BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	AS 2021-003
PETITION OF MIDWEST	)	
GENERATION, LLC FOR AN	)	
ADJUSTED STANDARD FROM	)	(Adjusted Standard)
845.740(a) AND FINDING OF	)	
INAPPLICABILITY OF PART 845	)	

NOTICE OF FILING

To: See attached Service List

PLEASE TAKE NOTICE that I have today electronically filed with the Office of the Clerk of the Pollution Control Board Midwest Generation, LLC's Response to the Illinois Environmental Protection Agency's Recommendation, a copy of which is hereby served upon you.

Dated: July 28, 2023 MIDWEST GENERATION, LLC

By: __/s/Kristen L. Gale _____

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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
Petition of Midwest Generation, LLC	)	
for an Adjusted Standard from 845.740(a)	)	
and Finding of Inapplicability of Part 845	)	PCB AS 2021-003
for the Waukegan Station	)	
	)	
	)	

MIDWEST GENERATION LLC'S RESPONSE TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S RECOMMENDATION

The Grassy Field is not, and never was, a CCR Surface Impoundment ("CCRSI"). The Agency has created the misnomer "Old Pond" to reference the Grassy Field. It never was a "pond" and the Agency has presented nothing to prove otherwise.[1]

U.S. EPA and the Board agree that the Grassy Field is not a CCRSI. In May 2023, U.S. EPA issued a proposed rule that would establish a new category of regulated units to address areas which, like the Grassy Field, do not fall within the definition of a CCRSI. See 88 Fed. Reg. 31982, "Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities; Legacy CCR Surface Impoundments" (May 18, 2023) ("Proposed Rule"). In the supporting documentation for the Proposed Rule, and apparently relying at least in part upon information provided to it by Illinois EPA, the U.S. EPA specifically includes the "Old Pond" at the Waukegan Station on a list entitled "Potential CCR Management Units." The list includes areas identified by U.S. EPA "where CCR is being managed, but which remain exempt under existing

[1] While the Grassy Field has also been called the "Former Slag/Fly Ash Storage Area" by the Waukegan Station, the Station never used the term "pond" to describe it.

federal CCR regulations." 88 Fed. Reg. 31982 at 32013. Similarly, in support of its decision to open a subdocket to evaluate new rules to regulate historic areas of ash, the Board relied upon information showing the Grassy Field was not a CCRSI. *In the Matter of: Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments: Proposed New 35 Ill. Adm. Code 845,* PCB R2020-019, Order (February 4, 2021), at 12.

The Grassy Field is not a CCRSI because it does not have all of the characteristics required under the CCRSI definition. 415 ILCS 5/3.143, 35 Ill. Adm. Code 845.120. This area was never designed to nor did it hold and accumulate liquids - - a key criteria to qualify as a CCRSI. The Grassy Field was a part of a slag field designed to disperse (not "hold") liquids until it ultimately ceased that use, and thereafter was occasionally used as a helicopter pad. Because it was not and is not a CCRSI, the Grassy Field is also not an "inactive CCR surface impoundment." An inactive CCRSI must first have been a CCRSI. 35 Ill. Admin. Code 845.120.

The Agency Recommendation extensively describes alleged impacts to groundwater from the Station's use of the area. MWG takes issue with the accuracy of the Agency's allegations, but the condition of the groundwater under the Grassy Field is not relevant to whether it qualifies as a CCRSI. The Illinois Environmental Protection Act (415 ILCS 5) as amended by the Coal Ash Pollution Prevention (CAPP) Act (Illinois Public Act 101-0171) ("Act") and the Illinois CCR Rule at 35 Ill. Adm. Code Part 845 provide specific, enumerated criteria for making that determination, and the condition of the underlying groundwater is not among them.

The inapplicability of the CCR Rule to the Grassy Field does not mean it is beyond regulation. Other regulatory programs exist, if and when necessary, to manage it. For example, as MWG's own expert recommended, the Grassy Field can be capped as a landfill. *Sierra Club et al. v.*

Midwest Generation, LLC, PCB 13-15,[2] 6/13/2023 Tr., pp. 153-160, Exhibit 32.[3] Alternatively, if the proposed federal rule to regulate CCRMUs is finalized, then the Grassy Field may be so regulated.

In sum, the CCR Rule is not applicable or appropriate to manage the Grassy Field—a conclusion that is consistent with federal law—and the Agency cannot rely on a "the ends justify the means" rationale to try to shoehorn the Grassy Field into the definition of CCRSI.[4]

I. U.S. EPA and the Board Agree that the Grassy Field is not a CCRSI.

Both the U.S. EPA and the Board have found that the Grassy Field is not a CCRSI, instead using it as an example for potential regulation of historic areas of ash. In May 2023, U.S. EPA issued the Proposed Rule to establish a new category of regulated units called "CCR management unit," or "CCRMU," defined as "any area of land on which any non-containerized accumulation of CCR is received, placed, or otherwise managed at any time, that is not a CCR unit." 88 Fed. Reg. 31982 at 32034. U.S. EPA's Proposed Rule materials include a list of "Potential CCR Management Units," a copy of which is attached as Exhibit 26 and is located on the Proposed Rule docket at EPA-HQ-OLEM-2020-0107-0155. On this list: "…EPA identified a total of 134 areas at 82 active facilities where CCR is being managed, but which remain exempt under existing federal CCR regulations. These areas include inactive CCR landfills, closed CCR landfills, closed CCR surface impoundments, and other solid waste management areas of CCR." 88 Fed. Reg. 31982 at 32013 (footnote omitted). The list includes two units at the Waukegan Station, "Old

[2] The Station's CCRSI and the Grassy Field are also the subject of an enforcement action in front of the Board, *Sierra Club et al. v. Midwest Generation, LLC*, PCB 13-15. The enforcement action alleges violations of the Act and Part 620 of the Board rules and is unrelated to MWG's request for Part 845 regulatory relief.

[3] To avoid confusion, MWG continued the sequential numbering of exhibits from its Original Petition in its Amended Petition. MWG again continues this sequential numbering of exhibits in its Response.

[4] Concurrent with this Response, MWG has filed a Second Amended Petition for an Adjusted Standard and a Finding of Inapplicability for Waukegan Station which seeks to withdraw its request for an adjusted standard that would have allowed MWG to decontaminate and retain the existing liner in the West Ash Pond.

Pond" and "Historic Fill," one of which is presumably the Grassy Field. Given U.S. EPA specifically includes the Grassy Field on its list, U.S. EPA clearly does not consider the Grassy Field to be regulated already as a CCRSI.

In the Proposed Rule's Preamble, U.S. EPA concurs with the differences between a CCRSI and a CCRMU that MWG identified in its Petition. Those differences demonstrate the Grassy Field is not a CCRSI. U.S. EPA explains that units that do not contain liquids are different from those that do, which is MWG's basis for asserting the Grassy Field is not a CCRSI. 88 Fed. Reg. 31982 at 31993; MWG's Petition, pp. 10-12. U.S. EPA found that historic areas of ash have different characteristics which does not support including them in the definition of CCRSI. So U.S. EPA is proposing "to establish a new category of regulated units that would be subject to a set of requirements tailored to the characteristics of such units and the risks that they present." *Id.* at 32017. EPA is "proposing to extend only a subset of the existing requirements in part 257, subpart D to CCRMU," *id.* at 32019, because "[t]he other existing requirements in part 257 are not necessary for CCRMU," *id.* at 32017. For example, "since CCRMU do not contain sufficient liquids to create a hydraulic head or to otherwise cause the conditions that might lead to a structural failure, the structural stability requirements are unnecessary." *Id.* at 32017. In other words, U.S. EPA has determined that the federal CCR rule, and thus by implication also the Illinois CCR Rule, do not apply to the Grassy Field because both rules require that the unit be designed to hold liquids, which the Grassy Field was not.

The Board previously opined that areas like the Grassy Field "do not fit the definition of 'CCR surface impoundments' and would therefore not be regulated by Part 845, nor were they included in the mandate of Section 22.59(g)." *In the Matter of: Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments: Proposed New 35 Ill. Adm. Code 845,* PCB

R2020-019, Order (February 4, 2021), at 12. The Board found "that regulation of these unconsolidated coal ash fills and piles is beyond the scope of Section 22.59(g)…," the statute for regulated CCRSI (415 ILCS 5/22.59(g)). *Id*. The Board supported its finding that historic ash fill areas do not fit the definition of CCRSI by relying upon a public comment by the Environmental Law and Policy Center, Prairie River Network, Sierra Club, and Little Village Environmental Justice Organization ("Environmental Groups") stating that the Grassy Field should be a regulated historic area of ash. *Id.*, citing P.C. #124. The Environmental Groups referenced in their public comment the Board's description of the Former Slag/Fly Ash Storage area (*i.e.* the Grassy Field), which the Board had specifically distinguished from the Ash Ponds in the Board's 2019 Interim Opinion in *Sierra Club et. al. v. Midwest Generation, LLC*, PCB 13-15. PCB R2020-019*,* P.C. #124, at p. 51, citing PCB 13-15 Interim Order, pp. 66-68. Concluding that it did not have sufficient information regarding the unconsolidated fill areas and piles, the Board ordered the Clerk to open a subdocket to "solicit more information and evidence, as well as proposed rules, on… [h]istoric, unconsolidated coal ash fill in the State…." PCB R2020-019, Order (February 4, 2021), at 105. Clearly, the Board correctly believed that the Grassy Field was not already regulated by the Illinois CCR Rule and the Agency's Recommendation does not provide any basis to alter that belief.

II. The Grassy Field Is Not and Never Was a CCRSI.

Throughout the history of the Grassy Field, its use has never qualified it as a CCR surface impoundment. The Illinois CCR Rule's applicability depends on whether the area meets its definition of CCRSI: "a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR." 415 ILCS 5/3.143; 35 Ill. Adm. Code 845.120. For the rule to apply, the area must meet all of the following criteria:

(1) a natural topographic depression, man-made excavation, or diked area;

(2) designed to hold an accumulation of CCR and liquids; and

(3) used by the Station to treat, store, or dispose of CCR.

According to the Station's operational history and expert opinion, the "Old Pond" was never a pond, nor impoundment,[5] nor any other type of unit designed to hold and accumulate liquids. Rather, it was originally a slag field that liquids were intentionally diverted from. Then it became an inactive slag field, and ultimately, the "Grassy Field", and neither of these uses was designed to accumulate liquids.

Tellingly, none of the Agency's historical documents use the term "Old Pond," other than a handful of aerial photographs on which the Agency applied the label "Old Pond." While the terms "settling basin" or "ash pond" appear at times, when viewed in context, those terms refer instead to another settling pond that was built on the eastern portion of it in the 1970s, not to the Grassy Field. This ash-settling pond, along with the present-day East and West Ash Ponds, were the only ponds that ever existed in the area—but none of them were in the area occupied by the Grassy Field. The Grassy Field is not, and never has been, a CCRSI. Nor is it, as the Agency implies, an "inactive CCRSI." Again, in order to be an inactive CCRSI, a unit must first have been an active CCRSI, which he Grassy field never was.

[5] The dictionary definition of "impoundment" comports with this understanding. Merriam-Webster's online dictionary defines "impoundment" as "a body of water formed by impounding," and defines to "impound," most relevantly, as "to collect and confine (water) in or as if in a reservoir." *See* M-W.com entries at https://www.merriam-webster.com/dictionary/impoundment and https://www.merriam-webster.com/dictionary/impound (Accessed 7/17/23).

a. The history of the Grassy Field demonstrates that it was never designed to accumulate liquids.

What the Agency refers to as the "Old Pond" is actually an area of approximately 40-acres that includes not only the Grassy Field, but also the East and West Ash Ponds. MWG's expert, Tom Dehlin, P.E. of Sargent & Lundy, detailed the history of the area in a report entitled "Classification of Grassy Field" ("CGF Report"), attached as Exhibit 27. The CGF Report shows that the area is bounded to the north by a former fence line to the Station's former coal yard, to the west by the Station's former property line with the Pacific Steel Boiler Corporation (and current property line with Commonwealth Edison), to the south by the Station's property line with the North Shore Water Reclamation District wastewater treatment facility, and to the east by an embankment, about 700 hundred feet west of Lake Michigan. CGF Report at 4-2 to 4-3. Within this approximately 40-acre area, the Grassy Field occupies the westernmost approximately 12 acres, while the East and West Ponds each occupy about 14 acres on the eastern portion of the area. CGF Report at 2-1.

The operational history of this area is divisible into three distinct phases:

- Phase 1 (~1946-1970) when it was used as a slag field ("Original Slag Field);
- Phase 2 (~1970-1978) when most of it became an ash settling pond ("Original Ash Pond") and the remaining approximately 12-acre western portion was unused ("Inactive Slag Field); and
- Phase 3 (~1978-present) during which the East and West Ash Ponds were constructed within the boundaries of the Original Ash Pond and the Inactive Slag Field to the west was regraded and seeded, creating the Grassy Field.

CGF Report at 4-1. Throughout each Phase, the area was never designed to accumulate liquids, as further explained below.

i. The Three Phases of the 40-Acre Area.

Phase 1: Original Slag Field (~1946-1970): Historical documents indicate that, as early as 1946, the Station was sending CCR from its coal-fired electric generating units to the Original Slag Field—designated as "slag field" on a 1950 development plan for a new coal yard to be installed to the north—using an 8-inch-diameter ash sluice line. CGF Report at 4-1 to 4-2. Aerial photographs indicate that the area evolved over time, but the core operation of the area involved sluiced CCR conveyed by pipe from the Station's boilers to the Original Slag Field where it either drained through the natural sand floor or was directed into the ditch along the Station's southern property line (the "South Ditch"), and then to Lake Michigan. CGF Report at 4-3. The South Ditch is a permanent feature that is still present today, and still used to manage stormwater run-off today. CGF Report at 4-3. The need for and use of the South Ditch demonstrates that the Original Slag Field could not, and was not designed to, accumulate CCR and liquid. The South Ditch was needed to drain away any liquid that did not drain through the natural sand floor of the Grassy Field. CGF Report at 4-3 to 4-4.

In about 1946, the Original Slag Field was bordered to the north by a dike on the northern edge separating the field from the Station's coal-handling area (the "North Dike") as well as the aforementioned South Ditch along the Station's southern property line. CGF Report at 4-2; CGF Report Figure A-3; Agency Exhibit 2. By 1961, the Station had excavated an approximately 30-foot-wide ditch beginning in the northwest quadrant of the slag field, proceeding south through the field, and ultimately tying into the South Ditch. CGF Report at 4-4; CGF Report Figure A-4; Agency Exhibit 3. As observed in the CGF report, the location and consistent shape of this inner ditch indicate that the excavation was man-made specifically to drain water from the slag field into the South Ditch, in contrast to a more organic form of a natural drainage path created over time by

flowing water. *Id.* The presence of these excavated features demonstrates that the Station designed the area so that any liquids that reached the area—sluice water from Station operations and stormwater runoff from the area—would either percolate into the natural sand floor or flow into the South Ditch, then into Lake Michigan. CGF Report at 4-3 to 4-4. Liquids were not designed to be, nor were they, contained.

Phase 2: Original Ash Pond and Inactive Slag Field (~1970-1978): By 1970, the Station began constructing the first ash-settling pond, called the Original Ash Pond, within approximately the easternmost two-thirds of the Original Slag Field. This area did not include the Grassy Field. CGF Report at 4-4; CGF Report Figures A-5 and A-6; Agency Exhibit 4. The Original Ash Pond began operating in 1970 and received sluice water until the present-day East and West Ash Ponds were constructed in 1978. CGF Report at 4-4. Like the Original Slag Field before it, the Original Ash Pond managed ash sluice water from the Station's boilers. CGF Report at 4-5. But unlike the Original Slag Field and other excavations at the Stations, the Original Ash Pond was designed to hold liquids and settle out solids before the treated wastewater was discharged.[6] *Id*.

Following construction of the Original Ash Pond, the Station stopped using the remaining western portion of the Original Slag Field and it became inactive (the "Inactive Slag Field"). CGF Report at 4-5. As discussed further below, the Grassy Field was later located in this Inactive Slag Field portion of the site. The Station excavated CCR from the Inactive Slag Field to promote drainage of stormwater run-off in the South Ditch. CGF Report at 4-5 to 4-6. The Station also removed CCR from the rest of the Inactive Slag Field to promote drainage to the west then south

[6] The Station also used the new pond to manage demineralizer regenerative wastewater and demineralizer filter backwash water. CGF Report at 4-5; Agency Exhibit 32 at 5.

toward the South Ditch, to direct all stormwater toward the western end of the South Ditch, then toward Lake Michigan. CGF Report at 4-6.

The presence of these features demonstrates that the Station did not intend or design the Inactive Slag Field area to accumulate liquids, but constructed it so that any liquids that reached the area, primarily stormwater runoff, would be directed away from the area.

Phase 3: East Ash Pond, West Ash Pond, and Grassy Field (~1978-present): In April 1975, the Station began plans to modify and/or add to the existing wastewater pollution control facilities in order to comply with discharge limits promulgated by U.S. EPA and the Board. The Station concluded that the existing Original Ash Pond was in compliance with surface water regulations but identified improvements to be made, including installing a liner to prevent seepage of ash sluice water into the groundwater. CGF Report at 4-6 to 4-7. On March 30, 1977, ComEd submitted a permit application to the Agency to construct and operate new wastewater treatment facilities at the Station. The proposed design called for modifications to the Station's bottom ash-handling system, including splitting the Original Ash Pond into two separate, lined ponds. CGF Report at 4-7. The design basis submitted with the permit application stated:

> The existing ash pond will be modified to provide for easier and redundant operation. The existing single pond will be split into two separate ponds…each approximately 10 acres. This design allows for the cleaning of one pond, when required, while the other pond remains in operation so that settling is not disturbed. The ponds will also be protected with a membrane liner, e.g., hypalon, to prevent ground-water contamination.

CGF Report at 4-7; Agency Exhibit 33 at 10-27. ComEd's description of the single pond being split into two, separate 10-acre ponds is consistent with the conclusion that the Original Ash Pond was comprised of the area on which the two CCRSI currently sit, and was *not* located in the Grassy Field.

Illinois EPA issued the requested permit, Water Pollution Control Permit No. 1977-EB-3699, to construct and operate the bottom ash transport system as well as other new wastewater treatment facilities and equipment. CGF Report at 4-7; Agency Exhibit 33 at 3. According to this and associated documentation, the East and West Ash Ponds were constructed within the footprint of the Original Ash Pond, sharing the same boundary as the Original Ash Pond that preceded them—which did not encompass the Inactive Slag Field, where the Grassy Field is now located.

The 1978 wastewater treatment facilities project described above also provided for the regrading and seeding of the Inactive Slag Field, creating the present-day Grassy Field. CGF Report at 4-8. As part of the construction project, the Station regraded the Inactive Slag Field so that the area sloped from a high point along the new dike constructed for the West Ash Pond towards a new drainage ditch constructed along the Station's western property line, designated "Overflow Ditch No. 1." *Id.* Thus, the Grassy Field was designed to shed stormwater runoff into the site's drainage ditch system and that design has not changed. *Id.*

ii. <u>At No Time Was the Grassy Field or its Predecessors Designed to Accumulate Liquids.</u>

During all three operational phases of the area now occupied by the Grassy Field—Original Slag Field (portion of), Inactive Slag Field, and Grassy Field—the area failed to meet the second criterion of a CCR surface impoundment because it was never designed to hold an accumulation of liquids, *i.e.*, it could not accumulate ash sluice water or stormwater. The Original Slag Field was never an "Old Pond" or any type of pond; rather, the Station consistently implemented measures throughout the slag field's operating history to promote the conveyance of liquids into the South Ditch along the field's southern boundary and on to Lake Michigan. The Inactive Slag Field ceased even these functions after the Original Ash Pond was constructed around 1970,

though the Station still ensured liquids continued to drain from the Inactive Slag field into the South Ditch. When the Grassy Field was created, it was not designed or maintained in a manner to hold an accumulation of liquids. Contrary to the Agency's assertions, it was and is designed, constructed, and maintained to promote drainage of stormwater run-off to guide any liquid away from the area.

The ability to accumulate liquid is critical to the definition of a CCR surface impoundment. As U.S. EPA explained when it first promulgated Part 257, the risks associated with CCR surface impoundments are from the hydraulic head created by the water impounded with the CCR that promotes rapid leaching of contaminants. 80 Fed. Reg. 21301, "Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities," (April 17, 2015) at 21328, 21342, 21357. In its May 2023 Proposed Rule, U.S. EPA again emphasized the importance of the accumulation of liquid to the definition, stating: "Units that contain liquid present different risks than those that do not, and the applicable requirements should differentiate among them accordingly on that basis." 88 Fed. Reg. 31982 at 31993 (May 18, 2023). U.S. EPA repeats that the key is that impounded water creates a "hydraulic head" in an operating impoundment that it "allows for continual leaching of contaminants from the CCR and drives the resulting leachate…potentially into the underlying aquifer." 88 Fed. Reg. 31982 at 32011, and *supra* § I. Turning to its Proposed Rule on CCRMU, U.S. EPA explains that "CCRMU do not contain sufficient liquids to create a hydraulic head or to otherwise cause the conditions that might lead to a structural failure…." 88 Fed. Reg. 31982 at 32017. U.S. EPA concludes that certain of the existing requirements in Part 257 applicable to CCRSI are not necessary for CCRMU. The CCRSI definition does not merely require that the unit hold CCR and liquid for any amount of time, but rather requires that the unit hold an *accumulation* of CCR and liquid.

MWG is not making a "play on words" with respect to the term "design," as the Agency suggests. Rather, the Agency is leaping to a conclusion unsupported by the factual record. The Agency's unproven theory is that the "Old Pond" was a CCR surface impoundment designed to hold an accumulation of CCR and liquids and stores or disposes of CCR, so therefore the Grassy Field is also (by some de facto inference) designed to hold an accumulation of CCR and liquids and stores or disposes of CCR. Agency Recommendation Paras. 27 and 28. In support, the Agency references the 2018 USWAG decision, *Util. Solid Waste Activities Grp. v. EPA*, 901 F.3d 414 (2018) at 438-42, stating that "the D.C. Court of Appeals addressed a similar joining of the present tense 'is' and the past tense 'disposed of'" therein and concluding,

> Similarly, 'designed' is the past tense of 'design,' while 'is' allows the design to exist even if the initial design was in the past. Therefore, since Old Pond was designed to hold an accumulation of CCR and liquids, Grassy Field is also designed to hold an accumulation of CCR and liquids.

Agency Recommendation Para. 29.

The Agency's reliance on the USWAG decision is misplaced because that decision does not lend any support to its argument. In the USWAG case, petitioners argued that the RCRA statutory language at issue was inapplicable to inactive sites on the basis that the language required a present and ongoing disposal activity due to the present-tense nature of the word "is" in the term "is disposed of." The court disagreed, since "disposed" in the phrase "disposed of" is a past participle describing a state that continues to exist after the underlying action is completed (*i.e.*, disposal is continuing to occur). *Util. Solid Waste Activities Grp. v. EPA*, 901 F.3d at 440. Here, MWG is not attempting to make any similar distinction with respect to the Grassy Field and the larger "Old Pond" area surrounding and underlying it. MWG's position, as the evidence shows, is that the

Original Slag Field, Inactive Slag Field, and the Grassy Field were *never* designed to accumulate liquid in the first place.

The Agency makes contorted and technically incorrect attempts to characterize the Original Slag Area (the Agency's "Old Pond") as a settling pond. It does so by pulling disparate terms from unrelated federal rules. The Agency asserts that the entirety of the "Old Pond area," *i.e.* the Original Slag Area, was a "settling pond receiving sluiced CCR," arguing that the area met the definition of CCRSI because it "utilized the natural topographic depression design within the dune field to hold an accumulation of CCR" and "engaged in the treatment of CCR through its settling operation as a settling pond." Agency Recommendation at Para. 18, 25.

In truth, the Original Slag Field was a slag field that happened to be located on a sand dune. Slag/CCR was conveyed onto it with sluice water, but the water was intended to run off, not be held or accumulated within it. There was no "settling operation" nor any "treatment." Describing it as such does not make it so. The Agency's conclusions are based upon speculation and conjecture drawn merely from old aerial photos. This becomes abundantly clear when one compares the Agency's description of the sand dunes to the Station's operation of the Original Ash Pond. CGF Report at 4-4 to 4-5. When the Original Ash Pond was constructed, the Station was able to discontinue discharge into the slag field and utilized instead an ash settling pond that was in fact designed to provide the proper conditions for settlement, *i.e.*, accumulation of enough water for sufficient time to create a hydraulic head that would cause suspended CCR solids to settle out of the sluice water before the (treated) sluice water was discharged from the pond. CGF Report at 4-5. However, the Inactive Slag Field which ultimately became the Grassy Field continued to be designed *not* to accumulate liquid, and instead the liquid was directed to the ditches to the west and south.

