BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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

NOTICE OF ELECTRONIC FILING

To: Attached Service List

PLEASE TAKE NOTICE that on September 6, 2023, I electronically filed with the Clerk of the Illinois Pollution Control Board ("Board") the **ENVIRONMENTAL GROUPS' COMMENTS OPPOSING MIDWEST GENERATION'S MOTION TO STAY**, copies of which are served on you along with this notice.

Dated: September 6, 2023

Respectfully Submitted,

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ENVIRONMENTAL GROUPS' COMMENTS OPPOSING MIDWEST GENERATION'S MOTION TO STAY PROCEEDINGS

Pursuant to 35 Ill. Adm. Code 101.628(c), 101.110(a), and 104.100, Clean Power Lake County, Earthjustice, Prairie Rivers Network, and Sierra Club (collectively, "Environmental Groups") submit the following comments opposing the Motion to Stay Proceedings ("Motion") filed by Midwest Generation, LLC ("MWG") on July 28, 2023 in this matter for the reasons explained herein.

In its Motion,[1] MWG asks the Board to stay this proceeding until the earlier of one year from the date of its July 28 filing or the date on which the U.S. Environmental Protection Agency ("USEPA") takes final action on its proposed rule for legacy coal combustion residual ("CCR") surface impoundments and other CCR units ("Proposed Rule").[2]

The factors the Board may consider in determining whether to grant a stay are: (1) comity; (2) prevention of multiplicity, vexation, and harassment; (3) likelihood of obtaining complete relief in the foreign jurisdiction; and (4) the *res judicata* effect of a foreign judgment on the Board proceeding.[3] Additionally, as the Board pointed out in *Sierra Club v. Midwest Generation*, "the Board must consider any ongoing environmental harm should the stay be granted."[4]

A stay is unwarranted here. First, Board decisions make clear that speculative future action with uncertain timing does not justify a stay. Second, neither comity nor prevention of multiplicity, vexation, and harassment justify a stay. The Proposed Rule, if finalized, does not render this proceeding "moot" because existing Illinois and federal rules *already* apply to the Old Pond at Waukegan Station, which MWG misleadingly refers to as the "Grassy Field."[5] The costs

[1] Motion at 1.
[2] *See e.g.*, USEPA, Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; Legacy CCR Surface Impoundments, 88 Fed. Reg. 31,982 (May 18, 2023) ("Proposed Rule").
[3] *See* Order, at 4, *Sierra Club, et. al. v. Midwest Generation, LLC*, PCB 2013-15 (Apr. 16, 2020) ("*Sierra Club v. MWG*").
[4] *Id.* (citation omitted).
[5] We use the term "Old Pond" to refer to the area at issue in this proceeding, which Illinois EPA ("IEPA") describes as the western third of the Old Pond. IEPA, Recommendation, at 5–6 (Oct. 31, 2022) ("IEPA Recommendation"). This area has also been called the Former Slag/Fly Ash Storage Area. *See* Interim Opinion and Order, at 66–67, *Sierra Club v. MWG* (June 20, 2019).

and time of proceeding with this docket accordingly are not time wasted, but rather necessary for the prompt resolution of the matter. Finally, as explained in the multiple public comments filed in this docket since the proceeding began in May 2021, ongoing environmental harm continues while application of the Part 845 rules is stayed due to this proceeding. As Waukegan-based environmental justice organization Clean Power Lake County stated in August 2021, "Each day that the Waukegan plant's pollution goes unchecked presents a risk to our community."[6] Further delay caused by a stay would only exacerbate that harm.

1. Future rules of uncertain timing and content do not justify a stay.

MWG asserts that the Proposed Rule concerning legacy CCR impoundments and what USEPA terms "CCR Management Units" or "CCRMU"[7] justifies a stay of this proceeding. We disagree that an unfinalized USEPA rule—that, for the reasons explained herein, is unlikely to cover the Old Pond—provides an adequate basis for a stay.

The timing of finalization of the Proposed Rule is not certain, and the fact that a consent decree[8] sets the timeline for the Proposed Rule provides few assurances as to the actual timeline on which the Rule will be finalized. While Environmental Groups expect and hope that USEPA will meet the timelines established in the consent decree,[9] there are many examples of the agency agreeing to a certain date to publish final rules, but then failing to meet that deadline. For instance, pursuant to a consent decree, USEPA was under deadline to issue both proposed and final regulations setting effluent limit guidelines on toxic metals for electric generating units.[10] Those deadlines were extended multiple times.[11]

The Board has repeatedly denied requests to stay proceedings based on uncertain timing and outcomes in other proceedings.[12] While USEPA's Proposed Rule will have important implications for many CCR units across the country, that is not true for the Old Pond because

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[6] Comments of Clean Power Lake Cty. (Aug. 27, 2021) ("[G]roundwater pollution from coal ash storage at Midwest Generation's Waukegan plant continues to pose an urgent threat to our community."). *See also* Env't Orgs., Req. for Public Hr'g (June 7, 2021); Env't Orgs., Renewed Req. for Public Hr'g (Oct. 18, 2021); Comments of Clean Power Lake Cty. (May 25, 2022); Comments submitted on behalf of the City of Waukegan by Mayor Taylor (May 25, 2022) ("Groundwater pollution from coal ash storage at Midwest Generation's Waukegan plant continues to pose an urgent threat to these resources and the health of our residents."); Env't Orgs., Comments on MWG's Motion for Extension of Time (Nov. 14, 2022); Comments submitted on behalf of the City of Waukegan by Mayor Taylor (Nov. 15, 2022).

[7] *See e.g.*, Proposed Rule at 31,984.

[8] Consent Decree, *Statewide Organizing for Community eMpowerment et al. v. USEPA et al.*, No. 22-cv-2562 (D.D.C. May 3, 2023).

[9] Commenter Earthjustice represents plaintiffs in the lawsuit that resulted in the consent decree.

[10] Consent Decree, *Defenders of Wildlife v. EPA*, No. 10-cv-01915 (D.D.C. Mar. 19, 2012).

[11] *See Defenders of Wildlife v. EPA*, No. 10-cv-01915 (D.D.C.) (status report filed Dec. 16, 2013).

[12] *See* Order, at 14, *Sierra Club v. MWG* (Apr. 17, 2014) (denying a motion to stay enforcement action and concluding that a "stay is unwarranted . . . because of the uncertain timing and duration of the rulemakings. There is no way to predict with any confidence when compliance with proposed rules will be required."); Order, at 6, *MWG v. IEPA*, PCB 04-216 (Feb. 15, 2007) (denying a stay when movant did not provide a timeline for federal decision); Order, at *2, *In re Petition of the Louis Berkman Company, d/b/a The Swenson Spreader Company, for an Adjusted Standard from 35 Ill. Adm. Code 215, Subpart F*, PCB AS No. 97-5, 1997 WL 165844 (Apr. 3, 1997) (denying a motion to stay adjusted standards proceedings and explaining that "[t]he possibility that a compliance plan may be adopted is not a sufficient reason to stay the adjusted standard proceedings.").

both Part 845[13] and the existing Federal CCR Rule[14] already squarely regulate the Old Pond. Future regulatory action of uncertain timing and content does not justify a stay in this docket.

2. Neither comity nor prevention of multiplicity, vexation, and harassment justify a stay in this matter.

Evidence indicates that the Federal CCR Rule *already* regulates the Old Pond. Likewise, Illinois' Part 845 *already* regulates the Old Pond. Therefore, any new USEPA rules regulating other coal ash units have no bearing on the mandates for that area.

a. The Federal CCR Rule already regulates the Old Pond.

i. The Old Pond sits within the footprint of a larger area that, in its entirety, meets the federal definition of a CCR surface impoundment.

The area at issue in this proceeding, which we refer to as the Old Pond, is the western third of a larger area that also includes Waukegan Station's East and West coal ash ponds.[15] IEPA correctly reasons that if this entire area meets the federal definition of a CCR surface impoundment, then the Old Pond necessarily is also a CCR surface impoundment.[16]

The Federal CCR Rule defines CCR surface impoundment as "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."[17]

IEPA amply demonstrates in its Recommendation that the entire area encompassing the East, West, and Old ponds meets this federal definition of CCR surface impoundment, and thus the Old Pond itself also meets that definition. For example, IEPA provides extensive evidence that the entire area encompassing what are now the East, West, and Old ponds was a settling pond that received sluiced CCR for decades: by 1946 the area "utilized the natural topographic depression within the dune field to settle CCR from sluice water prior to discharge"[18] and by 1974, the area "utilized designed, man-made excavations and dikes (berms) within the dune field to settle CCR from sluice water prior to discharge."[19] The design and use of this area clearly

[13] 35 Ill. Adm. Code 845.
[14] USEPA, Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities, 80 Fed. Reg. 21,302 (Apr. 17, 2015) ("Federal CCR Rule").
[15] IEPA Recommendation at 5–6. MWG has already conceded that the East and West ponds are regulated CCR surface impoundments and not at issue in this proceeding. *See, e.g.*, MWG, Petition for an Adjusted Standard and a Finding of Inapplicability for Waukegan Station, at 1 (May 11, 2021) ("The Illinois CCR Rule regulates the East Pond as a Coal Combustion Residual ("CCR") surface impoundment."); MWG, Amended Petition for an Adjusted Standard and a Finding of Inapplicability for Waukegan Station, at 12 (Sept. 17, 2021) (stating that "the West Pond is subject to the Illinois CCR Rule" and amending its petition to request an adjusted standard for the West Pond instead of for the East Pond); MWG, Second Amended Petition for an Adjusted Standard and a Finding of Inapplicability for Waukegan Station, at 1 (July 28, 2023) (amending its petition to withdraw its request for an adjusted standard for the West Pond).
[16] IEPA Recommendation at 5-6.
[17] Federal CCR Rule at 21,469 (40 C.F.R. § 257.53).
[18] IEPA Recommendation at 7.
[19] *Id.* at 8.

meet the federal criteria for a CCR surface impoundment. Because the Old Pond sits within the footprint of this larger area, it is a CCR surface impoundment under the Federal CCR Rule.[20]

As IEPA correctly points out, the fact that the Old Pond "was graded and seeded, and has maintained a vegetive [sic] cover[]" does not change its status as a CCR surface impoundment.[21] This issue turns on the meaning of "is designed" in the definition of a CCR surface impoundment. We agree with IEPA that the D.C. Circuit's analysis in *Utility Solid Waste Activities Group v. EPA*, 901 F.3d 414 (D.C. Cir. 2018) is instructive on this point.[22] In *USWAG*, the D.C. Circuit interpreted the phrase "is disposed" in RCRA's definition of "open dump" ("any facility or site where solid waste *is disposed* of which is not a sanitary landfill").[23] Industry argued that the phrase "is disposed of" means that a site must actively receive new waste in order to meet RCRA's definition of an "open dump."[24] The court rejected that argument, explaining that the word "disposed" took the form of a past participle and therefore an "open dump" includes sites where "the act of disposal took place at some prior time."[25] The court concluded that "the waste in inactive impoundments 'is disposed of' at a site no longer receiving new waste in just the same way that it 'is disposed of' in at a site that is still operating."[26] The same is true for a CCR surface impoundment that is designed "to hold an accumulation of CCR and liquids" even if the impoundment no longer receives CCR or water.

