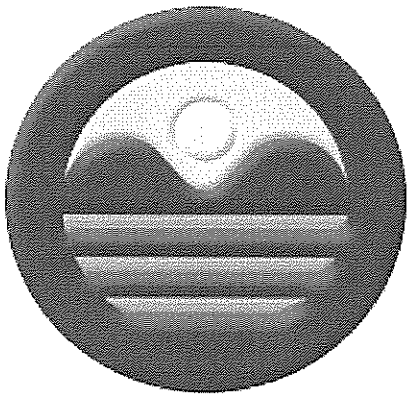
Midwest Generation LLC
Powerton

Coal Combustion Residual (CCR) Permit
Responsiveness Summary

Regarding

May 8, 2024, Public Hearing

Illinois Environmental Protection Agency
Office of Community Relations
July 3, 2024



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Illinois Environmental Protection Agency

ILLINOIS EPA PERMIT DECISIONS

Construction Permit
On July 3, 2024, the Illinois Environmental Protection Agency (Illinois EPA) Bureau of Water issued a construction permit to Midwest Generation LLC – Powerton for the coal ash residual surface impoundment as described in application 2021-100029. The construction permit includes conditions governing the compliance and monitoring of groundwater from the facility. This construction permit includes the retrofitting of the Ash Bypass Basin with a new composite liner and a new leachate collection and removal system in accordance with 35 Ill. Adm. Code 845.420 . The permits and additional copies of this document can also be obtained from the Illinois EPA website https://epa.illinois.gov/public-notices/ccr-public-notices.html

The following changes were made to the Powerton CCRSI Retrofit Construction Permit:

1. Special Condition 7 now notes that financial assurance information was submitted both in their initial application received October 21, 2021 and in a separate submission dated June 21, 2021.

2. Special Condition 9 now correctly references the Annual Consolidated Report in Special Condition 17.

3. Special Condition 13 now requires that the permittee shall notify the Agency within 7 days of construction being completed.

4. Reference to leachate monitoring data has been removed from Special Condition 11.

5. Special Condition 15 has been revised to not include CCR.

6. Various spelling and grammar mistakes have been corrected.

Operating Permit
On July 3, 2024, the Illinois EPA Buraus of Water issued an operating permit to Midwest Generation LLC – Powerton for the coal combustion residual surface impoundment as described in application 2024-100030. The operating permit establishes the conditions for operation of the Ash Bypass Basin, Ash Surge Basin, Former Ash Basin, and Metal Cleaning

Basin. The permits and additional copies of this document can also be obtained from the Illinois EPA website https://epa.illinois.gov/public-notices/ccr-public-notices.html

The following changes were made to the Powerton CCRSI Operating Permit:

1. Special Condition 10 corrected references the Annual Consolidated Report in Special Condition 29.

2. Special Condition 12 now states that there are two migration pathways.

3. Special Condition 13 now states that there are two migration pathways and updates the monitoring wells.

4. Special Condition 19 requires horizontal and vertical extent of structural components in all basins and explains the sampling of each material type used as a structural component and how they are to be compliant.

5. Special Conditions 21 and 22 now also note steps MWG must implement pursuant to 35 Ill. Admin. Code 845.650(d) or (e) if there is an exceedance at one or more downgradient monitoring wells.

6. Reference to leachate monitoring data has been removed from Special Condition 28.

7. Special Condition 30 has been revised to not include CCR.

8. Various spelling and grammar mistakes have been corrected.

PUBLIC OUTREACH

On April 4, 2024, the Illinois EPA published a notice of public hearing and public comment period for both the construction and the operating permits. The public comment period began on April 4, 2024, and ended on May 17, 2024.

A hearting notice was posted on April 4, 2024. Notification for the public comment period and public hearing was sent to individuals on the CCR listserv, elected officials, and environmental advocacy groups via email and mail. The hearing notice included instructions for participation in the public hearing and how to submit comments.

PUBLIC HEARING

A public hearing was conducted at 6:00 pm on May 8, 2024, at the Miller Center in Pekin to accept oral comments from the public on the operating and construction permit drafts for Midwest Generation LLC-Powerton. There were fifty- one people in attendance and of these,

eighteen gave public comments. A recording of the public hearing is posted on the Illinois EPA website https://epa.illinois.gov/public-notices/ccr-public-notices.html

BACKGROUND

On July 15, 2022, the Illinois EPA, Bureau of Water received a construction permit application from Midwest Generation LLC- Powerton, requesting a permit for Retrofit construction including all pipes, pumps, and appurtenances of the Ash Bypass Basin at their facility located at 13082 East Manito Road in Pekin. This permit is pursuant to 35 Ill. Adm. Code Part 845. The retrofit construction of the Ash Bypass Basin including the removal of the gravel warning and sand cushion layers over the existing geomembrane liner consists of decontaminating the basin's existing geomembrane liner for re-use as a supplemental liner, decontaminating the basin's appurtenant structures, installing a new basin floor and slopes, installing a composite liner system consisting of a 60-mil HDPE geomembrane over a geosynthetic clay liner, installing a leachate collection and removal system consisting of a drainage geo-composite, leachate collection pipe, and submersible sump pump, installing a sand filter layer over the leachate collection and removal system, and installing a protective warning layer over the sand filter layer. The application for Retrofit Construction Permit application is dated July 15, 2022, and the Amended Written Retrofit Plan Revision 1 dated March 5, 2024.

On October 29, 2021 the Illinois EPA, Bureau of Water received an operating permit application from Midwest Generation LLC- Powerton, requesting authorization for the operation of the Ash Surge Basin, the Former Ash Basin, the Ash Bypass Basin, and or the Metal Cleaning Basin. This permit is pursuant to 35 Ill. Adm. Code Part 845. Midwest Generation – Powerton Generating has an active NPDES Permit IL0002232 that regulates the discharges of wastewater from the property to waters of the United States.

