BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

In the Matter of:	)	
	)	
SIERRA CLUB, ENVIRONMENTAL LAW AND POLICY CENTER, PRAIRIE RIVERS NETWORK, and CITIZENS AGAINST RUINING THE ENVIRONMENT	)	
	)	**PCB 2013-015**
Complainants,	)	**(Enforcement – Water)**
	)	
v.	)	
	)	
MIDWEST GENERATION, LLC,	)	
	)	
Respondent.	)	

NOTICE OF FILING

TO: Don Brown, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street, Suite 11-500
Chicago, IL 60601

Attached Service List

PLEASE TAKE NOTICE that I have filed today with the Illinois Pollution Control Board, Midwest Generation, LLC's Response to Complainants' Motion *in Limine* to Exclude Certain Documents, a copy of which is hereby served upon you.

MIDWEST GENERATION, LLC

By: /s/ Jennifer T. Nijman

Dated: March 4, 2022

Jennifer T. Nijman
Susan M. Franzetti
Kristen L. Gale
NIJMAN FRANZETTI LLP
10 South LaSalle Street, Suite 3600
Chicago, IL 60603
(312) 251-5255

SERVICE LIST

Bradley P. Halloran, Hearing Officer
Illinois Pollution Control Board
100 West Randolph Street
Suite 11-500
Chicago, IL 60601
Brad.Halloran@illinois.gov

Cantrell Jones
Kiana Courtney
Environmental Law & Policy Center
35 East Wacker Drive, Suite 1600
Chicago, IL 60601
CJones@elpc.org
KCourtney@elpc.org

Keith Harley
Chicago Legal Clinic, Inc.
211 West Wacker Drive, Suite 750
Chicago, IL 60606
Kharley@kentlaw.edu

Abel Russ
For Prairie Rivers Network
Environmental Integrity Project
1000 Vermont Avenue, Suite 1100
Washington, DC 20005
aruss@environmentalintegrity.org

Faith E. Bugel
Attorney at Law
Sierra Club
1004 Mohawk
Wilmette, IL 60091
fbugel@gmail.com

Greg Wannier, Associate Attorney
Sierra Club
2101 Webster Street, Suite 1300
Oakland, CA 94612
Greg.wannier@sierraclub.org

CERTIFICATE OF SERVICE

The undersigned, an attorney, certifies that a true copy of the foregoing Notice of Filing, Certificate of Service and Midwest Generation, LLC's Response to Complainants' Motion *in Limine* to Exclude Certain Documents, a copy of which is hereby served upon you was filed on March 4, 2022 with the following:

Don Brown, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street, Suite 11-500
Chicago, IL 60601

and that true copies of the Notice of Filing, Certificate of Service and Midwest Generation, LLC's Response to Complainants' Motion *in Limine* to Exclude Certain Documents were emailed on March 4, 2022 to the parties listed on the foregoing Service List.

/s/ Jennifer T. Nijman

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	)	
Respondent.	)	

MIDWEST GENERATION, LLC'S RESPONSE TO COMPLAINANTS' MOTION *IN LIMINE* TO EXCLUDE CERTAIN DOCUMENTS

A news article that includes statements by Ms. Faith Bugel on behalf of the Sierra Club, and notes written by Complainants' expert, Mr. Quarles, may be relied on by experts, are admissible, and should not be excluded. Ms. Bugel's statements – about a lack of risk at the MWG Stations and that MWG's lined ponds likely are not leaking – are of the type reasonably relied on by experts, and even though not required to be admissible for an expert's reliance, constitute an admission by a party opponent. Alternatively, her statements may be admitted to establish that Complainants had notice. Mr. Quarles' statement, referring to MWG's experts in a derogatory manner as "idiots", shows Mr. Quarles' bias and goes to his credibility as an expert witness.

A. Faith Bugel's Statements in the News Article is an Item Relied on by Experts and is, in Any Case, Admissible

Ms. Bugel, as an agent of the Sierra Club, made statements to a reporter she has spoken to on many occasions, and made two key admissions relevant to this proceeding for remedy and penalties. First, she is reported saying that, "*Environmentalists' expert witnesses have also not*

found an immediate risk to drinking water, Bugel said." *See* Kari Lydersen, *Historic coal ash raises concerns at iconic Illinois coal plant site*, Energy News Network (Dec. 21, 2021) https://energynews.us/2021/12/21/historic-coal-ash-raises-concerns-at-iconic-illinois-coal-plant-site/ ("Article"), Attachment 1 to Complainants' Motion, p. 4 (emphasis added).

Second, she is reported to add that,

> "Bugel explained that *most of the coal ash repositories at Midwest Generation's coal plants are lined, and unlike many other companies, Midwest Generation frequently emptied the ash and sold it for "beneficial reuse" as construction materials and other uses. That means Midwest Generation's active coal ash ponds subject to the state and federal rules were probably less likely to be contaminating groundwater than at many other coal ash sites.*"

Id. (emphasis added). As noted by Complainants, MWG identified the Article as an "additional item experts will rely on" as required by the Hearing Officer's discovery Order. Comp. Mot., ¶1. While Complainants attempt to argue that these statements are not admissible because they are hearsay, Complainants miss the point. The question is whether the document is of the type relied upon *by experts*. In any case, the Article is relevant, inherently reliable, and still meets the standards for admissibility.

1. Ms. Bugel's Statements Need not be Admissible to be Relied on by an Expert

This Article, and the express statements made by the Sierra Club, directly support the opinions by MWG's experts, Weaver Consultants Group ("Weaver "). Weaver concluded the MWG surface impoundments likely are not impacting the environment, and that the lack of risk at the MWG Stations supports its opinion on remedy. *See* Weaver Rpt., pp. 29-32, 45-55, attached as Ex. 1. The Article, and specifically Sierra Club's statements in support of Weaver's conclusions, are facts reasonably relied upon by experts as allowed under Illinois Rule of Evidence 703. Rule 703 states:

> The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in

> forming opinions or inferences upon the subject, *the facts or data need not be admissible in evidence*.