MWG's claim that the Old Pond was designed to "disperse"—not "hold"—liquids is unavailing. MWG concedes that the "core operation" of the larger area encompassing the Old Pond, when constructed, was to receive "sluiced CCR conveyed by pipe from the Station's boilers" where both CCR and liquids would remain until the liquid "either drained through the natural sand floor or was directed into the ditch along the Station's southern property line . . . and then to Lake Michigan."[27]

Furthermore, the Old Pond is unlined[28] and holding CCR in groundwater—facts that indicate the Old Pond meets the federal definition of a CCR surface impoundment based on recent USEPA decisions. First, MWG's own investigations have found up to fifteen feet of CCR in the Old Pond.[29] That fifteen-foot-thick layer of CCR was measured at a maximum depth of

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[20] *Id.* at 10–11.
[21] *Id.* at 10.
[22] *Id.* at 11–12.
[23] 42 U.S.C. § 6903(14) (emphasis added).
[24] *USWAG*, 901 F.3d at 439.
[25] *Id.* at 440.
[26] *Id.*
[27] MWG, Response to IEPA's Recommendation, at 8 (July 28, 2023) ("MWG Response").
[28] IEPA Recommendation at 15 ("The Agency has found no information indicating that the bottom of Old Pond was lined, including the Grassy Field portion.").
[29] *See, e.g.*, Attach. A at Bates MWG13-15_79526. Attachment A is an excerpt of Exhibit 1330 from the May 2023 hearing in PCB 2013-15, which contains a sampling grid showing boring locations, boring logs, and soil sampling data at Waukegan Station. At that hearing, MWG witness Richard Gnat confirmed in testimony that this excerpted document "summarizes a soil grid boring program" conducted "in the area to the west of the west ash pond at Waukegan Station." *See* Testimony of Richard Gnat, 1–5, 106–108, PCB 2013-15 (May 17, 2023), https://pcb.illinois.gov/documents/dsweb/Get/Document-108305. Also at that hearing, MWG witness Sharene Shealey confirmed in testimony that the "area directly west of the west [ash] pond" at Waukegan Station "is sometimes called the grassy field," which Environmental Groups refer to in these comments as the Old Pond. *See*

17.5 feet below the surface, with up to 4.5 feet of the CCR in a saturated condition (i.e., below the level described as "wet" on boring logs).[30] Simply put, MWG itself confirms that CCR was, for decades, sluiced to the larger area encompassing the Old Pond; that area was utilized for the purpose of holding CCR and CCR-contaminated liquids until they percolated into groundwater or flowed into a nearby ditch; and the unlined Old Pond continues to hold CCR in groundwater.

USEPA has made clear that units like the Old Pond meet the federal definition of CCR surface impoundment. USEPA rejected claims similar to MWG's in a letter regarding CCR units at Duke Energy's Gallagher Station:

> We understand that you interpret the definition of a CCR surface impoundment to exclude units such as the North Ash Pond, where liquid remains in the unit because the base of the unit intersects with groundwater. You argue that such units do not "hold" liquid because groundwater flows through the unit (instead of staying within the unit). EPA disagrees with your interpretation. The definition of a CCR surface impoundment does not require that the unit prevent groundwater from flowing through the unit, but merely requires that the unit be "designed to hold an accumulation of CCR and liquid." 40 C.F.R. § 257.53. Following your interpretation would lead to the incongruous result that impoundments where contaminants can migrate out in the groundwater would not be regulated by the CCR Regulations, while those that prevent that type of migration would be regulated.[31]

Like Duke's North Ash Pond, MWG's Old Pond is a CCR surface impoundment under the Federal CCR Rule.

ii. The Old Pond is an inactive CCR surface impoundment under the Federal CCR Rule.

Having established that the Old Pond meets the federal definition of CCR surface impoundment, IEPA next demonstrates that the Old Pond is an "inactive" CCR surface impoundment under the Federal CCR Rule. An inactive CCR surface impoundment is "a 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."[32]

USEPA has explained that a surface impoundment "contains" liquids if any part of its base is in contact with groundwater:

> EPA interprets the word "contains" to mean "to have or hold (someone or something) within" based on the ordinary meaning of the word. (e.g., Oxford

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Testimony of Sharene Shealey, 1–6, PCB 2013-15 (May 19, 2023), https://pcb.illinois.gov/documents/dsweb/Get/Document-108242.

[30] *See id.*; *see also id.* at Bates at MWG 13-15_79518, 79525 (also showing 4.5 feet of wet CCR), 79528–29 (showing 5 feet of wet CCR).

[31] Attach. B, USEPA, Letter re: Duke Energy's Gallagher Generating Station, at 1 (Jan. 2021) ("Duke Letter").

[32] 40 C.F.R. § 257.53 (emphasis added).

> English Dictionary, Merriam-Webster). Accordingly, an impoundment "contains" liquid if there is liquid in the impoundment, even if the impoundment does not prevent the liquid from migrating out of the impoundment. *This means that if a CCR surface impoundment contains liquid because its base (or any part of its base) is in contact with groundwater, it would meet the definition of an inactive CCR surface impoundment*.[33]

USEPA reiterated and elaborated on that explanation in its Proposed Rule:

> A surface impoundment that, on or after October 19, 2015, has only decanted the surface water would normally still contain liquid if waste is saturated with water. *To the extent the unit still contains liquids, it would be covered by the existing definition of an inactive impoundment*. Under this proposed rule, such units would also be considered legacy CCR surface impoundments when located at inactive facilities. This would apply whether the unit is considered "closed" under state law, is in the process of closing, or whether at some subsequent point, the unit is fully dewatered and no longer contains liquid.[34]

Although the Old Pond stopped receiving CCR around 1980,[35] it still contains both CCR and liquids and thus meets the federal definition of an inactive CCR surface impoundment. MWG's own investigation showed that up to 4.5 feet of CCR in the unit is saturated.[36] IEPA confirms that "no mention, documentation, permit, permit application, or other evidence has been presented to the Agency showing that the Old Pond CCR materials were removed or covered in a manner that would prevent infiltration."[37] Because the Old Pond still contains CCR and liquids, it is an inactive CCR surface impoundment under the Federal CCR Rule.

In summary, IEPA's analysis and evidence presented in its Recommendation—bolstered by evidence from MWG itself—makes clear that the Federal CCR Rule *already* applies to the Old Pond.

b. <u>Illinois rules already regulate the Old Pond and potential revisions to Part 845 based on an unfinalized federal rule do not justify a stay.</u>

Likewise, Illinois' Part 845 rules already regulate the Old Pond consistent with—indeed, more protectively than—the Federal CCR Rule. The Illinois legislature made clear four years ago that addressing coal ash pollution from CCR surface impoundments is a priority for the state[38] and directed the Board to issue regulations for CCR surface impoundments that are "*at least* as protective and comprehensive" as federal requirements.[39] The Board issued those regulations, including mandates that are broader than existing federal rules.[40] As IEPA explains

[33] Duke Letter at 2 (emphasis added).
[34] Proposed Rule at 31,992 (emphasis added).
[35] *See, e.g.*, MWG Response at 10–11; IEPA Recommendation at 10.
[36] *Supra* n. 29 & 30.
[37] IEPA Recommendation at 13.
[38] *See* 415 ILCS 5/22.59 ("Coal Ash Pollution Prevention Act").
[39] *Id*. at 5/22.59(g)(1) (emphasis added).
[40] *See*, *e.g.*, 35 Ill. Adm. Code 845 (defining "inactive CCR surface impoundment" to include impoundments from

in its Recommendation, the Old Pond falls under those existing regulations. Therefore, even if the Old Pond were not already regulated by the *existing* Federal CCR Rule (as explained above, it is), the Proposed Rule would not justify a stay in this proceeding on MWG's request for adjusted standards from *state* rules that already regulate the Old Pond.

IEPA made this same point in its response opposing Southern Illinois Power Cooperative's recent motion to stay the adjusted standards proceeding for CCR impoundments at Marion station:

> Illinois EPA opposes SIPC's requested stay because Part 845 remains applicable independently of Part 257 [the Federal CCR Rule]. Part 845 is governed by the State law, making it imperative for the Board's decision to strictly adhere to the mandates outlined in Section 22.59 of the Illinois Environmental Protection Act (415 ILCS 5/22.59) and Part 845.[41]

We agree that because Illinois' Coal Ash Pollution Prevention Act already requires regulation of the Old Pond, and Part 845 already regulates the Old Pond, any potentially less protective federal requirements are not relevant to this proceeding.

Even assuming—incorrectly, we maintain—that the Old Pond will qualify as a "CCRMU" under a final version of USEPA's Proposed Rule instead of as a CCR surface impoundment under the existing Federal CCR Rule, there is no reason to put this proceeding on ice to wait for finalization of the Proposed Rule. The protections of Part 845 for inactive CCR surface impoundments are broader than, and consistent with, both existing federal mandates for CCR surface impoundments and the proposed federal requirements for CCRMU (once those units are identified). All subject such units to essentially the same groundwater monitoring requirements, corrective action directives, operating specifications, and closure and post-closure standards—e.g., effectively the same protections,[42] though Illinois' rules include more protective additions.[43] Accordingly, it is entirely possible that waiting for the Proposed Rule to be finalized will simply lead back to the same protections already required for the Old Pond under Part 845. In that scenario, further delaying regulation of the Old Pond by staying this proceeding would result in nothing more than additional time for the Old Pond to pollute.[44] In the unlikely event that there are major changes between USEPA's Proposed Rule and the final rule, those changes may require a broader look at whether Part 845 requires amendments to its provisions for inactive impoundments. However, the *possibility* that broader regulatory changes may be needed does not justify further delaying protections for the Old Pond that, as discussed in detail below, continues to pollute groundwater.

Illinois has the authority to regulate the Old Pond in a manner that is more protective and

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which all the liquids have previously drained out and setting regulatory requirements for those units); *id*. at 845.650(d) (triggering analysis of corrective measures and corrective action if exceedances of a broader array of CCR constituents are identified); *id*. at 845.740(c) (setting out responsible removal provisions).

[41] IEPA, Response to SIPC's Motion to Stay the Proceedings, at 6–7, AS 2021-006 (July 26, 2023).

[42] *Compare* 35 Ill. Adm. Code 845 *with* 40 C.F.R. § 257, subpart D and Proposed Rule at 32,033–044.

[43] *See supra* n. 40.