RESPONSES TO COMMENTS, QUESTIONS AND CONCERNS

Comments, Questions and Concerns are in regular text. The Agency's responses are in bold.

CCR Permit

1) There appears to be an inadvertent error because the condition includes "leachate monitoring data." The Illinois CCR rule does not require leachate monitoring data, so this term should be deleted.

While leachate that has contact with CCR must be characterized, its discharge must be covered under an NPDES permit. Therefore, the leachate monitoring data listed in the permits will be deleted.

2) Because the Illinois CCR rule does not require leachate monitoring data, the reference to it in the first sentence should be stricken in Special Condition 28.

While leachate that has contact with CCR must be characterized, its discharge must be covered under an NPDES permit. Therefore, the leachate monitoring data listed in the permits will be deleted.

GROUND WATER

3) have questions about the historic and future monitoring of the ground surface water. Ms. Hunt, you mentioned something about some concerns about the mixing between the groundwater and the source water. Could you address that issue and talk about the number of wells that are being monitored and they are historic compliance with the standards that IEPA has?

While the Agency has implemented enforcement actions under Part 620 in the past for Powerton, the Agency is reviewing and updating procedures to be consistent with groundwater monitoring requirements of Part 845 for evaluating aquifers and migration pathways. As such, the Agency is requiring evaluation of the groundwater consistent with Part 845 at MW-16 as the background well. Additionally, the monitoring wells for evaluating downgradient compliance are limited to down gradient of each of the CCRSIs unless the specific geologic unit does not exist at the downgradient locations. The wells monitored for groundwater elevation are expanded to ensure that characterization of the groundwater elevation is adequate for both geologic units that are migration pathways.

Mixing between the groundwater and surface water has not been fully investigated. Special Condition 14 requires the installation and monitoring of surface water (staff gauge) and groundwater (piezometers) gauges to determine the existence of any data gaps in the current monitoring network.

4) The boron is clearly already in those wells that is caused by coal ash. So how can we use that as your standard for justifying a higher boron standard?

Special Condition 18 requires that the groundwater protection standard for boron and the remaining constituents in 35 Ill. Adm. Code Part 845.600(a) be evaluated from data collected at MW-16 after adequate time has been allowed for the collection and analysis of eight rounds of sampling. At this time, the boron standard will be reevaluated and updated. The Boron groundwater protection standard listed in the operating permit is based on statistical procedures found in Part 845, using wells on the upgradient side of the CCRSI. However, as discussed in Response 3, the Agency is requiring groundwater monitoring consistent with 845.640 at MW-16. The Agency is requiring in Special Condition No. 12 that MW-16 will be the background well for the monitoring network for both geologic units at Powerton. Once eight samples of total metals are collected and analyzed, a new groundwater protection

standard for boron be evaluated in accordance with 35 Ill. Adm. Code Part 845.640(f) and (g).

5) Who is involved and who's going to be responsible?

Midwest Generation (MWG) must comply with the conditions and requirements of both the construction and operating permits in accordance with 35 Ill. Adm. Code Part 845. The Agency will be monitoring and evaluating compliance with the groundwater protection standards.

6) Who is responsible for monitoring these wells for the presence of heavy metals?

Per Special Conditions 21 and 22, MWG is responsible for groundwater monitoring for all constituents listed in 35 Ill. Adm. Code Part 845.600(a). Also see Response 5.

7) If Midwest Generation were to detect elevated levels of boron, or any of the pollutants mentioned in special conditions 21 and 22 at one of their regular tests, will private well owners and any other properties that may drink water from said wells be notified?

In accordance with Special Conditions 21 and 22, MWG must follow the process of investigation and corrective action in accordance with 35 Ill. Adm. Code Part Subpart F. This process, when implemented, in accordance with 35 Ill. Adm. Code Part 845.680(a)(3) will require interim corrective action in the event that exceedances are crossing a property boundary and potentially impacting a private water well. Special Conditions 21 and 22 have been revised to better explain these requirements. The corrective actions will include private well owner notification if necessary.

8) Will that trigger the testing of other nearby private wells for elevated pollutant concentrations?

In accordance with Special Conditions 21 and 22, groundwater monitoring results and/or additional hydrogeologic investigation, in accordance with 35 Ill. Adm. Code Part 845.650(d) that identifies offsite migration, will require further investigation of the groundwater offsite and corrective action under 35 Ill. Adm. Code Part 845 Subpart F. Special Conditions 21 and 22 have been expanded to better explain these requirements.

9) If contamination is detected in nearby private wells, who will be financially responsible for the affected wells' remediation?

The final permit and 35 Ill. Admin. Code 845 require compliance if the contamination is related to the Powerton CCRSIs. If there is offsite contamination, the permittee must undertake corrective actions pursuant to 35 Ill. Adm. Code Part 845 Subpart F. MWG would be responsible for any corrective actions either on-site or off-site.

10) How will IEPA hold Midwest Generation accountable to these standards and ensure the remediation takes place?

The Agency monitors compliance with the requirements of the construction and operating permits and may also conduct site inspections. If the permittee fails to implement any aspect of either permit, the Agency can initiate enforcement action, including violations notice under Section 31 of the Act.

11) I live near the Illinois River, and I am here to ask IEPA to not approve this draft permit for retrofit construction at Powerton. I am here to urge you to strengthen the permit. I want you to show that IEPA is very serious about these permits. I want to see that the corporations involved meet established regulations. Both the ash surge basin and the coal ash bypass basin fail to meet the five-foot separation between coal ash and the highest measured groundwater level. The old liner should be removed and especially the ash below that liner also removed and up to date. The boron standard permit is no more than double the existing limit requirements for protecting groundwater. My hope is that you will seriously strengthen this draft permit and make it clear NRG and the Powerton Plant must meet requirements.