The Agency's arguments all but ignore this distinction. Instead, the Agency takes a deep dive into the definition of "hold," asserting:

> Further, a CCR surface impoundment need not 'hold' liquids during its entire active life to meet the definition of CCR surface impoundment found at Section 845.120 Act or 40 C.F.R. 257.53….The word 'hold' is a verb defined as 'to enclose and keep in a container or within bounds' or 'prevent from leaving or getting away.' Synonyms include 'keep' or 'retain.' The act of keeping or retaining can be a temporary condition. The extent to which liquids are held within an impoundment is dependent upon several factors, including its design, use, and the permeability of the bottom of the impoundment and groundwater elevation.

Agency Recommendation at Para. 30. Under the Agency's interpretation, length of time is irrelevant, meaning that holding could even be momentary, which essentially renders the concept a nullity such that there is no difference between moving water and standing water. The Agency's subsequent observation that "Old Pond was never lined and is located on beach sand, allowing rapid infiltration of liquids from the impoundment," *id.*, suggests that even the continuous flowing of liquids through a porous barrier, like water through a sieve, might qualify as having been held.

The Agency's only true mention of the accumulation element appears in Agency Recommendation Paras. 20-21:

> By 1974, the design within Old Pond was modified. Old pond utilized designed, man-made excavations and dikes (berms) within the dune field to settle CCR from sluice water prior to discharge. See Agency Exhibit 4 and Agency Exhibit 32 at 5 and 17.
>
> Agency Exhibit 4 depicts what appears to be a low berm on the eastern edge of Old pond. These berms would have controlled the flow of sluice water to allow settling before discharge of water and further CCR storage…. Moving from west to east, an apparent berm is visible about one third of the way across Old Pond and there is what appears to be a pool of water east of that berm. *This is an accumulation of water with CCR storage occurring all around it.* Berms also appear to exist on the southern and eastern portions of Old Pond in the 1974 photo. Another apparent berm is located about two thirds of the way across Old Pond, with what appears to be a ditch just to its west. The ditch correlates with the location of one of the culverts indicated

> in permit 1974EB0346. See Agency Exhibit 32 at 17. *The water accumulated in the basin* would flow out of the basin, through the culvert that penetrated the berm. The CCR was left behind for continued treatment and storage. See Agency Exhibit 4.

(Emphasis added). However, both Agency Exhibit 4 (1974 aerial photograph of the Station) and Agency Exhibit 32 (1974 EB0346 Permit and Permit Record) confirm MWG's description of the area's history.[7] As described above, around 1970, the Station ceased using the area as a slag field and started construction of the Original Ash Pond, leaving the rest of the area inactive (the Inactive Slag Field). That inactive area later became the Grassy Field. The Original Ash Pond and the Grassy Field areas did not overlap. While a "pool of water," or "accumulation of water with CCR storage occurring all around it," may have occurred at times in the Original Ash Pond area, this does not render the separate Grassy Field area a surface impoundment. In fact, the Agency's suggestion that a ditch observed in the 1974 aerial photo lines up with a culvert on the Station drawing it cites at Agency Exhibit 32 page 17 (part of the Station's 1974 discharge permit record) makes sense because the cited drawing depicts the Original Ash Pond, even though this area of the drawing is labeled "slag field (settling basin)."

To avoid the critical requirement that the Grassy Field be capable of "accumulating liquid," the Agency unpersuasively looks to an unrelated regulation. Agency Recommendation at Para. 18. The Agency cites to the preamble of the 2015 federal rule, which provides these generic examples of CCRSI units: "…settling and aeration pits, ponds, and lagoons." *Id.* The Agency grasps at the word "settling" without acknowledging that it is not part of the rule's definition of CCRSI. Clearly, the CCRSI definition requires more than simply "settling" of ash to occur. The liquid the ash settles out of must also be contained.

[7] *N.B.*: Though Agency Exhibit 4 dates from 1974, the Agency has labeled it with the locations of the Grassy Field, West Pond, and East Pond, which were not constructed until approximately 1978.

The Agency also stretches for a definition of "settling pond" by deriving one from the definition of "waste treatment system" in the "Definitions of Waters of the United States", a part of U.S. EPA's Water Programs, located in Subchapter D of U.S. EPA's Chapter in Title 40 of the Federal Regulations. *Id*., 40 C.F.R. 120.2. The federal CCR rule is in Subchapter I, Part 257 of Title 40 and does not cite to, nor incorporate Subchapter D. The Agency's reliance on a wholly unrelated definition is legally deficient and the Board should disregard it. Moreover, the U.S. EPA recently deleted the defined term "waste treatment system" from Subchapter D, rendering the Agency's argument even more unreliable. 88 Fed. Reg. 3004, "Revised Definition of 'Waters of the United States'" (Jan. 18, 2023) at 3143.

In sum, the Agency's attempt to characterize the entire area at issue as a settling pond (and therefore a CCRSI) based on the physical properties of the underlying sand dune is unavailing. The Original Slag Field was exactly what its name suggests: a field where sluiced CCR from the Station's operations was sent via a pipe and the liquids were continually directed away by a system of engineered ditches, which are visible in historical aerial photographs of the site. The field was intended and designed to hold slag and drain liquids. No engineering was performed in the area to hold or accumulate liquids. As demonstrated by the Station's subsequent construction of an actual ash-settling pond in an area separate from the Grassy Field, the Station needed an ash-settling pond because it did not have one.

iii. <u>The term "Old Pond" is not used to refer to the area encompassing the Grassy Field.</u>

"Old Pond" is not a term the Station has ever used to refer to the larger area encompassing the Grassy Field. Neither do the historical documents cited by the Agency. The only place where the

"Old Pond" moniker appears is in labels applied to aerial photographs by the Agency itself.[8] For example, in Paragraph 9 of its Recommendation, the Agency states: "[W]ell before the Grassy Field was graded and seeded (See Agency Exhibit 33) a CCR surface impoundment, Old Pond, existed and operated in this area. See Agency Exhibit 2." Agency Exhibit 2 is a 1946 aerial photograph of the Station that the Agency prepared for this proceeding by digitally adding a flag labeled "Old Pond/Slag Field" and the caption: "Old Pond Location, Encompasses East Pond and West Pond as well." Similarly, Agency Exhibit 1, a 1939 aerial photograph of the Station, was also prepared by the Agency for this proceeding and again Agency-labeled with "Old Pond/Slag Field" and a caption stating: "Old Pond Location, Encompasses East Pond and West Pond as well." The Agency created the "Old Pond" labels. They appear nowhere else in any of the documentation or testimonial evidence in this record.

All of the references to ash field, ash pond or settling basin cited in Agency Recommendation Paragraph 10 and associated Footnote 1 are taken from permit-related documentation created between 1974 and 1978. During this time period, there actually was an ash-settling pond at the site, the Original Ash Pond, but it was not where the Grassy Field is today. CGF Report at 4-1 and 4-4 to 4-6. These references are inapplicable to the Grassy Field and instead clearly relate to the steps taken to replace the Original Ash Pond with the two new ash ponds constructed within the exact same footprint.

The Agency carries forward this same argument in Para. 27 of its Recommendation:

> ComEd was issued a permit stating ComEd would construct and operate two water pollution control facilities to replace the single settling basin (Old Pond) that existed previously. See Agency Exhibit 33 at 23. The permit established that East Pond would occupy the eastern one-third of Old Pond, West Pond would occupy

[8] The Agency did not identify who created and marked the exhibits, nor did it attach an affidavit verifying that the notations on each of the exhibits are true and correct.

> the middle one-third, and the western one-third of the Old Pond, the Grassy Field, would be graded and seeded. See Agency Exhibit 45 at 13.

In addition to the continuing use of the misnomer of "Old Pond," the Agency's statement is self-contradictory. The first sentence implies that one settling basin, "Old Pond," would be split in two while the next indicates it would be split into three, two ponds and a field. The underlying documentation provides: "The existing ash pond will be modified to provide for easier and redundant operation. The existing single pond will be split into two separate ponds (16BA100-NA & NB), each approximately 10 acres." Agency Exhibit 33, 1977EB3699 Permit and Permit Record, at 23.[9] The most logical and factually consistent interpretation is that the "existing ash pond," refers to the "Original Ash Pond" built in 1970 (*see* CGF report at 4-4 to 4-5) that was to be split into two new ponds covering approximately 20 acres, which is significantly less than the 40-acre area the Agency calls the "Old Pond."

The Agency also repeatedly cites to the hand drawing entitled "Figure 3" (Agency Exhibit 32), relating to the Station's 1974 discharge permit record.[10] This drawing depicts, *inter alia*, an area labeled "slag field (settling basin)," which the Agency suggests supports its argument that the entire "Old Pond" area was a settling basin. But a closer examination of the drawing reveals that the "slag field (settling basin)" is the eastern two thirds of the approximately 40-acre area, and the separate area to the west is the remaining one third. This configuration corresponds precisely to the configuration of the Inactive Slag Field/Grassy Field (occupying the western third) and Original Ash Pond/East and West Ponds (occupying the eastern two thirds). The depicted South Ditch extends beyond the "slag field (settling basin)" area to the west. This information

[9] Illinois EPA's citations are unclear. MWG presumes that this is the page Illinois EPA was citing to even though it is labeled as "page 3". There is no page "23" in Agency Exhibit 33. Instead, this quote from page 3 is on the 23rd page of Exhibit 33.
[10] There is no page number, but it appears to be the 17th page in the Agency's Exhibit 32.

demonstrates that the area referred to in the drawing as the "slag field (settling basin)" is the Original Ash Pond, which did not extend to the area now occupied by the Grassy Field.

The key facts are that the Original Ash Pond, and the present-day East and West Ash Ponds later established "within the footprint" of the Original Ash Pond, were the only "ponds" that have existed in the area—and none of them extended to the area occupied by the Grassy Field.

b. The Agency's treatment of the area as three separate CCRSI, with three separate permitting fees, is inconsistent with its position that the "Old Pond" area is one CCRSI.

On December 16, 2019, without any prior communication with MWG, the Agency sent MWG an invoice for three CCR surface impoundments: the East Pond, the West Pond, and an "Old Pond." See Illinois EPA invoice, Exhibit 28. On July 18, 2020, Illinois EPA issued a violation notice to MWG stating that it had determined the Old Pond was a CCR surface impoundment and that MWG had violated the Act by failing to pay the initial fee due under Section 22.59(j). The Agency's position that there are three CCRSIs undermines its contention that the East Pond, West Pond, and Grassy Field are within the single footprint of the "Old Pond." Agency Recommendation at Para. 11. The Agency's treatment of the area as three CCRSI for the purpose of permitting fees is inconsistent with its treatment of the area as one CCRSI for the purpose of its Recommendation. The Agency cannot have it both ways.

c. The Grassy Field is not an inactive CCRSI because it never was an active CCRSI.

The Agency argues that the Grassy Field is an inactive CCRSI "because it is a CCR surface impoundment in which CCR was placed before but not after October 19, 2015 and still contains CCR on or after October 19, 2015 and is located at an active facility," citing 35 Ill. Admin. Code 845.120. Agency Recommendation at Paras. 35-37. The Agency adds that because the "Old Pond"

area was not closed under an Agency approved closure or completed post-closure care, neither was the Grassy Field, so the Grassy Field "is an inactive CCR surface impoundment and must be regulated under Part 845." *Id.*

However, an inactive CCR surface impoundment must necessarily have been an "active" CCR surface impoundment before it can become an "inactive" one. The Agency conveniently ignores that part of the inactive CCR surface impoundment definition which states that inactive CCRSI "means *a CCR surface impoundment* in which CCR was placed before but not after October 19, 2015 and still contains CCR on or after October 19, 2015 …." 35 Ill. Admin. Code 845.120. (Emphasis added). The same is true of the Agency's assertion that: "Section 845.100(b) states that any CCR surface impoundment failing to meet the requirements of this Part is an open dump and therefore prohibited under Section 21(a) of the Act." Agency Recommendation at Para. 59. For all the reasons discussed above,[11] because neither the Grassy Field nor the portion of the "Old Pond" area in which it sits were ever CCR surface impoundments, it is not an inactive surface impoundment or an "open dump."

[11] Note that the federal definition of inactive CCR surface impoundment is "CCR surface impoundment that no longer receives CCR on or after October 19, 2015 and still contains both CCR *and liquids* on or after October 19, 2015." 40 C.F.R. 257.53. In the preamble to its recent Proposed Rule, in which U.S. EPA proposes (non-relevant) revisions to this definition, U.S. EPA makes it clear that the presence or absence of liquid is important to these determinations, stating: "Under the existing regulations, an impoundment that did not contain liquids prior to the effective date of the 2015 CCR Rule, whether because it was closed in accordance with existing state requirements or for other reasons, is not an inactive impoundment," and, "EPA is not proposing to expand the definition of a legacy CCR surface impoundment to include units that contain no liquid. Units that contain liquid present different risks than those that do not, and the applicable requirements should differentiate among them accordingly on that basis." 88 Fed. Reg. 31982 (May 18, 2023) at 31993. While the Illinois CCR rule's definition of inactive surface impoundment does not contain the explicit reference to liquids that the federal definition does, it still requires that an inactive CCR surface impoundment must first be a CCR surface impoundment.

III. Groundwater Conditions Underlying the Grassy Field do not Render it a CCRSI.

The Agency spends a significant portion of its Recommendation describing alleged impacts to groundwater from the Station's use of the area. See Agency Recommendation Paras. 49-52.[12] However, the condition of the groundwater under the Grassy Field is not relevant to a determination of whether the Grassy Field qualifies as a CCRSI. The CAPP Act (Illinois Public Act 101-0171, 415 ILCS 5/22.59) and the Illinois CCR Rule at 35 IAC Part 845, do not define a CCRSI based upon groundwater conditions. Groundwater is not even mentioned in the statutory and regulatory definitions. 35 Ill. Adm. Code 845.120; 415 ILCS 5/3.143; *see also* U.S. EPA's discussion in the preamble to the federal CCR rule in 80 Fed. Reg. 21301 at 21357 (April 17, 2015). The Agency's irrelevant rehashing of the groundwater data to bias the Board in favor of classifying the Grassy Field as a CCRSI properly should be set aside in the Board's determination of this issue.[13]

But even if groundwater conditions were a relevant consideration to the proper classification of the Grassy Field, three experts have evaluated this issue and found the groundwater poses no risk to public health or the environment. There are no potable wells downgradient of the Waukegan Station. *See Sierra Club et. al. v. Midwest Generation, LLC*, PCB 13-15, Order, (June 20, 2019),

[12] This data is available because MWG has been monitoring the groundwater at the Station for over ten years, including pursuant to the federal CCR rule at 40 C.F.R. 257 following its passage in 2015. Under construction permit No. 2016-EB-61340 (2016), MWG is required to monitor the groundwater at all of its monitoring wells at the Station for the constituents in 35 Ill. Adm. Code 620.410(a), including the wells surrounding the Grassy Field. See IEPA Construction Permit No. 2016-EB-61340 for Waukegan Station, attached to MWG's Petition as Exhibit 11, and a map of monitoring wells at the Station, attached to MWG's Petition as Exhibit 12.

[13] The Agency's claim that MWG has not voluntarily initiated any action at the Grassy Field is disingenuous at best. MWG has approached Illinois EPA to address the Grassy Field and Illinois EPA declined, barring MWG from taking any action. *See Sierra Club et. al. v. Midwest Generation, LLC*, PCB 13-15, 5/19/2023 Tr., at p. 8:14-15 (Test. of Ms. Sharene Shealey: "I believe that we offered the Agency a mitigation plan for the grassy field.") and p. 11:8-10 ("It is our position…that we cannot take any action without Agency agreement.")

p. 69. Waukegan Station has two separate Environmental Land Use Controls ("ELUCs"), approved by Illinois EPA, that prevent access to any potentially affected groundwater at the Stations. One of the ELUCs arises from the Greiss-Pfleger Tannery/General Boiler Site ("Tannery Site"), a contaminated industrial site that recently completed the Illinois EPA Site Remediation Program ("SRP"). MWG's groundwater monitoring shows that the Tannery Site continues to contaminate MWG's property with inorganic chemicals, including boron and arsenic, but the ELUC addresses any potential risks.

Three experts have also evaluated the quarterly groundwater data for the Station and concluded there was no risk to nearby surface waters. *See* Exhibit 37 (Expert Report on Relief and Remedy, Douglas Dorgan, P.G. and Michael Maxwell, P.G., Weaver Consultants Group (April 22, 2021)), , at pp. 45-47, Exhibit 38 (Appendix D, Expert Presentation of Weaver Consultants Group), , Exhibit 35 (Expert Report of John Seymour, P.E. Geosyntec Consultants (Nov. 2, 2015)), , at Appendix B, Exhibit 36 (updated Appendix B), , and Exhibit 34 (Expert Presentation of John Seymour).[14] *See also* the sworn testimony by these experts in *Sierra Club et al. v. Midwest Generation,* LLC, PCB13-15, Testimony of J. Seymour (2/1/2018 Tr., Exhibit 29, pp. 238-239, 278-281 and 2/2/2018 Tr., Exhibit 30, pp. 42-43, 79, 105, 124), Testimony of D. Dorgan, and M. Maxwell (6/12/2023 Tr., Exhibit 31, pp. 188, 218-220, 6/13/2023 Tr., Exhibit 32, p. 35-36, 78-81, 111-112, 151-153, 6/14/2023 Tr., Exhibit 33, p. 102). The experts compared the groundwater results from the Waukegan Station to the Lake Michigan Basin water quality standards, 35 Ill. Adm. Code Part 302, and conservatively assumed a complete exposure pathway, without any attenuation or dilution mechanisms, even though accounting for those hydrogeologic mechanisms

[14] Concurrent with this Response, MWG has filed a Motion to Incorporate Exhibits 901, 903, 907, 1701 and 1702 and the hearing transcripts for February 1 and 2, 2018 and June 12-14, 2023, from *Sierra Club et al. v. Midwest Generation,* LLC, PCB 13-15. They are identified here as Exhibits 29-38.

would have better reflected the actual environment and further reduced the likelihood of risk. The eastern-most groundwater monitoring wells at the Station are approximately 700-900 feet from Lake Michigan. Even at a distance of approximately 900 feet from the Lake, the groundwater data shows that the chemical concentrations are below the applicable water quality standards for Lake Michigan. As the groundwater flows off-site, advection, dispersion, and attenuation continues to occur before the groundwater reaches the lake, further reducing any potential risk. *See* Ex. 37 (Weaver Report, pp. 46-47), Ex. 35 (Seymour Report), p. 45, and Ex. 32 (6/13/2023 Hearing Tr., p. 151-154). The experts concluded there was no risk to Lake Michigan based on regulatory risk standards and standards of practice for risk assessment. When the experts' conclusions and testimony were presented in the hotly contested hearing, the opposing experts did not rebut or challenge them.

IV. The Grassy Field Will Be Specifically Regulated or Managed in the Future

The inapplicability of the CCRSI rules to the Grassy Field, which is better characterized as an area of unconsolidated fill, does not mean the area would be left unregulated, or as the Agency suggests, otherwise fail to "uphold the Board's intent to protect the public health and the environment in Illinois," Agency Recommendation at Para. 56. The U.S. EPA expects to finalize its Proposed Rule for CCRMU by April 2024. U.S. EPA Agenda, EPA-HQ-OLEM-2020-0107. If the final rule includes regulation of the Grassy Field, MWG will follow the rule. Following finalization of the U.S. EPA Proposed Rule, Illinois EPA or the Board could also use the subdocket in PCB R2020-019 (A) to codify the new federal rule for CCRMU as Illinois law.

Even if the U.S. EPA CCRMU rule or the rule in Subdocket A of R2020-019 are not finalized, in another matter involving the Station, MWG's own expert recommended capping the Grassy Field. Installing the cap could be conducted under the Illinois EPA Site Remediation Program, or

otherwise coordinated with Illinois EPA. *Sierra Club v. Midwest Generation, LLC*, PCB 13-15 6/13/2023 Tr., Exhibit 32, pp. 153-160. Ultimately, MWG will conduct some form of corrective action at the Grassy Field, and there is no reason to shoehorn it into an inapplicable rule.

V. CONCLUSION

For the reasons stated, MWG requests the Board enter an order which states that the Part 845 regulations do not apply to the Grassy Field at the Waukegan Station.

Respectfully submitted,

MIDWEST GENERATION, LLC

Petitioner,

By: /s/ Kristen L. Gale
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INDEX OF EXHIBITS FOR MIDWEST GENERATION, LLC'S
PETITION FOR ADJUSTED STANDARD FOR THE WAUKEGAN STATION

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Exhibit 35	Expert Report of John Seymour, P.E. Geosyntec Consultants (Nov. 2, 2015), MWG Exhibit 903 in *Sierra Club et al. v. Midwest Generation, LLC*, PCB 13-15	Attached to MWG's Mot. to Incorp.
Exhibit 36	Updated Appendix B to Expert Report of John Seymour, P.E. Geosyntec Consultants (Nov. 2, 2015) MWG Exhibit 907 in *Sierra Club et al. v. Midwest Generation, LLC*, PCB 13-15	Attached to MWG's Mot. to Incorp.
Exhibit 37	Expert Report on Relief and Remedy, Douglas Dorgan, P.G. and Michael Maxwell, P.G., Weaver Consultants Group (April 22, 2021) MWG Exhibit 1701 in *Sierra Club et al. v. Midwest Generation, LLC*, PCB 13-15	Attached to MWG's Mot. to Incorp.
Exhibit 38	Expert Presentation: "Remedy Assessment: Midwest Generation" of Weaver Consultants Group MWG Exhibit 1702 in *Sierra Club et al. v. Midwest Generation, LLC*, PCB 13-15	Attached to MWG's Mot. to Incorp.

CERTIFICATE OF SERVICE

The undersigned, an attorney, certifies that a true copy of the foregoing Notice of Filing, and Midwest Generation, LLC's Response to the Illinois Environmental Protection Agency's Recommendation, was electronically filed by delivery of a fileshare (Dropbox) on July 28, 2023 with the following:

Don Brown, Clerk of the Board
Illinois Pollution Control Board
60 E. Van Buren Street, Suite 630
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and that copies were sent via Dropbox on July 28, 2023 to the parties on the service list.