[44] The next section discusses the robust evidence of ongoing pollution from the Old Pond.

comprehensive than the Federal CCR Rule, and that is exactly what Part 845 does—and why existing Part 845 regulations should be implemented as written at MWG's Waukegan Station. No stay is warranted.

3. Ongoing harm would only get worse if this proceeding is stayed.

Staying this proceeding would prolong the harm that MWG's CCR pollution has caused residents of Waukegan, an environmental justice community, for far too long already. Both Waukegan's mayor and community members have repeatedly described this harm and called for expeditious resolution of this proceeding in comments they have filed in this docket.[45] More recently, residents described the impacts of MWG's CCR contamination and urgently called for an end to that pollution at USEPA's public hearing on its Proposed Rule in Waukegan.[46]

In its Motion, MWG makes the outrageous claim that "[a] stay in this proceeding will not result in environmental harm or threats to public health."[47] MWG argues this is because "[t]here are no potable wells downgradient of the Station"; "Environmental Land Use Controls are established at the Station which prevent any access to the groundwater"; and MWG's experts have "concluded the groundwater presented no risk to Lake Michigan."[48]

As an initial matter, CCR pollution from the Old Pond can cause harm regardless of the presence of potable wells or current accessibility of the groundwater. USEPA made that clear in its proposed denial of an alternative closure deadline for the Ottumwa Generating Station when it explained that corrective actions that remove CCR from groundwater "must be assessed more favorably than those that fail to do so" *regardless of the presence of groundwater receptors*:

> The assessment [of alternative corrective measures] appears to be based upon the assumption that because no receptors have been identified, there is no risk from continued releases of inorganic metals to the aquifer and ultimately to the Des Moines River, so all alternatives are equivalent . . . Alternatives that are likely to prevent future releases can be distinguished from those that are not and assessed accordingly. The requirement to assess their relative performance under this criterion is not negated by an unsubstantiated claim that no receptors are or will be impacted by the release. *The presence or absence of immediate receptors is not a valid criterion for remedy selection*.[49]

The Illinois Supreme Court's decision in *Central Illinois Public Service Co. v. Pollution Control Board*, 116 Ill. 2d 397 (1987) bolsters that conclusion by underscoring that, in Illinois,

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[45] *Supra* n. 6.
[46] *See* John McCracken, "New EPA rules tell polluters in Great Lakes communities to clean up legacy coal waste," *Grist* (June 23, 2023), https://grist.org/accountability/new-epa-rules-tell-polluters-in-great-lakes-communities-to-clean-up-legacy-coal-waste/; Nick Blumberg, "Environmental Activists Rally in Chicago for Tighter Rules on Coal Ash Byproduct," *WTTW* (June 28, 2023), https://news.wttw.com/2023/06/28/environmental-activists-rally-chicago-tighter-rules-coal-ash-byproduct.
[47] Motion at 6.
[48] *Id.*
[49] Attach. C, USEPA, Excerpt of Proposed Denial of Alternative Closure Deadline for Ottumwa Generating Station, EPA– HQ–OLEM–2021-0593, 61–62 (Jan. 11, 2022) (emphasis added).

groundwater must be protected for both current users *and potential future users*. There, the court adopted this Board's determination that water pollution exists not only when actual harm has occurred or will occur, but rather whenever "harm *would* occur if the contaminated water were to be used."[50] The court explicitly agreed with this Board's interpretation that "any contamination which prevents the State's water resources from being usable would constitute pollution."[51] This Board applied that holding to MWG in its interim opinion and order in the separate proceeding concerning groundwater pollution from Waukegan Station.[52]

Extensive evidence shows that the Old Pond is polluting groundwater, including evidence that the Board has already weighed in *Sierra Club v. MWG*.[53] Moreover, IEPA's Recommendation explains that monitoring wells to the east and southeast of the Old Pond "report reoccurring concentrations of Boron, Sulfate and TDS that exceed the Part 845.600(a)(1) numerical groundwater protection standards" with the caveat that "all of the constituents in Section 845.600(a)(1) are not being monitored, nor are total metals being analyzed."[54] Finally, as discussed above, the Old Pond contains CCR saturated in groundwater. As USEPA explained in its recently published proposed denial of Alabama's application for primacy of its CCR program,[55] "allowing groundwater to continue flowing through [CCR] indefinitely will not protect human health and the environment."[56]

Thus, contrary to MWG's claims, evidence shows that the Old Pond is polluting groundwater, and the law makes clear that such pollution poses environmental and public health risks regardless of the presence of groundwater receptors. That alone weighs strongly against a stay.

But here, the harm is not merely a future potential harm; it is an ongoing, present harm, decisively tipping the scales against a stay. As Waukegan resident Dulce Ortiz explained in her 2020 testimony to this Board, she does not let her children "go swimming or fishing on the Lake due to [her] fear of them getting sick just by doing things that normal kids do because of the exposure to so many sources of pollution," including CCR pollution from Waukegan Station.[57] She added:

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[50] *Cent. Ill. Pub. Serv. Co.*, 116 Ill. at 409 (emphasis in original).
[51] *Id.* at 409–10.
[52] Interim Opinion and Order, at 85, *Sierra Club v. MWG* (June 20, 2019).
[53] *See id.* at 68 ("Weighing the facts presented, the Board finds that Environmental Groups have proven that it is more likely than not that the historic areas [including the Former Slag/Fly Ash Storage area] and coal ash in the fill areas at the [Waukegan] Station are causing or contributing to GQS exceedances at the Station"), 69 ("[T]he 163 exceedances downgradient of the Former Slag and Fly Ash Storage area, along with higher concentrations of indicator constituents, show that the Former Slag and Fly Ash Storage area is contributing to the exceedances in wells MW-1 through 7."), 75 ("The Board finds that the groundwater monitoring results indicate the Former Slag and Fly Ash Storage area is the likely source of boron exceedances at Waukegan Station in the wells downgradient of the area as well as the ash ponds."), 76 ("[T]he Board finds that the likely source of the 57 exceedances of sulfate and 63 exceedances of TDS in the downgradient monitoring wells MW- 5, 7, 8, and 9 at Waukegan is the Former Slag and Fly Ash Storage area located west of the ash ponds").
[54] IEPA Recommendation at 17.
[55] USEPA, Alabama: Denial of State Coal Combustion Residuals Permit Program, 88 Fed. Reg. 55,220 (Aug. 14, 2023).
[56] *Id.* at 55,237.
[57] Pre-filed Testimony of Dulce Ortiz, at 2, R 2020-019 (Aug. 27, 2020).

> Not only is it a tremendous amount of toxic pollution that our predominantly low-income, Latino residents are exposed to, but it is also devastating for our community economically. Waukegan has dreamed for years, and still dreams, of revitalizing our lakefront. We have aspirational lakefront plans that have seen little success in coming to fruition in part because of the amount of contamination that remains at many of these sites and the limited re-use options they offer due to the levels of contamination. When we allow companies to pollute our communities and do not force them to clean up, we deter future investment in these sites and in our communities at large. This is devastating for economically disadvantaged communities like Waukegan who desperately need new investments and economic renewal.[58]

Ms. Ortiz recently echoed this testimony in public comments on USEPA's Proposed Rule. Other Waukegan residents have described the impact of MWG's coal ash pollution on their community and called for an urgent end to that pollution.[59]

Ms. Ortiz and other Waukegan residents have borne the costs of MWG's CCR pollution for too long. Staying this proceeding would only prolong that unfair outcome and further delay protections for the site. MWG's attempt to stay this proceeding is simply the latest in a long line of attempts to dodge and delay responsibility for its pollution. The separate groundwater pollution proceeding began in 2012, citing violations from 2010 when certain monitoring wells were first installed at Waukegan Station. Thirteen years later, MWG is still dedicating its dollars to delay tactics when it could spend that money on cleaning up its CCR pollution instead. Thirteen years of delay is long enough. This Board should reject MWG's request for yet more time.

Conclusion

For the reasons set out herein, the Board should deny MWG's Motion and require MWG to meet the full slate of requirements under Part 845.

Respectfully Submitted,

/s/ Lauren Piette
IL Bar No. 6330290
Earthjustice
311 S. Wacker Dr., Suite 1400

[58] *Id.* at 2–3.

[59] *See, e.g.*, Public Hr'g Testimony, at 5–6. R 2020-019 (Oct. 1, 2020) (Testimony of Cathy Colton) ("I know too many of my students and their families, friends of mine in the community who suffer from asthma, other respiratory ailments that way too many county citizens suffer from . . . So I'm here to ask that these rules be stringent to protect both the water near my home and my community."); *id.* at 11 (Testimony of Yolanda Flores) ("The rules need to make sure that these ashes will not get wet or in the future . . . When you leave it outside . . . [y]ou are fixing part of problem only. What you're telling to my community that you are -- you really don't care about us.").

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On behalf of Earthjustice

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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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

CERTIFICATE OF SERVICE

The undersigned, Lauren Piette, an attorney, certifies that I have served by email the Clerk and by email the individuals with email addresses named on the Service List provided on the Board's website, *available at* https://pcb.illinois.gov/Cases/GetCaseDetailsById?caseId=17032, a true and correct copy of the **ENVIRONMENTAL GROUPS' COMMENTS OPPOSING MIDWEST GENERATION'S MOTION TO STAY PROCEEDINGS**, before 5 p.m. Central Time on September 6, 2023. The number of pages in the email transmission is 72 pages.