In order to show that the structure meets the five-foot separation between the coal ash and the highest measured groundwater level or implements groundwater corrective action, the Agency issued the operating permit with special conditions to address further environmental data requirements necessary to address the extent of the CCRSI. Special Condition 19 requires the permittee to provide an analysis of the coal combustion residuals and horizontal and vertical extent of structural components in and around the Former Ash Basin, Ash Surge Basin, Metal Cleaning Basin, and Ash Bypass Basin. Special Condition 11 requires further investigation of the groundwater levels in the fill. Data from these two conditions will ensure that compliance with the five-foot separation will be achieved or closure and groundwater corrective action will be implemented.

Under Part 845, the permittee is not required to remove the old liner because this is a retrofit of a CCR impoundment and not part of a closure plan as the facility and basin is not closing at this time. The Agency issued the operating permit with specific groundwater protection standards (GWPS) for each constituent monitored in the groundwater, the Silty Clay/Silt Unit and the Sand/Gravel Unit, in Special Conditions 21 and 22, respectively. MWG is required to investigate, plan, and complete groundwater corrective action in accordance with 35 Ill. Adm. Code Part 845 Subpart F (Special Conditions 21 and 22) including a Corrective Action Plan if necessary.

Special Condition 18 requires that the groundwater protection standard for boron and the remaining constituents in 35 Ill. Adm. Code Part 845.600(a) be evaluated from data collected at MW-16 after adequate time has been allowed for the collection and analysis of eight rounds of sampling. After sufficient data has been collected, the boron groundwater protection standard will be updated.

12) I have been going door to door and talking to people in places like South Pekin and

Normandale mainly in regard the safety of our groundwater. Many of these people are very low income unfortunately, that is the community that gets targeted the most by dangerous polluting industries. We absolutely must protect that there are people who rely on well water to drink, farmers, people who just understand the importance of water in our ecosystem.

We are asking if you can please just make sure that the operating permit is amended to make sure that that 5 feet of separation between the coal ash and where the groundwater can get to for the ash surge basin and the ash bypass basin is met. Set stronger protection for boron and to deny the construction permit because the retrofit plan proposes to leave that highly toxic coal ash outside of the liner so it would be exposed to the groundwater. Also make sure these permits are amended to make sure it uses binding language that keeps NRG committed to not be able to change the plans in their permit application and to be bound to the plans that were submitted.

Regarding the five-foot separation question, please see the first paragraph in the answer to Question #11. Data collected in accordance with Special Conditions 11 and 19 will ensure that the 5-foot separation will be reached.

Regarding the Boron question, please see the answer to Question #4 and the third paragraph in the answer to Question #11.

Regarding the question about ash outside the liner, please see the second paragraph in the answer to Question #11. Data collected in accordance with Special Conditions 21 and 22 will be required in the area.

The Agency will enforce this permit as they would any other permit issued.

13) I represent the Illinois Alliance for Retired Americans and I am a Veteran of Vietnam. I am here just to see to it that you guys do the best you can and do not let outside forces force you into doing something that you know is not ethically right. I care about clean water and am concerned about coal ash, heavy metals and pollutants getting into groundwater. Possibly connecting the Illinois River and area aquifers. The IEPA needs to require Powerton to meet state standards and keep a five -foot separation between coal ash and the groundwaters high point. Boron is a problem. I think you should deny the permit. I expect the IEPA to redo this permit. If you do not deny it, I expect you to redo it.

Regarding the five-foot separation question, please see the first paragraph in the answer to Question #11. Data collected in accordance with Special Conditions 11 and 19 will ensure that the 5-foot separation will be reached.

Regarding the Boron question, please see the answer to Question #4 and the third paragraph in the answer to Question #11.

14) The Mahomet Aquifer covers a lot of Tazwell County and southern Tazewell County onto

the river. Our groundwater connects in many ways with aquifers whether it is Mahomet and its unconfined area which means there is no caprock or no definite layers that keep that a certain level. Millions of people depend on the Mahomet this area on east. Sand Cody Aquifer is all part of the very historic what was the Mississippi River. I ask the Illinois EPA in your groundwater assessments to consider the larger area at risk because coal ash and heavy metal toxins are nothing to ignore or discount. To the IEPA, please do not take their request for a much higher boron standard than what you know is your standard to protect water because what you decide as you know is not just for a short amount of time. Lost Creek is clearly remarkably close to the Powerton ponds, and the flood plain stops before Lost Creek. The five-foot separation is essential, 4.5 ft is not good enough. Leaving an old liner and a new one put on top is a band aid. The coal ash that is under that liner should be taken out and put in a higher standard hazardous waste landfill. Please IEPA put the strongest language that does not leave loopholes in your permit. The operating permit should be amended to ensure that five-foot separation and the construction permit for the ash bypass basin, it really should be denied because putting that new liner on top is not adequate.

Regarding the five-foot separation question, please see the first paragraph in the answer to Question #11. Data collected in accordance with Special Conditions 11 and 19 will ensure that the 5-foot separation will be reached.

Regarding the question about leaving the old liner, please see the second paragraph in the answer to Question #11. Data collected in accordance with Special Conditions 21 and 22 will be required in the area of the old liner.

15) You must do everything possible to protect the water resources. I ask you to fix the weaknesses and problems in the IEPA draft permit. The permit makes it clear that ash surge basin and the ash bypass basin failed to meet the required 5 ft separation of coal ash from highest groundwater level. It is not right to leave the old liner in the ash basin with layers of coal ash below it. The liner should be removed, and a new liner system should be put in that meets or exceeds current regulations and ensures the five feet of separation from the highest groundwater. If not, then the ash pond permit for construction should be denied. The same problem of failing at the required five feet of coal ash separation from the highest level of groundwater. It also fails to meet the requirements. The operating permit should be amended. The IEPA should set the right course with the Powerton Plant and use a boron standard that is protective. Stronger language that requires the company to do things correctly must be in the permit.

Regarding the five-foot separation question, please see the first paragraph in the answer to Question #11. Data in accordance with Special Conditions 11 and 19 will ensure that the 5-foot separation will be reached.