Dated: July 28, 2023 /s/Kristen L. Gale

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Exhibit 26

SR **SUPPORTING & RELATED MATERIAL**

Potential CCR Management Unit Universe

Posted by the **Environmental Protection Agency** on May 17, 2023

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Abstract

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More Details

Region	State	Plant Name	CCR Weblink	Unit Name	Unit Type	Closed	Potential GW Contamination from CCRMU	Source(s)	PDF Page Number	Key Source Link	Notes
10	AK	Healy	https://www.gvea.com/ccr-rule-compliance/?doing_wp_cron=1613578909.12704205513 00048828125	Historical Ash Handling Area	Closed CCR Surface Impoundment	Excavated with some CCR left in place	Yes	GWMR - 2021	14	https://gvea.com/wp-content/uploads/2022/02/Amended-FINAL2021-GWMCA-Report_20220204.pdf	
6	AR	Flint Creek	https://www.aep.com/about/codeofconduct/CCRRule/	CADL Roadbed BU	Other Solid Waste Management Area	Unknown		GWMR - 2021	136	https://cdn.entergy-arkansas.com/userfiles/content/ccr/indy/docs/2021_Groundwater_Monitoring_Corrective_Action_Report_Independence_landfill.pdf?_ga=2.226943774.200280567.1655476808-1481874884.1655476808	BU for roadbed construction;
6	AR	Flint Creek	https://www.aep.com/about/codeofconduct/CCRRule/	CADL Cells 1-11	Closed CCR Landfill	Unknown		GWMR - 2021	136	https://cdn.entergy-arkansas.com/userfiles/content/ccr/indy/docs/2021_Groundwater_Monitoring_Corrective_Action_Report_Independence_landfill.pdf?_ga=2.226943774.200280567.1655476808-1481874884.1655476808	Closed cells adjacent to active cells;
5	AR	Independence Steam Electric Station	http://www.entergy-arkansas.com/ccr/indy/	CADL Cells 1-11	Closed CCR Landfill	Yes	Yes	GWMR - 2021	136	https://cdn.entergy-arkansas.com/userfiles/content/ccr/indy/docs/2021_Groundwater_Monitoring_Corrective_Action_Report_Independence_landfill.pdf?_ga=2.136327792.1598427598.1655763935-1481874884.1655476808	
6	AR	Independence Steam Electric Station	http://www.entergy-arkansas.com/ccr/indy/	CADL Roadbed BU	Other Solid Waste Management Area	Unknown		GWMR - 2021	136	https://cdn.entergy-arkansas.com/userfiles/content/ccr/indy/docs/2021_Groundwater_Monitoring_Corrective_Action_Report_Independence_landfill.pdf?_ga=2.136327792.1598427598.1655763935-1481874884.1655476808	BU for roadbed construction;
6	AR	White Bluff	http://www.entergy-arkansas.com/ccr/WB/	CADL Roadbed BU	Other Solid Waste Management Area	Unknown		GWMR - 2021	186	https://cdn.entergy-arkansas.com/userfiles/content/ccr/wb/docs/2021_Groundwater_Monitoring_Corrective_Action_Report_White_Bluff_Landfill.pdf?_ga=2.224736656.200280567.1655476808-1481874884.1655476808	BU for roadbed construction;
6	AR	White Bluff	http://www.entergy-arkansas.com/ccr/WB/	Ravines	Other Solid Waste Management Area	Unknown		GWMR - 2021	186	https://cdn.entergy-arkansas.com/userfiles/content/ccr/wb/docs/2021_Groundwater_Monitoring_Corrective_Action_Report_White_Bluff_Landfill.pdf?_ga=2.224736656.200280567.1655476808-1481874884.1655476808	"CCR was placed into ravines"; Unclear if this included in the closed landfill or if it's separate
6	AR	White Bluff	http://www.entergy-arkansas.com/ccr/WB/	CADL Historical Section	Closed CCR Landfill	Unknown		GWMR - 2021	186	https://cdn.entergy-arkansas.com/userfiles/content/ccr/wb/docs/2021_Groundwater_Monitoring_Corrective_Action_Report_White_Bluff_Landfill.pdf?_ga=2.224736656.200280567.1655476808-1481874884.1655476808	Closed landfill is underneath existing landfill;
8	CO	Arapahoe	https://www.xcelenergy.com/stateselector?stateSelected=true&goto=%2Fcoal_ash_management	Discharge Pond	Closed CCR Surface Impoundment	Closure By Removal		ANPRM Comments			
8	CO	Arapahoe	https://www.xcelenergy.com/stateselector?stateSelected=true&goto=%2Fcoal_ash_management	Emergency Pond	Closed CCR Surface Impoundment	Closure By Removal		ANPRM Comments			
3	DE	Indian River Generating Station	http://www.nrg.com/legal/coal-combustion-residuals/	Phase 1 Landfill	Closed CCR Landfill	Yes	Yes	GWMR - 2021	6	http://3659839d00eefa48ab17-3929cea8f28e01ec3cb6bbf40cac69f0.r20.cf1.rackcdn.com/INR_IRLF_GMI21.pdf	Phase 2 landfill constructed on top of phase 1;
7	IA	Burlington	http://ccr.alliantenergy.com/	Ash Disposal Basin #2	Closed CCR Surface Impoundment	Unknown		HoC	7	https://ccr.alliantenergy.com/-/media/aeccr/ccrdocuments/burlington/surfaceimpoundment/designcriteria/bgshistoryofconstructionrev1final.pdf?la=en	Ash Disposal Pond #1 is the Ash Seal Pond, and therefore not a separate unit
7	IA	Burlington	http://ccr.alliantenergy.com/	North Ash Pond	Closed CCR Surface Impoundment	Unknown	Yes	HoC	28	https://ccr.alliantenergy.com/-/media/aeccr/ccrdocuments/burlington/surfaceimpoundment/designcriteria/bgshistoryofconstructionrev1final.pdf?la=en	Ash Disposal Pond #1 is the Ash Seal Pond, and therefore not a separate unit
7	IA	Lansing	http://ccr.alliantenergy.com/Lansing/index.htm	Original CCR Surface Impoundment	Closed CCR Surface Impoundment	Yes		HoC	6	https://ccr.alliantenergy.com/-/media/aeccr/ccrdocuments/lansing/surfaceimpoundment/designcriteria/lanhistoryofconstruction2021.pdf?la=en	Primary Ash Settling Basin is the LAN Primary Ash Pond
7	IA	Prairie Creek	https://ccr.alliantenergy.com/PrairieCreek?utm_source=WS&utm_campaign=PrairieCreek	Former Hydrated Fly Ash Storage Pile	Other Solid Waste Management Area	Unknown		GWMR - 2021	28	https://ccr.alliantenergy.com/prairiecreek/surfaceimpoundment/groundwatermonitoring	
7	IA	Sutherland	http://ccr.alliantenergy.com/Sutherland/index.htm	Original CCR Surface Impoundment	Closed CCR Surface Impoundment	Unknown		HoC	6	https://ccr.alliantenergy.com/-/media/aeccr/ccrdocuments/sutherland/surfaceimpoundment/designcriteria/sgshistoryofconstructionfinal.pdf?la=en	Also known as Ash Disposal Pond, Ash Pit; existing units are within the footprint but unclear if they fully overlap
5	IL	Baldwin Energy Complex	https://www.luminant.com/ccr/	Secondary Pond	Other Solid Waste Management Area	Unknown		HoC	5, 9, 30	https://www.luminant.com/documents/ccr/Illinois/Baldwin/2016/History%20of%20Construction.pdf	May not receive/store CCR, but clearly connects to CCR units
5	IL	Baldwin Energy Complex	https://www.luminant.com/ccr/	Tertiary Pond	Other Solid Waste Management Area	Unknown		HoC	30	https://www.luminant.com/documents/ccr/Illinois/Baldwin/2016/History%20of%20Construction.pdf	Only visible on map
5	IL	Hennepin Power Station	https://www.luminant.com/ccr/#hennepin	Ash Pond No. 4	Closed CCR Surface Impoundment	Yes	Yes	ACM	7	https://www.luminant.com/documents/ccr/Illinois/Hennepin/2019/2019-Hennepin-Assessment%20of%20Corrective%20Measures%20Report-Ash%20Pond%20No.%202.pdf	"Non-CCR unit capped or otherwise maintained"; "classified as capped or otherwise maintained"
5	IL	Joppa	https://www.luminant.com/ccr/#joppa	West Pond 1	Closed CCR Surface Impoundment	Unknown		ANPRM Comments			
5	IL	Lincoln Generating Facility	http://www.nrg.com/legal/coal-combustion-residuals/	West Filled Area	Closed CCR Surface Impoundment	Yes		GWMR - 2021	13	http://3659839d00eefa48ab17-3929cea8f28e01ec3cb6bbf40cac69f0.r20.cf1.rackcdn.com/LSQ_LSQ1_GMI22.pdf	
5	IL	Newton	https://www.luminant.com/ccr/#newton	Secondary Ash Pond	Closed CCR Surface Impoundment	Yes		HoC	16	https://www.luminant.com/documents/ccr/Illinois/Newton/2016/History%20of%20Construction.pdf	See Map
5	IL	Newton	https://www.luminant.com/ccr/#newton	Landfill 1	Inactive CCR Landfill	Yes	Yes	CAR - 2021	53	https://www.luminant.com/documents/ccr/Illinois/Newton/2021/2021-Newton-2021%20Annual%20Groundwater%20Monitoring%20and%20Corrective%20Action%20Report-Landfill%202.pdf	It appears landfill 1, LF1, closed prior to CCR, now they use LF2 only
5	IL	Waukegan	https://www.nrg.com/legal/coal-combustion-residuals.html	Old Pond	Closed CCR Surface Impoundment	Unknown		ANPRM Comments			
5	IL	Waukegan	https://www.nrg.com/legal/coal-combustion-residuals.html	Historic Fill	Other Solid Waste Management Area	Unknown	Yes	IL EPA documents		IL EPA documents- will add to docket	
5	IL	Will County	https://www.nrg.com/legal/coal-combustion-residuals.html	Pond 1 North	Closed CCR Surface Impoundment	Unknown		ANPRM Comments			
5	IL	Will County	https://www.nrg.com/legal/coal-combustion-residuals.html	Pond 1 South	Closed CCR Surface Impoundment	Unknown		ANPRM Comments			
5	IL	Wood River	https://ccrwoodriver.com/	Secondary East Polishing Pond	Other Solid Waste Management Area	Unknown	Yes	HoC	7	https://ccrwoodriver.com/wp-content/uploads/sites/6/2020/09/History-of-Construction.pdf	
5	IN	AES Petersburg	http://ccr-petersburg.com/Home/default.aspx	Ash Pond D	Closed CCR Surface Impoundment	Unknown	Yes	GWMR - 2021	Figure 1-1, 9	AESI-Petersburg-AP-2021-Annual-GWM-and-CA-Rpt-1-31-2022-FINAL.pdf (q4cdn.com)	If you look at the figures, there is an Ash Pond D and B. They are 'non CCR" as per earlier reports/figures, but later reports (see 2019 CAR) have them all lumped together as one area, so I added them.

5	IN	AES Petersburg	http://ccr-petersburg.com/Home/default.aspx	Ash Pond B	Closed CCR Surface Impoundment	Unknown	Yes	GWMR - 2021	Figure 1-1, 9	AESI-Petersburg-AP-2021-Annual-GWM-and-CA-Rpt-1-31-2022-FINAL.pdf (q4cdn.com)	If you look at the figures, there is an Ash Pond D and B. They are 'non CCR" as per earlier reports/figures, but later reports (see 2019 CAR) have them all lumped together as one area, so I added them.
5	IN	Breed	(not regulated)	Landfill	Inactive CCR Landfill	Unknown		ANPRM Comments			
5	IN	Cayuga (IN)	https://www.duke-energy.com/environment/reports/ccr-compliance.asp	Historical Ash Ponds	Closed CCR Surface Impoundment	Unknown		GWMR - 2018	153	https://desitecoreprod-cd.azureedge.net/_/media/pdfs/our-company/ash-management/190484/cay-annl-gmcar-lf-2018.pdf?la=en&rev=b1d682ba8921471385497d014e23f40b	on the map there appear to be two ponds, but the documentation doesn't specifically label either ; on the map there appear to be two ponds, but the documentation doesn't specifically label either
5	IN	Clifty Creek	http://www.ovec.com/CCRClifty.php	Type III Landfill	Closed CCR Landfill	Unknown		ASD - 2019	13	Clifty Creek Landfill- Alternative Source Demonstration Appendix III Boron.pdf (ovec.com)	Below new Type 1 landfill (different permits); Leaking Type 3 Landfill (identified via ASD) below new Type 1 landfill that was constructed on top
5	IN	Eagle Valley	http://ccr-eaglevalley.com/Home/default.aspx	Exempt Pond D	Closed CCR Surface Impoundment	Yes	Yes	ACM	All figures, see 34-37	http://s2.q4cdn.com/262924254/files/doc_downloads/2019/IPL-EV-CMA-Final.pdf	Both are labeled exempt, but are also in the figure. None of the reports have any reason behind why they are not included. Pond D was explicitly within the CCR lines in the figure, so I added these.
5	IN	Eagle Valley	http://ccr-eaglevalley.com/Home/default.aspx	Exempt Pond E	Closed CCR Surface Impoundment	yes	Yes	ACM	All figures, see 34-37	http://s2.q4cdn.com/262924254/files/doc_downloads/2019/IPL-EV-CMA-Final.pdf	Both are labeled exempt, but are also in the figure. None of the reports have any reason behind why they are not included. Pond D was explicitly within the CCR lines in the figure, so I added these.
5	IN	Harding Street	http://ccr-hardingstreet.com/Home/default.aspx	Former Pond 2	Closed CCR Surface Impoundment	Yes		GWMR - 2022	See Page 9 and 10 (figures)	AES-Indiana-HSS-2021-Annual-GWM-and-CA-Rpt-1-29-2022-FINAL.pdf (q4cdn.com)	See page 10, all areas are around the ash pond system boundary, not sure why they were all left out. (Also, 2a and 2b are different than 2, see map)
5	IN	Harding Street	http://ccr-hardingstreet.com/Home/default.aspx	Former Pond 4A	Closed CCR Surface Impoundment	Yes		GWMR - 2022	See Page 9 and 10 (figures)	AES-Indiana-HSS-2021-Annual-GWM-and-CA-Rpt-1-29-2022-FINAL.pdf (q4cdn.com)	See page 10, all areas are around the ash pond system boundary, not sure why they were all left out. (Also, 2a and 2b are different than 2, see map)
5	IN	Harding Street	http://ccr-hardingstreet.com/Home/default.aspx	Former Pond 4B	Closed CCR Surface Impoundment	Yes		GWMR - 2022	See Page 9 and 10 (figures)	AES-Indiana-HSS-2021-Annual-GWM-and-CA-Rpt-1-29-2022-FINAL.pdf (q4cdn.com)	See page 10, all areas are around the ash pond system boundary, not sure why they were all left out. (Also, 2a and 2b are different than 2, see map)
5	IN	Harding Street	http://ccr-hardingstreet.com/Home/default.aspx	Former Pond 4	Closed CCR Surface Impoundment	Yes		GWMR - 2022	See Page 9 and 10 (figures)	AES-Indiana-HSS-2021-Annual-GWM-and-CA-Rpt-1-29-2022-FINAL.pdf (q4cdn.com)	See page 10, all areas are around the ash pond system boundary, not sure why they were all left out. (Also, 2a and 2b are different than 2, see map)
5	IN	Michigan City	https://www.nipsco.com/about-us/ccr-rule-compliance-data-information	Historical fill under ash ponds	CCR Disposed Below Regulated CCR Unit	Unknown	Yes	Closure Plan	28	https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/ccr/michigan-city-generating-station/closure-and-post-closure-care/michigan-city-generating-station-ccr-surface-impoundments-closure-and-post-closure-plan.pdf?sfvrsn=7e823d51_4	
5	IN	Noblesville	(not regulated)	Ash Disposal Site	Inactive CCR Landfill	Waste In Place		ANPRM Comments			
4	IN	R M Schahfer	https://www.nipsco.com/about-us/ccr-rule-compliance-data-information	Landfill Phases 1 and 2	Closed CCR Landfill	Yes	Yes	GWMR - 2021	21	https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/ccr/r.m.-schahfer/r.m.-schahfer-generating-station-groundwater-moniitoring-and-corrective-action/rm-schahfer-2021-gmcar-landfill-v-vi-vii.pdf?sfvrsn=8cd51b51_4	
5	IN	R M Schahfer	https://www.nipsco.com/about-us/ccr-rule-compliance-data-information	Berm around Phased Landfill	Other Solid Waste Management Area	Unknown		GWM System Design Manual	7	https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/ccr/r.m.-schahfer/r.m.-schahfer-generating-station-groundwater-moniitoring-and-corrective-action/r.m.-schahfer-generating-station---groundwater-monitoring-system-design-manual---june-2022.pdf?sfvrsn=80c21351_1	
5	IN	Rockport	https://www.aep.com/about/codeofconduct/CCRRule/	Closed Landfill	Closed CCR Landfill	Yes		GWMR - 2021	11	https://www.aep.com/Assets/docs/requiredpostings/ccr/2022/2-18-2022/RK-LF-GWMonitoringCorrectiveActionRpt-01312022.pdf	Only identified on map;
4	KY	Cane Run	https://lge-ku.com/CCR	Legacy Landfill	Inactive CCR Landfill	Unknown		ACM	6	https://ccr.lge-ku.com/sites/ccr/files/ccr/W_CR_ATB_GMCA_NACACM_122120.pdf	"The majority of fly ash and FGD solids generated at Cane Run were combined with other additives to form a concrete-like material known as Poz-o-Tec for final placement into the legacy CCR Landfill."
4	KY	Cooper	https://www2.ekpc.coop/CCR_Rule_Compliance_Data_and_Information.html	Former surface impoundment	Closed CCR Surface Impoundment	Yes	Yes	ASD - 2019 (2019 GWMR)	24	https://www2.ekpc.coop/ccr/Cooper_Reports_files/PDFs/Cooper%20Station%20Landfill/Groundwater%20Monitoring%20and%20Corrective%20Action/Annual%20Groundwater%20Monitoring%20and%20Corrective%20Action%20Report%20257.90%20(e)/Cooper_Landfill_20190131_Annual%20GWM%20&%20CA%20Report.pdf	"Before construction of the CCR unit, ash was originally managed in an unlined surface impoundment that is located beneath the CCR unit."
4	KY	Dale Station	https://www2.ekpc.coop/CCR_Rule_Compliance_Data_and_Information.html	Ash Pond 3	Closed CCR Surface Impoundment	Closure By Removal		ANPRM Comments			
4	KY	E W Brown	https://lge-ku.com/CCR	Main Ash Pond	Closed CCR Surface Impoundment	Yes	Yes	CAR - 2019	3, 41 (search for 'legacy')	https://ccr.lge-ku.com/sites/ccr/files/ccr/W_BR_GNST_GMCA_ANGWA_021120.pdf	Legacy unit that closed in 2011, cannot find map; *Cannot find a map of this one - "The CCR Landfill is a permitted facility located in the northern portion" of the Multi-Unit, constructed atop a closed legacy CCR impoundment identified as the Main Ash Pond (MAP). It is this former ash treatment basin, closed in 2011, that has been identified as the likely source of the CCR constituents observed in the groundwater on the east side of the CCR Landfill in the northern portions of the Multi-Unit.
4	KY	Paradise	https://www.tva.gov/Environment/Environmental-Stewardship/Coal-Combustion-Residuals	Jacob's Creek Ash Pond	Closed CCR Surface Impoundment	Yes		GWMR - 2018	4	https://www.tva.com/docs/default-source/ccr/paf/surface-impoundment---peabody-ash-pond/groundwater-monitoring/annual-groundwater-report/257-90(e)_annual-groundwater-monitoring-report_paf_peabody-ash-pond_2018.pdf?sfvrsn=4a4116b6_2	
3	MD	Dickerson	https://www.genon.com/ccr-rule-compliance	Cell C	Closed CCR Landfill	Yes		GWMR - 2021	5 (text), 14-16 (figures)	https://static1.squarespace.com/static/5b64a999a2772cef1fe10e54/t/6222aad52e16c33d42f95799/1646439132430/Westland_Annual_GW_and_CA_Report_2021.pdf	Closed before CCR Rule

5	MI	Dan E Karn	https://www.consumersenergy.com/community/sustainability/environment/waste-management/coal-combustion-residuals#de-karn	Underlying Fill	CCR Disposed Below Regulated CCR Unit	Unknown	Yes	EPA discussions with regions/states			Ash used as surficial fill underneath lined impoundment;
5	MI	Dan E Karn	https://www.consumersenergy.com/community/sustainability/environment/waste-management/coal-combustion-residuals#de-karn	Bottom Ash Pond	Closed CCR Surface Impoundment	Unknown		GWMR - 2021 (for the Lined Impoundment)	25 (see 2 bottom ash ponds)	https://www.consumersenergy.com/-/media/CE/Documents/sustainability/coal-combustion-residuals/dek/lined-impoundment/2022-01-dek-kli-2021-ccr-annual-gw-report-final.ashx	Maps show two Bottom Ash Pond, one N, one S, not sure which one is marked already, ASDs all natural/do not cite the CCR units as the source
5	MI	Erickson Station	http://www.lbwl.com/CCR-Rule-Compliance-Data-and-Information/	Impoundment system	Closed CCR Surface Impoundment	Yes	Yes	ACM	7	https://www.lbwl.com/sites/default/files/documents/acm_bwl_20211105.pdf	Forebay and Retention Pond are only part of former Impoundment System, do not take up whole footprint
5	MI	J B Sims	https://ghblp.org/about-us/reports/ccr-rule-compliance-data-and-information/	Ash and waste fill materials	Other Solid Waste Management Area	Unknown	Yes	ASD - 2020 (Unit 3 Impoundments)	5, 7, 11, 12	https://ghblp.org/wp-content/uploads/2021/01/Alternate-Source-Demonstration-JB-Sims-Unit-3-Impoundments-min.pdf	See unit name;
5	MI	J B Sims	https://ghblp.org/about-us/reports/ccr-rule-compliance-data-and-information/	CCR Disposed below Unit 3 Impoundment	CCR Disposed Below Regulated CCR Unit	Unknown		EPA discussions with regions/states			Could be the same as the general fill used at site noted in ASD
5	MI	J H Campbell	https://www.consumersenergy.com/community/sustainability/environment/waste-management/coal-combustion-residuals	Pond B	Closed CCR Surface Impoundment	Yes	Yes	GWMR - 2021	22	https://www.consumersenergy.com/-/media/CE/Documents/sustainability/coal-combustion-residuals/jhc/dry-ash-landfill/202201-jhclf-ccr-2021-annual-gw-report-trc.ashx	*See Figures, for all of the closed pond locations, Various ASDs that are inconclusive
5	MI	J H Campbell	https://www.consumersenergy.com/community/sustainability/environment/waste-management/coal-combustion-residuals	Pond C	Closed CCR Surface Impoundment	Yes	Yes	GWMR - 2021	22	https://www.consumersenergy.com/-/media/CE/Documents/sustainability/coal-combustion-residuals/jhc/dry-ash-landfill/202201-jhclf-ccr-2021-annual-gw-report-trc.ashx	*See Figures, for all of the closed pond locations, Various ASDs that are inconclusive
5	MI	J H Campbell	https://www.consumersenergy.com/community/sustainability/environment/waste-management/coal-combustion-residuals	Pond D (North, Mid, Mid south, and South)	Closed CCR Surface Impoundment	Yes	Yes	GWMR - 2021	22	https://www.consumersenergy.com/-/media/CE/Documents/sustainability/coal-combustion-residuals/jhc/dry-ash-landfill/202201-jhclf-ccr-2021-annual-gw-report-trc.ashx	*See Figures, for all of the closed pond locations, Various ASDs that are inconclusive
5	MI	J H Campbell	https://www.consumersenergy.com/community/sustainability/environment/waste-management/coal-combustion-residuals	Pond F	Closed CCR Surface Impoundment	Yes	Yes	GWMR - 2021	22	https://www.consumersenergy.com/-/media/CE/Documents/sustainability/coal-combustion-residuals/jhc/dry-ash-landfill/202201-jhclf-ccr-2021-annual-gw-report-trc.ashx	*See Figures, for all of the closed pond locations, Various ASDs that are inconclusive
5	MI	J H Campbell	https://www.consumersenergy.com/community/sustainability/environment/waste-management/coal-combustion-residuals	Pond G (G1 and G2)	Closed CCR Surface Impoundment	Yes	Yes	GWMR - 2021	22	https://www.consumersenergy.com/-/media/CE/Documents/sustainability/coal-combustion-residuals/jhc/dry-ash-landfill/202201-jhclf-ccr-2021-annual-gw-report-trc.ashx	*See Figures, for all of the closed pond locations, Various ASDs that are inconclusive
5	MI	J H Campbell	https://www.consumersenergy.com/community/sustainability/environment/waste-management/coal-combustion-residuals	Pond H	Closed CCR Surface Impoundment	Yes	Yes	GWMR - 2021	22	https://www.consumersenergy.com/-/media/CE/Documents/sustainability/coal-combustion-residuals/jhc/dry-ash-landfill/202201-jhclf-ccr-2021-annual-gw-report-trc.ashx	*See Figures, for all of the closed pond locations, Various ASDs that are inconclusive
5	MI	J H Campbell	https://www.consumersenergy.com/community/sustainability/environment/waste-management/coal-combustion-residuals	Pond K	Closed CCR Surface Impoundment	Yes	Yes	GWMR - 2021	22	https://www.consumersenergy.com/-/media/CE/Documents/sustainability/coal-combustion-residuals/jhc/dry-ash-landfill/202201-jhclf-ccr-2021-annual-gw-report-trc.ashx	*See Figures, for all of the closed pond locations, Various ASDs that are inconclusive
5	MI	Presque Isle	http://www.we-energies.com/environmental/coal-combustion.htm	PIP Landfill #2	Closed CCR Landfill	Unknown	Yes	GWMR - 2018	23	https://www.we-energies.com/environment/pdf/presque-isle-annualreport2018.pdf	
5	MI	Presque Isle	http://www.we-energies.com/environmental/coal-combustion.htm	PIP Landfill #1	Closed CCR Landfill	Unknown	Yes	GWMR - 2018	23	https://www.we-energies.com/environment/pdf/presque-isle-annualreport2018.pdf	
5	MN	Austin Northeast	https://www.austinutilities.com/pages/CCRRule/	Solid waste disposal area	Closed CCR Landfill	Yes		NOI to Close	1	https://www.austinutilities.com/assetmanager/downloads/documents/pdf/Austin%20Utilities%20Notice%20of%20Intent.pdf	A polishing pond is present but no evidence it received CCR
5	MN	B C Cobb	https://merg-ccrrule.com/	CCR disposed below Bottom Ash Pond	CCR Disposed Below Regulated CCR Unit	Unknown		EPA discussions with regions/states			
5	MN	B C Cobb	https://merg-ccrrule.com/	CCR disposed below Ponds 0-8	CCR Disposed Below Regulated CCR Unit	Unknown		EPA discussions with regions/states			
5	MN	Black Dog	https://www.xcelenergy.com/coal_ash_management	Legacy On site Ash Basin	Closed CCR Surface Impoundment	Yes		GWMR - 2019	8, 18	https://www.xcelenergy.com/staticfiles/xe-responsive/Environment/Coal%20Ash%20Management/NSPM-Black-Dog-GW-System-Cert-Report-signed.pdf	Doesn't say what they were split up as, but page 18 shows the old outline of the Ash Basin that closed in the 1970s, much larger then what is currently on site. Extends current Pond A past Former Pond 4. No actual GWMR available, just the system certification.
5	MN	Clay Boswell	http://mp-ccr.azurewebsites.net/Boswell	Closed Fly Ash Pond	Closed CCR Surface Impoundment	Unknown		GWMR - 2021	24	https://mp-ccr.azurewebsites.net/Content/Facilities/Boswell/Groundwater_Monitoring/BEC%202021%20Annual%20Groundwater%20Monitoring%20and%20Corrective%20Action%20Report%20-%20All%20CCR%20Units.pdf	Closed Fly Ash Pond is not listed under Master Compliance Report
5	MN	Sherburne County	https://www.xcelenergy.com/coal_ash_management	Pond #1	Closed CCR Surface Impoundment	Yes		CAR - 2021 (for Bottom Ash Pond)	27	https://www.xcelenergy.com/staticfiles/xe-responsive/Environment/Coal%20Ash%20Management/BAP%20CCR%202021%20Annual%20GW%20Mon%20&%20Corrective%20Action%20Report.pdf	See figures with labeled inactive CCR units.
5	MN	Sherburne County	https://www.xcelenergy.com/coal_ash_management	Pond #2	Closed CCR Surface Impoundment	Yes		CAR - 2021 (for Bottom Ash Pond)	27	https://www.xcelenergy.com/staticfiles/xe-responsive/Environment/Coal%20Ash%20Management/BAP%20CCR%202021%20Annual%20GW%20Mon%20&%20Corrective%20Action%20Report.pdf	See figures with labeled inactive CCR units.
5	MN	Sherburne County	https://www.xcelenergy.com/coal_ash_management	Bottom Ash pond #2	Closed CCR Surface Impoundment	Unknown		CAR - 2021 (for Bottom Ash Pond)	27, also listed on website but not in Master Compliance Report	https://www.xcelenergy.com/staticfiles/xe-responsive/Environment/Coal%20Ash%20Management/BAP%20CCR%202021%20Annual%20GW%20Mon%20&%20Corrective%20Action%20Report.pdf	See figures and website - website has it listed as a CCR unit already. Says bottom ash pond is closed, and bottom ash pond #2 is the active one.
7	MO	John Twitty Energy Center	https://www.cityutilities.net/corporate/legal/ccr/	Process Wastewater Pipeline	Other Solid Waste Management Area	Unknown		ASD - (2020 GWMR)	272	https://www.cityutilities.net/wp-content/uploads/ccr-itec-groundwatermonitoring-report-2020.pdf	It is a "failed" pipeline that has been retired and replace; Given that it has been replaced, the ASD states that SSI concentration will likely decrease below GW protection standard over next several years
7	MO	Meramec	https://www.ameren.com/Environment/ccr-rule-compliance	Surface Impoundment MOPF	Closed CCR Surface Impoundment	Yes		GWMR - 2020	3 (text), 24 (figure)	https://www.ameren.com/-/media/corporate-site/files/environment/ccr-rule/2020/annual-groundwater-monitoring-report-mec.ashx	Labeled as exempt but text confirms these historically all held CCR
7	MO	Meramec	https://www.ameren.com/Environment/ccr-rule-compliance	Surface Impoundment MOPG	Closed CCR Surface Impoundment	Yes		GWMR - 2020	3 (text), 24 (figure)	https://www.ameren.com/-/media/corporate-site/files/environment/ccr-rule/2020/annual-groundwater-monitoring-report-mec.ashx	Labeled as exempt but text confirms these historically all held CCR