Ill. R. Evid. 703 (emphasis added). The key requirement under Rule 703 is reasonable reliance by the expert in their particular field, not whether the document is admissible. *Wilson v. Clark,* 84 Ill. 2d 186, 193, 49 Ill. Dec. 308, 312, 417 N.E.2d 1322, 1326 (1981). For an expert to reasonably rely upon a document, the document or information must be reliable. *Taylor v. Cnty. of Cook*, 2011 IL App (1st) 093085, ¶ 32 ("For expert testimony to be admissible, an adequate foundation must be laid establishing that the information that the expert bases the opinion upon is reliable."). And a newspaper can be found to be reliable information for an expert to rely upon. *Walden v. City of Chi*., 755 F. Supp. 2d 942, 953 (N.D. Ill. 2010). (Court declined to exclude an expert's opinion, even though his opinion relied, in part, on newspaper articles).

Here, there is little doubt that Ms. Bugel's statements in the Article are reliable. This is demonstrated by the fact that Complainants do not dispute the reporting of Ms. Bugel's statements in the Article, do not claim that Ms. Lydersen misquoted or misrepresented Ms. Bugel's statements, and do not identifying any discrepancies. More importantly, Complainants do not even assert that the Article cannot be relied on by an expert under Rule 703.

Moreover, Ms. Bugel has a long history of giving interviews to Ms. Lydersen, and it is unthinkable that she would have given these interviews if she thought Ms. Lydersen's reporting was unreliable. Ms. Lydersen interviewed and heavily quoted Ms. Bugel in 2014 for her "Closing the Cloud Factories" e-book.[1] Ms. Lydersen interviewed and quoted Ms. Bugel in 2016 about the Title V permits for coal-powered electric generating stations,[2] and in 2017 about changes to a

[1] Kari Lydersen, *Closing the Cloud Factories - Lessons from the fight to shut down Chicago's coal plants*, (Midwest Energy News 2014), relevant excerpts attached as Ex. 2.
[2] Ex. 3, Kari Lydersen, "Illinois coal plant epitomizes state's dysfunctional air permit system, advocates say", Energy News Network (Sept. 13, 2016)

proposed rule regarding sulfur dioxide in emissions.[3] Ms. Bugel also spoke with Ms. Lydersen on January 18, 2022 regarding the USEPA coal ash announcements[4] and even spoke with Ms. Lydersen about this matter in June 2019.[5] In fact, a search of the Energy News Network site shows that Ms. Bugel is routinely quoted by Ms. Lydersen.[6]

It is remarkable that Ms. Bugel – who signed Complainants' motion – would state that the Article is not reliable when she is the person quoted and she speaks so frequently with Ms. Lydersen. *See* Exs. 2-6. As demonstrated by the book and articles attached, Ms. Bugel routinely speaks with this reporter, Ms. Lydersen, indicating that she finds Ms. Lydersen to be a reliable journalist. Based on Rule 703 alone and because the Article is clearly reliable, Complainants' motion to exclude fails. Complainants are simply trying to avoid admitting to the Board that, in fact, there are aspects of Weaver's opinions on remedy they do not dispute.

2. In any Case, Ms. Bugel's Statements Are an Admission of a Party Opponent

Even though the Article meets the standard of reliability for an expert under Illinois Rule of Evidence 703, Ms. Bugel's statements in the Article also fall squarely within the exception to hearsay as statements from a party-opponent and could be admitted.[7] Illinois Rule of Evidence 801(d) states that a Statement by a Party Opponent is not hearsay. This includes "the party's own statement, in either an individual or a representative capacity," "a statement by a person authorized by the party to make a statement concerning the subject," or "a statement by the party's agent or

[3] Ex. 4, Kari Lydersen, "After Dynegy negotiates new pollution standard with Illinois EPA, advocates fear cleaner coal plants could close", Energy News Network (Sept. 27, 2017)
[4] Ex. 5 - Kari Lydersen, "EPA coal ash announcement turns up the heat on Illinois municipal utility", Energy News Network (Jan. 18, 2022)
[5] Ex. 6, Kari Lydersen, "Illinois Pollution Control Board finds NRG liable for coal ash at power plants", Energy News Network (June 26, 2019), respectively.
[6] https://energynews.us/?s=bugel
[7] Complainants' motion as to whether the Article is "admissible" is somewhat premature. The parties will present final exhibit lists and raise any arguments on admissibility during this second hearing phase.

servant concerning a matter within the scope of the agency or employment, made during the existence of the relationship". Ill. Evid. R. 801(d)(2)(A), (C), & (D).

A party opponent's attorney's statements are included within the party opponent exception. In *Doe v. Logan*, the defendant made the same argument as Complainants here – that a process server's affidavit containing defendant's attorney's statements to the process server were double hearsay. *Doe v. Logan*, 2021 IL App (1st) 191447-U (1st Dist. 2021), ¶ 34.[8] The court rejected the defendant's argument and found the affidavit did not contain hearsay. The court found that the statement to the process server by defendant's attorney, repeated in the affidavit, was not hearsay under Rule 801(d)(2)(A) because it was offered against the defendant as defendant's own statement. *Id.*, ¶36. The court also found that the statement to the process server, repeated in the affidavit, was not hearsay under Rule 801(d)(2)(C) because it was a statement offered against the defendant that the attorney was authorized to make on the defendant's behalf. *Id.*

Similarly, a statement by a party's agent or servant, including their attorney, about a matter within the scope of the agency or employment, made during the relationship, constitutes an admission of a party-opponent. The Seventh Circuit has held that an attorney may be the agent of his client for purposes of Rule 801(d)(2)(D), and statements made by an attorney offered against a principal's interest are within the scope of agency.[9] *United States v. Persfull*, 08 CR 50025, 2009 U.S. Dist. LEXIS 145459, at *11 (N.D. Ill. Sept. 8, 2009) (quoting *United States v. Brandon,* 50 F.3d 464, 468 (7th Cir. 1995). *See also Pavlik v. Wal-Mart Stores*, Inc., 323 Ill. App. 3d 1060,

[8] *Doe v. Logan*, 2021 IL App (1st) 191447-U was filed under Illinois Supreme Court Rule 23. Pursuant to Rule 23(e), "a nonprecedential order entered under subpart (b) of this rule on or after January 1, 2021, may be cited for persuasive purposes." Because *Doe v. Logan*, was filed on March 21, 2021, it may be cited here.