Regarding the Boron question, please see the answer to Question #4 and the third paragraph in the answer to Question #11.

Regarding the question about ash outside the liner, please see the second paragraph in the answer to Question #11. Data collected in accordance with Special Conditions 21 and 22 will be required in the area.

16) I am speaking on behalf of Sierra Club, and I wanted to point out a couple of things about the permit. The ash surge basin, in the HDPE liner is located at an elevation of 450.5 ft there is a layer of Poz-o-Pac beneath that which is made of ash. The Poz-o-Pac is part of the liner system so if you look at what the base is logically it is the Poz-o-Pac as part of the liner system. The upper limit of the uppermost aquifer based on groundwater elevations is located at 452 feet or higher. That is the highest elevation measured but those elevations are only taken quarterly. Chances are they do not catch peak flooding the highest point but even though even then it is at 452 ft. So that gives you an overlap of one 1.5 ft to 2.5 ft that is not a five-foot separation. That is an overlap where groundwater is coming up higher than the base of the pond and coming in encountering with the liners that are there. This does not meet the requirement of a five-foot separation. The bypass basin is the same as the ash surge basin beneath the HDPE liner there is Poz-o-Pac. There is a four and a half-foot separation by law again the location restrictions require a five-foot separation. I want to ask IEPA to take a close look at those elevations and make your own determinations about whether the five-foot standard is met.

The Poz-o-Pac was removed when the liner was replaced in 2010.

Regarding the five-foot separation question, please see the first paragraph in the answer to Question #11. Data collected in accordance with Special Conditions 11 and 19 will ensure that the 5-foot separation will be reached.

17) I do urge you to reconsider the plans and deny the retrofit construction permit. Amend the plan for the liners coal ash and containment of heavy metals. I think you have heard a lot of comments this evening about how important that is not just to the people living here now but for generations to come. That they have to safe environment and that we have followed the regulations that have been made. That we take proper action for everyone's safety.

Regarding the five-foot separation question, please see the first paragraph in the answer to Question #11. Data collected in accordance with Special Conditions 11 and 19 will ensure that the 5-foot separation will be reached.

The new liner and leachate collection system is designed to contain the heavy metals in the CCR.

18) Overall, the proposed retrofit in the permit to construct is acceptable. However, it does not make sense that only the ash bypass basin is being retrofitted with a new liner, when none of the other basins have proper liners. Once the ash bypass basin is retrofitted with a new liner, it should be used as the primary surge basin until the ash surge basin can be retrofitted with an appropriate liner. In the draft permit to construct, it states that the ash bypass basin "has not been in use since April 11, 2021." However, the draft permit to operate states that the ash

bypass basin "was taken out of service in 2020 and has not been used for managing CCR or non-CCR waste streams since 2020." This significant discrepancy calls into question the accuracy of other information in the draft permits. It is recommended that the draft permits be rechecked for accuracy. The permit indicates that the former ash basin will be put back into use but does not specify how the Former ash basin will be used or what materials they plan to place in it. It is not acceptable to put the former ash basin back into use, given that it is almost certainly unlined, the standard proposed for boron in the draft permit is 4.7 mg/L at the waste boundary, which is more than double the Illinois Groundwater Standard for boron (2.0 mg/L). The cumulative effect of the listed pollutants even within the concentration limits, collectively, at a chronic exposure, have the potential to cause cancer, cardiovascular disease, respiratory disease, kidney disease, mental health problems, adverse birth outcomes, and impaired child development in humans. An additional point of concern is the testing requirements and monitoring of privately owned wells that could be directly impacted by these elevated standards. The permit should require Powerton to have nearby private wells tested for heavy metals and the other analytes on the groundwater protection standards list in the permit.

The Ash Bypass Basin will be used as the primary basin for all ash collected from coal combustion activities after it is retrofitted. The bypass basin, as configured previously, has not been in use since April 11, 2021.

The Former Ash Basin will not be put back into any use. The fact sheet and permit from both the construction and operating permits do not state that the Former Ash Basin will be put back into any use.

The Retrofit Construction permit is not a closure permit. A separate closure permit is required for closure at each CCRSI.

Regarding the Boron question, please see the answer to Question #4 and the third paragraph in the answer to Question #11.

Should groundwater testing data show that parameters have migrated off-site, MWG will be required to conduct a groundwater investigation, corrective action assessment, and corrective action planning which will include an off-site groundwater investigation and possibly interim corrective action in accordance with 35 Ill. Admin. Code 845.650(d) and 35 Ill. Admin. Code 845.680(a)(3). After an adequate corrective action plan has been approved by the Agency, corrective action implementation will be conducted.

19) The Mahomet Aquifer is unconfined in western Tazwell County and current and future potentials for water quality impacts should be reviewed. Towns west, south, and north of Powerton use wells accessing Mahomet aquifer groundwater The Aquifer Sensitivity Map of Tazewell County 2003 gives the area of the Powerton Plant an A-1 rating (Very High Sensitivity). Please take into consideration the potential for the Illinois River to flood and Lost creek which is on the east side of the ash ponds. Consider in 2019 The Illinois Pollution Control Board ruled NRG was responsible for groundwater contamination at Powerton. Please do not leave the

Powerton site as aa environmental sacrifice zone for generations to come. This permit needs to be denied as it is now. The boron standard needs to be set so aquatic life is protected. Please do not allow language of the permit to provide loopholes allowing the companies to avoid compliance.