7	MO	Meramec	https://www.ameren.com/Environment/ccr-rule-compliance	Surface Impoundment MOPH	Closed CCR Surface Impoundment	yes		GWMR - 2020	3 (text), 24 (figure)	https://www.ameren.com/-/media/corporate-site/files/environment/ccr-rule/2020/annual-groundwater-monitoring-report-mec.ashx	Labeled as exempt but text confirms these historically all held CCR
7	MO	Meramec	https://www.ameren.com/Environment/ccr-rule-compliance	Surface Impoundment MOPI	Closed CCR Surface Impoundment	Yes		GWMR - 2020	3 (text), 24 (figure)	https://www.ameren.com/-/media/corporate-site/files/environment/ccr-rule/2020/annual-groundwater-monitoring-report-mec.ashx	Labeled as exempt but text confirms these historically all held CCR
8	MT	Colstrip Energy LP	https://www.talenenergy.com/ccr-colstrip/	1 & 2 A Pond (Capped and Closed)	Closed CCR Surface Impoundment	Unknown		GWMR - 2021	192	https://tln-environmental.s3.amazonaws.com/Colstrip+3%264+Bottom+Ash/2021+Annual+Groundwater+Monitoring+and+corrective+Action+Report+-+3%264+Bottom+Ash.pdf	See Figure, its hard to say what exactly might be legacy, I kept what I thought made sense. Some may need to be deleted
8	MT	Colstrip Energy LP	https://www.talenenergy.com/ccr-colstrip/	Brine Concentrator Solids Disposal Area	Other Solid Waste Management Area	Unknown		GWMR - 2021	192	https://tln-environmental.s3.amazonaws.com/Colstrip+3%264+Bottom+Ash/2021+Annual+Groundwater+Monitoring+and+corrective+Action+Report+-+3%264+Bottom+Ash.pdf	See Figure, its hard to say what exactly might be legacy, I kept what I thought made sense. Some may need to be deleted
8	MT	Colstrip Energy LP	https://www.talenenergy.com/ccr-colstrip/	Former 1 & 2 Bottom Ash Pond	Closed CCR Surface Impoundment	Unknown		GWMR - 2021	192	https://tln-environmental.s3.amazonaws.com/Colstrip+3%264+Bottom+Ash/2021+Annual+Groundwater+Monitoring+and+corrective+Action+Report+-+3%264+Bottom+Ash.pdf	See Figure, its hard to say what exactly might be legacy, I kept what I thought made sense. Some may need to be deleted
8	MT	Colstrip Energy LP	https://www.talenenergy.com/ccr-colstrip/	1 & 2 Step B Cell	Closed CCR Surface Impoundment	Unknown		GWMR - 2021	192	https://tln-environmental.s3.amazonaws.com/Colstrip+3%264+Bottom+Ash/2021+Annual+Groundwater+Monitoring+and+corrective+Action+Report+-+3%264+Bottom+Ash.pdf	not 100% sure what this is ; See Figure, its hard to say what exactly might be legacy, I kept what I thought made sense. Some may need to be deleted
8	MT	Colstrip Energy LP	https://www.talenenergy.com/ccr-colstrip/	Stage 1 Evap Pond (Closed)	Closed CCR Surface Impoundment	Unknown		GWMR - 2021	192	https://tln-environmental.s3.amazonaws.com/Colstrip+3%264+Bottom+Ash/2021+Annual+Groundwater+Monitoring+and+corrective+Action+Report+-+3%264+Bottom+Ash.pdf	See Figure
8	MT	Colstrip Energy LP	https://www.talenenergy.com/ccr-colstrip/	A Cell	Closed CCR Surface Impoundment	Unknown		GWMR - 2021	192	https://tln-environmental.s3.amazonaws.com/Colstrip+3%264+Bottom+Ash/2021+Annual+Groundwater+Monitoring+and+corrective+Action+Report+-+3%264+Bottom+Ash.pdf	not 100% sure what this is ; See Figure, its hard to say what exactly might be legacy, I kept what I thought made sense. Some may need to be deleted
4	NC	Dan River	http://www.duke-energy.com/environment/reports/ccr-compliance.asp	Former Ash Stack 1	Other Solid Waste Management Area	Yes	Yes	ASD (within CPP GWMR)	9, 761	dr-annl-gmcar-lf-2021.pdf (azureedge.net)	"In accordance with § 257.94(e)(2), semiannual ASDs were successfully developed and showed that a source other than the CCR unit caused the SSI..";
8	ND	Coal Creek	http://ccr.greatriverenergy.com/	CCR disposed below Upstream Raise 91 Impoundment	CCR Disposed Below Regulated CCR Unit	Unknown		EPA discussions with regions/states			Multiple ASDs cite duck pond removal and heavy rain as sources
8	ND	Milton R Young	https://www.minnkota.com/minnkota-website/our-power/ccr-rule-compliance	Cell 1	Closed CCR Landfill	Yes		GWMR - 2021	23 (figures), 6 (text)	https://assets.website-files.com/5ef212e2cdca1e094063db4e/61e87dd8db29bea91d67e6bb_2021%20Annual%20Groundwater%20Monitoring%20and%20Corrective%20Action%20Report.pdf	See the figure map, cell 1 was a CCR landfill that previously closed. Also see Section 1
7	NE	Gerald Gentleman	https://www.nppd.com/ccr-rule-compliance	Historically placed CCR	CCR Disposed Below Regulated CCR Unit	Unknown	Yes	GWMR - 2019	53	https://docs.nppd.com/2019GGSAnnualGroundwaterReport.pdf	
7	NE	North Omaha	http://www.oppd.com/environment/environmental-reports/ccr-rule-compliance/ccr-rule-compliance-north-omaha-power-station/	Structural Fill	CCR Disposed Below Regulated CCR Unit	Unknown		GWM System Certification	5	https://www.oppd.com/media/316764/2020-nos-groundwater-monitoring-system-certification.pdf	One unsuccessful ASD from 2018 that indicates the landfill is leaking, but its already regulated. Nothing since CCR started.
7	NE	Platte	https://www.giud.com/about-us/electric-generation/platte-generating-station/ccr-rule-compliance-data-and-information	Phase 1 Landfill	Closed CCR Landfill	Yes		ACM	7	https://www.giud.com/home/showpublisheddocument/29811/637788866834130000	
9	NM	Four Corners	https://www.aps.com/en/Utility/Regulatory-and-Legal/Environmental-Compliance	Fill around CWPT	Other Solid Waste Management Area	Unknown		CAR - 2021	11,47	FC_GW_AnCAR_021_20220131.pdf	Says CCR was used as fill around facility ; "SSIs were caused by spatially inconsistent groundwater chemistry resulting from multiple factors, including past anthropogenic activities impacting subsurface conditions (i.e., placement of fill around the CWTP)"
9	NV	Reid Gardner	http://www.berkshirehathawayenergyco.com/ccr/nve.html	Historical Evaporation Pond	Other Solid Waste Management Area	Unknown		GWMR - 2021	6	https://www.brkenergy.com/ccr/assets/pdf/nve/RG/Pond_E-1/GW_Monitoring_and_Corrective_Action/Annual_GW_Monitoring_and_Corrective_Action_Report/RGS_Pond_E1.pdf	Under existing units;
2	NY	Cayuga (NY)	scoc1.weebly.com	Landfill Phase 1	Closed CCR Landfill	Yes		CAR - 2021	5, 23	https://scoc1.weebly.com/uploads/5/8/8/8/58883275/cayuga_ccr_2021_groundwater_monitoring_and_corrective_action_report_part_257.90_e_.pdf	*different than expansion area ; Closed prior to CCR
2	NY	Cayuga (NY)	scoc1.weebly.com	Landfill Phase 2	Closed CCR Landfill	Yes		CAR - 2022	5, 24	https://scoc1.weebly.com/uploads/5/8/8/8/58883275/cayuga_ccr_2021_groundwater_monitoring_and_corrective_action_report_part_257.90_e_.pdf	Closed prior to CCR
5	OH	Conesville	https://conesvilleindustrialpark.com/	Historical Ash Pond	Closed CCR Surface Impoundment	Unknown	Yes	HoC	4	https://conesvilleindustrialpark.com/wp-content/uploads/2020/05/CV-APS-History-101616.pdf	
5	OH	Conesville	https://conesvilleindustrialpark.com/	Pozzotec Landfill	Closed CCR Landfill	Yes		ACM	8	https://conesvilleindustrialpark.com/wp-content/uploads/2020/05/CV-APS-AvailableAssessementofCorrectiveMeasuresNotice-06-24-19.pdf	May also be referred to as FGD Sludge Landfill; there is also an "original" ash pond that seems to have grown into the current complex
5	OH	Gorsuch	(not regulated)	Landfill	Inactive CCR Landfill	Yes		ANPRM Comments			
5	OH	J M Stuart	https://ccrstuart.com/	Former Pond 8	Closed CCR Surface Impoundment	Yes	Yes	GWMR - 2019	22	https://static1.squarespace.com/static/621d03a8919d4e5e5a311e38/t/628bd0a08b8b0b277ac81a98/1653330090957/2018+JMSS-Annual-Groundwater-Monitoring-and-Corrective-Action-Report-P3A-P6.pdf	
5	OH	Kyger Creek	http://www.ovec.com/CCRKyger.php	North Fly Ash Pond	Closed CCR Surface Impoundment	Yes	Yes	HoC	4	http://www.ovec.com/CCRCompliance/Kyger%20Creek%20Station/South%20Fly%20Ash%20Pond/Kyger%20Creek%20South%20Fly%20Ash%20Pond%20-%20History%20of%20Construction.pdf	Also identified in ASDs of General James M Gavin plant
6	OK	GRDA	http://www.grda.com/ccr-rule-compliance-data-and-information/	1982 Landfill	Closed CCR Landfill	Yes		Closure Plan	Intro, paragraph 2	https://grda.com/wp-content/uploads/2015/09/2018_02_22_GRDA-LF-Closure-Plan.pdf	See quote, bigger version of the current landfill that closed. 2 different permits, one from 1982, and redrawn in 2017; "The GRDA Landfill is situated south of the coal fired boiler units within the GREC complex and has been in operation since 1982. The original landfill permit area consisted of approximately 116 acres, of which only 69.5 acres was available for use. A revised permit area was established in October 2017 which reduced the permit area to approximately 67 acres, of which 48 acres was available for use"

3	PA	Brunner Island	https://www.talenenergy.com/generation/fossil-fuels/ccr-brunner-island	Ash Basin 5	Closed CCR Surface Impoundment	Unknown	Yes	GWMR - 2021	2,3,19,20	2021AnnualGroundwaterMonitoringAndCorrectiveActionReport_Area8.pdf (tln-environmental.s3.amazonaws.com)	Disposal area 8 was built on top of this, not sure if it counts as a separate legacy one?;
3	PA	Hatfields Ferry Power Station	http://ccrdocs.firstenergycorp.com/	Unidentified Cobalt Source (likely the Leachate Storage Impoundment)	Other Solid Waste Management Area	Unknown	Yes	GWMR - 2021	17	file:///C:/Users/bhalee/Downloads/Hatfield%202021%20Annual%20CCR%20GMCA%20Report.pdf	"As documented in the site's 2019 Appendix IV ASD, multiple lines of evidence (LOE) indicate that cobalt from an as-yet unidentified alternate source, ex. historical maintenance activities conducted near the site's Leachate Storage Impoundment [LSI]), are likely the cause of the elevated cobalt concentrations.";
3	PA	Homer City Generating Station	http://www.homercitygenerationccr.com/	Subsurface Mixing Cells	Other Solid Waste Management Area	Unknown		ACM	9	https://www.homercitygenerationccr.com/	Part of Ash Valley Treatment System; not a "legacy" unit but does not appear presently regulated
3	PA	Homer City Generating Station	http://www.homercitygenerationccr.com/	Leachate Mixing Pond	Closed CCR Surface Impoundment	Unknown		ACM	9	https://www.homercitygenerationccr.com/	Don't know if this counts, an older, closed portion of the landfill is the source of the ASD. As far as I can tell there are not 2 permit #s. See quote ; Part of Ash Valley Treatment System; not a "legacy" unit but does not appear presently regulated
3	PA	Homer City Generating Station	http://www.homercitygenerationccr.com/	Leachate Polishing Pond	Closed CCR Surface Impoundment	Unknown		ACM	9	https://www.homercitygenerationccr.com/	Don't know if this counts, an older, closed portion of the landfill is the source of the ASD. As far as I can tell there are not 2 permit #s. See quote ; Part of Ash Valley Treatment System; not a "legacy" unit but does not appear presently regulated
3	PA	New Castle Plant	https://www.genon.com/ccr-rule-compliance	Plant Landfill - older portions	Closed CCR Landfill	Yes	Yes	GWMR - 2021	4	https://static1.squarespace.com/static/5b64a999a2772cef1fe10e54/t/61f5db5989446a298835d000/1643502427654/NC_Annual_GW_and_CA_Report_2021.pdf	Don't know if this counts, an older, closed portion of the landfill is the source of the ASD. As far as I can tell there are not 2 permit #s. See quote ; Not sure if this really counts, "an Alternate Source Demonstration (ASD) was completed in April 2018, which successfully showed that statistically significant increases (SSIs) in CCR Appendix III constituents, including boron, calcium, sulfate, and total dissolved solids (TDS) (see Table 1) were associated with a historical ash impoundment and other closed stages of the landfill underlying the landfill's active footprint associated with Stage 4. "
3	PA	New Castle Plant	https://www.genon.com/ccr-rule-compliance	South Ash Pond	Closed CCR Surface Impoundment	Yes		Closure Plan	3,12	https://static1.squarespace.com/static/5b64a999a2772cef1fe10e54/t/5c76fb440d9297b1b4cdf278/1551301447281/North_Ash_Pond_Closure_Plan.pdf	
3	PA	Shawville	(not regulated)	Ash Landfill	Inactive CCR Landfill	Unknown		ANPRM Comments			
4	SC	Cope	https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/ccr-rule-compliance-data-and-information	Landfill Leachate Pond	Other Solid Waste Management Area	Unknown	Yes	GWMR - 2021	7	https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/global/projects-and-facilities/electric-projects/coal-ash/cope/2021-cope-landfill-annual-groundwater-monitoring-report.pdf?la=en&rev=a8e1ddf875974fa1a3707a898354e625&hash=C1CF5CDEB4397159150520428O6BF768	Permitted under NPDES
4	SC	Cope	https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/ccr-rule-compliance-data-and-information	Class II Landfill	Closed CCR Landfill	Yes		GWMR - 2021	7	https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/global/projects-and-facilities/electric-projects/coal-ash/cope/2021-cope-landfill-annual-groundwater-monitoring-report.pdf?la=en&rev=a8e1ddf875974fa1a3707a898354e625&hash=C1CF5CDEB4397159150520428O6BF768	
4	SC	Wateree	https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/ccr-rule-compliance-data-and-information	Ash Pond 2	Closed CCR Surface Impoundment	Unknown		GWMR - 2021	7	https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/global/projects-and-facilities/electric-projects/coal-ash/wateree/2021-wateree-fgd-pond-annual-groundwater-monitoring-report.pdf?la=en&rev=f5d572e3c34e4f598cd8c8d506527985&hash=7C49DEDEC0B5B1B5CCC30C29563ABC48	
4	SC	Williams	https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/ccr-rule-compliance-data-and-information	Williams Highway 17A Class II Landfill	Closed CCR Landfill	Yes		GWMR - 2021	8	https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/global/projects-and-facilities/electric-projects/coal-ash/williams/2021-williams-new-fgd-pond-annual-groundwater-monitoring-report.pdf?la=en&rev=ad0e92617ad44071932b5516d08223f9&hash=EF951B2265C4F696181E447F75230405	
4	TN	Gallatin	https://www.tva.gov/Environment/Environmental-Stewardship/Coal-Combustion-Residuals	Fly ash sluicing stream	Other Solid Waste Management Area	Unknown		HoC	5	https://www.tva.com/docs/default-source/ccr/gaf/surface-impoundment---ash-pond-a/design-criteria/history-of-construction/257-73(c)-_history-of-construction_gaf_ash-pond-a.pdf?sfvrsn=d47c0b9a_2	Sluicing stream that has been rerouted in the past before the "[elimination] of the wet sluicing of fly ash";
4	TN	John Sevier Coal Fired Fossil Plant	https://www.tva.com/Environment/Environmental-Stewardship/Coal-Combustion-Residuals	Ash Disposal Area J	Closed CCR Surface Impoundment	Waste In Place		ANPRM Comments			
4	TN	John Sevier Coal Fired Fossil Plant	https://www.tva.com/Environment/Environmental-Stewardship/Coal-Combustion-Residuals	Dry Fly Ash Stack	Closed CCR Surface Impoundment	Waste In Place		ANPRM Comments			
4	TN	Kingston	https://www.tva.gov/Environment/Environmental-Stewardship/Coal-Combustion-Residuals	Sluice Trench	Other Solid Waste Management Area	Unknown		HoC	5	https://www.tva.com/docs/default-source/ccr/kif/surface-impoundment---sluice-trench-and-area-east-of-sluice-trench/design-criteria/history-of-construction/257-73(c)-_history-of-construction_kif_sluice-trench-(and-area-east-of-sluice-trench).pdf?sfvrsn=78a46639_2	
6	TX	Limestone	http://www.nrg.com/legal/coal-combustion-residuals/	Unit BACP	Closed CCR Surface Impoundment	Unknown		HoC	5		Unit's documents were removed from NRG's website after a determination that it is not regulated under the 2015 rule, though it is mentioned in the 2016 History of Construction. This unit was removed from the CCR database following discussions with EPA in 2020.