[9] Illinois Rule 801(d)(2) and its subparts are practically identical to the Federal Rule of Evidence Rule 801(d)(2) and its subparts.

1065 (1st Dist. 2001) (The proponent of the evidence does not need to establish the statement was authorized to be admissible non-hearsay of a party opponent by an employee or agent).

Here, Ms. Bugel's statements clearly are admissions, and courts generally "grant wide latitude in construing statements as admissions." *People v. Bryant*, 391 Ill. App. 3d 228, 244, 907 N.E.2d 862, 876 (5th Dist. 2009) (quoting *Zaragoza v. Ebenroth*, 331 Ill. App. 3d 139, 142, 770 N.E.2d 1238, 264 Ill. Dec. 542 (2002).)

First, there is no question that Ms. Bugel, the Sierra Club's attorney, is a representative of the Sierra Club. Thus, Ms. Bugel's statements are not hearsay under Rule 801(d)(2)(A) because it the Sierra Club's own statement against itself, by a Sierra Club representative.

Second, there is also little doubt that as the Sierra Club's attorney, Ms. Bugel was authorized to make those statements. As demonstrated above, Ms. Bugel has often given interviews to Ms. Lydersen and it is unthinkable that she would have given these interviews without authorization. Accordingly, Ms. Bugel's statements are not hearsay under Rule 801(d)(2)(C) because the statements were offered against the Sierra Club, and Ms. Bugel is clearly authorized to speak on behalf of Sierra Club.

Third, as Sierra Club's attorney, Ms. Bugel is its agent. She made her statement within the scope of her employment and during the relationship – she was identified as Sierra Club's attorney in the Article and she continues to be its attorney. Thus her statements are not hearsay under Rule 801(d)(2)(D).

3. The Article Itself is Reliable.

The Article and Ms. Bugel's statements in the Article are similarly reliable for the purposes of admissibility. Illinois Pollution Control Board ("Board") rules provide that, under Section 10-40 of the Illinois Administrative Procedures Act, the Hearing Officer "will admit evidence that is admissible under the rules of evidence as applied in the civil courts of Illinois, except as otherwise

provided in this Part." 35 Ill. Adm. Code 101.626. The Board's procedural rules, Section 101.626(a), state that the "hearing officer may admit evidence that is material, relevant, and would be relied upon by prudent persons in the conduct of serious affairs, unless the evidence is privileged." 35 Ill. Adm. 101.626(a). The Board has stated that it considers section 101.626(a) as a "relaxed standard," *People v. Atkinson Landfill Co*., PCB No. 13-28, slip op. at 9 (Jan. 9, 2014), and has stated that it "favors a liberal construction of admissible evidence." *McHenry County Landfill, Inc. v. County Board of McHenry County*, PCB Nos. 85-56; 85-61; 85-63; 85-64; 85-66 (consolidated) (Sept. 20, 1985) 1985 Ill. ENV LEXIS 255, *12. A totality of circumstances should be considered in determining whether statements are reliable enough to warrant an exception to the hearsay rule. *In re Marriage of L.R.*, 202 Ill. App. 3d 69, 83 (1st Dist. 1990) (the court considered the nature of the action and the interest of the parties.)

Complainants argue the Article is not reliable because "news articles are not the type of evidence" that are relied upon by prudent persons and if they are not "scientific or technical," they are unreliable. As stated above, this argument ignores Rule 703 of the Illinois Rules of Evidence as to reliance by experts. Complainants also ignore the plain language of the rule that evidence is admissible as applied by civil courts of Illinois if it is "material, relevant and would be relied upon by prudent persons. …" 35 Ill. Adm. Code § 101.626. The rule merely lists scientific and technical articles as one type of evidence that is admissible not that the evidence must be scientific or technical. 35 Ill. Adm. Code § 101.626(c). The Article is clearly relevant and material, and Complainants do not even attempt to argue that it is not. Certainly Weaver should be able to state that aspects of its opinions are agreed to and in fact adopted by Complainants to express to the public. The information, and Complainants' acknowledgement, is further material and relevant to any penalties that Complainants may attempt to impose. Also, Ms. Lydersen's role as a journalist

is more like a neutral third party, which is considered reliable. *Daniels v. Retirement Bd. of Policeman's Annuity & Ben Fun.*, 106 Ill. App. 3d 412, 415 (1st Dist. 1982) (Court found testimony was not hearsay in part because it was made by a neutral party).

Complainants' reliance on *In Re Marriage of L.R.* is misplaced. *In Re Marriage of L.R.* is regarding a custody dispute between the mother and father, and he court concluded that statements made by the mother quoting the daughter were unreliable because of the mother's incentive to lie in this custody dispute. 202 Ill. App. 3d 69, 83 (1st Dist. 1990). In this case, there was no incentive for the reporter, Ms. Lyersen, to lie, as a neutral party and a person apparently trusted by Ms. Bugel. *Daniels*, 106 Ill. App. 3d at 415. Similarly, *Ramirez v. FCL Builders, Inc*., does not support Complainants' motion because the "trial court expressly found that the incident report was not reliable based on the discrepancy over when it was completed." 2014 IL App (1st) 123663, ¶ 204 (1st Dist. 2014). Here, Complainants do not identify any discrepancy.