The Agency issued this permit in accordance with Part 845 to ensure that adequate groundwater monitoring and surface water monitoring are implemented at the Powerton Generating Station. The additional groundwater and surface water monitoring required by the draft permit are designed to assure that the groundwater resources, including the Mahomet Aquifer, are protected. If the groundwater monitoring demonstrates a threat to groundwater resources with exceedances of groundwater protection standards, the permittee must perform corrective actions in a manner consistent with the law. The Agency is mindful that the Former Ash Basin lies within the Federal Emergency Management Agency (FEMA) flood zone for the Illinois River. Special Condition 11 requires a staff gauge and two piezometers installed in Lost Creek and fill material, respectively, to monitor for water levels along with the monitoring wells for purposes of determining the interaction between groundwater and surface water in Lost Creek and due to flooding. The Agency is aware of the Illinois Pollution Control Board decision regarding the groundwater pollution at Powerton. The Agency is implementing this permit in a manner consistent with 35 Ill. Admin. Code 845 and believes that implementation will address groundwater pollution originating from the CCRSIs. Special Condition 19 addresses characterization of CCR within the structure of the CCRSI, as the CCR placed below the liner is a "structural component" as defined by 35 Ill. Adm. Code 845.120. The Agency understands that Tazewell County is a Priority Regional Groundwater Protection area.

20) Illinois EPA must amend Powerton's operating draft permit. The method for setting the groundwater protection standard of 4.7 mg/L was improper. This is more than double the Illinois Part 845 standard of 2.0 mg/L. This is unreasonably high and poses a risk of masking boron exceedances and statistically significant increases in boron. Wells impacted by CCR units were improperly used to set the boron GWPS. The use of MW-09 and MW-19 to establish background for upgradient monitoring violated Illinois Coal Ash rules and Federal Coal Ash rule. This permit must be amended to require proper background monitoring wells for both groundwater units. IEPA must require two different upgradient background monitoring wells, one installed in each ground water unit. Illinois IEPA must deny the retrofit permit and amend the operating permit drafts. The ash surge basin and the bypass basin were improperly certified. They are not in compliance with the location restriction for placement above the uppermost aquifer. Please make changes to special conditions 3,5,6,14,12, 13,15, and 7. (For details see exhibit 20)

Please see response to question #11 and #4. Special Condition 18 requires that groundwater protection standard for boron and the remaining constituents in 35 Ill. Adm. Code Part 845.600(a) be evaluated from data collected at MW-16 after adequate time has been allowed for the collection and analysis of 8 rounds of sampling. Once eight rounds of groundwater sampling and analysis have been conducted at MW-16, the boron standard will be reevaluated and updated. The Agency is requiring in Special Condition No. 12 that MW-16,

not MW-09 and MW-19, will be the background well for the monitoring network at Powerton. Once eight samples of total metals are collected and analyzed, a new the groundwater protection standard for boron will be evaluated in accordance with 35 Ill. Adm. Code Part 845.640(f) and (g).

In accordance with 35 Ill. Adm. Code Part 845.640(d), MW-16 is not installed in or through CCR that is associated with the CCRSIs and is hydraulically upgradient in the Sand and Gravel Unit. The Agency maintains that MW-16 is an adequate background well for the purposes of this permit.

Because MWG used CCR for structural components of the Ash Surge Basin and Ash Bypass Basin and these CCRSIs are sitting on top of the Silty Clay unit, the Agency maintains that corrective action and closure implementation must include prevention of flood waters influx into the fill material in a manner that prevent leaching from the structural components of the CCRSIs to the Illinois River or outside of the waste boundary. While the CCR placed on top of the Silty Clay Unit to the geomembrane liner of the Ash Surge Basin and Ash Bypass Basin is included in the structural components, at this time the lateral extent of the structural components of the Ash Surge Basin and Ash Bypass Basin is not defined. Until calculations exhibiting the lateral extent of the CCRSIs in the fill material has been adequately presented, the Agency is taking the position that all the CCR placed as fill material in, under and laterally around the CCRSIs at Powerton are in fact structural components of one of more of the CCRSIs covered by this permit. Additionally, the Poz-O-Pac is a CCR material and is a structural component of the CCRSIs where present because it was used in the construction and design of the CCRSI in accordance with the definition of structural components in 35 35 Ill. Adm. Code Part 845.120.

The Retrofit construction permit allows for the retrofit construction and not closure. The Ash Bypass Basin (ABB) remains required to close in accordance with Part 845. In addition, during the time in which the ABB is used after the retrofit, groundwater corrective action must be conducted in accordance with 35 Ill. Adm. Code Part 845 Subpart F. The Retrofit construction permit does not negate the groundwater corrective action requirements of Part 845.

21) Special Condition 15 is not relevant and should be stricken. There are no "sludges" associated with the Bypass Basin and none will be generated through the operation of the CCR surface impoundments.

The special condition has been revised such that it is only referring to sludges which are not defined as CCR under 35 Ill. Adm. Code 845. Since this sludge can include such material as filtrate or other debris, it is necessary require that it be disposed of correctly.

22) Special Condition 6 is incorrect. MWG submitted a preliminary written closure plan as part of its Permit Application Log No. 2021-100029, pursuant to Section 845.230(d)(2)(J) of the

Illinois Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments ("Illinois CCR Rule) ("The initial operating permit application for existing or inactive CCR surface impoundments... must contain...[a] Preliminary written closure plan" (emphasis added). 35 Ill. Adm. Code 845.230. To precisely describe the information submitted to Illinois EPA, MWG suggests that Illinois EPA modify Special Condition 6 to state: "The preliminary written closure plan has been submitted ..."

The Agency agrees and changes have been made to state preliminary written closure plan.

23) MWG suggests a correction to the description of MW-23. MWG drilled the wells described in Special Condition 11 after Illinois EPA issued the draft operating permit and found that at well location MW-23 the Silty Clay/Silt Unit was not present and therefore, the well was completed within the Sand and Gravel Unit. The condition should be modified to describe MW-23 correctly. The spelling error should be corrected to "...elevations of one staff gauge in the Lost Creek."

The Agency will use the term "gauge" although both spellings are correct. Also, the list of wells and Special Condition 11 have been updated.