Dated: September 6, 2023

Respectfully Submitted,

/s/ Lauren Piette
IL Bar No. 6330290
Earthjustice
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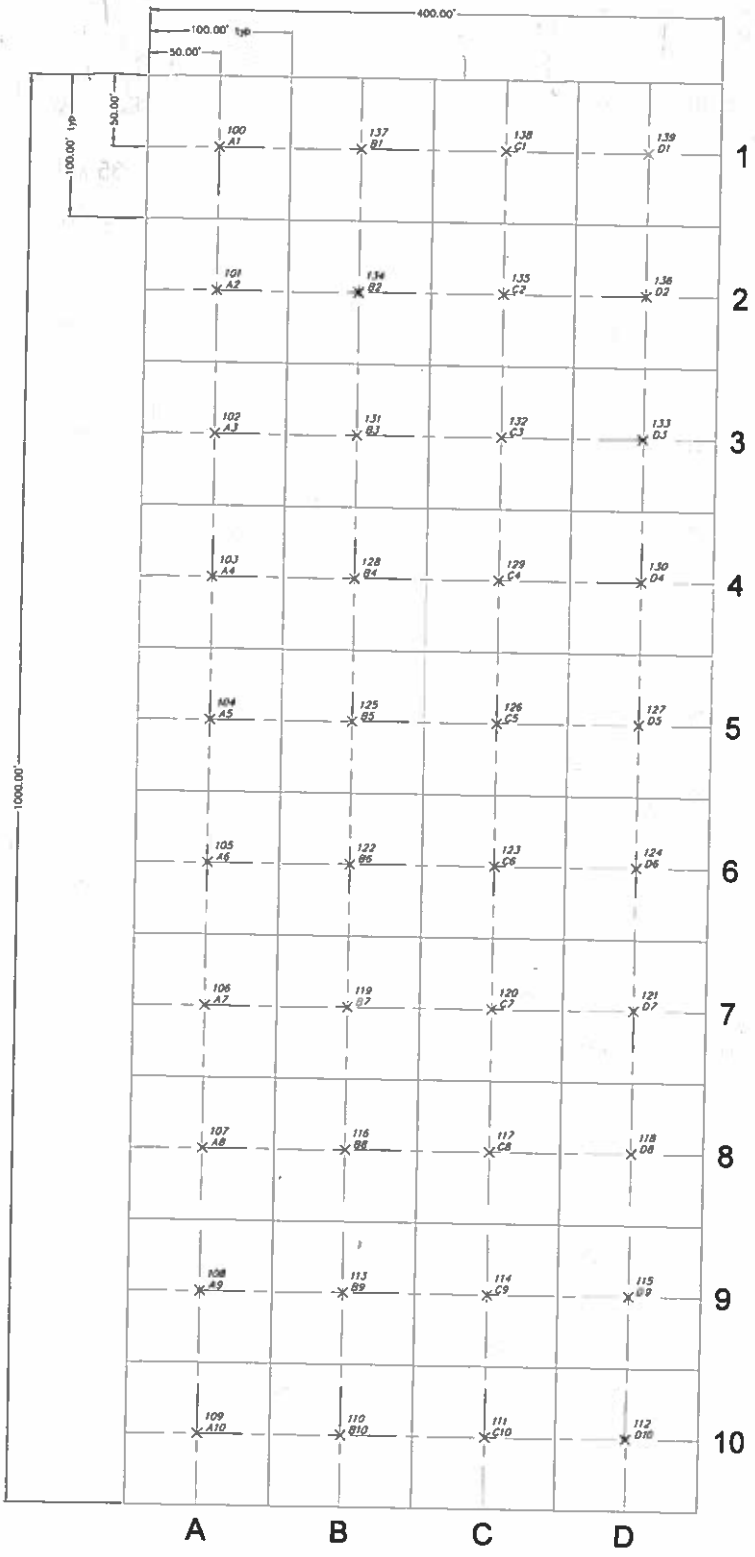
Attachment A

SAMPLING GRID EXHIBIT

MIDWEST GENERATION LLC
WAUKEGAN, IL



Point Table			
Point #	Northing	Easting	Description
100	2081049.0030	1123455.0830	A1
101	2080949.0100	1123454.2070	A2
102	2080849.0170	1123453.3310	A3
103	2080749.0240	1123452.4550	A4
104	2080649.0310	1123451.5800	A5
105	2080549.0380	1123450.7040	A6
106	2080449.0450	1123449.8280	A7
107	2080349.0520	1123448.9520	A8
108	2080249.0590	1123448.0760	A9
109	2080149.0660	1123447.2000	A10
110	2080148.1900	1123547.1930	B10
111	2080147.3140	1123647.1850	C10
112	2080146.4380	1123747.1790	D10
113	2080248.1630	1123548.0690	B9
114	2080247.3070	1123648.0620	C9
115	2080246.4310	1123748.0550	D9
116	2080348.1760	1123548.9450	B8
117	2080347.3000	1123648.9380	C8
118	2080346.4240	1123748.9310	D8
119	2080448.1690	1123549.8210	B7
120	2080447.2930	1123649.8140	C7
121	2080446.4170	1123749.8070	D7
122	2080548.1620	1123550.6970	B6
123	2080547.2860	1123650.6900	C6
124	2080546.4100	1123750.6830	D6
125	2080648.1550	1123551.5730	B5
126	2080647.2790	1123651.5660	C5
127	2080646.4030	1123751.5590	D5
128	2080748.1480	1123552.4480	B4
129	2080747.2720	1123652.4420	C4
130	2080746.3960	1123752.4350	D4
131	2080848.1410	1123553.3240	B3
132	2080847.2650	1123653.3170	C3
133	2080846.3890	1123753.3100	D3
134	2080948.1340	1123554.2000	B2
135	2080947.2580	1123654.1930	C2
136	2080946.3820	1123754.1860	D2
137	2081048.1270	1123555.0760	B1
138	2081047.2510	1123655.0690	C1
139	2081046.3750	1123755.0620	D1

GRAPHIC SCALE
(IN FEET)
1 inch = 80 ft.

EXHIBIT
1330

REVISIONS			
No.	DATE	DESCRIPTION	BY

Ruettiger, Tonelli & Associates, Inc.
Surveyors • Engineers • Planners • Landscape Architects • G.I.S. Consultants
129 CAPISTA DRIVE - SHOREWOOD, ILLINOIS 60404
PH. (815) 744-6600 FAX (815) 744-0181
website: www.ruettigertonelli.com

DATE: 11-23-2020 | SCALE: 1" = 80' | DRAWN BY: ECH | CHECKED BY: DJZ

PREPARED FOR: KPRG ASSOCIATES, INC.
14685 W. LISBON ROAD, SUITE 1A
BROOKFIELD, WISCONSIN 53005

FIELD BOOK: MWG
PAGE: 1

DRAWING No.: 213-1030-Exhibit

DRAWING TITLE: SAMPLING GRID EXHIBIT

DRAFT	Boring Number: A1	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenfield Ave. Waukegan, IL 60187	Boring Location Point #100	Date: 11/25/20 Start 11:30 AM Finish 11:35 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Gray SILT, Slightly Moist, Ash				
				2	Black FINE to MEDIUM SAND, Slightly Moist, Slag				
		48"		3				0.0	
				4					
				5	Tan SILT, Dry, Ash				
				6	Black SILT, Slightly Moist, Ash and Slag				
				7	Gray SILT, Slightly Moist, Ash				
		48"		8				0.0	
				9					
				10	Black FINE to MEDIUM SAND, Slightly Moist, Ash and Slag				
				11					Fill
				12					
		48"		13	Brown/Gray FINE to MEDIUM SAND, Wet			0.0	Native
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT	Boring Number: A2	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #101	Date: 11/25/20 Start 11:25 AM Finish 11:30 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 6 inch layer Gray SILT, Moist, Ash				
		36"		2					
				3					
				4					
				5	- Wet				
				6					
				7	Black FINE to MEDIUM SAND, Slightly Moist, Slag				
		36"		8					FILL
				9					
				10	Brown/Gray FINE to MEDIUM SAND, Wet				
				11					NATIVE
				12					
		48"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT	Boring Number: A3	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #102	Date: 11/25/20 Start 11:20 AM Finish 11:25 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 6 inch layer Gray SILT, Slightly Moist, Ash				
				2	Brown/Black, FINE to MEDIUM SAND, Slightly Moist Gray, SILT, Very Moist, Ash				
		36"		3					
				4					
				5	Brown/Gray/Black, FINE to MEDIUM SAND with SILT, Moist, Ash and Slag				
				6					
				7	Gray SILT, Wet, Ash				
		48"		8					
				9	Black FINE to MEDIUM SAND, Wet				
				10					Fill
				11	---				
				12	Gray/Brown FINE to MEDIUM SAND, Wet				Native
		48"		13					
				14					
				15	---				
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT	Boring Number: A4	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #103	Date: 11/25/20 Start 11:10 AM Finish 11:15 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 6 inch layer Gray SILT, Slightly Moist, Ash				
		48"		2 3 4 5					
				6	Brown/Black, FINE and MEDIUM SAND with SILT, Slightly Moist, Ash and Slag				
				7	Gray/Black SILT, Wet, Ash				
		48"		8					Fill
				9					
				10	Black SILT, Moist, Peat with Roots and Wood				Native
				11	Gray/Brown, FINE to MEDIUM SAND, Wet				
				12					
		60"		13 14					
				15					
				16	END OF BORING AT 15 FEET				
				17 18 19 20 21 22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT	Boring Number: A5	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #104	Date: 11/25/20 Start 11:00 AM Finish 11:05 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
		60"		1	Brown CLAYEY TOP SOIL, Slightly Moist, 2 inch layer - 1 inch layer Black/Brown, FINE and MEDIUM SAND, Moist				
				2	Gray SILT, Moist, Ash				
				3					
				4					
				5					
				6					
				7	Brown/Black FINE and MEDIUM SAND, Moist, Slag				
		36"		8	Gray/Black SILT, Wet, Ash				
				9	Brown/Gray/Black FINE and MEDIUM SAND with SILT, Moist, Slag and Ash				Fill
				10	Black SILT, Moist, Peat with Roots Gray/Brown FINE and MEDIUM SAND, Wet				
				11					Native
				12					
		48"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT	Boring Number: A6	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #105	Date: 11/25/20 Start 10:50 AM Finish 10:55 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 4 inch layer Gray SILT, Slightly Moist, Ash				
				2					
		42"		3	- 1 inch layer Black FINE to MEDIUM SAND, Moist, Slag				
				4					
				5					
				6	Black FINE to MEDIUM SAND, Slightly Moist, Slag				
				7	Black/Gray SILT, Wet, Ash				Fill
		36"		8					
				9	Gray/Black FINE to MEDIUM SAND, Wet				Native
				10	- 3 inch layer Black PEAT with WOOD				
				11					
				12					
		60"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT	Boring Number: A7	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #106	Date: 11/25/20 Start 10:40 AM Finish 10:45 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 6 inch layer Gray SILT, Moist, Ash				
				2					
		48"		3	- 1 inch layer Black FINE to MEDIUM SAND, Moist, Slag				
				4					
				5					
				6	- As Above, Wet				Fill
				7					
				8	Brown/Gray FINE to MEDIUM Sand, Moist				Native
		36"		9					
				10	- As above, Wet				
				11					
				12					
		48"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT	Boring Number: A8	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #107	Date: 11/25/20 Start 10:30 AM Finish 10:35 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
		60"		1–7	Brown CLAYEY TOP SOIL, Slightly Moist, 1 inch layer Gray SILT, Very Moist, Ash				Fill
		48"		8–15	Black SILTY CLAY, Moist, Peat with Roots and Wood Brown/Gray FINE to MEDIUM SAND, Very Moist				Native
		48"		16–22	END OF BORING AT 15 FEET				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT	Boring Number: A9	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #108	Date: 11/25/20 Start 10:20 AM Finish 10:25 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 1 inch layer				
				2	Gray SILT, Very Moist, Ash				
		36"		3					
				4					
				5					
				6	Black/Gray SAND and CLAY, Very Moist, Ash and Slag				Fill
				7					
		48"		8	Tan/Gray FINE to MEDIUM SAND, Moist				Native
				9					
				10	- As Above, Wet				
				11					
				12					
		48"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT	Boring Number: A10	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #109	Date: 11/25/20 Start 10:10 AM Finish 10:15 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 6 inch layer				
				2	Gray SILT, Slightly Moist, Ash				
		36"		3					
				4	- As Above, Wet				
				5					
				6					Fill
				7					
		48"		8	Brown/Gray FINE to MEDIUM SAND, Very Moist				Native
				9	- Coarsening Downward				
				10					
				11					
				12					
		48"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT	Boring Number: B1	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #137	Date: 11/24/20 Start 14:55 AM Finish 15:00 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 2 inch layer Gray/Brown SILTY CLAY, Slightly Moist, Slag				
				2	Gray SILTY SAND, Slightly Moist Dark Gray/Tan, SILTY SAND, Slightly Moist, Slag				
		60"		3	Brown SILT, Very Moist, Ash			1.4	
				4					
				5					
				6	- Gray layers of SILT and FINE SAND				
				7	Gray SILT, Slightly Moist, Ash				
		60"		8	Black FINE to MEDIUM SAND, Slightly Moist, Slag			0.3	
				9	- Thin Gray Clayey Silt Layer				
				10					
				11					Fill
				12					
		42"		13	Dark Gray SILT and FINE SAND, Wet, PEAT and Organics			4.9	
				14	Tan/Light Brown FINE to MEDIUM SAND, Wet				Native
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT	Boring Number: B2	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #134	Date: 11/25/20 Start 08:50 AM Finish 08:55 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer Gray SILT, Dry, Ash				
		48"		2 3	- As Above, Very Moist				
				4 5 6 7	Black MEDIUM SAND, Moist, Ash				
		48"		8 9 10 11					Fill
				12					
		48"		13 14	Brown/Gray FINE to MEDIUM SAND, Wet - 1 inch layer of PEAT at top				Native
				15					
				16 17 18 19 20 21 22	END OF BORING AT 15 FEET				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