6	TX	Monticello	https://ccrmonticello.com/	A Ash Area	Closed CCR Surface Impoundment	Yes		GWMR - 2021	16	https://ccrmonticello.com/wp-content/uploads/sites/4/2022/02/2021-MOSES-Annual-CCR-Groundwater-Monitoring-Report-BAPs.pdf	
6	TX	Monticello	https://ccrmonticello.com/	Inactive Scrubber Pond	Closed CCR Surface Impoundment	Yes		GWMR - 2021	16	https://ccrmonticello.com/wp-content/uploads/sites/4/2022/02/2021-MOSES-Annual-CCR-Groundwater-Monitoring-Report-BAPs.pdf	
6	TX	Monticello	https://ccrmonticello.com/	Scrubber Sludge Decant Area	Closed CCR Surface Impoundment	Yes		GWMR - 2021	16	https://ccrmonticello.com/wp-content/uploads/sites/4/2022/02/2021-MOSES-Annual-CCR-Groundwater-Monitoring-Report-BAPs.pdf	
8	UT	Bonanza	https://apps.deseretpower.com/apex/f?p=400:40:15000612199970::NO:::	Name Unknown	Other Solid Waste Management Area	Unknown		GWMR - 2021	122	https://apps.deseretpower.com/apex/f?p=400:40:15000612199970::NO:::	Type of unit unclear-- located within footprint of landfill. GWMR pdf pg. 122: "A grab sample from the bottom of boring S1 (89.5 to 90 feet below the surface) was also collected to represent ash from a previously closed non-CCR unit within the landfill footprint."; GWMR claims it's a "non-CCR unit"
8	UT	Huntington	http://www.berkshirehathawayenergyco.com/ccr/ppw.html	Old Landfill	Closed CCR Landfill	Unknown		ACM	33	https://www.brkenergy.com/ccr/assets/pdf/ppw/Htn/Htn_CCR_Landfill/GW_monitoring_corrective_action/Corrective_measures_assessment/Corrective%20Measures%20Assessment.pdf	
8	UT	Huntington	http://www.berkshirehathawayenergyco.com/ccr/ppw.html	Historic Landfills	Closed CCR Landfill	Unknown		ACM	13	https://www.brkenergy.com/ccr/assets/pdf/ppw/Htn/Htn_CCR_Landfill/GW_monitoring_corrective_action/Corrective_measures_assessment/Corrective%20Measures%20Assessment.pdf	On some pages, it mentions "two landfills" (1 regulated and 1 old, unregulated landfill), however, on this page it mentions "historic landfills" suggesting there is more than one unregulated unit.
3	VA	Chesapeake	https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/ccr-rule-compliance-data-and-information	Historical Pond	Closed CCR Surface Impoundment	Unknown	Yes	GWMR - 2021	8	https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/global/projects-and-facilities/electric-projects/coal-ash/chesapeake/2021-cec-bottom-ash-pond-groundwater-monitoring-report.pdf?la=en&rev=b71591451d594b1dae3d8191b205f7b5&hash=764457OB56A4109BCC4600CF50262C1B	Referred to as "Sluiced Ash Pond" in HOC;
3	VA	Chesapeake	https://www.dominionenergy.com/projects-and-facilities/electric-projects/coal-ash/ccr-rule-compliance-data-and-information	Lined Landfill	Inactive CCR Landfill	Unknown		GWMR - 2021	8	https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/global/projects-and-facilities/electric-projects/coal-ash/chesapeake/2021-cec-bottom-ash-pond-groundwater-monitoring-report.pdf?la=en&rev=b71591451d594b1dae3d8191b205f7b5&hash=764457OB56A4109BCC4600CF50262C1B	Unclear if this landfill should be regulated or not. We don't have it in the database;
3	VA	Clinch River	https://www.aep.com/about/codeofconduct/CCRRule/	Ash Pond 2	Closed CCR Surface Impoundment	Yes		HoC	48	https://www.aep.com/Assets/docs/requiredpostings/ccr/2018/CR-P1-InactiveSIDesignRpts-062118.pdf	"Ash Pond 2 is currently closed and has been excluded from this analysis.
5	WI	Columbia (WI)	http://ccr.alliantenergy.com/	Closed Ash Ponds Landfill	Closed CCR Landfill	Yes		GWMR - 2021	22	https://ccr.alliantenergy.com/Columbia/Landfill/GroundwaterMonitoring?utm_source=WS&utm_campaign=Legacy&utm_medium=Columbia/Landfill/GroundwaterMonitoring&utm_source=WS&utm_campaign=Legacy&utm_medium=Columbia/Landfill/GroundwaterMonitoring	
5	WI	Columbia (WI)	http://ccr.alliantenergy.com/	Former Ash Pond Effluent Ditch	Other Solid Waste Management Area	Unknown	Yes	GWMR - 2021	187	https://ccr.alliantenergy.com/Columbia/Landfill/GroundwaterMonitoring?utm_source=WS&utm_campaign=Legacy&utm_medium=Columbia/Landfill/GroundwaterMonitoring&utm_source=WS&utm_campaign=Legacy&utm_medium=Columbia/Landfill/GroundwaterMonitoring	
5	WI	Columbia (WI)	http://ccr.alliantenergy.com/	Effluent Basin	Other Solid Waste Management Area	Unknown	Yes	HoC	8	https://ccr.alliantenergy.com/columbia/surfaceimpoundment/designcriteria	Used for treating water collected from CCR units
5	WI	Edgewater	http://ccr.alliantenergy.com/	Ash Disposal Facility	Closed CCR Landfill	Yes	Yes	HoC	8	https://ccr.alliantenergy.com/edgewater/surfaceimpoundment/designcriteria	
5	WI	Edgewater	http://ccr.alliantenergy.com/	BU Temporary Staging Area	Other Solid Waste Management Area	Unknown		HoC	11	https://ccr.alliantenergy.com/edgewater/surfaceimpoundment/designcriteria	
5	WI	Edgewater	http://ccr.alliantenergy.com/	Original CCR Surface Impoundment	Closed CCR Surface Impoundment	Yes		HoC	7	https://ccr.alliantenergy.com/edgewater/surfaceimpoundment/designcriteria	Located South of the Facility
5	WI	Nelson Dewey	http://ccr.alliantenergy.com/	Fly Ash Landfill (Former Ash Setting Pond	Closed CCR Landfill	Yes	Yes	GWMR - 2021	24	https://ccr.alliantenergy.com/nelsondewey/surfaceimpoundment/groundwatermonitoring	
5	WI	Nelson Dewey	http://ccr.alliantenergy.com/	Former Fly Ash Basin	Closed CCR Surface Impoundment	Yes		GWMR - 2021	7	https://ccr.alliantenergy.com/nelsondewey/surfaceimpoundment/groundwatermonitoring	
3	WV	FirstEnergy Pleasants Power Station	http://ccrdocs.firstenergycorp.com/	Downstream portion of impoundment dam	Other Solid Waste Management Area	Unknown		ACM - 2019	76	http://ccrdocs.firstenergycorp.com/files/CCR Landfills/Pleasants Landfill/Groundwater Requirements/Pleasants CCR ACM Report_Oct 2019.pdf	Downstream portion of impoundment dam;

Exhibit 27

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July 21, 2023

Re: Illinois Environmental Protection Agency's Recommendation in the Matter of Midwest Generation, LLC's Petition for a Finding of Inapplicability of Part 845 to the Grassy Field at the Waukegan Station (AS 2021-003)

Dear Members of the Board:

I have prepared this letter and the enclosed report, "Classification of Grassy Field," in response to the Illinois Environmental Protection Agency's ("Agency") recommendation that the Board deny Midwest Generation, LLC's ("MWG") Petition for a Finding of Inapplicability of Part 845 ("Petition") to the Grassy Field at MWG's Waukegan Generating Station ("Waukegan" or the "Station"). MWG asserts that the Grassy Field should not be classified as a coal combustion residual (CCR) surface impoundment under Title 35, Part 845 to the Illinois Administrative Code (35 Ill. Adm. Code 845) because the Grassy Field does not meet the definition of a CCR surface impoundment under Section 3.143 of the Illinois Environmental Protection Act as amended by the 2019 Coal Ash Pollution Prevention (CAPP) Act. Specifically, MWG claims the Grassy Field "is not a depression or excavation, it is not designed to hold CCR and liquids, and it was never designed to accumulate CCR and liquid."[1] The Illinois EPA disagrees with MWG and claims that the Grassy Field is a CCR surface impoundment because it is located within and preceded by a facility the Agency has designated "Old Pond," which the Agency claims "was a depression or excavation, was designed to hold an accumulation of CCR and liquids and the CCR surface impoundment stores or disposes of CCR."

[1] Petition at 2.

The purpose of the enclosed report is to determine whether the Grassy Field should be classified as a CCR surface impoundment as defined under Section 3.143 of the Illinois Environmental Protection Act. To make this determination, the evaluation:

- Documents the history of construction and operation of the Grassy Field and relevant areas at the Station associated with its construction and operation.
- Determines, based on the Grassy Field's history of construction and operation, whether the Grassy Field meets the definition of a CCR surface impoundment under the Act.

As detailed in the enclosed report, the 40-acre area occupied by Grassy Field and the Station's two CCR surface impoundments, East Ash Pond and West Ash Pond, were developed in three distinct phases. In Phase 1, spanning from no later than 1946 to circa 1970, the Station used the 40-acre area as a slag field, "Original Slag Field," which was not designed to accumulate liquids. Phase 2 started circa 1970 when the Station built an ash pond, "Original Ash Pond," in the eastern two-thirds of the "Original Slag Field," which is the area currently occupied by the East and West Ash Ponds. After the Original Ash Pond was constructed, the remainder of the "Original Slag Field" became an inactive area, "Inactive Slag Field," which was designed to not accumulate liquids. Finally, Phase 3 began in about 1978 when the present-day East and West Ash Ponds were constructed within the footprint of the Original Ash Pond and the Inactive Slag Field was regraded and seeded, creating the present-day Grassy Field, which also was designed to not accumulate liquids.

The preceding history of the site and the meaning of the verb "designed" in the context of the definition of a CCR surface impoundment are important to understand when determining whether the Grassy Field is or ever was a CCR surface impoundment. Because "design" is not defined in the Act, dictionary definitions must be used to determine what "designed" (the past participle form of the verb "design") means as it applies to the statutory definition for a CCR surface impoundment. Merriam-Webster offers two applicable definitions for the verb "design:" (1) to create, fashion, execute or construct according to plan, or (2) to conceive and plan out in the mind, to have as a purpose, or to devise for a specific function or end.[2] Meanwhile, the Oxford English Dictionary defines "design" as "do or plan (something) with a specific purpose or intention in mind."[3] Both dictionaries indicate that something is "designed" if it is planned and/or created with a specific intent. Therefore, a natural topographic depression, man-made excavation, or diked area that treats, stores, or disposes of CCR only qualifies as a CCR surface impoundment if the area was constructed and/or used *with the intent* of accumulating *both* CCR and liquids. This is consistent with my understanding of the term as a Professional Engineer. In my expert opinion, "design" (or "designed") requires intent and affirmative action.

Based on the analysis of the Grassy Field's history of construction in the enclosed report, it is my opinion that the Original Slag Field, Inactive Slag Field, and Grassy Field were neither designed nor operated / maintained with the intent of holding an accumulation of liquids. In fact,

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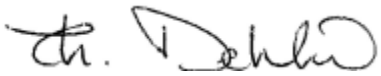
[2] https://www.merriam-webster.com
[3] https://languages.oup.com/google-dictionary-en/

the Station consistently implemented measures throughout the area's history to promote drainage of sluice water and stormwater away from the area. These measures include the excavation of ditches within stored CCR material to drain water and grading the Grassy Field to shed stormwater run-off into an overflow ditch. Therefore, it is my opinion that the Grassy Field is not and never was a CCR surface impoundment as defined in Section 3.143 of the Act. Thus, the Grassy Field should not be regulated under 35 Ill. Adm. Code 845.

Respectfully submitted,



Thomas J. Dehlin, P.E.
Project Engineer

Enclosure: "Classification of Grassy Field"

MWG
Midwest Generation, LLC

Waukegan Generating Station

Classification of Grassy Field

Revision 0

July 21, 2023

Issue Purpose: Use

Project No.: 12661-104

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Chicago, IL 60603-5780 USA
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Sargent & Lundy

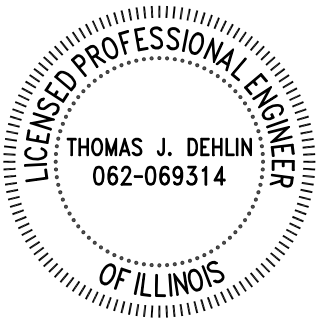
CERTIFICATION PAGE

Sargent & Lundy (S&L) is registered in the State of Illinois to practice engineering. S&L's Illinois Department of Financial and Professional Regulation registration number is 184-000106.

I certify that I prepared this report and am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas J. Dehlin Date: July 21, 2023

Seal:



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1.0 INTRODUCTION

1.1 PURPOSE

Sargent & Lundy (S&L) has prepared this evaluation of the "Grassy Field" at MWG's Waukegan Generating Station in Waukegan, Lake County, Illinois. The purpose of this evaluation is to determine whether the Grassy Field should be classified as a coal combustion residual (CCR) surface impoundment as defined under Section 3.143 of the Illinois Environmental Protection Act. In their "Petition for an Adjusted Standard and a Finding of Inapplicability for the Waukegan Station" ("Petition") that was filed with the Illinois Pollution Control Board on May 11, 2021, MWG asserts that the Grassy Field should not be classified as a CCR surface impoundment because it "is not a depression or excavation, it is not designed to hold CCR and liquids, and it was never designed to accumulate CCR and liquid."[1]

This evaluation is organized as follows:

- **Section 2.0 – Background:**
  - Provides background information on the Waukegan Generating Station, the Grassy Field, and two existing CCR surface impoundments at the Station, the East and West Ash Ponds;
  - Provides background information on the 2019 Coal Ash Pollution Prevention (CAPP) Act which amended the Illinois Environmental Protection Act to regulate CCR surface impoundments at coal-fired power plants in Illinois; and
  - Defines CCR surface impoundment as promulgated by the 2019 amendment to the Illinois Environmental Protection Act.
- **Section 3.0 – Inputs & Methodology:** Outlines the inputs and describes the methodology used to determine if the historic or present uses of the Grassy Field meet the definition of a CCR surface impoundment under the Illinois Environmental Protection Act.
- **Section 4.0 – History of Grassy Field:** Documents the history of construction and operation of the Grassy Field and relevant areas at the Waukegan Generating Station associated with its construction and operation.
- **Section 5.0 – Classification of Grassy Field:** Based on the Grassy Field's history of construction and operation, determines whether the Grassy Field meets the definition of a CCR surface impoundment under the Illinois Environmental Protection Act.

[1] Petition at 2.

1.2 SCOPE

The scope of this evaluation is strictly limited to the historical construction and operation of the Grassy Field at the Waukegan Generating Station and whether, based on its history, the Grassy Field should be classified as a CCR surface impoundment under the Illinois Environmental Protection Act. This evaluation only provides the historical construction and operation details for the existing East and West Ash Ponds and the historical ash pond that preceded them (“Original Ash Pond”) that are relevant to how the Grassy Field was constructed and/or operated.

2.0 BACKGROUND

2.1 WAUKEGAN GENERATING STATION

The Waukegan Generating Station (the "Station") is a steam electric power plant located in Waukegan, Lake County, Illinois. The facility's address is 401 E. Greenwood Ave., Waukegan, IL 60087. The facility property consists of approximately 180 acres of land and is bordered by Lake Michigan to the east, the Johns Manville Corp. Superfund Site to the north, the North Shore Water Reclamation District to the south, and various facilities and property owned by Commonwealth Edison Company (ComEd) to the west.

The Station has operated as a power plant since it was first built circa 1923. From the 1920s through summer 2022, the Station operated as a coal-fired power plant, operating a total of eight electric generating units throughout its history. The Station started with Units 1 and 2 when the facility was first built circa 1923. By 1931, the Station had expanded to include Units 3, 4, and 5. The final three units – Units 6, 7, and 8 – were placed into service in 1952, 1958, and 1962, respectively, and were the only coal-fired electric generating units operating at the Station by the late 1970s (i.e., Units 1 through 5 were retired and decommissioned). Unit 6 was retired and decommissioned in 2007. Finally, in July 2022, Units 7 and 8 were retired, thereby ceasing all coal-fired power generation at the site. Presently, the Station continues to operate two ultra-low sulfur diesel fired peaking units on an as-needed basis.

2.2 GRASSY FIELD, EAST ASH POND, & WEST ASH POND

The Grassy Field, the subject of this report, is located at the southwestern end of the Station's property, west of the Station's East and West Ash Ponds. The Grassy Field occupies approximately 12 acres of land, and the East and West Ash Ponds are each about 14 acres. The three areas total approximately 40-acres and are depicted on the 2022 aerial photograph of the site shown on Figure A-1 in Appendix A.

The East Ash Pond and West Ash Pond were built in 1978 when the Station modified and added to its existing wastewater treatment facilities to meet new effluent limitations established by the Illinois Environmental Protection Act of 1970 and the federal Clean Water Act of 1972. From 1978 to 2022, the Station primarily used the East and West Ash Ponds to manage boiler slag from Unit 6, bottom ash from Units 7 and 8, and economizer ash from Units 6, 7, and 8. Both ponds were also used to manage non-CCR wastestreams associated with Station operations. Until 2020, the Station operated the East and West Ash Ponds in parallel (i.e., only one pond would be in service at any one time). While CCR and non-CCR wastestreams were being conveyed into one pond, the Station would be emptying and cleaning the out-of-service pond to recover working storage capacity. CCR removed during this process was generally sold for beneficial re-use. In June 2020, the Station took the West Ash Pond out of service for routine cleaning and did not place it back into service. From 2020 to present, the Station has only operated the East Ash Pond,

which, as of the retirement of Units 7 and 8, is used to manage stormwater run-off from the Station's property.

2.3 ILLINOIS CAPP ACT AND CCR RULE

2.3.1 BACKGROUND

On July 30, 2019, Illinois enacted the CAPP Act (Illinois Public Act 101-0171), which amended the Illinois Environmental Protection Act (415 ILCS 5) to regulate CCR surface impoundments at coal-fired power plants in the state. The CAPP Act instructed the Illinois Environmental Protection Agency (EPA) to propose, and the Illinois Pollution Control Board to ultimately adopt, regulations for CCR surface impoundments that were at least as protective as the U.S. EPA's regulations for CCR surface impoundments (40 CFR Part 257 Subpart D). Following issuance of the Illinois EPA's proposed regulations in March 2020 and two sets public hearings on those proposed regulations in the summer and fall of 2020, the Illinois Pollution Control Board adopted regulations for CCR surface impoundments into Title 35, Part 845 of the Illinois Administrative Code in April 2021. These regulations became effective on April 21, 2021, and are hereafter referred to as the "Illinois CCR Rule."

2.3.2 SCOPE AND APPLICABILITY

Pursuant to Section 3.143 of the amended Illinois Environmental Protection Act and Section 845.120 of the Illinois CCR Rule, an area in Illinois is considered to be a CCR surface impoundment, and regulated by the Illinois CCR Rule, if it meets all three of the following criteria:

a) The unit is a natural topographic depression, man-made excavation, or diked area.
b) The unit is designed to hold an accumulation of CCR and liquids.
c) The unit treats, stores, or disposes of CCR.

3.0 INPUTS & METHODOLOGY

3.1 INPUTS

The history of construction and operation of the Grassy Field documented in this evaluation and the conclusions made herein are based on S&L's review of historical design drawings and reports, permit applications, correspondence, maps, and photographs. The records reviewed include:

- Historical aerial photographs from Lake County, Illinois Maps Online[2] and from the Chicago Metropolitan Agency for Planning, which are included in Appendix A;[3]
- Historical design drawings of the Waukegan Generating Station, the Grassy Field, and areas of interest pertinent to the Grassy Field's historical construction and operation, which are included in Appendix B;
- Historical fire insurance rate maps prepared by the Sanborn Map Company for Waukegan, Lake County, Illinois;[4] and
- Exhibits in the Illinois EPA's Recommendation in the matter of Midwest Generation's Petition (Illinois EPA Rec. Ex.), which include historical permit applications, engineering reports, and correspondence.

3.2 METHODOLOGY

The preceding inputs were reviewed to evaluate the history of the Grassy Field and to ultimately determine if the area currently meets the definition for a CCR surface impoundment under the Illinois CCR Rule, or if its historic use met the definition of a CCR surface impoundment. Accordingly, if the Grassy Field is determined to be or had ever been (1) a natural topographic depression, man-made excavation, or diked area; (2) designed to hold an accumulation of CCR and liquids; and (3) used by the Station to treat, store, or dispose of CCR, then the Grassy Field meets the definition of a CCR surface impoundment. If it is determined that the Grassy Field does not meet any one of these three criteria, then the Grassy Field does not meet the definition of a CCR surface impoundment.

[2] https://maps.lakecountyil.gov/mapsonline/
[3] https://www.cmap.illinois.gov/data/land-use/air-photo-archive
[4] Sanborn Map Company. (1949.) Insurance maps of Waukegan, Lake County, Illinois, including North Chicago. October.

4.0 HISTORY OF GRASSY FIELD

The operational history of the 40-acre area occupied by the Grassy Field, East Ash Pond, and West Ash Pond can be divided into three distinct phases. In Phase 1, which commenced no later than 1946 and lasted until about 1970, the Station used the 40-acre area as a slag field. Phase 2 started in about 1970 when the Station built an ash pond in the area currently occupied by the East and West Ash Ponds. After the original ash pond was constructed, the remainder of the slag field within the area of the present-day Grassy Field became inactive. Finally, Phase 3 began in about 1978 when the present-day East and West Ash Ponds were constructed within the footprint of the original ash pond. At this time, the inactive slag field west of the original ash pond was regraded and seeded, creating the present-day Grassy Field.

The following subsections provide more details on these three operating phases as they pertain to the historical construction and operation of the Grassy Field. These details are based on S&L's review of the documents and aerial photographs listed in Section 3.1, as referenced. There are numerous instances in the referenced documents where the terms "ash pond," "slag field," "settling basin," and combinations thereof are used interchangeably to refer to the original ash pond that operated during Phase 2. For clarity, the following nomenclature is used to refer to distinct features that were present within the 40-acre area during at least one of the site's three operational phases as summarized above and detailed in the following subsections:

- **Original Slag Field:** The slag field that received ash and slag from the Station from at least 1946 through 1970.
- **Original Ash Pond:** The ash sedimentation pond built in the Original Slag Field, within the combined footprint of the present-day East and West Ash Ponds, and that operated from about 1970 through 1978.
- **Inactive Slag Field:** ("Grassy Field") The portion of the Original Slag Field that was excluded from the Original Ash Pond area and presumably ceased receiving ash and slag from the Station in about 1970.

4.1 ORIGINAL SLAG FIELD (1946 THROUGH 1970)

The oldest engineering design drawing found for review that shows the subject 40-acre area is S&L Drawing M-301, which is attached in Appendix B. Dated circa 1950, Drawing M-301 shows the proposed plan for a new coal handling area to support the future operations of Units 6 and 7. The development plan shown on Drawing M-301 called for new coal-handling facilities to be constructed and for the Station's coal supply to be consolidated into a single area south of the Station's Intake Channel. Per the drawing, this new coal yard was to occupy approximately 15.6 acres of land, the southern portion of which was to extend beyond an existing fence line into an area designated on the drawing as "slag field."

In addition to the plans for new coal-handling facilities, Drawing M-301 also depicts an 8-in.-diameter ash sluice line from Units 4 and 5 that is designated as "in place" (i.e., existing). Given that this was an existing

line shown on the development plan, this ash sluice line was presumably present in May 1949 when Drawing M-301 was first issued. Based on the 1946 aerial photograph of the site shown in Figure A-3, which was taken three years prior to the issuance of Drawing M-301, it appears this pipe was present in 1946. Although Drawing M-301 does not show the pipe extending into the “slag field” area, it is inferred that the line continued southward and ultimately discharged into the “slag field” area as shown in Figure A-3. Therefore, the “slag field” shown on Drawing M-301 was the “Original Slag Field” that the Station used to manage ash from Units 4 and 5, starting no later than 1946.

4.1.1 ORIGINAL SLAG FIELD BOUNDARY

The exact boundary for the Original Slag Field is not explicitly identified on the historical design documents. However, the historical design documents and historical aerial photographs of the site show an approximate boundary that is depicted on Figures A-1, A-3, and A-4; the basis for this boundary is detailed below.

The copy of an historical property plat map in Appendix B shows the Station’s property line. Despite the low quality of this particular copy, several features are discernible. Notably, the Original Slag Field is labeled on this map in an area south of a fence line, east of the Station’s western property line, north of the Station’s southern property line, and west of Lake Michigan. However, no distinct topographical features (dikes, ditches, etc.) are shown on this historical map that could be used to identify the exact boundary of the Original Slag Field.

The fence line shown on the historical property plat is the same fence line shown on S&L Drawing M-301 . When the fence line is overlain on the 1961 aerial photograph of the site shown in Figure A-4, it is noted that the Station’s coal yard does not extend beyond the fence line as originally planned per Drawing M-301. Presumably, the coal yard was kept north of the fence line to provide a physical separation between the Station’s coal-handling area and the Original Slag Field. Notably, the 1961 aerial photograph of the site shows a ditch just south of the fence line between the coal yard and the Original Slag Field. This implies a dike was present along the northern edge of the Original Slag Field, presumably to ensure separation between the Station’s coal supply and its CCR waste. Therefore, it is presumed that the fence line shown on Drawing M-301 and Figures A-3 and A-4 represents the Original Slag Field’s northern boundary.

Although the property immediately west of the Original Slag Field is currently owned by ComEd, the Pacific Steel Boiler Corporation previously owned and operated a manufacturing plant at this site.[5] This plant is shown on the 1946 and 1961 aerial photographs of the site in Figures A-3 and A-4, respectively. Given this parcel of land was not owned by the Station when the Original Slag Field was operating, it is inferred that the Original Slag Field’s western boundary was the property line between the Station and the Pacific Steel Boiler Corporation, which is the present-day property line between the Station and ComEd.

[5] Sanborn Map Company. “Insurance maps of Waukegan, Lake County, Illinois, including North Chicago.” Sheet 0b. October 1949.

Similar to its western boundary, the Original Slag Field's southern boundary is inferred to be the Station's southern property line. The property south of the Station is currently owned by the North Shore Water Reclamation District, which was established in 1911 and has operated a wastewater treatment facility at that location since the late 1930s.[6] Given this parcel of land was not owned by the Station when the Original Slag Field was operating, it is inferred that the Original Slag Field would not have extended beyond the Station's property line to the North Shore Water Reclamation District's wastewater treatment facility. Moreover, a ditch can be seen just north of this property line in the 1946 aerial photograph of the site in Figure A-3. As discussed in Section 4.1.2, this ditch was presumably excavated by the Station to prevent CCR, sluice water, and stormwater from encroaching onto the North Shore Water Reclamation District's property. Therefore, it is inferred that this ditch represents the Original Slag Field's southern boundary.

Unlike its other three boundaries, no distinct topographic features (dike, ditch, etc.) can be identified between the Original Slag Field and Lake Michigan on the 1946 aerial photograph of the site shown in Figure A-3. However, the 1961 aerial photograph of the site in Figure A-4 appears to show an exposed slope between the Original Slag Field and Lake Michigan. Notably, the face of this slope has a similar color as the eastern boundary of the Station's coal yard, which would have been excavated to confine the Station's coal and associated coal pile run-off to the coal yard area. Therefore, the exposed slope between the Original Slag Field and Lake Michigan is likely the result either an excavation made into the ground or the construction of an embankment to prevent CCR, ash sluice water, and stormwater from running directly into Lake Michigan. Based on these observations, this topographic feature shown on the 1961 aerial photograph of the site is presumed to represent the Original Slag Field's eastern boundary.