When weighing the totality of the circumstances, Ms. Lydersen's' reporting of Ms. Bugel's statements is reliable and admissible. Ms. Lydersen is more like a neutral third party with no stake in the game, and there are no apparent discrepancies or errors in her reporting of Ms. Bugel's statements.

4. The Article Is Not Hearsay.

Even if the Hearing Officer somehow finds that the Article may not be relied on by experts under Rule 703, or that Ms. Bugel's statements were not admissions by a party-opponent, which they are, MWG asserts in the alternative that her statements are not hearsay under Illinois Rule of Evidence 801(c) because MWG could instead offer the statements to establish that Sierra Club is aware of and agrees with these findings about risk and MWG's lined impoundments, regardless of their truth – such that they would not be offered for the truth of the matter asserted. Illinois Rule of Evidence 801(c) states that "'Hearsay' is a statement…, offered in evidence to prove the truth

of the matter asserted." But an "out-of-court statement offered for some independent purpose, rather than the truth of the matter asserted, is not hearsay." *Kochan v. Owens-Corning Fiberglass Corp*., 242 Ill. App. 3d 781, 806 (5th Dist. 1993) *overruled in part on other grounds*. "A writing that is offered to prove that the recipient had notice of the information contained therein, rather than to prove the truth of the matter asserted, is admissible, non-hearsay." *Id.*, citing *People v. Campbell*, 28 Ill. App. 3d 480, 486 (5th Dist. 1975); *See also Marseilles Hydro Power, LLC v. Marseilles Land & Water Co*., 518 F.3d 459, 468 (7th Cir. 2008) (finding that letter was used to show notice and not to demonstrate the truth of the matter asserted, thus not hearsay). In fact, an Illinois court has found that a newspaper article was admissible because it showed notice to the opposing party. *Deerhake v. Duquoin State Fair Ass'n*, 185 Ill. App. 3d 374, 381, 133 Ill. Dec. 508, 511 (5th Dist. 1989).

Here, as an alternative, MWG may opt to submit Ms. Bugel's statements to show that Complainant, Sierra Club, is *aware* that MWG's ash ponds are less likely to be contaminating groundwater and *aware* that there is no immediate to the drinking water. As a result, the Article and Ms. Bugel's statements are non-hearsay and admissible.

B. Complainants' Expert Derogatory Remark is Probative of Witness Bias and Admissible

Complainants have no basis to exclude their expert's derogatory statement – that the Weaver experts "are idiots" – because it goes to bias. "Proof of bias is almost always relevant because the jury, as finder of fact and weigher of credibility, has historically been entitled to assess all evidence which might bear on the accuracy and truth of a witness's testimony." *Betts v. City of Chicago*, 784 F. Supp. 2d 1020, 1028 (N.D. Ill. 2011) (*quoting United States v. Abel*, 469 U.S. 45, 52 (1984)). A witness's partiality is always relevant in determining his or her credibility and what weight to give the testimony. *People v. Chaban*, 2013 IL App (1st) 112588, ¶ 49 (1st Dist. 2013).

Here, the derogatory statement was made by Mark Quarles, the expert witness for Complainant. (Bates Comp 70313-314). He called MWG's experts "idiots." More specifically, his notes state, "[t]hey are idiots too," referring to MWG's expert witnesses. It appears that his notes are from a conversation with Complainants' counsel Faith Bugel and Abel Russ reviewing a draft of Mr. Quarles's Rebuttal Report on July 9, 2021.[10] Mr. Quarles's description seems to be regarding Section 2.2, paragraph 2 of his report (excerpt attached as Exhibit 7), in which Mr. Quarles is responding to Weaver's criticism that the Quarles report has very little independent analysis. He appears to state that the Weaver experts "are idiots for suggesting" that his opinion "presented little independent analysis." Ex. 7.

Mr. Quarles's statement is made by an expert witness about opposing experts. The statement in his notes is evidence of his bias and lack of impartiality in conducting what *should be* an independent technical analysis of the groundwater at the MWG Stations. This is consistent with Mr. Quarles' admission in his deposition that he refers to himself as a "public interest environmental consultant." Ex. 8, Quarles Dep, p. 16:6-12. MWG is entitled to present evidence on this obvious bias. It is also evidence of Mr. Quarles' bias and lack of impartiality relating to his criticisms of Weaver's opinions. Mr. Quarles specifically opines in his Rebuttal Report his unfounded belief that the Weaver experts do not have sufficient expertise. His statements demonstrate that he has a bias against them, calling into question his partiality and credibility as an expert witness.

Complainants' reliance on the Hearing Officer's March 1, 2018 order is misplaced. There, the Hearing Officer found that Sierra Club's motives in their "end coal" campaign were not relevant and thus had no probative value. *Sierra Club, v. Midwest Generation*, PCB 13-15, *slip op.* at *3

[10] Per Complainants' request for an extension of the time to file expert rebuttal reports, Mr. Quarles's rebuttal report was due on July 16, 2021. Hearing Officer Order, May 18, 2021.

(March 1, 2018). Here, establishing bias of an expert is undoubtedly permissible and relevant. Similarly, *Cecil v. Gibson*, 37 Ill. App. 3d 710, 711 (3rd Dist. 1976) is of no help. In *Cecil*, the unreasonable, inflammatory, and baseless statements were made by the defense counsel about the plaintiff's counsel during closing arguments. *Id*, at 711-712.

Here, Mr. Quarles's statements are evidence of bias and witness partiality and a "witness's partiality is always relevant in determining his … credibility." *Chaban* ¶ 49. Clearly, because his statement shows his bias, his statement is relevant and admissible.