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DRAFT	Boring Number: B3	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #131	Date: 11/25/20 Start 09:00 AM Finish 09:05 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer Gray SILT, Very Moist, Ash				
		24"		2 3 4 5 6 7					
		48"		8	Black/Brown FINE to MEDIUM SAND, Slightly Moist, Ash and Slag				Fill
				9					
				10	Brown/Gray FINE to MEDIUM SAND, Slightly Moist				Native
				11	- As Above, Wet				
		48"		12 13 14					
				15					
				16	END OF BORING AT 15 FEET				
				17 18 19 20 21 22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

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DRAFT	Boring Number: B4	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #128	Date: 11/25/20 Start 09:10 AM Finish 09:15 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 6 inch layer Brown/Gray SILT, Very Moist, Ash				
		48"		2 3 4					
				5	Brown/Black FINE to MEDIUM SAND, Moist				
				6	Gray SILT, Very Moist, Ash				
				7	- As Above, Wet				
		48"		8					Fill
				9					
				10	Brown/Gray FINE to MEDIUM SAND, Slightly Moist				Native
				11	- As Above, Wet				
				12					
		36"		13 14					
				15					
				16	END OF BORING AT 15 FEET				
				17 18 19 20 21 22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: B5	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #125	Date: 11/25/20 Start 09:20 AM Finish 09:25 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
		48"		1–6	Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer Gray SILT, Slightly Moist, Ash				
				7	As Above, Wet				
		48"		8–9	Black FINE to MEDIUM SAND, Ash and Slag - 2 inch layer Gray SILT, Wet, Ash				Fill
				10–11	Brown/Gray FINE to MEDIUM SAND, Slightly Moist - As Above, Wet				Native
		48"		12–15					
				16	END OF BORING AT 15 FEET				
				17–22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT	Boring Number: B6	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #122	Date: 11/25/20 Start 09:25 AM Finish 09:30 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 6 inch layer Gray SILT, Slightly Moist, Ash				
		48"		2 3 4 5	- As Above, Wet				
				6 7	- Thin 1 inch layer Brown/Black FINE to MEDIUM SAND				
		60"		8 9					Fill
				10					
				11	Brown/Gray FINE to MEDIUM SAND, Very Moist				Native
		36"		12 13 14 15					
				16	END OF BORING AT 15 FEET				
				17 18 19 20 21 22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: B7	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #119	Date: 11/25/20 Start 09:35 AM Finish 09:40 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
		48"		1–5	Brown CLAYEY TOP SOIL, Slightly Moist, 4 inch layer Gray SILT, Slightly Moist, Ash - As Above, Wet				Fill
		60"		8–9					
		36"		10–15	Tan/Gray FINE to MEDIUM SAND, Slightly Moist - 1 inch layer Black PEAT - As Above, Wet				Native
				16	END OF BORING AT 15 FEET				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: B8	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #116	Date: 11/25/20 Start 09:45 AM Finish 09:50 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 4 inch layer Gray SILT, Slightly Moist, Ash				
		36"		2 3 4					
				5	- As Above, Wet				
		60"		6 7 8					
				9	Brown/Black FINE to MEDIUM SAND, Slightly Moist, Slag				Fill
				10					
				11	Gray/Brown FINE to MEDIUM SAND, Wet				Native
		48"		12 13 14					
				15					
				16	END OF BORING AT 15 FEET				
				17 18 19 20 21 22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: B9	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #113	Date: 11/25/20 Start 09:55 AM Finish 10:00 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 4 inch layer Dark Brown/Orange SILTY SAND, Slightly Moist				
		36"		2 3 4	Gray SILT, Slightly Moist, Ash				
				5	- As Above, Wet				
				6 7 8					Fill
		60"		9					
				10	Brown/Gray FINE to MEDIUM SAND, Slightly Moist - 1 inch layer Black PEAT on top				Native
				11	- As above, Wet				
				12 13					
		48"		14 15					
				16	END OF BORING AT 15 FEET				
				17 18 19 20 21 22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT	Boring Number: B10	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #110	Date: 11/25/20 Start 10:05 AM Finish 10:10 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 4 inch layer Gray SILT, Slightly Moist, Ash				
		48"		2 3 4					
				5	- As Above, Wet				
				6 7					
		60"		8	Black FINE to MEDIUM SAND, Slightly Moist, Ash and Slag				Fill
				9					
				10	Tan/Brown/Gray FINE to MEDIUM SAND, Slightly Moist				Native
				11	- As above, Wet, Coarsening Downwards				
				12					
		48"		13 14					
				15					
				16	END OF BORING AT 15 FEET				
				17 18 19 20 21 22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: C1	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #138	Date: 11/24/20 Start 14:30 PM Finish 14:35 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL with GRAVEL, Slightly Moist, 4 inch layer				
				2	Dark Brown SILTY SAND, Trace CLAY, Slightly Moist, Ash				
		49"		3	Gray/Dark Gray SILTY CLAY with SAND, Ash and Trace Slag Gray SILT, Wet, Ash			8.8	
				4					
				5					
				6	Black FINE to MEDIUM SAND, Slightly Moist, Slag				
				7					
		40"		8				0.8	Fill
				9					
				10	Brown SILTY SAND, Moist - As Above, Wet				Native
				11					
				12					
		41"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: C2	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #135	Date: 11/24/20 Start 14:15 PM Finish 14:20 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 4 inch layer				
				2	Gray SILT, Dry, Ash - As Above, Wet				
		42"		3				0.0	
				4					
				5					
				6	- Interbedded Red/Brown/Black Medium Sand and Gravel, Slag				
				7					
				8	Black FINE to MEDIUM SAND, Slightly Moist, Slag			0.0	Fill
		42"		9					
				10	Gray FINE to MEDIUM SILTY SAND, Grades to Tan, Slightly Moist				Native
				11	- As Above, Wet				
				12					
				13					
		44"		14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: C3	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #132	Date: 11/24/20 Start 14:05 PM Finish 14:10 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
		42"		1 2 3 4 5 6 7 8 9 10 11	Brown CLAYEY TOP SOIL, Slightly Moist, 4 inch layer Dark and Light Gray SILT, Slightly Moist, Ash Red-Brown FINE to MEDIUM SAND, Slightly Moist, Ash Black FINE to MEDIUM SAND, Slightly Moist, Slag -Brown Layers at 5-6 ft. - 3 inch layer Gray SILT, Ash			0.0 22.8 2.1	Fill
		30"		12 13 14 15	Gray/Tan FINE to MEDIUM SAND, Wet				Native
		48"		16 17 18 19 20 21 22	END OF BORING AT 15 FEET				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: C4	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #129	Date: 11/24/20 Start 13:55 PM Finish 14:00 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
		60"		1	Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer - Gravel				
				2	Gray SILT, Slightly Moist, Ash				
				3				0.0	
				4					
				5					
				6	Brown/Black FINE to MEDIUM SAND, Slag and Ash				
				7				1.2	
		36"		8	Gray SILT, Wet, Ash Black MEDIUM to COARSE SAND, Slightly Moist, Slag				
				9					
				10					Fill
				11				21.6	
				12	Gray/Light Gray/Tan MEDIUM SAND, PEAT and Roots at Top, Slightly Moist				Native
		41"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: C5	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #126	Date: 11/24/20 Start 13:45 PM Finish 13:50 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer Gray SILT, Slightly Moist, Ash				
		60"		2 3 4 5				14.3	
				6	Brown/Black FINE SAND, Slightly Moist, Slag				
				7	Gray SILT, Wet, Ash			0.9	
		48"		8					
				9	Black and Gray MEDIUM SAND, Slag and Ash				
				10 11				1.1	Fill
				12					
		48"		13	Gray SAND and GRAVEL, Some Peat and Glass Pieces				Native
				14	Gray/Brown FINE to MEDIUM SAND, Moist				
				15					
				16	END OF BORING AT 15 FEET				
				17 18 19 20 21 22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: C6	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #123	Date: 11/24/20 Start 13:35 PM Finish 13:40 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 6 inch layer				
				2					
		38"		3				4.7	
				4					
				5					
				6					
				7	Brown/Black MEDIUM SAND, Slightly Moist, Slag			3.7	
		36"		8	Gray SILT, Wet, Ash				
				9	Black/Gray SILT to MEDIUM SAND, Slag and Ash, Slightly Moist				
				10					
				11				28	Fill
				12					
		30"		13	Brown/Gray FINE to MEDIUM SAND, Slightly Moist				Native
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: C7	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #120	Date: 11/24/20 Start 13:25 PM Finish 13:30 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Brown CLAYEY TOP SOIL, Slightly Moist, 6 inch layer				
				2	Brown/Gray SILTY SAND and CLAY				
					Gray SILT, Slightly Moist, Ash				
		60"		3				0.7	
				4					
				5					
				6					
				7				12.5	
					- As Above, Wet				
		60"		8	- 3 inch layer Gray/Black FINE SAND, Slightly Moist, Ash				
				9					
				10					
				11				3.1	Fill
				12	Black PEAT with Rootlets, 3 inch layer				
		48"		13	Tan FINE to MEDIUM SAND, Slightly Moist				Native
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT	Boring Number: C8	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #117	Date: 11/24/20 Start 13:20 PM Finish 13:25 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist				
				2	Black/Gray MEDIUM SAND, Slag Gray CLAY, Slightly Moist, Ash				
		36"		3	Gray SILT, Slightly Moist, Ash			7.9	
				4					
				5					
				6	Black FINE to MEDIUM SAND, SLAG				
				7	Gray SILT, Wet, Ash			0.0	
		60"		8	Black MEDIUM SAND, Trace CLAY, Moist, Slag and Ash				
				9					
				10					
				11				4.9	Fill
				12					
		60"		13	Tan/Gray FINE to MEDIUM SAND, Moist				Native
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: C9	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #114	Date: 11/24/20 Start 13:10 PM Finish 13:15 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist				
				2	Black/Gray SILTY SANDY CLAY, Slightly Moist, Ash and Slag				
		60"		3				7.9	
				4	Gray SILT, Moist, Ash				
				5					
				6					
				7				17.0	
		60"		8					
				9					
				10	- As Above, Wet				
				11				0.1	
				12					Fill
		60"		13					
				14	Black PEAT with Rootlets, 3 inch layer Tan/Gray FINE to MEDIUM SAND, Very Moist				Native
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