4.1.2 CONSTRUCTION AND OPERATION

Based on the preceding discussion on the Original Slag Field's boundary, and based on the review of historical aerial photographs, the form of the Original Slag Field developed over time to support the continued placement of CCR from the Station's boilers. Despite its evolving form, the operation of the Original Slag Field remained the same: CCR was sluiced to the field, at which point the sluice water would either drain through the natural sand floor or would be directed to the ditch along the Station's southern property line, which would ultimately discharge into Lake Michigan. This ditch, hereafter referred to as "South Ditch," was a permanent feature throughout the Original Slag Field's operational history; was still used by the Station for managing stormwater run-off after the construction of the Original Ash Pond, East Ash Pond, and West Ash Pond; and is still present today. See aerial photographs in Appendix A.

Per the 1946 aerial photograph of the site in Figure A-3, it appears that the South Ditch and the northern dike separating the Original Slag Field from the Station's coal-handling area are present. This suggests that the natural topography and conditions of the site were sufficient to confine the CCR to the Station's property and

[6] The North Shore Water Reclamation District. "History of the North Shore Water Reclamation District." https://www.northshorewrd.org/about.htm.

prevent encroachment onto Pacific Steel Boiler Corporation's property to the west and into Lake Michigan to the east. The presence of the South Ditch demonstrates that the Station did not design the Original Slag Field to accumulate both CCR and liquids. Instead, the Station intended for the sluice water in this area to either drain through the natural sand floor or, if sluice water built up, drain into the South Ditch and ultimately discharge into Lake Michigan.[7]

The 1961 aerial photograph of the site in Figure A-4 further demonstrates the Station did not intend for sluice water to accumulate within the Original Slag Field. This aerial photograph shows an approximately 30-foot-wide ditch has been excavated within the Original Slag Field to drain sluice water into the South Ditch. Beginning in the northwest quadrant of the field, this ditch proceeds west for approximately 200 feet, then proceeds south for approximately 600 feet, and then proceeds southeast for approximately 300 feet before ultimately tying into the South Ditch. The location of this ditch within the Original Slag Field and its consistent shape indicate that this excavation was man-made (i.e., was not a drainage path created over time by flowing water) and was excavated specifically to drain sluice water from the field into the South Ditch. Thus, despite the presence of embankments and excavations along the perimeter of the Original Slag Field, the Station only intended to accumulate CCR within this area and actively implemented measures to drain sluice water and stormwater from the area.

4.2 ORIGINAL ASH POND & INACTIVE SLAG FIELD (1970 – 1978)

By 1970, the Station started constructing a new ash-settling pond ("Original Ash Pond") within the easternmost two-thirds (approximate) of the Original Slag Field's boundary. The Original Ash Pond is the first ash pond built at the subject site. The Original Ash Pond appears in the 1970 and 1974 aerial photographs shown in Figures A-5 and A-6, respectively, and operated until the present-day East and West Ash Ponds were constructed during the Station's 1978 Waste Water Treatment Facilities Project (see Section 4.3). The Original Ash Pond's boundary is readily identifiable in the 1974 aerial photograph in Figure A-6. When compared to the 1970 aerial photograph of the site shown in Figure A-5, however, an interior berm is present within the Original Ash Pond in the 1974 photograph that is not present in the 1970 photograph. Therefore, it is presumed that Figure A-5 depicts the ongoing construction of the Original Ash Pond. Based on the state of construction in this 1970 photograph, it is presumed that the pond began operating later that same year.

4.2.1 ORIGINAL ASH POND

4.2.1.1 Construction

The NUS Corporation Drawings 5082-C-5005, 5082-C-5006, and 5082-C-5007 in Appendix B and the 1970 aerial photograph of the pond's construction shown in Figure A-5 provide insight into how the Original Ash

[7] Notably, the discharge point into Lake Michigan was on the Station's property in 1946, which ComEd referenced in its 1974 operating permit application for the Original Ash Pond. Illinois EPA Ex. 32 at 16-17.

Pond was constructed within the eastern two-thirds of the Original Slag Field. Drawings 5082-C-5005 and 5082-C-5006 prepared by NUS Corporation, the engineer-of-record for the Station's 1978 Waste Water Treatment Facilities Project (see Section 4.3), collectively show the topography of the Original Ash Pond when the site was surveyed by Aero-Metric Engineering, Inc. in November 1974.[8] Based on this topographic map, the Original Ash Pond's exterior embankments formed a storage area of approximately 20 acres. Per Drawing 5082-C-5006, an embankment was also constructed within the Original Ash Pond's storage area, which likely ensure sufficient detention time was provided for the CCR to settle out of the sluice water before being discharged from the pond.

4.2.1.2 Operation

Like the Original Slag Field before it, the Station used the Original Ash Pond to manage ash sluice water from the boilers. In addition, the Station used the new pond to manage demineralizer regenerative wastewater and demineralizer filter backwash water.[9] Unlike the Original Slag Field, the Original Ash Pond was constructed to settle suspended CCR solids out of the sluice water before the treated wastewater was discharged from the pond.[10] Based on a sketch submitted to the Illinois EPA by ComEd in correspondence related to its application for an operating permit for the Original Ash Pond ("Figure 3 sketch"), effluent from the pond was discharged via two culverts installed through the pond's northern embankment into the North Ditch;[11] these are the "existing drainage pipes" identified on NUS Corporation Drawing 5082-C-5006. Per this sketch, treated effluent would then flow from the North Ditch into the East Ditch, thence into the South Ditch, thence into a swampy area outside of the Station's property line, and thence into Lake Michigan. This flow path is annotated on the 1974 aerial photograph of the site shown in Figure A-6.

4.2.2 INACTIVE SLAG FIELD

Following construction of the Original Ash Pond within the eastern portion of the Original Slag Field, the Station would have ceased using the western portion of the Original Slag Field for managing the Station's CCR. This area was omitted from the Station's applications for its initial water pollution control operating permit and its initial NPDES permit. Instead, according to these applications, ash sluice water was exclusively sent to the Original Ash Pond following the pond's construction, and the remaining portion of the Original Slag Field became inactive (the "Inactive Slag Field"), and ultimately the "Grassy Field" (*see infra* Section 4.3.2). Indeed, this area is not identified on the "Figure 3 sketch" or on NUS Corporation Drawing 5082-C-5005 as a CCR management area (e.g., "slag field," "ash pond," etc.).

In addition to the construction of the Original Ash Pond, the 1970 aerial photograph of the site shown in Figure A-5 also shows CCR was removed from the Inactive Slag Field. Consistent with how the Original Slag

[8] See Note 2 on NUS Corporation Drawings 5082-C-5005 and 5082-C-5006.
[9] Illinois EPA Rec. Ex. 32 at 5.
[10] Illinois EPA Rec. Ex. 36 at 28.
[11] Illinois EPA Rec. Ex. 32 at 17.

Field was operated to preclude the accumulation of sluice water and/or stormwater, CCR was removed from the Inactive Slag Field in a manner that promoted drainage of stormwater into the South Ditch. This is evident from the topography shown on NUS Corporation Drawing 5082-C-5005 in Appendix B, which is representative of the topography of the Inactive Slag Field shown on the 1974 aerial photograph in Figure A-6 and likely that shown on the 1970 aerial photograph in Figure A-5. When compared to the 1974 aerial photograph of the site shown in Figure A-6, it does not appear the area was significantly modified in the four years following the construction of the Original Ash Pond, further demonstrating that the area was "inactive."

Figure 4-1 shows a heat map of the Inactive Slag Field as shown on NUS Corporation Drawing 5082-C-5005. This heat map was prepared by importing the NUS Corporation drawing into Autodesk Civil3D 2021 and creating a three-dimensional, triangulated irregular network (TIN) surface of the Inactive Slag Field using the topographic contours provided on the drawing.[12] As indicated in the legend provided in the figure, hot colors represent areas of high elevation while cold colors represent areas of low elevation. Based on the heat map, the ground surface within the Inactive Slag Field adjacent to the Original Ash Pond's west dike sloped to the south, promoting drainage of stormwater run-off towards the southern end of the Inactive Slag Field. Meanwhile, CCR appears to have been removed from the rest of the Inactive Slag Field in a manner that promoted drainage to the west and then south towards the South Ditch. Ultimately, all stormwater run-off was directed towards the western end of the South Ditch, whereby it would flow into the aforementioned swampy area before ultimately being discharged into Lake Michigan. Thus, the Station removed CCR from the Inactive Slag Field with the intention of preventing stormwater from accumulating in the area, intending for such stormwater to drain into South Ditch thence into Lake Michigan.

4.3 EAST ASH POND, WEST ASH POND, & GRASSY FIELD (1978 – PRESENT)

4.3.1 EAST AND WEST ASH PONDS

In April 1975, ComEd contracted NUS Corporation to review and assess the existing wastewater pollution control facilities at the Station to determine what modifications and/or additions could be made to ultimately comply with the future discharge limits promulgated by the U.S. EPA and the Illinois Pollution Control Board. That November, NUS Corporation issued a preliminary report that provided conceptual plans for modifying and adding to the Station's wastewater treatment facilities to meet federal and state effluent limitations. Understanding that the Original Ash Pond's effluent was meeting the discharge limits in the Station's NPDES permit, NUS Corporation concluded in its preliminary report, "The present ash ponds[13] [sic] are of sufficient

[12] Note: The "holes" in the northwestern corner of the Inactive Slag Field shown in Figure 4-1 are areas where accurate topographic information was not able to be obtained due to the presence of "piles" in these areas when the survey was performed in November 1974. *See* NUS Corporation Drawing 5082-C-5005 in Appendix B. The piles shown on this drawing are not present today.

[13] Although it is clear that NUS Corporation is referring to the Original Ash Pond in this statement, it is unknown why they refer to multiple ash ponds. Notably, the next reference to the Original Ash Pond is singular ("The system proposed utilizes the existing ash pond…"). Therefore, the reference to multiple ponds appears to be a typographical error.

size." Despite the pond's compliance with surface water regulations, NUS Corporation also concluded that a liner should be installed to eliminate seepage of ash sluice water from the unlined Original Ash Pond into the groundwater. To address this potential issue, NUS Corporation proposed two solutions:
(1) install a 6-in.-thick, reinforced concrete liner within the existing ash pond, or (2) install new dewatering bins to collect ash sluice water and to separate CCR solids from the sluice water. Per Drawing No. 6523-2AI and the corresponding equipment list proposed for this modification to the bottom ash-handling system, NUS Corporation was proposing to install the reinforced concrete liner within approximately 15 acres of the Original Ash Pond. Notably, modifications or additions to the Inactive Slag Field are not considered or addressed in this preliminary report, further suggesting the area was no longer being used by the Station to manage its CCR by the 1970s.[14]

On March 30, 1977, the Illinois EPA received a permit application from ComEd to construct and operate new wastewater treatment facilities at the Station in accordance with the recommendations made by NUS Corporation, the engineer-of-record for the project. The proposed design called for modifications to the Station's bottom ash-handling system, including the Original Ash Pond. In the design basis submitted with the permit application, NUS Corporation states, "The existing ash pond will be modified to provide for easier and redundant operation. The existing single pond will be split into two separate ponds…, each approximately 10 acres. This design allows for the cleaning on one pond, when required, while the other pond remains in operation so that settling is not disturbed. The ponds will also be protected with a membrane liner, e.g., hypalon, to prevent ground-water contamination." In addition to splitting the Original Ash Pond into two separate, lined ponds, the Station proposed to cease discharging the ash pond effluent into the North Ditch and instead recycle the ash sluice water back into the Station's bottom ash transport system. To prevent a build-up of CCR solids within the recycle water that would risk damaging the ash sluice pumps, a portion of this recycle water was to be blown down to two new reactor clarifiers before ultimately being discharged to Lake Michigan via the Station's Discharge Canal.[15]

On July 1, 1977, the Illinois EPA issued Water Pollution Control Permit No. 1977-EB-3699 to the Station to construct and operate the modifications and additions to its bottom ash transport system discussed above, in addition to other new wastewater treatment facilities and equipment for the purposes of complying with future discharge limits.[16] Per Drawing 5082-C-5006 in Appendix B, NUS Corporation issued the plans for the two new, lined ash ponds to replace the Original Ash Pond for construction on August 1, 1977. Per this plan and the sections shown on NUS Corporation Drawing 5082-C-5007, and in accordance with the permit application submitted to the Illinois EPA for this project, the East and West Ash Ponds were constructed within the footprint of the Original Ash Pond. Therefore, the East and West Ash Ponds share the same solid waste boundary as the Original Ash Pond that preceded them.

[14] Illinois EPA Rec. Ex. 33 at 28-78.
[15] Illinois EPA Rec. Ex. 33 at 10-27.
[16] Illinois EPA Rec. Ex. 33 at 3.

Other than replacing the original liner with their current HDPE geomembrane liners in the early 2000s and modifications to the dikes' side slopes, the Station has generally maintained and operated the East and West Ash Ponds in accordance with their original 1978 construction. For more details on the construction and operational history of the East and West Ash Ponds since 1978, refer to the NUS Corporation design drawings from the project and the ponds' 2016 History of Construction.[17]

4.3.2 GRASSY FIELD / INACTIVE SLAG FIELD

In addition to modifying the Station's bottom ash transport system and reconfiguring the Original Ash Pond into the East and West Ash Ponds, the 1978 Wastewater Treatment Facilities Project included regrading the Inactive Slag Field. Per NUS Corporation Drawing 5082-C-5005 in Appendix B, the CCR remaining in this approximately 12-acre area was to be regraded and seeded, creating the present-day Grassy Field. Based on the contours shown on this drawing, the area was to be sloped from a high point along the new dike constructed for the West Ash Pond down towards a new drainage ditch constructed along the Station's western property line, designated "Overflow Ditch No. 1." This plan is further illustrated in Section "Sta. 36 and 39" on NUS Corporation Drawing 5082-C-5007 in Appendix B. Thus, the Grassy Field was designed to shed stormwater run-off into Overflow Ditch No. 1.

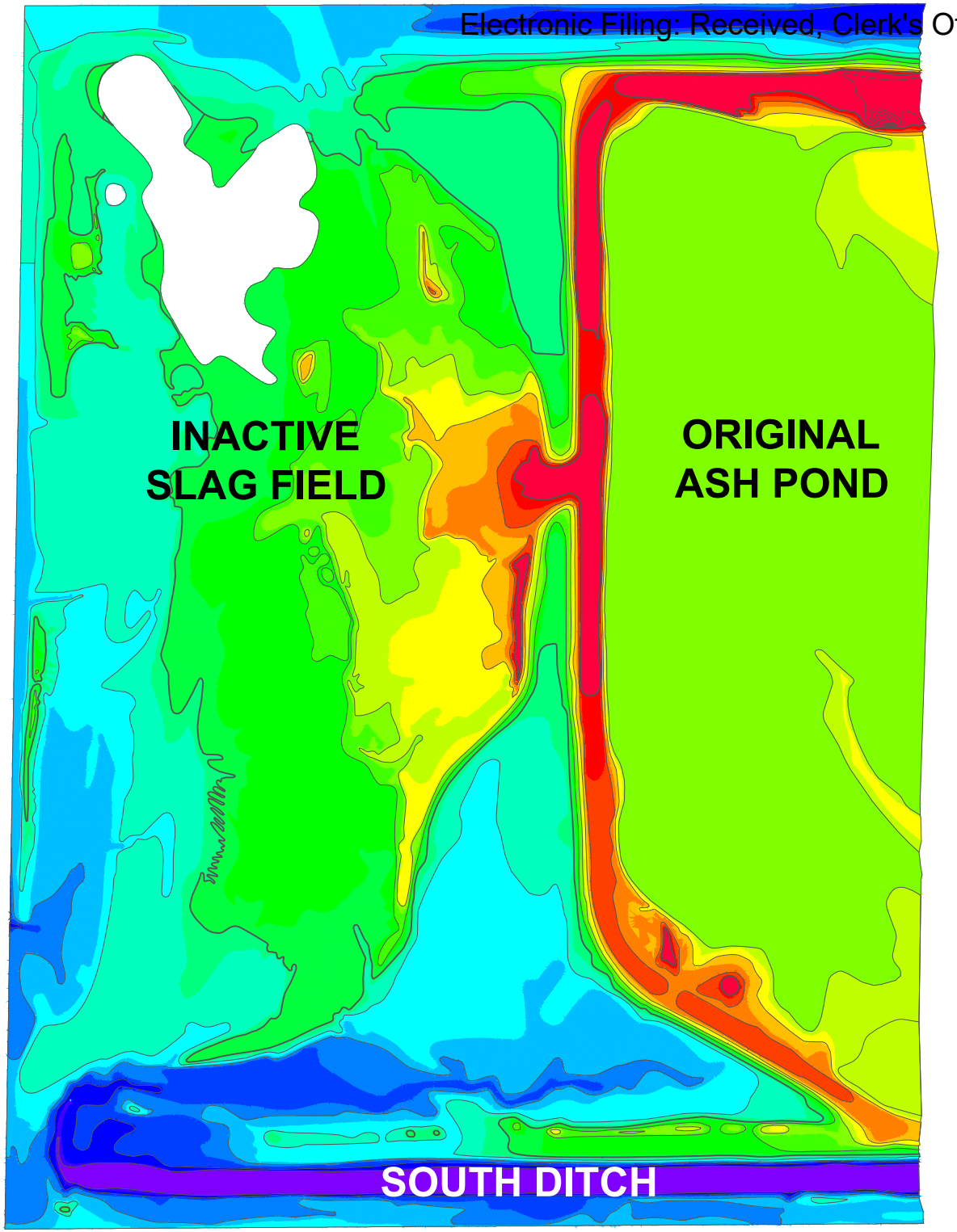
Like the East and West Ash Ponds, the Station has generally maintained the Grassy Field in accordance with its original 1978 construction. Per a survey performed by Geo Terra on December 4, 2015, the Grassy Field was graded and constructed in a manner to direct stormwater run-off into the ditch along the Station's western property line.[18]

[17] Illinois EPA Rec. Ex. 45.
[18] Illinois EPA Rec. Ex. 45 at 24.

FIGURE 4-1

INACTIVE SLAG FIELD HEAT MAP

(REF.: NUS CORP. DWG 5082-C-5005)



N

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	1.000	2.000	
2	2.000	3.000	
3	3.000	4.000	
4	4.000	5.000	
5	5.000	6.000	
6	6.000	7.000	
7	7.000	8.000	
8	8.000	9.000	
9	9.000	10.000	
10	10.000	11.000	
11	11.000	12.000	
12	12.000	13.000	
13	13.000	14.000	
14	14.000	15.000	
15	15.000	16.000	
16	16.000	17.000	
17	17.000	18.000	
18	18.000	19.000	
19	19.000	20.000	
20	20.000	21.000	
21	21.000	22.000	
22	22.000	23.000	
23	23.000	24.000	
24	24.000	25.000	
25	25.000	26.000	
26	26.000	27.000	
27	27.000	28.000	

5.0 CLASSIFICATION OF GRASSY FIELD

The applicability of the Illinois CCR Rule to the Grassy Field is dependent on whether the area has met the definition of a CCR surface impoundment. This requires the Grassy Field or one of its predecessors (i.e., the Inactive Slag Field and Original Slag Field) to be / have been (1) a natural topographic depression, man-made excavation, or diked area; (2) designed to hold an accumulation of CCR and liquids; and (3) used by the Station to treat, store, or dispose of CCR. If the Original Slag Field, Inactive Slag Field, and Grassy Field do not meet all three of these criteria (i.e., any one of the criteria does not apply to all three operational phases of the subject area), then the Grassy Field does not meet the definition of a CCR surface impoundment. Because the Original Slag Field enveloped the Inactive Slag Field and Grassy Field; was used by the Station to accumulate and treat, store, or dispose of CCR since at least 1946; and was formed over time with a combination of man-made excavations and dikes, the classification of the Grassy Field is ultimately based on whether the Grassy Field or one of its predecessors were designed to hold an accumulation of liquids. To determine whether the Original Slag Field, Inactive Slag Field, or Grassy Field meet this criterion, it is important to understand (1) the meaning of the verb "designed" in the context of the subject criterion, and (2) the history of the site. The latter was presented in Section 4.0, and the former is addressed below.

The past participle "designed" is a form of the verb "design," which is not defined in the Illinois Environmental Protection Act. Therefore, dictionary definitions are used to determine what "design" means as it applies to the statutory definition for a CCR surface impoundment. Merriam-Webster offers two applicable definitions for the verb "design:" (1) to create, fashion, execute or construct according to plan, or (2) to conceive and plan out in the mind, to have as a purpose, or to devise for a specific function or end.[19] Meanwhile, the Oxford English Dictionary defines "design" as "do or plan (something) with a specific purpose or intention in mind."[20] Both dictionaries indicate that something is "designed" if it is planned and/or created with a specific intent. Therefore, a natural topographic depression, man-made excavation, or diked area that treats, stores, or disposes of CCR only qualifies as a CCR surface impoundment if the area was constructed and/or used *with the intent* of accumulating *both* CCR and liquids.

Under the preceding conclusion, an area constructed and/or used to only store CCR without actively implementing methods or equipment to simultaneously accumulate liquids cannot be considered a CCR surface impoundment. Similarly, a basin that was designed to store process water but not CCR also cannot be considered a CCR surface impoundment. The latter case applies to the Service Water Basin at MWG's Powerton Generating Station in Pekin, Illinois, which the Illinois EPA and Illinois Pollution Control Board both agreed did not meet the definition of a CCR surface impoundment under the Illinois Environmental Protection

[19] https://www.merriam-webster.com
[20] https://languages.oup.com/google-dictionary-en/

Act because, in part, it "was not an area designed to hold an accumulation of CCR and liquids."[21] Despite the Service Water Basin being downstream of the Powerton Generating Station's ash dewatering bins and Ash Surge and Bypass Basins, these bottom ash-handling facilities were designed and have been operated and maintained to ensure CCR in the Powerton Generating Station's bottom ash sluice water settles out before the process water enters the Service Water Basin. As recognized by the Illinois EPA and Illinois Pollution Control Board in that matter, the Service Water Basin was not intended to accumulate both CCR and liquids and therefore is not regulated under the Illinois CCR Rule.

Based on the analysis of the historic documents and aerial photographs presented in Section 4.1.2, the Original Slag Field was not designed to accumulate ash sluice water or stormwater. In other words, it was never an "Old Pond" as suggested by the Illinois EPA.[22] Although the northern dike built by 1946 and the eastern excavation made by 1961 prevented CCR, and perhaps some liquid, from encroaching into the Station's coal yard and Lake Michigan, no such means were ever provided along the Original Slag Field's southern boundary to confine and accumulate liquids within the slag field's boundary. In fact, the Station consistently implemented measures throughout the slag field's operating history to promote drainage of sluice water and stormwater into the South Ditch along the slag field's southern boundary, typically by excavating ditches / channels within the accumulated CCR. See Section 4.1.2 and Figure A-4. Thus, the Original Slag Field was neither designed nor operated by the Station to hold an accumulation of liquids.

Based on the analysis presented in Section 4.2.2, the Inactive Slag Field was not used by the Station to manage its CCR after the Original Ash Pond was constructed. Although it was no longer an active CCR area, the Station ensured the area drained into the South Ditch after CCR was excavated from the area circa 1970. This is demonstrated by the 1974 topographic survey of the area shown on NUS Corporation Drawing 5082-C-5005 in Appendix B. Thus, the Inactive Slag Field was neither designed nor operated by the Station to hold an accumulation of liquids.

Based on the analysis presented in Section 4.3.2, the Grassy Field was not designed and is not maintained in a manner to hold an accumulation of liquids. Instead, it is designed, constructed, and maintained to promote drainage of stormwater run-off into a ditch along the Station's western property line. Thus, the present-day Grassy Field was.

Based on the preceding evaluation, neither the Grassy Field nor its Original Slag Field and Inactive Slag Field predecessors were designed, operated, and/or maintained to hold an accumulation of liquids. Therefore, the Grassy Field is not and never was a CCR surface impoundment as defined in Section 3.143 of the Act.

[21] Opinion and Order of the Board in the Matter of Midwest Generation LLC's Petition for an Adjusted Standard and Finding of Inapplicability for the Powerton Station, AS 21-2, February 17, 2022
[22] Illinois EPA Rec. at 5.

6.0 CONCLUSIONS

The purpose of the preceding evaluation of the Grassy Field's construction and operational history, and that of its predecessors, was to determine whether the area meets or did meet the definition of a CCR surface impoundment under Section 3.143 of the Illinois Environmental Protection Act. Per the Act, a CCR surface impoundment is defined as "a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the surface impoundment treats, stores, or disposes of CCR." For the Grassy Field to be classified as a CCR surface impoundment under the Illinois Environmental Protection Act, it or its predecessors must meet or have met all three of these criteria. If any one of these criteria do not apply to the Grassy Field or its predecessors, then the Grassy Field does not meet the definition of a CCR surface impoundment.