C. CONCLUSION

Ms. Bugel's statements in the Article are allowed as a document relied on by experts, pursuant to Illinois Rule of Evidence Rule 703. In any case, the statements are admissible because they are an admission of a party opponent and are reliable. Even if the Hearing Officer finds that Rule 703 somehow is not applicable, and that the statements are not admissions, alternatively MWG may assert that the Article may be admitted to demonstrate that Sierra Club is *aware* that the MWG ponds are less likely to be contaminating groundwater and *aware* that there is no immediate to the drinking water.

Additionally, Mr. Quarles's statement is admissible because it shows witness bias which is relevant to the consideration of his credibility.

Based on the above, Respondent, Midwest Generation, LLC respectfully requests that the Hearing Officer deny Complainants' Motion *In Limine* to Exclude Certain Documents.

Respectfully submitted,

MIDWEST GENERATION, LLC.

By ____/s/ Jennifer T. Nijman_____
One of Its Attorneys

Jennifer T. Nijman

Susan M. Franzetti
Kristen L. Gale
NIJMAN FRANZETTI LLP
10 South LaSalle Street, Suite 3600
Chicago, IL 60603
312-251-5255

EXHIBIT 1

Electronic Filing: Received, Clerk's Office 3/04/2022

April 22, 2021

EXPERT REPORT ON RELIEF AND REMEDY

SIERRA CLUB, ET AL (COMPLAINANTS) V. MIDWEST GENERATION, LLC (RESPONDENT)

PREPARED BY

Weaver Consultants Group

diagram is inconsistent with industry standard practice and results in his inaccurate conclusion that there is mounding under the Ash Surge Basin and the Bypass Basin. WCG's evaluation of the April 2020 groundwater elevation data along with the monitoring well boring logs and well construction logs identified the following:

- Six wells (MW-6, MW-8, MW-12, MW-14, MW-15, and MW-17) screened within a confining clay/silt unit and the overlying gravel, sand, and cinders unit;
- Twelve (12) wells screened within the deeper unit consisting mostly of gravel and sand; and one well (MW-18) screened within both the deep and shallow sand units separated by a confining clay unit. Given MW-18 is screened across two water bearing units, MW-18 groundwater elevation data is not an accurate representation of either water bearing units. Therefore, MW-18 groundwater elevation data should not be used in the creation of potentiometric surface maps.

The two different units demonstrate that there are two distinct but hydraulically connected groundwater units, a conclusion that was identified by KPRG and that has been consistently demonstrated in each of MWG's groundwater reports for the CCR surface impoundments. In fact, that there are two distinct but hydraulically connected units was never in dispute. Rather, Complainants' first expert agreed with KPRG's analysis, testifying that there are two aquifers at Powerton, that one was a sand-and-gravel unit, and the other was a silty clay aquifer.[72] Once the two saturated vertical units are identified, it is clear that there is no mounding in the groundwater under the Ash Surge Basin and the Bypass Basin.

4.1.2 Alternate Source Demonstrations (ASDs)

The Federal CCR Rules allow for a demonstration that the regulated units are not the source of the confirmed statistically significant increases above the background concentrations. MWG has pursued this Alternate Source Demonstration (ASD) path at three of the Stations: Powerton, Will County, and Waukegan. No ASD was needed for Joliet 29 because no statistically significant increases have been confirmed at monitoring wells monitoring Pond 2, which is the only unit covered under the Federal CCR Rules at the Joliet 29 Station. Each of the ASDs has been certified by an Illinois Licensed Professional Engineer (PE) and made available to the on-line MWG CCR platform. Further discussion concerning the ASDs is presented below:

[72] Oct. 26, 2017 Afternoon Transcript, pg. 93:15-20.

4.1.2.1 Powerton ASD

The initial detection monitoring results for the Powerton Station were discussed by KPRG in the 2017 CCR Groundwater Monitoring Report dated January 24, 2018[73]. KPRG recommended completing an ASD because the detection monitoring statistical evaluations indicated statistically significant increases (SSIs) in downgradient monitoring wells relative to established background for various 40 CFR 257 Appendix III parameters.

The recommended ASD for SSIs of Appendix III detection monitoring parameters was performed April 12, 2018[74]. Ash and water samples were collected from the Ash Surge Basin and the Bypass Basin and analyzed using the Leaching Environmental Assessment Framework (LEAF) method to determine whether the noted SSIs may be associated with a release from the regulated unit(s) or if another potential source in the vicinity of the ash ponds may be affecting the local groundwater quality. Each of the samples underwent leaching over a range of 8 pH values and under "Natural pH" conditions, which is the actual pH of the sample itself. The natural pH results are believed to be the most applicable to field conditions because the natural pH represents the best approximation of field conditions. A summary of the LEAF data is located in **Table 2**. KPRG concluded that the Ash Surge Basin is not the source of downgradient monitoring well SSIs and that there is an alternate source(s) of impacts.

KPRG concluded that the data relative to the Bypass Basin was not definitive and potential contribution of leachate from the Bypass Basin to the local downgradient groundwater impacts could not be ruled out. KPRG recommended that the Ash Surge Basin and Bypass Basin be shifted from detection monitoring into assessment monitoring[75]. In accordance with the Federal CCR rules, KPRG performed a round of assessment monitoring for all Appendix III and Appendix IV parameters and determined that there were detections of Appendix IV parameters at concentrations exceeding Groundwater Protection Standards (GWPS), including arsenic at three well locations MW-11, MW-12 and MW-17, barium at well location MW-11 (August sampling only), selenium at well location MW-15, and molybdenum (May sampling only) and thallium at

[73] KPRG, CCR Compliance Annual Groundwater Monitoring and Corrective Action Report – 2017 Powerton Station, dated January 24, 2018.
[74] KPRG, Alternate Source Demonstration CCR Groundwater Monitoring Powerton Generating Station, dated April 12, 2018.
[75] Both Basins were shifted into assessment monitoring even though KPRG determined that the Ash Surge Basin was not the source of the SSIs. As described in the CCR Annual Groundwater Monitoring and Corrective Action Report – 2018, dated January 31, 2019, KPRG concluded that Ash Surge Basin should be included in the assessment monitoring as the well network for the Ash Surge Basin and Bypass Basins are "somewhat integrated".

well location MW-17. KPRG recommended that an ASD for the Appendix IV parameters be completed[76].