24) There appears to be a typographical error. Special Condition 12 identifies two migration pathways: the Silty Clay/Silt Unit and the Sand and Gravel Unit. However, Special Condition 12 states that the "background wells for the 'three migration pathways' are..." MWG suggests correction of the t typographical error to state "two" migration pathways.

MW-16 should not be identified as the background well for the Silty Clay/Silt Unit and Sand and Gravel unit because it was not included in the groundwater monitoring system established for the CCR surface impoundments in Sections 9 of both Operating Permit Applications. Instead, as discussed with the Illinois EPA, MWG agreed to include MW-16 in the groundwater monitoring network in 2024. Accordingly, per Special Conditions 17 and 18, MWG is collecting the background data and conducting the statistical calculations in MW-16 and other agreed additional wells pursuant to Subpart F of the Illinois CCR Rule. Because there is insufficient background data to date for MW-16, it is improper to identify MW-16 as the background well.

The Agency agrees to the change of "three" to "two". MW-16 is the background well for the groundwater monitoring because it is not located in CCR materials that may or may not be associated with the structural components of the CCRSIs at Powerton. Pursuant to Special Condition 15 of the operating permit, MWG must begin monitoring for total metals and then perform the statistical evaluations required in 35 Ill. Adm. Code 845.640(f) and (g).

25) Special Condition 13 should state "The downgradient wells for the two migration pathways..." After Illinois EPA issued the draft operating permit, MWG drilled MW-23 and found that it is located in the Sand and Gravel Unit (see response to Special Condition 11). To reflect its proper location, MW-23 should be listed as a downgradient well for the Sand and Gravel Unit.

The Agency agrees to the change from "three" to "two". The Agency does not agree that MW-23 was to be installed in the Sand and Gravel unit. The Permit requires two additional wells in the Silty Clay Unit. MWG is required to better characterize and monitor the Silty Clay Unit. MW-18 appears to be cross installed between the fill and silty clay unit. While monitoring two units with one screen is not acceptable, MWG can install a well next to MW-18 that monitors only the Silty Clay Unit. The Agency did not direct MWG to install an additional well in the Sand and Gravel unit at the MW-23 location. Because of the complex nature of the Bypass Basin, Ash Surge Basin and Former Ash Basin structural components, MW-23 cannot be recognized as a downgradient well for monitoring under Part 845.

26) In Special Condition 14, there appears to be a typographical error in the second paragraph on page 3. As agreed with Illinois EPA, MWG will install one staff gauge in Lost Creek (see Special Condition 11). MWG suggests modifying this condition to "...and a staff gauge within..."

The Agency will use the term "gauge" although both spellings are correct.

27) Special Condition 15 is incorrect. MWG has been sampling the wells identified in the groundwater monitoring network in its Operating Permit Application since the Illinois CCR Rule passed in 2021. Accordingly, the statement in that MWG must "initiate groundwater sampling and analysis" within 30 days of the effective date of the operating permit is inaccurate and should be deleted.

There are other groundwater wells at the Powerton Station installed and sampled under different programs and are not a part of the groundwater monitoring network for the CCR surface impoundments specified in this Permit. To avoid confusion, Special Condition 15 should state: "MWG must conduct the groundwater sampling and analysis in accordance with 35 Ill. Adm. Code Section 845.640 at each well identified in Special Conditions 12 and 13."

The Agency agrees and has clarified to state wells listed in Special Conditions 12 and 13.

28) Special Condition 16 is incorrect. Pursuant to Section 845.220(d)(2)(I)(iii), MWG selected a statistical method for evaluating the groundwater data pursuant to Section 845.640(f)(1) in Section 9 of the Operating Permit Application in Attachment 9-5. Thus, MWG has notified the Agency that the chosen statistical method is the prediction interval procedure identified in Section 845.640(f)(1)(C). See MWG Operating Permit Application, Attachment 9-5, p. 2. Illinois EPA should correct Special Condition 16 to identify the procedure used by MWG.
The Attachment identified in Special Condition 16 is incorrect. Attachment 9-4 referenced by the Agency is the PE Stamp dated Oct. 30, 2021. Attachment 9-5 is the correct attachment.

As written, MWG's statistical analysis in Attachment 9-5 adheres and is consistent to the statement included in paragraph (a)(1) of Special Condition 16. Because no outliers were removed from any background dataset as part of statistical prediction limit calculations and is consistent with the noted statement in the permit, the outlier analysis need not be struck or

revised. MWG confirmed that its input data sets are in accordance with SW-846.

The Agency's limitation of the data sets for statistical analysis of background to the last eight consecutive quarterly sampling events in paragraph (c) is incorrect and should be modified. Section 845.650(b)(1)(A) states that a "minimum of eight independent samples" from each well must be collected, but there is no maximum limit and nor is there a limit to the most recent eight samples. It is universally recognized that the larger the background dataset, the more representative and statistically robust it is. Unless some statistical reason (such as an increasing trend) can be provided, it makes no sense to limit background dataset calculations to only the most recent eight quarters when there currently is over eight years of available quarterly CCR monitoring data available. There is no scientific basis to limit data sets for statistical evaluations. Illinois EPA could be attempting to ensure that the statistical analysis includes the most recent data. Assuming that is true, the sentence should be modified to state: "All data sets used for statistical analysis of background, must include the last eight consecutive quarterly sampling events in order ....". It is noted, however, that once a GWPS is established based on statistical background, this background should not be recalculated after each sampling event. Revisiting background calculations should only be considered after at least three to five years of subsequent sampling, which would be in accordance with guidelines provided in USEPA's Unified Guidance.

The Agency's statement in paragraph (d) that non-parametric statistical analysis must be provided to the Agency for review and approval each time a non-parametric data set occurs is not required by the rule. Section 845.640(g)(1) is the only applicable section related to non-parametric data sets and does not require submission of the data. A requirement of submission and approval of a statistical analysis for every non-parametric data set would be unduly burdensome, because it is common to have data sets that are not normal distributions. This requirement should be stricken.