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DRAFT	Boring Number: C10	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #111	Date: 11/24/20 Start 12:50 PM Finish 12:55 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist				
				2	Gray SILTY CLAY, Trace SAND Slightly Moist				
		48"		3	Brown/Black MEDIUM SAND, Slightly Moist, Slag			10.3	
				4	Gray SILT, Very Moist, Ash				
				5					
				6					
				7	Black/Gray FINE to MEDIUM SAND, Ash and Slag			2.4	
		36"		8	- Thin layer Gray Silt, Ash				
				9					
				10					
				11				0.2	
				12					Fill
		48"		13					
				14	Tan/Gray FINE to MEDIUM SAND, Moist				Native
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT	Boring Number: D1	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #139	Date: 11/24/20 Start 10:50 AM Finish 10:55 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer Gray/Black FINE to MEDIUM SAND, Slag				
				2	Gray SILTY CLAY, Ash, Moist Black/Gray FINE to MEDIUM SAND, Ash and Slag				
		48"		3				0.0	
				4					
				5					
				6					
				7	Black/Gray SILTY CLAY, Tan Layering, Ash			1.8	
		48"		8					
				9	Tan/Light Brown SILTY SAND, Some Slag and Ash				
				10	Black SANDY SILTY CLAY, Ash and Slag				
				11	Black/Gray SILTY SANDY CLAY, Ash and Slag			0.3	
				12					
		48"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT	Boring Number: D2	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #136	Date: 11/24/20 Start 11:00 AM Finish 11:05 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer Gray/Brown/Black SILTY SANDY CLAY with GRAVEL, Ash				FILL
				2	Brown/Black SILTY CLAY, Ash, Moist				
		30"		3	Black/Brown/Orange FINE to MEDIUM SAND, Ash and Slag			0.0	
				4					
				5					
				6	Brown/Gray SILTY CLAY, Ash				
				7				0.0	
		48"		8					
				9					
				10					
				11	Black/Brown SILTY SAND, Wet, Ash				
				12	Gray SILTY SANDY CLAY, Wet, Ash				
		48"		13					
				14					
				15	Black MEDIUM SAND, Wet, Ash and Slag				
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT	Boring Number: D3	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #133	Date: 11/24/20 Start 11:20 AM Finish 11:25 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer Gray/Brown SILTY SAND with GRAVEL, Slightly Moist				
				2	Brown/Gray SILTY CLAY, Ash, Moist				
		30"		3	Black/Gray/Green/Orange Layered MEDIUM SAND, Ash			0.0	
				4					
				5	Gray SILT, Moist, Ash				
				6					
				7				0.1	
		60"		8					
				9					
				10					
				11	Black/Brown FINE to MEDIUM SAND, Dry, Ash and Slag				
				12					
		48"		13	Gray SILT, Wet, Ash				
				14	Black MEDIUM SAND, Wet, Ash and Slag				
				15					
				16					Fill
				17					
		48"		18					
				19	Brown/Black CLAY and PEAT with Shells and Wood Gray MEDIUM SAND, Moist				Native
				20					
				21	END OF BORING AT 20 FEET				
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT	Boring Number: D4	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #130	Date: 11/24/20 Start 11:30 AM Finish 11:35 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer				Fill
				2	Black/Brown/Red SILTY SANDY CLAY, Trace GRAVEL, Ash Tan/Black/Gray SILTY SAND, Ash and Slag				
		36"		3				6.8	
				4					
				5					
				6	Gray SILT, Moist, Ash				
				7				0.7	
		60"		8	- As Above, Wet				
				9					
				10					
				11	Black/Gray/Brown CLAYEY SAND, Moist, Ash and Slag			0.0	
				12					
		60"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT | Boring Number: D5 | Page 1 of 1

Site Name: Waukegan Station

Address: 401 E Greenwood Ave. Waukegan, IL 60187

Boring Location: Point #127

Date: 11/24/20 Start 11:35 AM

Finish 11:40 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer Black/Brown SILTY SANDY CLAY with GRAVEL, Slightly Moist				Fill
				2	Red/Brown/Gray MEDIUM SAND, Ash and Slag				
		32"		3				0.0	
				4	Gray SILT, Moist, Ash				
				5					
				6	- As Above, Wet				
				7				0.1	
		60"		8					
				9					
				10					
				11	Black/Gray SILTY SAND, Slightly Moist, Ash and Slag			0.2	
				12					
		48"		13					
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT	Boring Number: D6	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #124	Date: 11/24/20 Start 11:50 AM Finish 11:55 AM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer Black/Gray SILTY SAND, Orange Layering, Slightly Moist, Ash				
				2	Gray SILT, Slightly Moist, Ash				
		36"		3				0.0	
				4					
				5					
				6	- As Above, Wet				
				7				0.0	
		60"		8					
				9	Black/Gray SILTY SAND, Moist, Ash and Slag				
				10					
				11	Gray SILT, Wet, Ash			0.0	
				12	Black MEDIUM SAND, Slightly Moist, Ash and Slag				Fill
		60"		13	Tan/Gray FINE to MEDIUM SAND, Trace GRAVEL, Moist				
				14					Native
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT | Boring Number: D7 | Page 1 of 1

Site Name: Waukegan Station

Address: 401 E Greenwood Ave. Waukegan, IL 60187

Boring Location Point #121

Date: 11/24/20 Start 12:05 PM

Finish 12:10 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer Tan CLAY, Slightly Moist				Fill
				2	Tan/Brown/Black MEDIUM SAND, Slightly Moist, Ash and Slag				
		30"		3				0.2	
				4	Gray SILT, Slightly Moist, Ash				
				5					
				6					
				7				0.0	
		60"		8					
				9					
				10	Black/Brown FINE SAND, Slightly Moist. Ash				
				11	Gray SILT, Wet, Ash			0.0	
				12					
		60"		13					
				14	Black/Gray MEDIUM SAND, Slightly Moist, Ash and Slag				
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

DRAFT	Boring Number: D8	Page 1 of 1
Site Name: Waukegan Station Address: 401 E Greenwood Ave. Waukegan, IL 60187	Boring Location Point #118	Date: 11/24/20 Start 12:10 PM Finish 12:15 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer				Fill
				2	Gray/Black FINE to MEDIUM SAND, Trace GRAVEL, Slightly Moist, Ash and Slag				
		40"		3				0.1	
				4					
				5					
				6	Tan/Orange/Brown, Layered FINE to MEDIUM SAND, Slightly Moist. Ash and Slag				
				7				0.4	
		34"		8					
				9					
				10					
				11	Gray SILT, Wet, Ash			0.6	
				12					
		60"		13					
				14	Black/Gray, Layered MEDIUM SAND and CLAY, Ash and Slag				
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

DRAFT | Boring Number: D9 | Page 1 of 1

Site Name: Waukegan Station

Address: 401 E Greenwood Ave. Waukegan, IL 60187

Boring Location Point #115

Date: 11/24/20 Start 12:25 PM

Finish 12:30 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer				
				2	Dark Gray/Black FINE to MEDIUM SAND with interbedded SILT layers, Slightly Moist, Ash and Slag				
		40"		3				0.0	
				4					
				5					
				6					
				7				0.1	
		45"		8	Dark Gray SILT, Very Moist, Ash				
				9					
				10	- As Above, Wet				
				11				0.0	Fill
				12					
		60"		13	Tan/Gray FINE to MEDIUM, Moist, Roots at Top				Native
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

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DRAFT

Boring Number: D10

Page 1 of 1

Site Name: Waukegan Station

Address: 401 E Greenwood Ave. Waukegan, IL 60187

Boring Location Point #112

Date: 11/24/20 Start 12:40 PM

Finish 12:45 PM

Sample Number	Sample Device	Sample Recovery	Lithology Symbol	Depth (feet)	Detailed Soil and Rock Description	Natural Moisture Content %	Hand Penetrometer	OVA/PID/FID/OVM	Remarks
				1	Dark Brown CLAYEY TOP SOIL, Slightly Moist, 3 inch layer				Fill
				2	Gray/Black SILTY CLAY with laminations, Slightly Moist, Ash and Slag				
		48"		3				0.2	
				4	Black/Gray SILTY SAND, Slightly Moist, Slag				
				5					
				6					
				7				4.9	
		24"		8					
				9					
				10	- As Above, Wet				
				11	Dark Gray SILT, Wet, Ash			0.0	
				12					
		60"		13	- 3 inch layer Fine Sand				
				14					
				15					
				16	END OF BORING AT 15 FEET				
				17					
				18					
				19					
				20					
				21					
				22					

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

Groundwater Data

▼ Depth While Drilling _____

▽ Depth After Drilling _____

Auger Depth _____ Rig Geoprobe

Rotary Depth _____ Geologist M. Dolan

Driller/Co Cabeno Environmental Services

Note: Boring backfilled unless otherwise noted

Illinois Environmental Protection Agency

IL 532-2275
LPC 501 Rev June 2004

Attachment B

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
L-17J

Mr. Owen R. Schwartz
Duke Energy
1000 East Main Street
Plainfield, Indiana 46168

Dear Mr. Schwartz,

This letter provides written confirmation of the discussion between the Environmental Protection Agency (EPA) and Duke Energy Gallagher staff during our conference calls on August 27 and September 17, 2021 regarding the history of the site and the closure of Coal Combustion Residuals (CCR) surface impoundments at Duke Energy's Gallagher Generating Station in New Albany, Indiana. This letter also serves to notify you that, based on the information provided in those telephone conversations, EPA has concluded that the North Ash Pond and the Primary Pond Ash Fill Area are subject to the requirements of 40 C.F.R. Part 257 Subpart D ("the CCR Regulations").