An ASD for detected Appendix IV parameters above established groundwater protection standards (GWPSs) was performed on March 25, 2019[77]. Ash and water samples were again collected from the Ash Surge Basin and Bypass Basin and analyzed using the LEAF method. A summary of the LEAF data is located in **Table 2**. KPRG performed a statistical evaluation of the LEAF data relative to groundwater and concluded that the Ash Surge Basin and Bypass Basin are not the source of downgradient monitoring well detections of arsenic, barium, molybdenum, selenium, and thallium concentrations detected above the GWPSs.

4.1.2.2 Will County ASD

The ASD for Will County was prepared by KPRG and dated April 12, 2018. The 2017 CCR Groundwater Monitoring Report dated January 12, 2018 included the following recommendation:

> *"The completed detection monitoring statistical evaluations have determined that there are SSIs in downgradient monitoring wells relative to established background for chloride, fluoride and TDS. At this time, KPRG recommends completing an alternate source demonstration to determine whether these exceedances may be associated with an actual release from the regulated unit(s) or if another potential historical source in the vicinity of the ash ponds may be affecting the local groundwater quality. If the alternate source demonstration is successful, then detection monitoring will resume. If the alternate source demonstration is not successful, then a transition to an assessment monitoring program complying with Section 257.95 will be required."*

To support the ASD, composite ash samples were collected from Pond 2S and Pond 3S. The composite samples consisted of a series of equivalent grab samples from across the length of the ponds, from the inlet area to the outfall. The samples were analyzed using the LEAF method. Each of the samples underwent leaching over a range of 8 pH values and under "Natural pH" conditions, which is the actual pH of the sample itself. The natural pH results are believed to be the most applicable to field conditions because the natural pH represents the best approximation

[76] Id.
[77] KPRG, CCR Compliance Annual Groundwater Monitoring and Corrective Action Report – 2018 Ash By-Pass Basin and Ash Surge Basin, dated January 31, 2019.

of field conditions. The leachate was analyzed for the CCR Appendix III detection parameters. The results from the LEAF Natural pH testing are summarized in **Table 3**.

The Will County ASD concluded that the SSIs for chloride, fluoride, and total dissolved solids (TDS) identified in the groundwater are not the result of leakage of leachate from the regulated units (Ponds 2S and 3S), but rather from "other potential sources". This was based on the following:

- Upgradient monitoring well concentrations of fluoride and TDS are higher than those measured for ash leachate at Natural pH conditions.
- The ash leachate at Natural pH conditions does not contain a sufficient concentration of each of these constituents to result in the measured downgradient well concentrations.

4.1.2.3 Waukegan ASD

The initial detection monitoring results for the Waukegan monitoring were presented by KPRG in the CCR Compliance Annual Groundwater Monitoring and Corrective Action Report dated January 31, 2019[78].

According to an ASD prepared by KPRG on April 12, 2018 for the Waukegan Station[79], detection monitoring statistical evaluations determined that there were SSIs in downgradient monitoring wells relative to established background for boron, pH and sulfate. Therefore, the ASD evaluated boron, pH, and sulfate. Ash and water samples were collected from each of the two CCR Ponds (East and West) and analyzed using the LEAF method (as described above). A summary of the LEAF data is located in **Table 4**. KPRG concluded that the SSIs for boron, pH, and sulfate are not the result of a release of leachate from the regulated units (East and West Ash Ponds) but rather from other potential source(s). KPRG based the recommendation on evaluation of the boron and sulfate ratio for ash samples and groundwater, the downgradient sulfate concentrations relative to the LEAF data, elevated sulfate outside the regulated units, and the concentration of sulfate and boron in groundwater upgradient of the CCR Ponds relative to the downgradient groundwater and LEAF results. The recommendation was to continue with routine detection monitoring.

[78] KPRG, CCR Compliance Annual Groundwater Monitoring and Corrective Action Report – 2018 for the Waukegan Generating Station, dated January 31, 2019.
[79] KPRG, Alternate Source Demonstration CCR Groundwater Monitoring at the Waukegan Generating Station, dated April 12, 2018.

4.4 There is no unacceptable risk to offsite receptors at the four Stations.

Each of the Stations are bordered by surface water and the shallow groundwater unit at each of the Stations discharges into either the adjacent river or Lake Michigan (in the case of Waukegan). To support the above opinion, WCG conducted an updated evaluation to assess whether the groundwater conditions will result in discharge to surface water at concentrations that meet the applicable surface water quality standards. A similar statistical risk evaluation was presented in the expert opinion of John Seymour[109]. While the concentrations in groundwater will be reduced as the groundwater discharges to surface water and mixes with the surface water, the following evaluation takes the very conservative approach of first excluding the (beneficial) effects of groundwater/surface water mixing. Mixing is only considered in those rare instances where a groundwater concentration slightly exceeded an applicable surface water standard.

Downgradient groundwater sample concentrations were compared to Illinois Water Quality Standards (WQS) included in 35 Ill. Adm. Code Part 302 and Illinois Water Quality Criteria (WQC) for surface water. Downgradient groundwater concentrations were compared to Illinois chronic WQS, or if a WQS was not available, the Illinois chronic WQC. The surface water standards and their sources are provided in **Table 1** in **Appendix D**. No unacceptable risk is deemed present if groundwater concentrations are less than the applicable WQS or WQC for surface water, which are set at levels that are protective of human health and the environment in accordance with the surface water's designated uses.