The Agency agrees with the item regarding the reference to Attachment 9-5. The Agency does not agree with the other portions of this comment, and therefore has not revised Special Condition 16 because MW-16 is the background well that will be used for establishing background values for the CCRSIs for the Operating Permit. The Agency has determined that the other proposed wells are too close to the CCRSIs to be definitively determined to be outside of the structural components of the CCRSIs.

29) MWG conducts each of the requirements in Condition 17 in compliance in 35 Ill. Adm. Code 845.650. Also, as stated in the Comment on Special Condition 15, there are other groundwater wells at the Powerton Station installed and sampled under different programs and are not a part of the groundwater monitoring network for the CCR surface impoundments specified in the Permit. To avoid confusion, Special Condition 17 should state: "The groundwater monitoring program must be in compliance with 35 Ill. Adm. Code 845.650 at each well identified Special Conditions 12 and 13."

The Agency agrees and has revised the language to include wells included in Special Condition

12 and 13, and wells added for monitoring of corrective action implementation as a part of 35 Ill. Adm. Code 845.680 and additional groundwater plume delineation under 35 Ill. Adm. Code 845.650(d).

30) MWG provided an analysis of the CCR in the Ash Surge Basin and Former Ash Basin in the Operating Permit Application for the Ash Surge Basin, Ash Bypass Basin, and Former Ash Basin. The results of the analysis are in Tables 2-1 and 2-2 of the application, and the laboratory data package is in Attachment 2. As MWG stated in the application, the Bypass Basin did not contain CCR at the time of permit application completion and that any CCR that would be stored within that unit would be the same as that within the Ash Surge Basin. Similarly, MWG provided an analysis of the CCR in the Metal Cleaning Basin in Table 2 and Attachment 2 of the Metal Cleaning Basin Operating Permit Application. The request for a second analysis is unduly burdensome and unnecessary because the operations at the Powerton Station have not changed. The Illinois EPA should modify Special Condition 19 to state that analysis of the CCR in the Former Ash Basin, Ash Surge Basin, and Metal Cleaning Basin were submitted as part of the Operating Permit Applications, and that the Bypass Basin does not contain CCR.

MWG has not provided characterization of all the CCR used in the CCRSIs, especially CCR used as structural components of the CCRSIs. Structural components are defined in 35 Ill. Adm. Code 845.150 definitions section. The Agency is requiring that these structural components be sampled and analyzed to determine the contribution to the groundwater plume. Without the structural components characterized as stated previously, the Agency is unable to evaluate Closure Construction Applications and Corrective Action Construction Applications directly related to 35 Ill. Adm. Code 845.220(d)(3) and 35 Ill. Adm. Code 845.220(c)(2), respectively.

31) MWG cannot provide an analysis of all waste streams entering the Former Ash Basin or the Ash Bypass Basin because neither basin accepts any waste stream. Sampling of the waste streams that enter the surface impoundments prior to entering the units is redundant and unnecessary. The CCR within the waste streams settles and is contained within the unit. The constituents in the CCR are located in Tables 2-1 and 2-2 of the Operating Permit Application for the Ash Surge Basin, Bypass Basin, and Former Ash Basin, and Table 2 of the Operating Permit Application for the Metal Cleaning Basin. Any constituents within the wastewater that enters the CCR surface impoundment is identified by the current NPDES sampling that occurs. All the water that enters and leaves the CCR surface impoundments is discharged through a NPDES permitted outfall and sampled on a regular basis.

Alternatively, MWG seeks clarity. If the Agency is demanding that MWG sample each individual waste stream (such as each plant drain), that is unduly burdensome and not required by Section 845.230(d)(2)(C). However, MWG could sample the water entering the Ash Surge Basin and Metal Cleaning Basin if that is the Agency's demand.

"Waste streams" to be characterized for the purpose of the initial operating permit includes

waste streams "contained" in the CCRSI in accordance with 35 Ill. Adm. Code 845.230(d)(2)(C). The water entering and leaving the Ash Surge Basin and the Metal Cleaning Basin must be characterized.

32) Special Condition 21 should be modified for clarity. The condition states: "The groundwater standards at the waste boundary for the Silty Clay/Silt Unit...," incorrectly implying that the Silty Clay/Silt Unit has a waste boundary. The "at the waste boundary" should be stricken and the sentence should state: "The groundwater standards for the Silty Clay/Silt unit..."MWG agrees with the Agency's acceptance of the proposed boron standard for the CCR surface impoundments. The purpose of the groundwater monitoring program is to evaluate the groundwater "at the waste boundary" of a CCR surface impoundment to determine whether the CCR surface impoundment is releasing CCR constituents. Because the Illinois CCR Rule recognizes that there may be constituents at the historically operated facilities that are unrelated to the CCR surface impoundments, the rule allows for alternative standards proposed pursuant to Section 845.600(a)(2). At the Powerton Station, the boron standard was established because of an upgradient source unrelated to the CCR surface impoundments. The first paragraph after the table of standards has a typographical error. It should state "...as part of Special Condition 18..."

The first and second paragraphs after the table of standards are in conflict. The first paragraph states that if the statistical analysis performed pursuant to Special Condition 18 results in a higher groundwater protection standard than the current permit limits, MWG may submit a permit application modification to modify the standards in the table of standards. The second paragraph states that background concentrations will only be evaluated for changes during permit renewal or after completion of construction permits. Also, the second paragraph violates the express statements in the Illinois CCR rule. Section 845.280(c) states that an owner/operator "may initiate modification to its permit by application to the Agency at any time after the permit is approved and before the permit expires. 35 Ill. Adm. Code 845.280(c). To resolve the internal conflict and violation of the Illinois CCR rule, the second paragraph should be stricken.

