified by the CQA Contractor and/or MWG. Therefore, it is expected that the Bypass Basin's new composite liner system will be installed by early September 2024.

Leachate Collection & Removal System

As areas of the Bypass Basin are lined with the new composite liner system, the GW Contractor will start installing the perforated leachate collection pipe and deploying the drainage geocomposite for the basin's new LCRS. The perforated leachate collection pipe will be installed in a leachate collection trench along the center of the basin floor above the new composite liner system. To preclude the pipe's perforations from clogging, the GW Contractor will first install a bedding layer of free-draining, coarse aggregate material. The leachate collection pipe will then be installed over the bedding layer, and the trench will be backfilled with more free-draining, coarse aggregate material. Finally, the GW Contractor will install a non-perforated riser pipe at the southern end of the Bypass Basin which will ultimately house a wheeled, submersible pump that will ultimately be used to dewater the Bypass Basin during periodic cleanings, at the time of closure, and as needed during the post-closure care period (if the retrofitted Bypass Basin is closed in-place with a final cover system).

After the leachate collection pipe has been installed, the GW Contractor will begin deploying panels of the drainage geocomposite that will ultimately convey leachate to the leachate collection pipe. Like the composite liner system components, the GW Contractor will first unroll the geocomposite panels and then deploy them directly over and in the same orientation as the HDPE geomembrane liner. Finally, the GW Contractor will overlap adjacent panels and join them with self-locking straps. The drainage geocomposite layer will also be secured at the top of the Bypass Basin's embankments in the same anchor trench as the composite liner system components.

As the LCRS components are being installed, the CQA Contractor will perform the necessary visual inspections, field tests, and laboratory tests to ensure the Bypass Basin's new LCRS is being properly installed.

Including material required for overlap and accounting for waste, it is anticipated that approximately 0.90 acre of drainage geocomposite will be required to install the Bypass Basin's new LCRS. Meanwhile, approximately 250 linear feet of HDPE pipe will be required to provide the perforated leachate collection pipe and the riser pipe that will ultimately house a submerged pump. Similar to the new composite liner system, it is anticipated that the GW Contractor will have the LCRS installed within a week. Thus, based on the new composite liner system being installed by early September 2024, it is anticipated that the LCRS will be installed by mid-September 2024.

Sand Filter & Protective Warning Layers

As the new LCRS components are being installed in the Bypass Basin, the GW Contractor will install a sand filter layer above the new LCRS to prevent CCR and non-CCR sediments from clogging the LCRS. A protective warning layer will then be installed over the sand filter layer to provide a means of deflecting the force of CCR flowing into the retrofitted Bypass Basin. Along the basin's floor, this protective warning layer will be comprised of coarse aggregate akin to gravel or crushed stone, which will provide a working surface for operators removing CCR from the basin and will serve as a warning to these operators that they have reached the basin floor and to stop excavating. Meanwhile, the protective warning layer will be comprised of riprap on a gravel bedding layer along the retrofitted Bypass Basin's sideslopes, which will protect the sand filter layer from erosion.

Approximately 1,000 cubic yards of sand and approximately 2,000 cubic yards of gravel and riprap will be required to install the sand filter layer and protective warning layer, respectively. Like the structural fill layer, these layers will be installed at slower than normal production rates to ensure the basin's new LCRS and composite liner system components are not damaged during installation. Therefore, similar to the structural fill layer, it is anticipated that the GW Contractor will have the sand filter and protective warning layers installed within a week. It is also expected that the GW Contractor can complete this activity shortly after the LCRS has been installed. Thus, based on the LCRS being installed by mid-September 2024, it is anticipated that the sand filter and protective warning layers will also be installed by mid-September 2024.

Start-Up & Implementation: Illinois EPA Approval of Retrofit Work

Because the Bypass Basin is being retrofitted with no significant changes to its inlet and outlet structures nor with significant changes to the Station's bottom ash-handling operations, MWG does not anticipate any significant commissioning activities will be needed prior to placing the retrofitted Bypass Basin into service. However, upon the completion of all retrofit activities, MWG must prepare and submit a retrofit completion report to the Illinois EPA for review, which the agency must approve before the retrofitted Bypass Basin can be placed into service. To ensure the retrofit completion report is submitted to the agency as soon as possible after completing all retrofit work, MWG expects the CQA Contractor will prepare the report throughout construction by assembling and documenting all CQA reports and certifications, photographs, and summaries of completed retrofit activities. MWG also expects the CQA Contractor will issue interim drafts for review to ensure the final report can be submitted to the Illinois EPA as soon as possible after construction is completed by mid-September 2024.

During the October 2022 meeting with the Illinois EPA, MWG inquired into an estimated timeframe for reviewing and approving the retrofit completion report. The agency's representatives acknowledged that, similar to the timeframe required to approve re-using the Bypass Basin's existing HDPE geomembrane liner, the final CQA report should make it clear that the acceptance criteria have been met. However, the Illinois EPA's representatives re-emphasized that such a review could take four to six weeks to complete based on the agency's limited resources and other reviews pending before the agency at that time. Therefore, based on issuing the retrofit completion report to the Illinois EPA by mid-September 2024, MWG assumes the agency will approve the retrofit work performed at the Bypass Basin by mid-October 2024.

Immediately upon receiving the Illinois EPA's approval of the retrofit completion report, MWG can divert all CCR and non-CCR wastestreams currently being managed in the Ash Surge Basin to the retrofitted Bypass Basin. Thus, per the Project schedule, MWG anticipates that Powerton will have alternative disposal capacity for the wastestreams currently being managed in the Ash Surge Basin by October 15, 2024.