The area occupied by the Grassy Field and the Station's two CCR surface impoundments, East Ash Pond, and West Ash Pond, was developed in three distinct phases. In Phase 1, spanning from no later than 1946 to circa 1970, the Station used the 40-acre area as a slag field, "Original Slag Field," which was not designed to accumulate liquids. Phase 2 started circa 1970 when the Station built an ash pond, "Original Ash Pond," in the eastern two-thirds of the "Original Slag Field," which is the area currently occupied by the East and West Ash Ponds. After the Original Ash Pond was constructed, the remainder of the "Original Slag Field" became an inactive area, "Inactive Slag Field," which was designed to not accumulate liquids. Finally, Phase 3 began in about 1978 when the present-day East and West Ash Ponds were constructed within the footprint of the Original Ash Pond and the Inactive Slag Field was regraded and seeded, creating the present-day Grassy Field, which also was designed to not accumulate liquids.

Because the Grassy Field, the Original Slag Field, and the Inactive Slag Field were not designed to accumulate liquids, and because the Inactive Slag Field and Grassy Field were designed to drain liquids from the area, none are CCR surface impoundments as defined in Section 3.143. Throughout the area's history, the Station consistently implemented measures to promote the drainage of water and stormwater into either the South Ditch along the Station's southern line (presently with the North Shore Water Reclamation District) or to a ditch along the Station's western property line (presently with ComEd and historically with Pacific Steel Boiler Company). These measures typically included excavating ditches / channels within and mass grading the CCR accumulated within the area to establish drainage paths to these ditches. Thus, the Grassy Field is not a CCR surface impoundment as defined in Section 3.143 of the Act. Consequently, the Illinois CCR Rule does not apply to the Grassy Field.

APPENDIX A – CURRENT & HISTORICAL AERIAL IMAGES OF GRASSY FIELD SITE

Figure	Title
A-1	2022 Aerial Photograph of Grassy Field Site
A-2	1939 Aerial Photograph of Grassy Field Site
A-3	1946 Aerial Photograph of Grassy Field Site
A-4	1961 Aerial Photograph of Grassy Field Site
A-5	1970 Aerial Photograph of Grassy Field Site
A-6	1974 Aerial Photograph of Grassy Field Site

NOTES:

1. AERIAL IMAGERY SHOWN ON THIS FIGURE IS DATED 2022 AND WAS OBTAINED FROM LAKE COUNTY, ILLINOIS MAPS ONLINE.
2. FOR ORIGINAL SLAG FIELD, SEE FIGURES A-3 AND A-4. FOR DETAILS ON BASIS FOR ORIGINAL SLAG FIELD BOUNDARY, SEE EVALUATION SECTION 4.1.1.

CLASSIFICATION OF GRASSY FIELD

FIGURE A-1
2022 AERIAL PHOTOGRAPH OF GRASSY FIELD SITE

SCALE IN FEET

0 400 800

NORTH

COUNTY: LAKE
STATE: ILLINOIS

PURPOSE: USE

DATE: 07-21-2023 REV. 0

PREPARED: MK / JC
REVIEWED: TD
APPROVED: TD

PROJECT NO. 12661-104

MWG
Midwest Generation, LLC

Sargent & Lundy LLC
SARGENT & LUNDY
55 EAST MONROE STREET
CHICAGO, ILLINOIS 60603-5780

MIDWEST GENERATION, LLC
WAUKEGAN
GENERATING STATION

NOTES:

1. AERIAL IMAGERY SHOWN ON THIS FIGURE IS DATED 1939 AND WAS OBTAINED FROM LAKE COUNTY, ILLINOIS MAPS ONLINE.
2. FENCELINE LOCATION IS APPROXIMATE AND WAS OBTAINED FROM S&L DRAWING M-301 (REV. H, 09-13-1954) IN APPENDIX B.
3. FOR DETAILS ON BASIS FOR ORIGINAL SLAG FIELD BOUNDARY, SEE EVALUATION SECTION 4.1.1.

CLASSIFICATION OF GRASSY FIELD

FIGURE A-2
1939 AERIAL PHOTOGRAPH OF
GRASSY FIELD SITE

SCALE IN FEET

0 400 800

NORTH

COUNTY: LAKE
STATE: ILLINOIS

PURPOSE: USE

DATE: 07-21-2023 REV. 0

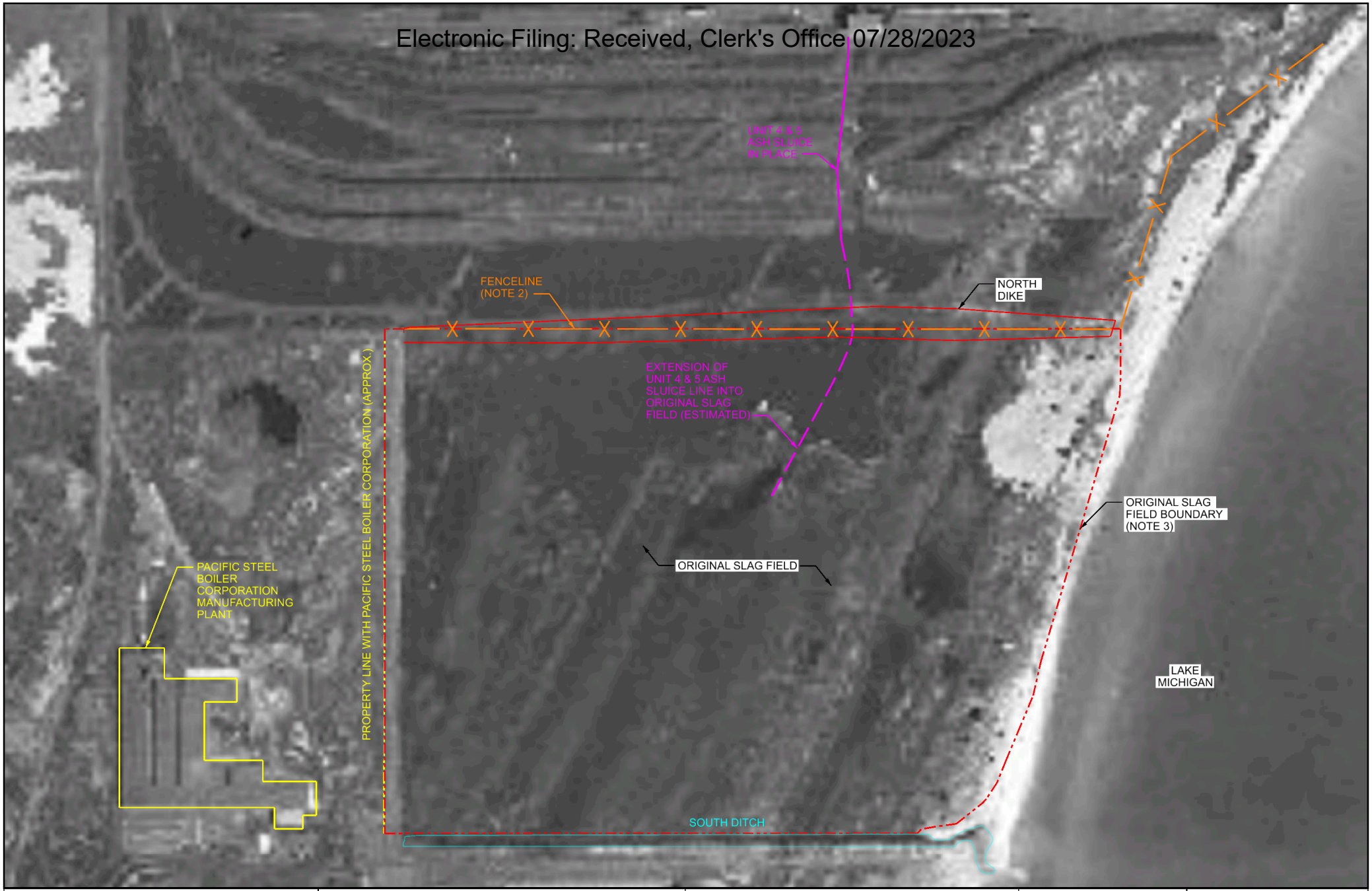
PREPARED: MK / JC
REVIEWED: TD
APPROVED: TD

PROJECT NO. 12661-104

MWG
Midwest Generation, LLC

Sargent & Lundy LLC
SARGENT & LUNDY
55 EAST MONROE STREET
CHICAGO, ILLINOIS 60603-5780

MIDWEST GENERATION, LLC
WAUKEGAN
GENERATING STATION



NOTES:

1. AERIAL IMAGERY SHOWN ON THIS FIGURE IS DATED 1946 AND WAS OBTAINED FROM LAKE COUNTY, ILLINOIS MAPS ONLINE
2. LOCATIONS OF FENCELINE AND ASH SLUICE LINE FROM UNITS 4 AND 5 ARE APPROXIMATE AND WERE OBTAINED FROM S&L DRAWING M-301 (REV. H, 09-13-1954) IN APPENDIX B.
3. FOR DETAILS ON BASIS FOR ORIGINAL SLAG FIELD BOUNDARY, SEE EVALUATION SECTION 4.1.1.

CLASSIFICATION GRASSY FIELD

FIGURE A-3
1946 AERIAL PHOTOGRAPH OF
GRASSY FIELD SITE

SCALE IN FEET
0 300 600
NORTH

COUNTY: LAKE
STATE: ILLINOIS

PURPOSE: USE

DATE: 07-21-2023 REV. 0

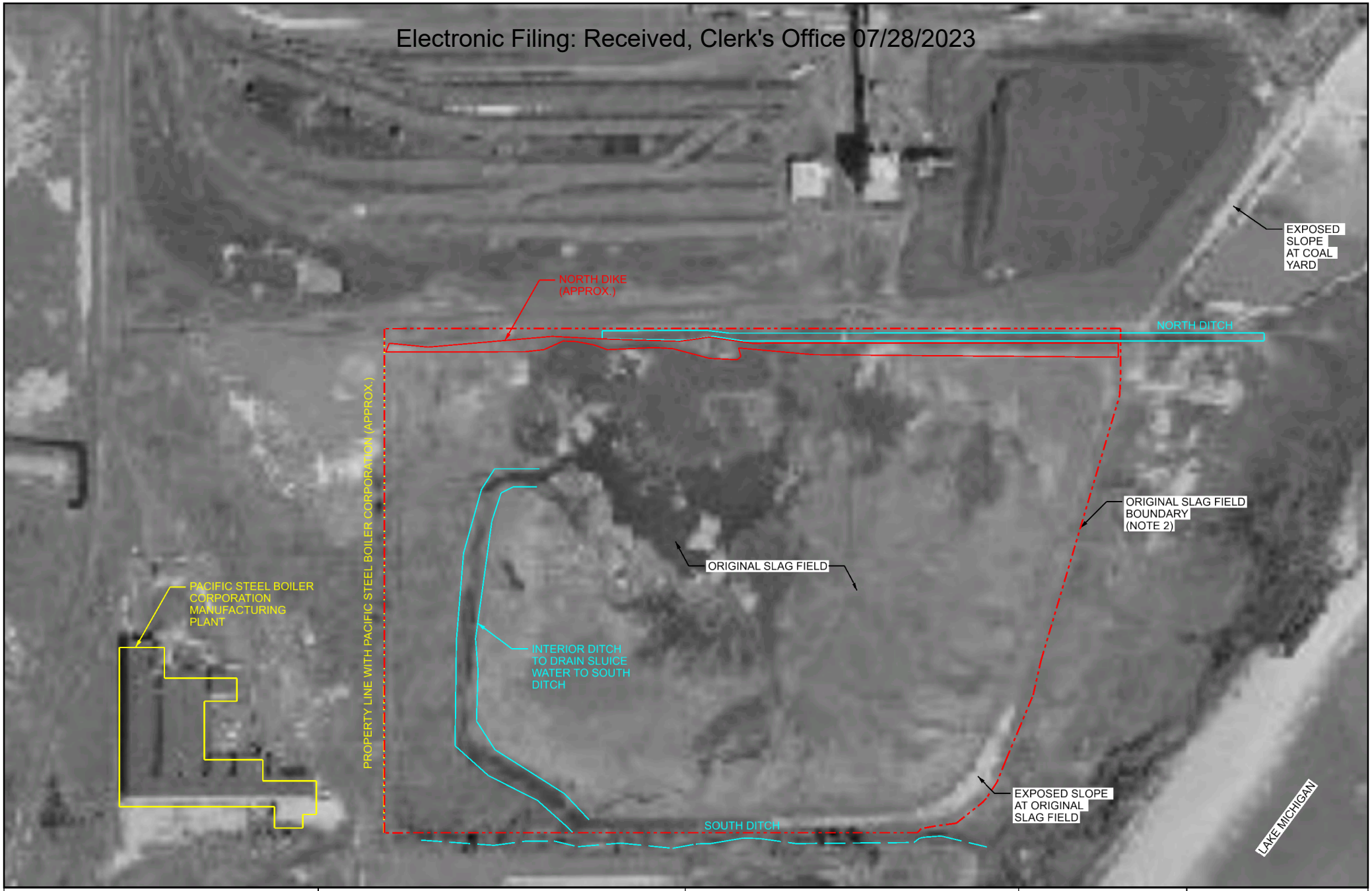
PREPARED: MK / JC
REVIEWED: TD
APPROVED: TD

PROJECT NO. 12661-104

MWG
Midwest Generation, LLC

Sargent & Lundy LLC
SARGENT & LUNDY
55 EAST MONROE STREET
CHICAGO, ILLINOIS 60603-5780

MIDWEST GENERATION, LLC
WAUKEGAN
GENERATING STATION



NOTES:

1. AERIAL IMAGERY SHOWN ON THIS FIGURE IS DATED 1961 AND WAS OBTAINED FROM LAKE COUNTY, ILLINOIS MAPS ONLINE.
2. FOR DETAILS ON BASIS FOR ORIGINAL SLAG FIELD BOUNDARY, SEE EVALUATION SECTION 4.1.1.

CLASSIFICATION OF GRASSY FIELD

FIGURE A-4
1961 AERIAL PHOTOGRAPH OF GRASSY FIELD SITE

SCALE IN FEET
0 300 600
NORTH

COUNTY: LAKE
STATE: ILLINOIS

PURPOSE: USE
DATE: 07-21-2023 REV. 0

PREPARED: MK / JC
REVIEWED: TD
APPROVED: TD

PROJECT NO. 12661-104

MWG
Midwest Generation, LLC

Sargent & Lundy LLC
SARGENT & LUNDY
55 EAST MONROE STREET
CHICAGO, ILLINOIS 60603-5780

MIDWEST GENERATION, LLC
WAUKEGAN
GENERATING STATION

NOTES:

1. AERIAL IMAGERY SHOWN ON THIS FIGURE IS DATED 1970 AND WAS OBTAINED FROM THE CHICAGO METROPOLITAN AGENCY FOR PLANNING2. FOR DETAILS ON BASIS FOR ORIGINAL SLAG FIELD BOUNDARY, SEE EVALUATION SECTION 4.1.1.

CLASSIFICATION OF GRASSY FIELD

FIGURE A-5
1970 ARIEAL PHOTOGRAPH OF GRASSY FIELD SITE

SCALE IN FEET
0 400 800
NORTH

COUNTY: LAKE
STATE: ILLINOIS

PURPOSE: USE

DATE: 07-21-2023 REV. 0

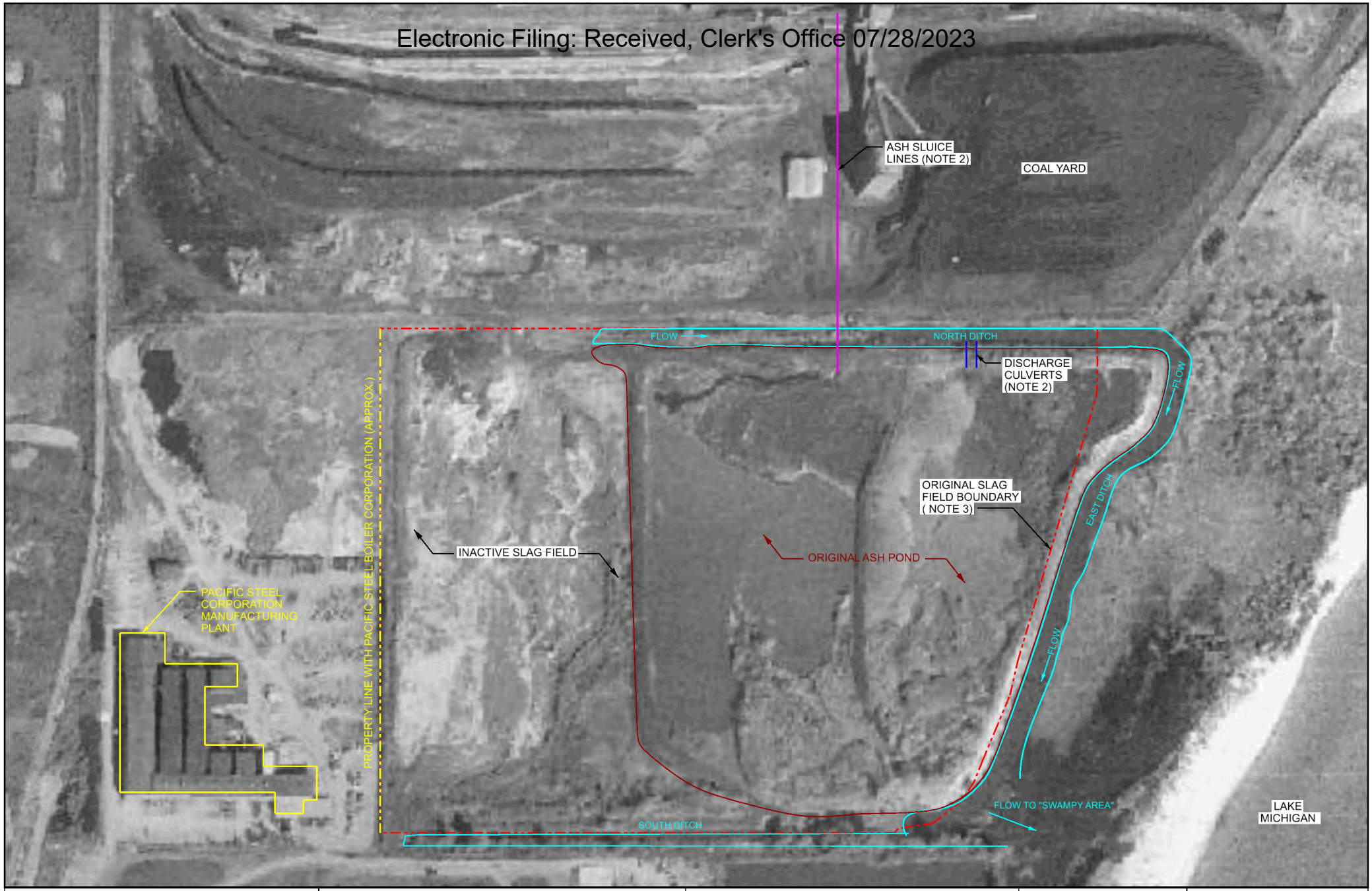
PREPARED: MK / JC
REVIEWED: TD
APPROVED: TD

PROJECT NO. 12661-104

MWG
Midwest Generation, LLC

Sargent & Lundy LLC
SARGENT & LUNDY
55 EAST MONROE STREET
CHICAGO, ILLINOIS 60603-5780

MIDWEST GENERATION, LLC
WAUKEGAN
GENERATING STATION



NOTES:

1. AERIAL IMAGERY SHOWN ON THIS FIGURE IS DATED 1974 AND WAS OBTAINED FROM LAKE COUNTY, ILLINOIS MAPS ONLINE.
2. LOCATIONS OF ASH SLUICE LINES INTO AND DISCHARGE CULVERTS OUT OF ORIGINAL ASH POND ARE APPROXIMATE AND WERE OBTAINED FROM NUS CORPORATION DRAWING 5082-C-5006 IN APPENDIX B.
3. FOR DETAILS ON BASIS FOR ORIGINAL SLAG FIELD BOUNDARY, SEE EVALUATION SECTION 4.1.1.

CLASSIFICATION OF GRASSY FIELD

FIGURE A-6
1974 AERIAL PHOTOGRAPH OF GRASSY FIELD SITE

SCALE IN FEET
0 300 600
NORTH

COUNTY: LAKE
STATE: ILLINOIS

PURPOSE: USE
DATE: 07-21-2023 REV. 0

PREPARED: MK / JC
REVIEWED: TD
APPROVED: TD

PROJECT NO. 12661-104

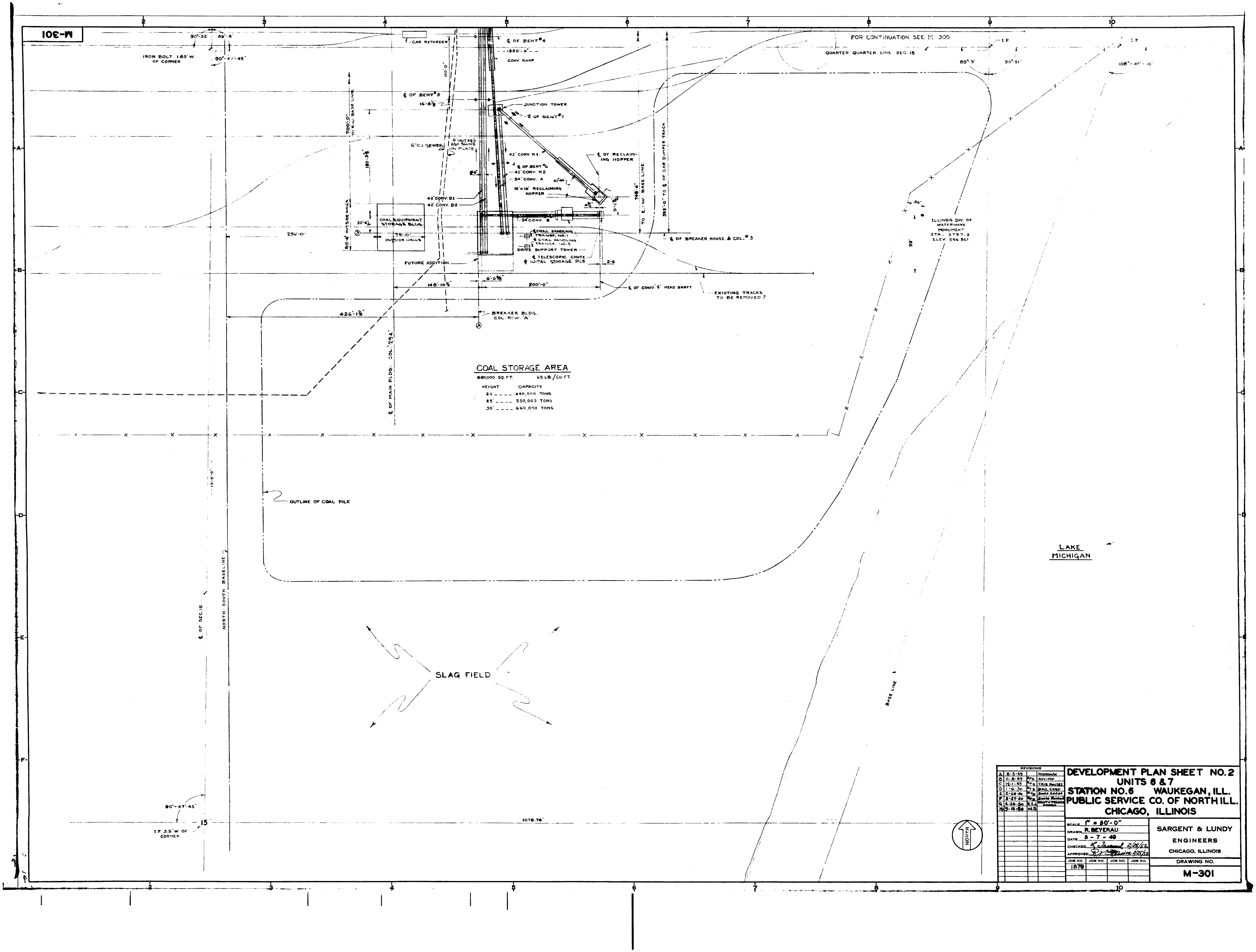
MWG
Midwest Generation, LLC

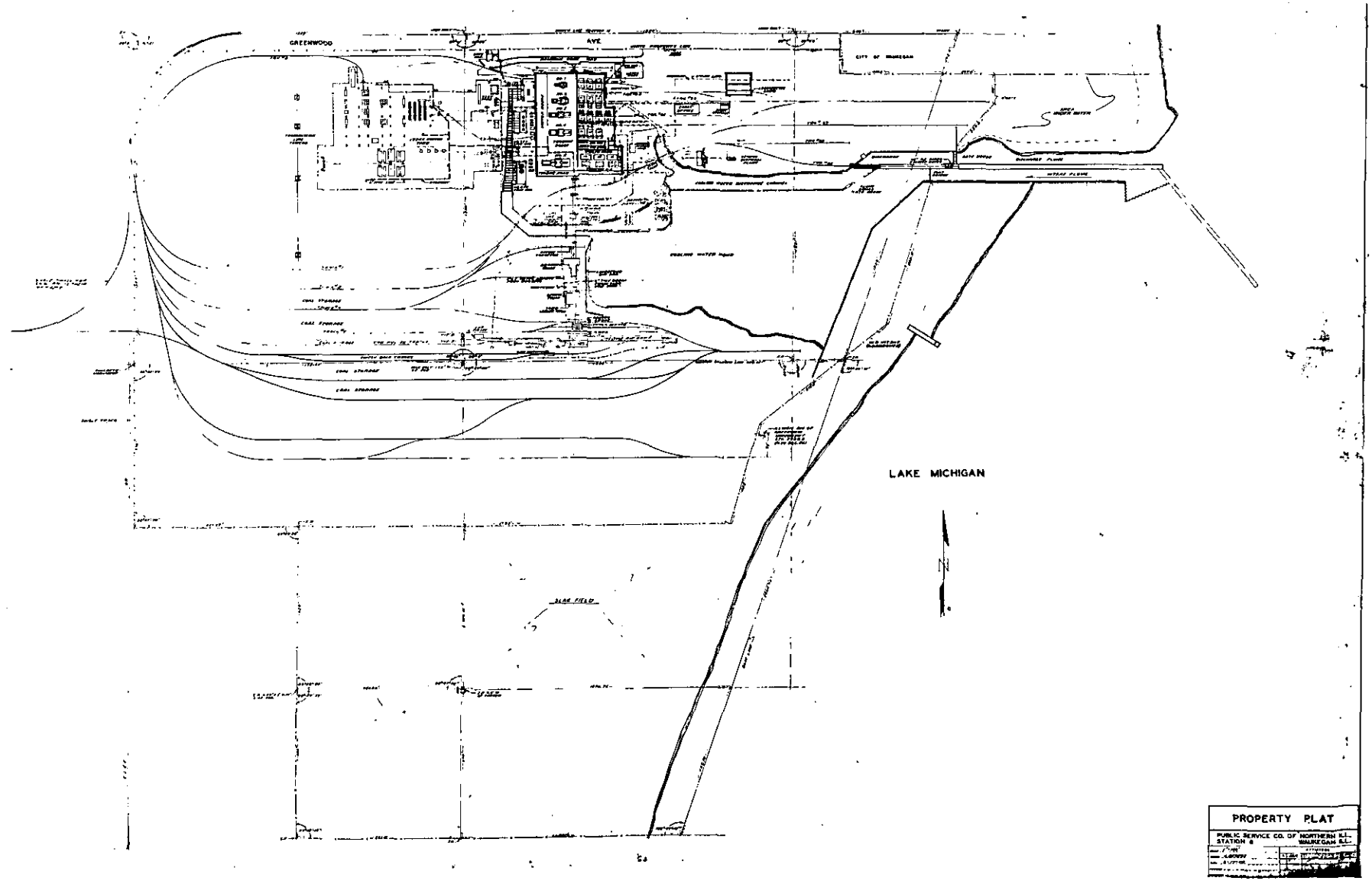
Sargent & Lundy LLC
SARGENT & LUNDY
55 EAST MONROE STREET
CHICAGO, ILLINOIS 60603-5780