The groundwater standards for the Silty Clay Unit do include "at the waste boundary" because there are some portions of the Silty Clay Unit that are not at the waste boundary. Due to the discontinuous nature of the Silty Clay Unit as it extends towards the Illinois River, it is not continuous along the top of the Sand and Gravel Unit thereby allowing for mixing between the Fill Sand with the Sand and Gravel Unit.

The groundwater protection standards, after collection of 8 rounds of samples from MW-16, must be adjusted accordingly. After the collection of the first 8 rounds of groundwater samples from MW-16, additional groundwater samples and background calculations will only be considered during the permit renewal.

The typographical error has been corrected.

33) Special Condition 22 should be modified for clarity. The condition states: "The groundwater standards at the waste boundary for the Sand and Gravel unit...," incorrectly implying that the Sand & Gravel Unit has a waste boundary. The "at the waste boundary" should be stricken and the sentence should state: "The groundwater standards for the Sand and Gravel unit..."
The first paragraph after the table of standards has a typographical error. It should state "...as part of Special Condition 18..."
The first and second paragraphs after the table of standards are in conflict. The first paragraph states that if the statistical analysis performed pursuant to Special Condition 18 results in a higher groundwater protection standard than the current permit limits, MWG may submit a permit application modification to modify the standards in the table of standards. The second paragraph states that background concentrations will only be evaluated for changes during permit renewal or after completion of construction permits. Also, the second paragraph violates the express statements in the Illinois CCR rule. Section 845.280(c) states that an owner/operator "may initiate modification to its permit by application to the Agency at any time after the permit is approved and before the permit expires. 35 Ill. Adm. Code 845.280(c). To resolve the internal conflict and violation of the Illinois CCR rule, the second paragraph should be stricken.

Compliance with Part 845 is required at the waste boundary. The Agency has not revised the text of the Special Condition. The groundwater protection standards, after collection of 8 rounds of samples from MW-16, must be adjusted accordingly. After the collection of the first 8 rounds of groundwater samples from MW-16, additional groundwater samples and background calculations will only be considered during the permit renewal.

34) Special Condition 24(g) this paragraph is regarding a "remedy." Because there is no remedy in the operating permit, the paragraph should be deleted.

The Agency has not removed this requirement, as a remedy, in accordance with 35 Ill. Admin. Code 845 Subpart F and Special Conditions 21 and 22, will be required to be reported on prior to the approval of a corrective action construction.

35) Special Condition 26(c) mistakenly includes a requirement for a potentiometric map for the "Fill Unit", which is a misnomer and does not exist. Pursuant to Special Condition 14, MWG is evaluating the surface water and groundwater interactions which will include consideration of water levels recorded from the two piezometers that have been installed. The piezometric maps for the Silty Clay/Silt Units and the Sand and Gravel Unit will sufficiently define the horizontal flow system. Furthermore, a flow map cannot be developed based on only two data points. The requirement for a flow map within the fill should be stricken. Also, "Silty/Clay-Silt Unit" is spelled differently than in other Special Conditions and suggest modifying it for consistency to "Silty Clay/Silt Unit.

Special Condition 26(d) requires that MWG include the documentation of field sampling

procedures in the Annual Report. To date and per the Illinois EPA's request, MWG provides the documentation of field sampling procedures in the groundwater data reports submitted to the Agency pursuant to Section 845.610(b)(3)(D) (i.e., the "60-day reports"). It is unduly burdensome and unnecessary to also require hard copy submittal of field data sheets and analytical laboratory reports in both the 60-day reports and the Annual Report. Double submission of this documentation would also unnecessarily increase the size of the reports and double the volume of the permit record (i.e. – number of pages). MWG has understood from the Illinois EPA that the documentation of the field sampling sheets, and analytical laboratory reports should continue to be in the 60-day report. Accordingly, the requirement to include this documentation in the Annual Report should be stricken.

In Responses 24 and 25 the Agency acknowledges that there are two geologic units, the "sand and gravel unit" and the "silty clay/silt unit". Therefore, the Agency agrees a potentiometric surface map of the "fill unit" cannot be required by this permit.

Once lab reports, field documentation and other reporting requirements have been submitted to the Agency, further reporting that references that documentation must have a reference to the report that it was included in.

36) Special Condition 30 is not relevant and should be stricken. There are no "sludges" associated with the CCR surface impoundments and none will be generated through the operation of the CCR surface impoundments.

The special condition has been revised such that it is only referring to sludges which are not defined as CCR under 35 Ill. Adm. Code 845. Since this sludge can include such material as filtrate or other debris, it is necessary require that it be disposed of correctly.

ACRONYMS AND INITIALS

ABB	Ash Bypass Basin
CCR	Coal Combustion Residuals
CCRSI	Coal Combustion Residual Surface Impoundment
FEMA	Federal Emergency Management Agency
GWPS	Groundwater Protection Standard
Illinois EPA	Environmental Protection Agency
Ill. Adm. Code	Illinois Administrative Code
MWG	Midwest Generation
NPDES	National Pollutant Discharge Elimination System

DISTRIBUTION OF RESPONSIVENESS SUMMARY

An announcement that the CCR surface impoundment permit decision and accompanying responsiveness summary is available on the Illinois EPA website, was mailed or e-mailed to all who registered at the hearing and to all who sent in written comments. Printed copies of this responsiveness summary are available from Sabrina Bailey, 312-832-2162, e-mail: sabrina.bailey@illinois.gov.

WHO CAN ANSWER YOUR QUESTIONS ILLINOIS EPA CCR PERMIT:

CCR Permit ..... Mark Liska.....217-782-1599
Legal Questions .....Charles Matoesian.....217-524-9453
Legal Questions.....Rebecca Strauss.....217-557-1451
Groundwater Unit .....Lauren Hunt.....217-524-9048
Public Hearing of May 8, 2024..... Jeff Guy.....217-785-8724

The public hearing notice, fact sheets, the hearing recording, the CCR permits and the responsiveness summary are available on the Illinois EPA website https://epa.illinois.gov/public-notices/ccr-public-notices.html