On the August 27 conference call, Duke Energy stated that two impoundments (i.e., North Ash Pond, Primary Pond Ash Fill Area) were removed from service, drained of ponded surface water, and subsequently covered with soil and grass in 1989. Further, EPA's understanding is that Duke has taken no engineering measures to remove any of the groundwater from either unit and both of these unlined units are sitting in approximately 20 feet of groundwater.

As an initial matter, we disagree with Duke Energy's argument that neither of these units are CCR surface impoundments within the meaning of the CCR Regulations. We understand that you interpret the definition of a CCR surface impoundment to exclude units such as the North Ash Pond, where liquid remains in the unit because the base of the unit intersects with groundwater. You argue that such units do not "hold" liquid because groundwater flows through the unit (instead of staying within the unit). EPA disagrees with your interpretation. The definition of a CCR surface impoundment does not require that the unit prevent groundwater from flowing through the unit, but merely requires that the unit be "designed to hold an accumulation of CCR and liquid." 40 C.F.R. § 257.53. Following your interpretation would lead to the incongruous result that impoundments where contaminants can migrate out in the groundwater would not be regulated by the CCR Regulations, while those that prevent that type of migration would be regulated.

Primary Pond Ash Fill Area

The Primary Pond Ash Fill Area is not an existing CCR surface impoundment because (to EPA's knowledge) it has not received CCR after October 19, 2015. However, because it still contains CCR and liquids, it meets the definition of an inactive CCR surface impoundment. An inactive CCR surface impoundment is one "that no longer receives CCR on or after October 19, 2015 and still contains both CCR and liquids on or after October 19, 2015." EPA interprets the word "contains" to mean "to have or hold (someone or something) within" based on the ordinary meaning of the word. (e.g., Oxford English Dictionary, Merriam-Webster). Accordingly, an impoundment "contains" liquid if there is liquid in the impoundment, even if the impoundment does not prevent the liquid from migrating out of the impoundment. This means that if a CCR surface impoundment contains liquid because its base (or any part of its base) is in contact with groundwater, it would meet the definition of an inactive CCR surface impoundment. Under both the regulatory and dictionary definitions of the term, groundwater (or water) falls within the plain meaning of a "liquid." See 40 C.F.R. 257.53. Therefore, because the Primary Pond Ash Fill Area is sitting in approximately 20 feet of groundwater, it holds or contains liquids and is an inactive surface impoundment.

As an inactive CCR surface impoundment, the Primary Pond Ash Fill Area is regulated pursuant to 40 C.F.R. § 257.50(c), which specifies that "[t]his subpart also applies to inactive CCR surface impoundments at active electric utilities or independent power producers, regardless of the fuel currently used at the facility to produce electricity."

North Ash Pond

On the September call, Duke Energy confirmed that the North Ash Pond has received CCR after the October 19, 2015 effective date of the CCR Rule. Therefore, that pond meets the definition of an existing CCR surface impoundment. An existing CCR surface impoundment is one that "receives CCR both before and after October 19, 2015." 40 C.F.R. § 257.53. Accordingly, the North Ash Pond falls within the ambit of 40 C.F.R. § 257.50(b), which specifies that "[t]his subpart applies to owners and operators of…existing CCR surface impoundments…that dispose or otherwise engage in solid waste management of CCR." Even if the North Ash Pond had not received CCR after October 19, 2015, it would be an inactive CCR surface impoundment for the same reasons that the Primary Pond Ash Fill Area is an inactive CCR surface impoundment and would fall within the ambit of 40 C.F.R. § 257.50(c).

Applicability of the Closure Requirements to these Impoundments

For the reasons set out in the discussion above, the North Ash Pond and Primary Pond Ash Fill Area are regulated under 40 C.F.R. Part 257 Subpart D and Duke Energy will need to take action to bring these ponds into compliance by meeting all the requirements of the regulations. Significant among these is the requirement to close, because the North Ash Pond and the Primary Pond Ash Fill Area are unlined CCR surface impoundments. See, 40 C.F.R. § 257.101(a).

The applicable closure regulations are those that address closing with waste in place (assuming EPA's understanding is correct that Duke Energy's plan is to close both impoundments with waste in place). The Part 257 requirements applicable to impoundments closing with waste in place include general performance standards and specific technical standards that set forth individual engineering requirements related to the drainage and stabilization of the waste and to the final cover system. The general performance standards and the technical standards complement each other, and both must be met at every site. The general performance standards

under 40 C.F.R. § 257.102(d)(1) require that the owner or operator of a CCR unit "ensure that, at a minimum, the CCR unit is closed in a manner that will: (i) Control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere; and (ii) Preclude the probability of future impoundment of water, sediment, or slurry." The specific technical standards related to the drainage of the waste in the unit require that "free liquids must be eliminated by removing liquid wastes or solidifying the remaining wastes and waste residues" prior to installing the final cover system. 40 C.F.R. § 257.102(d)(2)(i).

If Duke Energy plans to close with waste in place and the base of the impoundment does, in fact, intersect with groundwater, Duke Energy will need to implement engineering measures to remove groundwater from the unit prior to the start of installing the final cover system, as required by 40 C.F.R. § 257.102(d)(2)(i). This provision applies both to the free-standing liquid in the impoundment and to all separable porewater in the impoundment, whether the porewater was derived from sluiced water or groundwater that intersects the impoundment. The definition of free liquids in 40 C.F.R. § 257.53 encompasses all "liquids that readily separate from the solid portion of a waste under ambient temperature and pressure," regardless of whether the source of the liquids is from sluiced water or groundwater. The regulation does not differentiate between the sources of the liquid in the impoundment (e.g., surface water infiltration, sluice water intentionally added, groundwater intrusion). Furthermore, the performance standard at 40 C.F.R. § 257.102(d)(2)(i) was modeled on the regulations that apply to interim status hazardous waste surface impoundments, which are codified at 40 C.F.R. § 265.228(a)(2)(i). Guidance on these interim status regulations clarifies that these regulations require both the removal of free-standing liquids in the impoundment as well as sediment dewatering. See US EPA publication titled "Closure of Hazardous Waste Surface Impoundments," publication number SW-873, September 1982.

Similarly, Duke Energy will need to ensure that the impoundments are closed in a manner that will "control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere." 40 C.F.R. § 257.102(d)(1). EPA views the word "infiltration" as a general term that refers to any kind of movement of liquids into a CCR unit. That would include, for example, any liquid passing into or through the CCR unit by filtering or permeating from any direction, including the sides and bottom of the unit. This is consistent with the plain meaning of the term. For example, Merriam-Webster defines infiltration to mean "to pass into or through (a substance) by filtering or permeating" or "to cause (something, such as a liquid) to permeate something by penetrating its pores or interstices." Neither definition limits the source or direction by which the infiltration occurs. In situations where the groundwater intersects the CCR unit, water may infiltrate into the unit from the sides and/or bottom of the unit because the base of the unit is below the water table. This contact between the waste and groundwater provides a potential for waste constituents to be dissolved and to migrate out of (or away from) the closed unit that is similar to infiltration from above. In this case, the performance standard requires the facility to take measures, such as engineering controls that will "control, minimize, or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste" as well as "post-closure releases to the groundwater" from the sides and bottom of the unit.

Finally, because the North Ash Pond and the Primary Pond Ash Fill Area must close pursuant to 40 C.F.R. § 257.101(a), any further receipt of CCR into those units is prohibited. EPA also made this clear in the preamble to the March 15, 2018 proposed rule (83 FR 11605) where EPA stated:

> The current CCR rules require that certain units must close for cause, as laid forth in § 257.101(a)–(c). As written, the regulation expressly prohibits ‘‘placing CCR’’ in any units required to close for-cause pursuant to § 257.101….Note that the rule does not distinguish between placement that might be considered beneficial use and placement that might be considered disposal. All further placement of CCR into the unit is prohibited once the provisions of § 257.101 are triggered.

If you have any questions about the information provided in this letter or if you have additional information that you would like EPA to consider, you may contact Angela Mullins at mullins.angela@epa.gov. Alternatively, Duke Energy counsel can contact Laurel Celeste at celeste.laurel@epa.gov in EPA's Office of General Counsel for any questions on the Agency's position set forth in the letter.

Sincerely,

Edward Nam
Director
Land, Chemicals and Redevelopment Division

cc: Peggy Dorsey,
Assistant Commissioner
Office of Land Quality
Indiana Department of Environmental Management

Attachment C

Prepublication Copy Notice:

The Acting Assistant Administrator for the Office of Land and Emergency Management signed the following document on January 11, 2022:

Title: **Proposed Denial of Alternative Closure Deadline for Ottumwa Generating Station**

Action: **Proposed Decision**

Docket No.: **EPA–HQ–OLEM–2021-0593**

This is a **prepublication version** of the document that EPA is submitting to the docket for public comment. While the Agency has taken steps to ensure the accuracy of this prepublication version of the document, **it is not the official version** of the document for purposes of public comment or judicial review. Please refer to the official version of the document that will appear in the docket.

Once the official version of the document publishes in the docket, the prepublication version of the document posted on the agency's internet will be replaced with a link to the document that appears in the docket.

For further information about the docket and, if applicable, instructions for commenting, please consult the ADDRESSES section in the front of the document.

PROPOSED DECISION

Proposed Denial of Alternative Closure Deadline for Ottumwa Generating Station

SUMMARY:

The Environmental Protection Agency (EPA) is proposing to deny the Demonstration submitted by Interstate Power and Light Company (IPL), for a coal combustion residuals (CCR) surface impoundment, the Ottumwa Generating Station (OGS) Ash Pond, located at the OGS near Ottumwa, Iowa. IPL submitted a Demonstration to EPA for approval seeking an extension pursuant to 40 C.F.R § 257.103(f)(1) to allow the impoundment to continue to receive CCR and non-CCR wastestreams after April 11, 2021. In the Demonstration, IPL requested an alternative closure deadline of December 31, 2022, for the OGS Ash Pond. EPA is proposing to deny the request for an extension based on a proposed determination that the Demonstration does not meet the requirements of § 257.103(f)(1) and a proposed determination that Ottumwa Generating Station has failed to demonstrate that the facility is in compliance with the requirements of 40 C.F.R. § 257 Subpart D.

DATES: *Comments.* Comments must be received on or before February 23, 2022.