The surface water comparisons were conducted for CCR constituents listed in Appendices III and IV to 40 CFR Part 257. Appendix III constituents are Constituents for Detection Monitoring and Appendix IV constituents are Constituents for Assessment Monitoring.

For each Station, the extensive dataset from downgradient monitoring wells was averaged using the Sanitas™ groundwater statistical software. The mean concentration was calculated by Sanitas™ at each sites' respective downgradient monitoring wells is presented in each table included in **Appendix D**. The average groundwater concentration was compared to the surface water standards presented in Table 1 in **Appendix D**. While both chronic and acute surface water standards are presented in Table 1 for completeness, the groundwater data has been compared to the chronic standards, as they are the lower standard. This approach is therefore deemed conservative. If a constituent was reported as non-detect in seventy-five percent (75%) or more

[109] MWG Exh. 903. pgs. 44-45 and Appendix B.

in the historical data, then the laboratory reporting limit was presented as the average concentration for that constituent.

Joliet 29

Shallow groundwater in the vicinity of the Joliet 29 Station ash ponds discharges to the south of the Station to the Des Plaines River. Groundwater data collected between December 2010 and October 2020 from downgradient monitoring wells (i.e., wells south of the ponds) MW-01 through MW-04, and MW-06 and MW-07 was averaged using the Sanitas™ groundwater statistical software and compared to applicable surface water standards. For Joliet 29, average groundwater concentrations at downgradient monitoring wells did not exceed surface water standards.

Powerton

Shallow groundwater in the vicinity of the Powerton Station ash ponds discharges to the north and west. Groundwater data collected between December 2010 and December 2020 from downgradient monitoring wells MW-03 through MW-08 and MW-13 through MW-15 was averaged using the Sanitas™ groundwater statistical software and compared to applicable surface water standards. For Powerton, average groundwater concentrations at downgradient monitoring wells did not exceed surface water standards.

Will County

Shallow groundwater in the vicinity of the Will County Station ash ponds discharges west to the adjacent Des Plaines River. Groundwater data collected between December 2010 and November 2020 from downgradient monitoring wells MW-07 through MW-12 was averaged using the Sanitas™ groundwater statistical software and compared to applicable surface water standards. Apart from pH at monitoring well MW-09, the Will County average groundwater concentrations at downgradient monitoring wells did not exceed the applicable surface water standards. At MW-09, the average pH concentration of 9.22 slightly exceeded the applicable pH range of 6.5-9.0 for surface water. However, MW-9 is located approximately 120 feet upgradient of the downgradient property boundary, which approximately coincides with the Des Plaines River. Groundwater flowing from MW-09 to the west towards the Des Plaines River will undergo further advection dispersion and attenuation. Additionally, the mixing that occurs as groundwater discharges into surface water will further moderate the pH. Therefore, the average pH concentration of 9.22 at MW-09 does not pose an unacceptable risk to surface water receptors in the Des Plaines River.

Waukegan

Shallow groundwater in the vicinity of the Waukegan Station ash ponds discharges to the east to adjacent Lake Michigan. Groundwater data collected between December 2010 and November 2020 from downgradient monitoring wells MW-01 through MW-4 was averaged using the Sanitas™ groundwater statistical software. Except for pH at monitoring well MW-01, the Waukegan average groundwater concentrations at downgradient monitoring wells did not exceed the applicable surface water standards for the Lake Michigan Basin. At MW-01, the average pH concentration of 9.74 slightly exceeded the applicable pH range of 6.5-9.0 for surface water. However, MW-1 is located over 700 feet upgradient from the existing shore of Lake Michigan. Groundwater flowing from MW-01 to the east towards Lake Michigan will undergo further advection dispersion and attenuation. Additionally, the mixing that occurs as groundwater discharges into surface water will further moderate the pH. Therefore, the average pH concentration of 9.74 at MW-01 does not pose an unacceptable risk to potential surface water receptors in Lake Michigan.

The results of the surface water risk evaluation indicate that downgradient groundwater conditions at each of the four Stations do not pose unacceptable risks to surface water receptors. WCG's opinion is consistent with the export report of John Seymour, who concluded that it was his opinion that "groundwater conditions do not pose risks to surface water receptors[110]."

4.5 MWG has already committed to following the Federal/State CCR Rules for applicable Existing and Inactive Surface Impoundments at each Station, until closure is complete. Therefore, no additional action beyond continued compliance with these Rules is warranted.

MWG has been operating the active surface impoundments in a manner that minimizes potential impacts to groundwater. Regarding the liners previously installed at the Federal CCR Surface Impoundments, it is WCG's opinion that the prior and current liners are consistent with industry practice for this type of application and are effective at containing the materials managed in the surface impoundments. However, the existing HDPE liners – even though many were required by the CCAs and approved by Illinois EPA when installed -- do not meet the Federal CCR Rules which require a dual liner. MWG has opted to close the surface impoundments.

[110] MWG Exh. 903. pg. 44.

Regular inspections occur at each Station to ensure that design, construction, operation, and maintenance of the CCR units are consistent with recognized generally accepted good engineering standards[111][112][113].

In addition, MWG implemented a detection monitoring program at Joliet 29, Will County, and Waukegan Stations to identify potential impacts to groundwater from the regulated impoundments. An assessment program is being implemented at the Powerton Station. Further assessment monitoring will be implemented at the other Stations if statistically significant increases attributable to the regulated units are confirmed. Corrective action will be conducted if assessment monitoring data indicates that the groundwater protection standards are exceeded. MWG continues to upload reports associated with these activities as well as other technical reports to the website for CCR Rule Compliance Data and Information[114]. Also, the recently adopted Illinois CCR Rule does not distinguish between detection monitoring and assessment monitoring. Instead, pursuant to the Illinois EPA Rule, beginning in the second quarter of 2021, MWG will be sampling the groundwater for all of the constituents identified in the federal CCR rule pursuant to 35 Ill. Adm. Code 845.600.