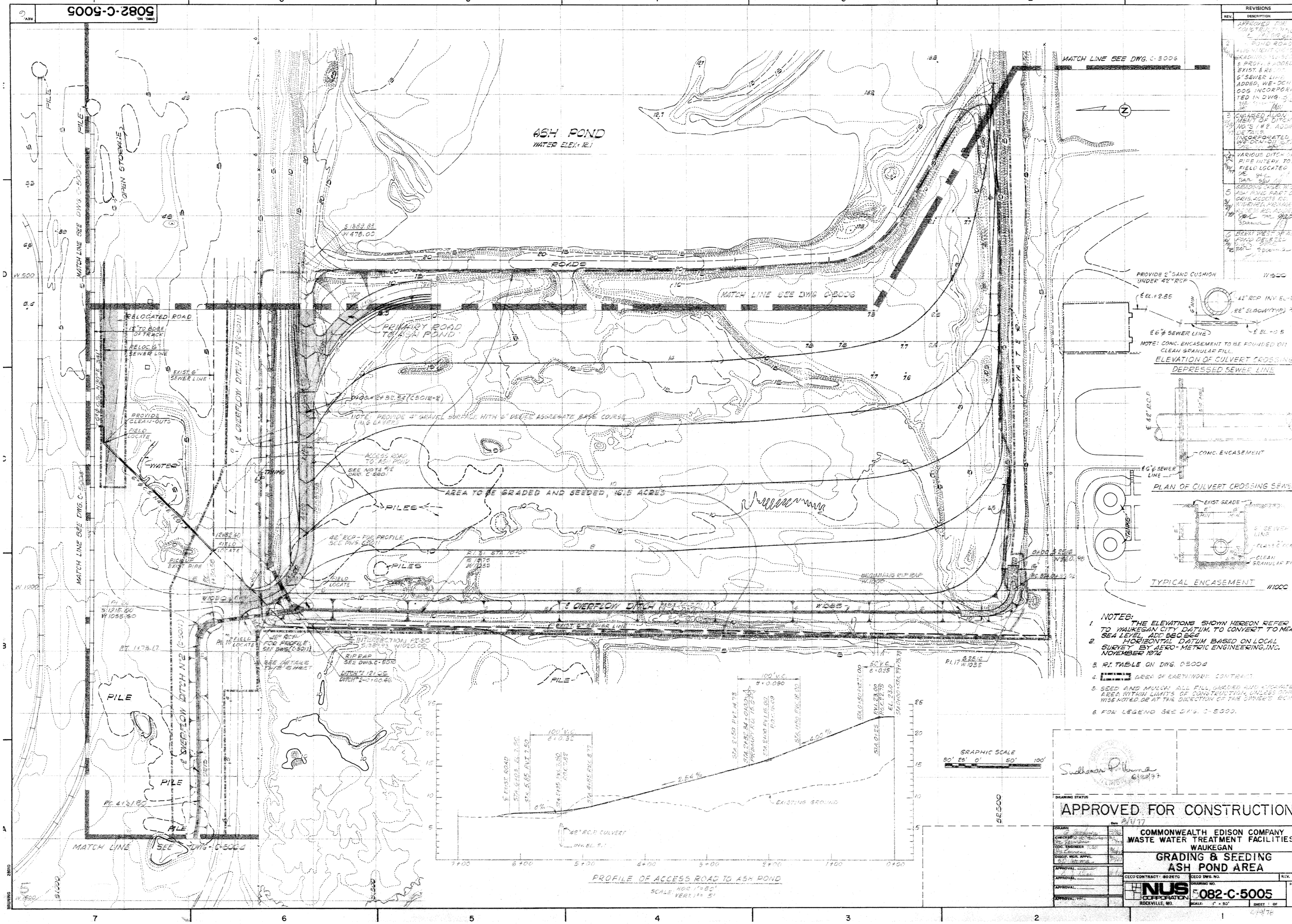
MIDWEST GENERATION, LLC
WAUKEGAN
GENERATING STATION

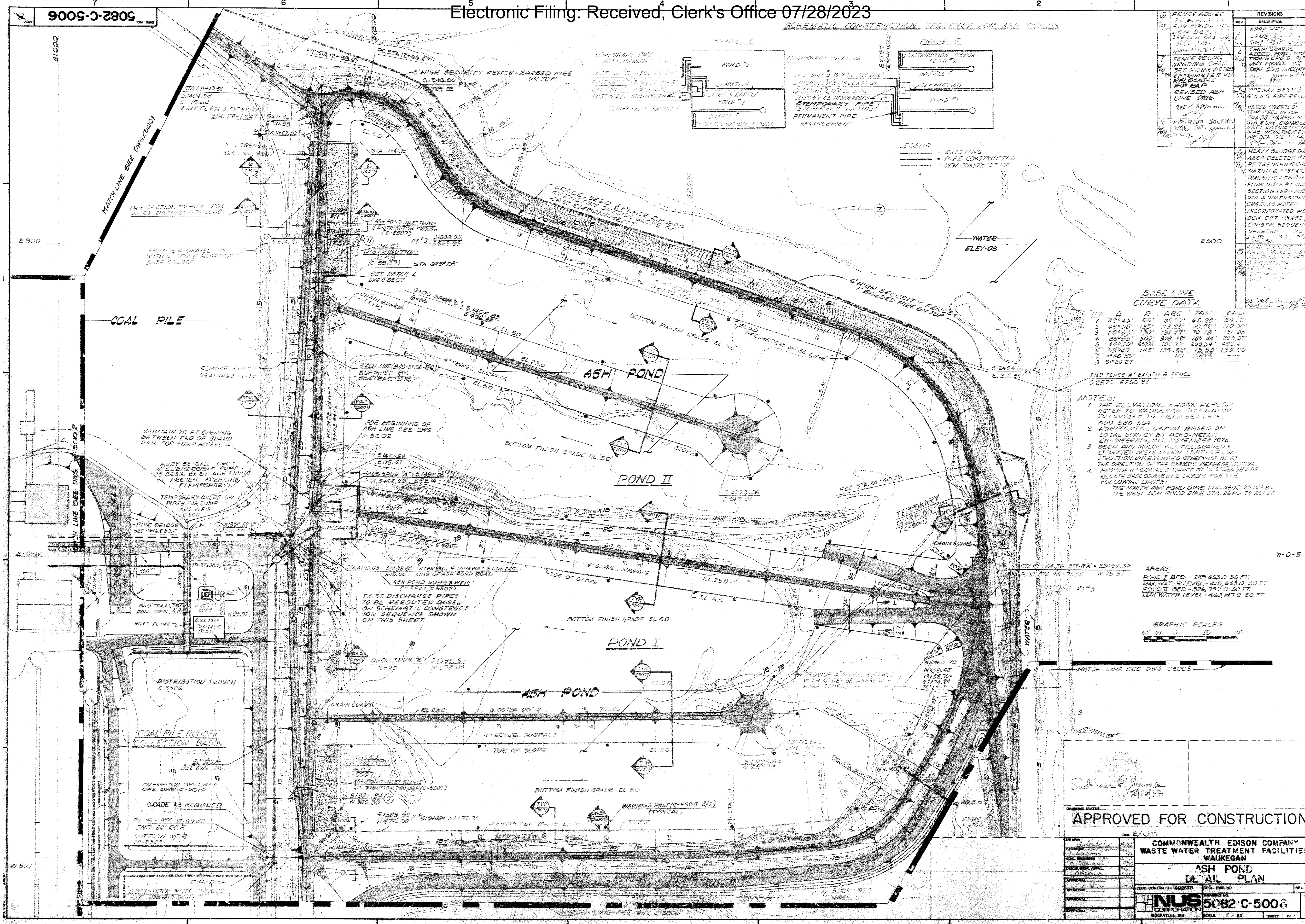
APPENDIX B – HISTORICAL DESIGN DRAWINGS

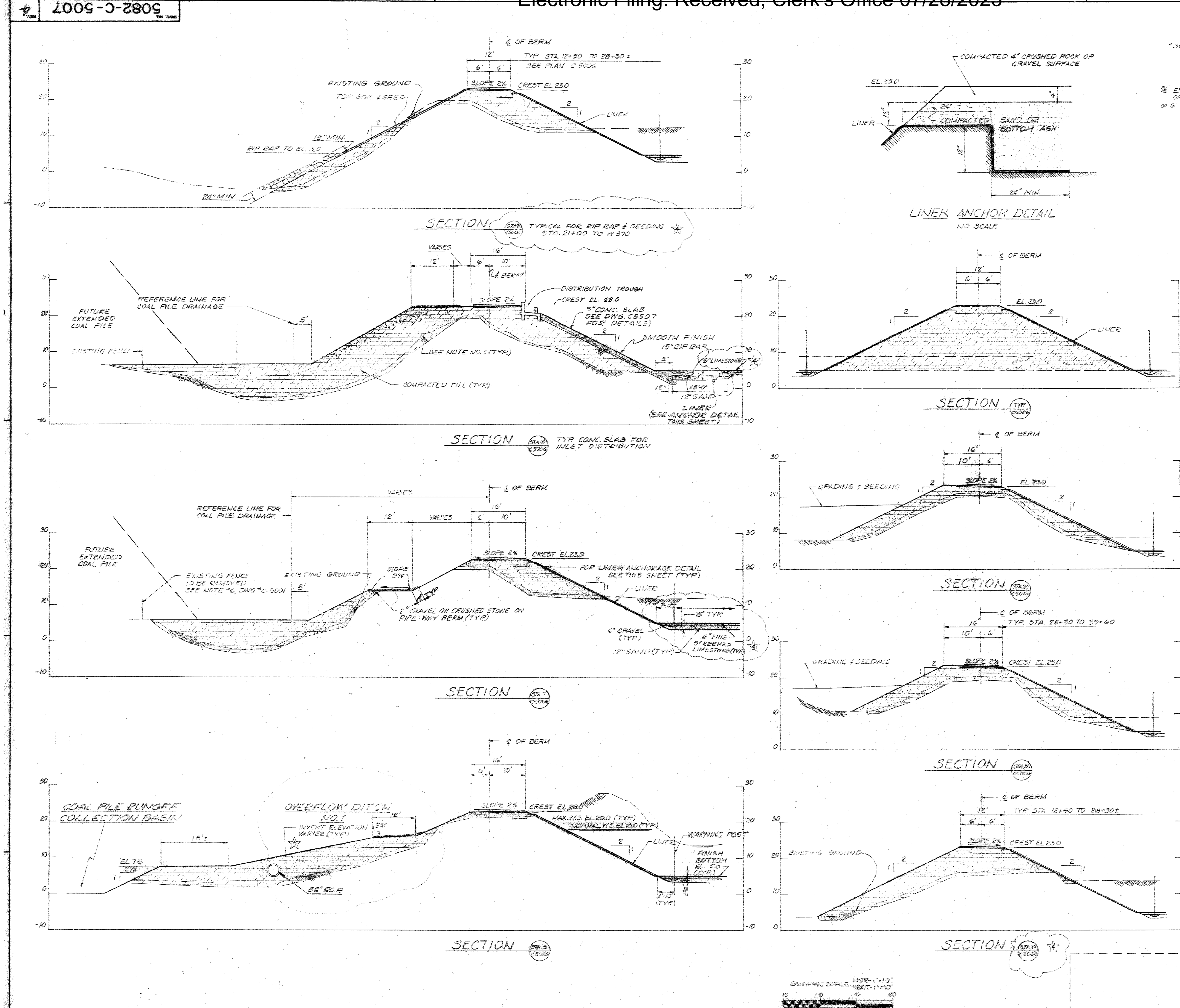
Drawing No.	Title
M-301	Development Plan Sheet No. 2, Units 6 & 7, Station No. 6, Waukegan, Ill.
Property Plat	Property Plat, Public Service Co. of Northern Ill., Station 6, Waukegan, Ill.
5082-C-5005	Grading & Seeding Ash Pond Area
5082-C-5006	Ash Pond Detail Plan
5082-C-5007	Ash Pond Sections & Details

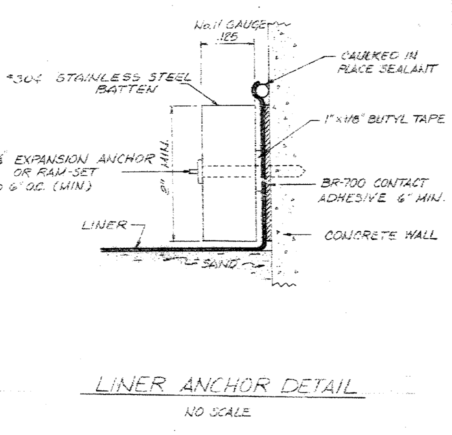


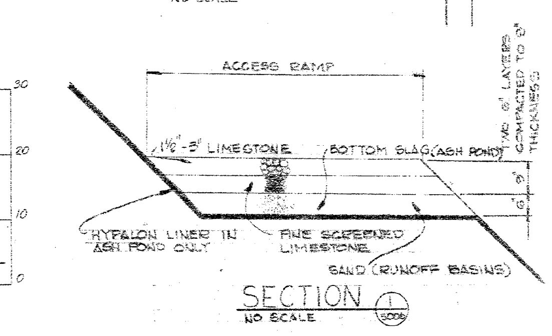

GREENWOOD
AVE.
CITY OF WAUKEGAN
LAKE MICHIGAN
N
PROPERTY PLAT
PUBLIC SERVICE CO. OF NORTHERN IL.
STATION 6
WAUKEGAN IL.











NOTES:

1. ALL ORGANIC MATERIAL, DEBRIS AND LOOSE BOTTOM SLAG OR FLY-ASH SHALL BE STRIPPED FROM THE EXISTING DIKE FOUNDATION AREA. THE EXPOSED FOUNDATION SOILS SHALL BE PROOF ROLLED WITH A PNEUMATIC SMALL TIRE COMPACTOR OF 10 TONS WEIGHT.

2. THE FOUNDATION MATERIAL FOR ALL NEW (INTERIOR) DIKES SHALL BE PLACED BELOW ORGANIC SOILS, DEBRIS, LOOSE FILL MATERIAL IN THE STRATUM OF NATURAL BROWN GRAY SAND.

3. ALL EARTHWORK, FILL, BACKFILL AND EXCAVATION SHALL BE DONE AS PER NUS SPECIFICATION C513. ALL FILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 9 INCHES IN LOOSE THICKNESS AND COMPACTED TO A MINIMUM OF 95 % OF THE MAXIMUM DENSITY AS PER ASTM D1557-70, METHOD A.

4. DIKE CONSTRUCTION SHALL UTILIZE BOILER BOTTOM SLAG OF ACCEPTABLE FLY ASH CONTENT, TO THE EXTENT THAT MATERIAL IS READILY AVAILABLE. OTHER MATERIAL, IF ANALYSED & APPROVED BY THE OWNER'S REPRESENTATIVE, WILL BE ACCEPTABLE.

5. EXISTING WET BOTTOM SLAG REMOVED FROM INTERIOR OF ASH POND AREA MAY BE DRIED AND REUSED FOR DIKE CONSTRUCTION IF FREE OF ORGANIC MATERIAL & WITH ACCEPTABLE FLY ASH CONTENT. UNSUITABLE MATERIAL, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, SHALL NOT BE USED FOR DIKE CONSTRUCTION.

7. BEDDING BLANKET FOR FILTER MATERIAL AND IMPERVIOUS BASIN LINERS SHALL BE PROVIDED TO THE DEPTH, GRADE AND DIMENSIONS AS SHOWN. SAND, CRUSHED STONE OR LOCALLY AVAILABLE BOTTOM ASH CONFORMING TO NUS STANDARD SPECIFICATION C513 AND C515 MAY BE USED.

8. FILL SHALL HAVE SUFFICIENT BEARING CAPACITY FOR SUPPORTING TRAFFIC.

DRAWING STATUS: APPROVED FOR CONSTRUCTION
Date 8/1/77

COMMONWEALTH EDISON COMPANY
WASTE WATER TREATMENT FACILITIES
WAUKEGAN

ASH POND
SECTIONS & DETAILS

CECO CONTRACT: 802670
NUS CORPORATION, ROCKVILLE, MD.
DRAWING NO. 5082-C-5007
SCALE: 1" = 10'

THOMAS J. DEHLIN

Project Engineer
Energy & Industrial Group

Summary

Mr. Dehlin is a civil engineer at Sargent & Lundy with eight years of experience in developing coal combustion residual (CCR) solutions in conformance with regulations promulgated by U.S. EPA and various state environmental protection agencies. His CCR experience includes:

- Designing new flue gas desulfurization (FGD) waste ponds;
- Developing closure and retrofit designs for existing ash and FGD waste ponds;
- Preparing engineering reports and specifications in accordance with federal and state location, design, operating, and closure criteria for CCR surface impoundments; and
- Interfacing with state environmental protection agencies during the permitting / design approval process.

Education

University of Illinois at Urbana-Champaign – M.S., Civil & Environmental Engineering – 2013

University of Illinois at Urbana-Champaign – B.S., Civil & Environmental Engineering – 2012

Registrations

Professional Engineer – Illinois (License No. 062.069314)

Professional Engineer – Kentucky (License No. 37434)

Professional Engineer – Wyoming (License No. 17542)

Proficiencies

- CCR Surface Impoundments – New, Retrofit, and Closure Construction
- Federal CCR Rule and Various State CCR Rule Compliance Programs

CCR Rule Experience

Coal-Fired Power Plant, Kentucky | 2022–Present

- Developed a design for closing a 25-acre CCR surface impoundment in accordance with federal and state regulations
    - Evaluated several closure alternatives, which included assessing potential impacts caused by changes in CCR regulations and developing cost estimates
    - Oversaw groundwater modeling and evaluation of potential groundwater remedies
- Assisted in preparing a final report documenting the groundwater remedy selected for the site
- Participated in a public meeting to discuss corrective measures assessment for the site's groundwater

THOMAS J. DEHLIN
Project Engineer
Energy & Industrial Group

Three Coal-Fired Power Plants, Illinois | 2018–Present

- Developed designs for retrofitting three ash ponds with new composite liner systems and leachate collection and removal systems in accordance with Illinois CCR regulations, including design drawings and construction specifications
- Developed designs for closing six ash ponds (five in-place and one by removal) in accordance with Illinois CCR regulations, including preparation of design drawings and construction specifications
- Prepared retrofit and closure construction permit applications and participated in pre-application public meetings on the proposed construction designs
- Prepared of periodic hazard potential classification assessments, structural stability assessments, safety factor assessments, and inflow design flood control system plans for nine CCR surface impoundments across four power plants

Coal-Fired Power Plant, Wyoming | 2017–Present

- Developing a closure design for the Station's existing 270-acre FGD pond
- Designed the conversion of an existing low-volume waste pond into a new CCR surface impoundment for disposal of effluent from the station's FGD systems
    - 250-acre evaporation pond with zero liquid discharge to surface waters
    - Lined with a composite liner system featuring HDPE geomembrane over geosynthetic clay liner (GCL)
- Developed project design criteria, construction drawings and specifications, and permit applications
- Directly interfaced with Wyoming Department of Environmental Quality and Wyoming State Engineer's Office

Coal-Fired Power Plant, Texas | 2016

- Prepared hazard potential classification assessments, histories of construction, structural stability assessments, and closure and post-closure plans for existing ash disposal units (two ash ponds and four landfill cells).

Two Coal-Fired Power Plants, Indiana | 2015–Present

- Developing final cover system designs and construction specifications to close the ash ponds systems at the Eagle Valley and Harding Street Generating Stations in-place
    - Multi-layer final cover systems over 80-acre and 90-acre ash pond systems
    - Interfacing with Indiana Department of Environmental Management for agency approval of closure plans
    - Participation in public meetings on closure plans
- Participated in annual inspections of the ash pond systems at the Eagle Valley and Harding Street Generating Stations
- Prepared of periodic hazard potential classification assessments, structural stability assessments, safety factor assessments, and inflow design flood control system plans for the ash ponds systems at the Eagle Valley and Harding Street Generating Stations

Exhibit 28

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Springfield, IL 62794-9276

Billing Date	Mon December 16, 2019
Due Date	Tue January 31, 2020
Account Number	W0971900021
Facility Name	Waukegan Station

Will County Generating Station
Attn: Sharene Shealey
529 East 135th Street,
Romeoville, IL 60446

Initial Invoice

Pond ID	Pond Description	Amount
W0971900021-01	East Pond	75,000.00
W0971900021-02	West Pond	75,000.00
W0971900021-03	Old Pond	75,000.00

Amount Due **$225,000.00**

Other Information/Messages

Questions. Please direct any technical/permit questions to the Permit Section at (217) 782-0610. Questions about the amount of your fee should be emailed to: EPA.AcctsReceivable@illinois.gov

- See Reverse Side for Additional Important Information –

Return bottom portion with a check made payable to Illinois EPA

Payment
Remittance Stub

Account Information

Acct. Number	W0971900021
Facility Name	Waukegan Station
IEPA Program	COALIN
Billing Date	Mon December 16, 2019

Amount Due

Tue January 31, 2020	**$225,000.00**
Amount Enclosed	

Please remit payment to:
Illinois Environmental Protection Agency
Fiscal Services #2
P.O. Box 19276
Springfield, IL 62794-9276