ADDRESSES AND PUBLIC PARTICIPATION: The EPA has established a docket for this notice under Docket ID No. EPA-HQ-OLEM-2021-0593. EPA established a docket for the August 28, 2020, CCR Part A final rule under Docket ID No. EPA-HQ-OLEM-2019-0172. All documents in the docket are listed in the https://www.regulations.gov index. Publicly available docket materials are available either electronically at https://www.regulations.gov or in hard copy at the EPA Docket Center. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding holidays. The telephone number for the Public Reading

Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742. You may send comments, identified by Docket ID. No. EPA-HQ-OLEM-2021-0593, by any of the following methods:

- Federal e-Rulemaking Portal: https://www.regulations.gov/ (our preferred method). Follow the online instructions for submitting comments.
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Office of Land and Emergency Management, Docket ID No. EPA-HQ-OLEM-2021-0593, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.
- Hand Delivery or Courier (by scheduled appointment only): EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center's hours of operations are 8:30 a.m. – 4:30 p.m., Monday – Friday (except Federal Holidays).

Instructions: All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to https://www.regulations.gov/, including any personal information provided. Once submitted, comments cannot be edited or removed from the docket. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia

submissions, and general guidance on making effective comments, please visit https://www.epa.gov/dockets/commenting-epa-dockets.

Due to public health concerns related to COVID-19, the EPA Docket Center and Reading Room are open to the public by appointment only. Our Docket Center staff also continues to provide remote customer service via email, phone, and webform. Hand deliveries or couriers will be received by scheduled appointment only. For further information and updates on EPA Docket Center services, please visit us online at https://www.epa.gov/dockets.

The EPA continues to carefully and continuously monitor information from the Centers for Disease Control and Prevention (CDC), local area health departments, and our Federal partners so that we can respond rapidly as conditions change regarding COVID-19.

FOR FURTHER INFORMATION CONTACT: For information concerning this proposed decision, contact:

- Lydia Anderson, Office of Resource Conservation and Recovery, Materials Recovery and Waste Management Division, Environmental Protection Agency, 1200 Pennsylvania Avenue NW, MC: 5304T, Washington, DC 20460; telephone number: (202) 566-0523; email address: Anderson.Lydia@epa.gov, and/or
- Kirsten Hillyer, Office of Resource Conservation and Recovery, Materials Recovery and Waste Management Division, Environmental Protection Agency, 1200 Pennsylvania Avenue NW, MC: 5304T, Washington, DC 20460; telephone number: (202) 566-0542; email address: Hillyer.Kirsten@epa.gov.
- For more information on this rulemaking please visit https://www.epa.gov/coalash.

SUPPLEMENTARY INFORMATION:

relies on estimated groundwater flow rates based on porosity, rather than the calculated groundwater flow rates based on site-specific measurements required by 40 C.F.R. § 257.93(c).

To assess MNA, attenuation mechanisms (i.e., immobilization vs. dilution and dispersion) must be identified in order to assess ability to meet the requirements of 40 C.F.R. § 257.97(b). Different mechanisms would be assessed differently according to criteria in 40 C.F.R. § 257.96(c). For example, dilution and dispersion would be assessed poorly with respect to cross-media impacts, because it would result in migration of the release to the Des Moines River. For these reasons, decreasing concentration between MW-305 and MW-310 is not, by itself, sufficient data to support a favorable assessment of MNA.

(ii) Inconsistent application of criteria

As discussed in Section E.2 of this document, EPA has preliminarily determined that the base of the OGS Ash Pond at least partially intersects with groundwater; therefore, EPA preliminarily concludes that lateral migration of the groundwater into the ash, in addition to the vertical migration from precipitation, is occurring.[39] This infiltration allows contaminants in the CCR to leach into the groundwater, causing releases from the unit. Despite this, all alternatives that include on-site disposal are assessed generally the same, regardless whether the CCR remains in contact with groundwater. Source control alternatives that will remove CCR from groundwater (alternatives 4, 5) must be assessed more favorably than alternatives that fail to do so (alternatives 1, 2, 3, 6, 7, 8) with respect to performance, reliability, and control of exposure to residual contamination (i.e., CCR left in the ground). 40 C.F.R. § 257.96(c)(1), 40 C.F.R. § 257.97(c)(1)(ii).

[39] Revised ACM, Figure 3.

The assessment in Table 5 of the revised ACM attributes equal reduction of risks under criteria in 40 C.F.R. § 257.97(c)(1)(i) to alternatives 2, 3, and 4. However, alternative 4 achieves a significantly greater reduction of risk by removing CCR from the aquifer and placing it in a lined disposal unit above the aquifer, compared to alternatives 2 and 3, which allow CCR to remain in contact with groundwater in an unlined disposal unit. Therefore, alternative 4 must be assessed more favorably than alternatives 2 and 3 under this criterion. Additionally, alternative 7 is assessed less favorably than alternative 2 because it is claimed that a pump-and-treat system brings contaminated groundwater to the surface, increasing the potential for exposure.[40] This assessment underestimates the risk reduction achieved by alternative 7 for two reasons. First, consolidation of CCR prior to closure reduces the footprint of CCR in the water table, making alternative 7 at least slightly more protective. Second, it ignores the risk reduction achieved by the groundwater pump-and-treat system when it removes cobalt from the environment. Since cobalt does not degrade naturally, as explained above, this removal prevents its migration to the river and ultimately to downgradient receptors. Alternative 7 should be assessed more favorably than alternative 2 under this criterion.

Alternatives with significantly different source control approaches were assessed similarly in Table 5 with respect to criteria in 40 C.F.R. § 257.97(c)(1)(ii), "The long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of…Magnitude of residual risks in terms of likelihood of further releases due to CCR remaining following implementation of a remedy…" The assessment in Table 5 appears to be based upon the assumption that because no receptors have been identified, there is no risk from continued releases of inorganic metals to

[40] See revised ACM Table 5, 40 C.F.R. § 257.97(c)(1)(i).

the aquifer and ultimately to the Des Moines River, so all alternatives are equivalent. As discussed previously, the release has not been sufficiently characterized and the impacts of contaminated groundwater on the Des Moines River have not been characterized. Also, cobalt will persist in the environment because it will not degrade. Alternatives that are likely to prevent future releases can be distinguished from those that are not and assessed accordingly. The requirement to assess their relative performance under this criterion is not negated by an unsubstantiated claim that no receptors are or will be impacted by the release. The presence or absence of immediate receptors is not a valid criterion for remedy selection.

Performance of corrective measures based on their potential need for replacement, the criterion in 40 C.F.R. § 257.97(c)(1)(viii), is not assessed consistently across alternatives and the assessments are unsupported or contradicted by information in the ACM. All alternatives except 1 and 5 are assessed similarly, despite significant differences. Barrier walls and groundwater extraction and treatment are proven technologies, therefore, alternatives 7 and 8 should be assessed significantly more favorably than alternatives 2 through 4, for which there is a lack of supporting data to demonstrate that MNA is occurring at this site for cobalt. This makes MNA an unproven technology at this site for cobalt.

The assessment of expected operational reliability of alternatives 2 through 5 according to 40 C.F.R. § 257.97(c)(3)(ii) is unsupported by data or analysis. The reliability of alternatives 2 through 5, which include MNA as a primary element, must be assessed less favorably than for approaches that are known to be reliable. This is because no data or analysis is provided to demonstrate immobilization mechanisms are occurring for cobalt at the site or how permanent they may be. While the reliability of the source control portion of alternative 7 may be low to moderate, given the uncertainty about whether CCR will remain in the water table, a properly

maintained and operated pump-and-treat system is a reliable technology compared to unconfirmed MNA through immobilization. The relative assessments must reflect that.

(iii) Inaccurate statements

The ACM contains inaccurate statements that affect conclusions regarding the effectiveness of corrective measures. For example, the discussion of alternatives in Section 5 states, "With the exception of the No Action alternative, each of the corrective measure alternatives meet the requirements in 40 C.F.R. § 257.97(b)(1) through (5) based on the information available at the current time." This statement is inconsistent with facts presented in other sections of the ACM. For example, alternative 2 would leave CCR in continued contact with groundwater,[41] allowing constituents to continue to leach from the CCR into groundwater. This would not control the source of the release(s) to reduce or eliminate, to the maximum extent feasible, further releases, as required by 40 C.F.R. § 257.97(b)(3).

In another example, the assessment of alternative 8 in Table 5 incorrectly identifies the requirement in 40 C.F.R. § 257.97(b)(4) as "not applicable." Section 3.3.2 of the revised ACM explains that "No releases of CCR have been identified from the OGS ash pond." In fact, the SSLs of cobalt are evidence of a release from the OGS Ash Pond, therefore, the requirement in 40 C.F.R. § 257.97(b)(4) is applicable. This is particularly relevant for alternative 8, because a barrier wall would not typically remove contamination from the environment, it would only serve to keep contamination from migrating beyond the property.

Because the revised ACM contains conclusions that result from inconsistent application of the criteria, that are based on inaccurate statements, and that are unsupported by data about

[41] Revised ACM, Figure 3

V. Conclusion

In conclusion EPA is proposing to deny IPL's request for an alternative compliance date for the OGS Ash Pond surface impoundment, located at the Ottumwa Generating Station near Ottumwa, Iowa. EPA is proposing to deny the extension request because IPL has not demonstrated that the facility is in compliance with all the requirements of 257 subpart D, based on concerns with the groundwater monitoring at the facility, with the facility's corrective action, and with the facility's closure plans. EPA is proposing that IPL cease receipt of waste and initiate closure no later than 135 days from the date of EPA's final decision.

Finally, due to the nature of the noncompliance EPA has preliminarily identified at IPL, EPA is proposing to issue a denial rather than a conditional approval. As discussed in greater detail in the proposed H.L. Spurlock Power Station decision, EPA is proposing that a conditional approval may be appropriate in situations where the actions necessary to bring the facility into compliance are straightforward and the facility could take the actions well before its requested deadline (or the alternative deadline that EPA has determined to be warranted). But in the case of IPL, the noncompliance EPA has identified involves more complicated technical issues, where the specific actions necessary to come into compliance cannot be easily identified and/or cannot be implemented quickly. Specifically, if EPA is correct that the base of the OGS Ash Pond intersects with groundwater, the determination of whether the closure of these units meets the performance standards in 40 C.F.R. § 257.102(d) is highly technical and extremely complicated. As explained in unit III.E.2, IPL provided insufficient information for EPA identify specific actions that would need to be taken at the site. Nor could EPA conclude that IPL could implement the necessary measures before its requested deadline. Finally, EPA continues to believe that where there is affirmative evidence of harm at the site, such as where a facility has

delayed corrective action, EPA cannot grant additional time for the impoundment to operate without some evidence that these risks are mitigated.

VI. Effective Date

EPA is proposing to establish an effective date for the final decision on IPL's demonstration of 135 days after the date of the final decision (i.e., the date that the final decision is signed). EPA is proposing to align the effective date with the new deadline that EPA is proposing to establish for IPL to cease receipt of waste. EPA is doing so for all of the reasons discussed as the basis for proposing to establish the new deadline to cease receipt of waste discussed in Section IV of this document.

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Date

Barry N. Breen
Acting Assistant Administrator