Pursuant to the Federal CCR Rules, MWG prepared Closure Plans for the regulated surface impoundments at each of the Stations, including Pond 2 at Joliet 29[115], the Ash Surge Basin, Bypass Basin[116], and the Former Ash Basin[117] at Powerton, the South Ash Ponds 2S and 3S at Will County[118], and the East and West Ash Basins at Waukegan[119].

As discussed in Section 1.5, in compliance with the Federal CCR Rules, MWG has prepared and submitted to the USEPA Alternative Closure Demonstrations (ACD) related to the infeasibility of

[111] Annual Inspection Reports for Ash Pond 2 at Joliet 29 Station, October 2020, Ash Surge Basin and Bypass Basin at Powerton Station, January 2016, October 2018, October 2019, October 2020; Annual Inspection Reports for Former Ash Basin at Powerton Station, July 2017, July 2018, July 2019, July 2020; and Annual Inspection Reports for East Ash Pond and West Ash Pond at Waukegan Station, January 2016, October 2018, October 2019, October 2020.
[112] MWG Ex. 903, p. 38; 1/31/18 Tr. p. 145:2-23 and p. 145:18-146:3 (Test. of Kelly); 10/24/17 Tr. p. 126:20-127:6 (Test. of Lux); 1/31/18 Tr. p. 237:20-23 and p. 257:15-258:4 (Test. of Veenbaas); 10/24/18 Tr. p. 222:18-223:8 (Test. of Maddox).
[113] Op. cit. footnote 47.
[114] NRG website for CCR Rule Compliance Data and Information available at: https://www.nrg.com/legal/coal-combustion-residuals.html.
[115] Closure Plan for Ash Pond 2 at the Joliet 29 Station, October 2016.
[116] Closure Plan for the Ash Surge Basin and Bypass Basin at the Powerton Station, October 2016.
[117] Closure Plan for the Former Ash Basin at the Powerton Station, April 2018 as amended in May 2019.
[118] Closure Plan for the South Ash Ponds 2S and 3 S at the Will County Station, October 2016.
[119] Closure Plan for the East and West Ash Basins at the Waukegan Station, October 2016.

the development of alternative capacity for the Ash Surge Basin at Powerton, Ash Pond 2S at Will County and the East Ash Pond at Waukegan. Continued operation of the CCR Ponds until the alternate closure deadlines identified for each Station will be monitored to mitigate any potential impacts to groundwater. The detection and assessment groundwater monitoring programs implemented by MWG are designed to identify potential issues with the regulated impoundments until such time that the ponds are taken out of service and formally closed in accordance with the applicable permits. According to IL Public Act 101-171, signed into law July 30, 2019, closure activities related to Federal/State Ponds cannot be completed until a permit is attained from Illinois EPA.

Contrary to Quarles's opinion, the scope of the ASDs associated with the Powerton, Will Co., and Waukegan Stations is appropriate and complies with the Federal CCR Rules and likely also the Illinois CCR Rules. Quarles's suggestion that MWG should have used the ASD process to specifically identify the source of statistically significant increases in groundwater concentrations is incorrect. It is not appropriate nor required by the Federal CCR Rules or the Illinois CCR Rules to pursue additional investigation of non-regulated units as part of this process. The Federal CCR Rules and the Illinois CCR Rules require the owner/operator to evaluate whether the *regulated unit(s)* are adversely impacting groundwater, but neither require an exhaustive site-wide study to identify a specific alternate source.

Moreover, additional investigation is not needed for purposes of identifying the appropriate relief/remedy related to groundwater conditions attributed by the Board to MWG. The appropriate action recommended by WCG is based on the existing applicable regulatory framework and data historically collected at the Stations.

In closing, no additional relief is warranted at the Stations with respect to Section 33(c), criteria (i), the character and degree of injury to, or interference with the protection of the health, general welfare, and physical property of the people. MWG is actively complying with the detection and assessment groundwater monitoring requirements of the Federal CCR Rules at these Stations and has created a long-term plan for closure of the regulated active and inactive CCR surface impoundments, as appropriate. The plans comply with the existing Federal CCR Rules and MWG is aware of, and further intends to comply with the IL CCR Rules, once promulgated.

4.6 MWG should continue to maintain the GMZs at each Station until the corrective action is complete.

GMZs have been established at Joliet 29, Powerton, and Will County Stations. The GMZs are a component of corrective action included in the CCAs implemented for the Joliet, Powerton and Will County Stations. A GMZ would not have been approved by the Illinois EPA if a specific means for managing the groundwater was not implemented. The means for managing the groundwater for the three Stations is deemed to be the various corrective measures specified in the CCAs, including:

- Upgrades to various CCR surface impoundment liners;
- Installation of the dewatering system at Will County Ponds 1N and 1S; and
- At Powerton, the East Yard Run-off Basin was not to be used as part of the ash sluicing flow system and no unlined areas may be used for temporary or permanent management of CCR.

The GMZ also includes conducting long-term groundwater monitoring to confirm the effectiveness of the corrective measures included in the CCAs, and the maintenance of institutional controls to prevent potential exposures to groundwater containing CCR-related constituents at concentrations above Class I Groundwater Quality Standards. The 2020 Board Order specifically clarifies that *"(t)he Board is aware that the process of monitored natural attenuation (MNA) can be, by its nature, a long one. Monitored natural attenuation, depending upon its efficacy and subject to the Agency's review, can conceivably last for many years."*[120]

WCG agrees that MNA is a long-term process, which may require multiple decades to complete. WCG recommends that MWG maintain the GMZs and continue the groundwater monitoring until the corrective actions through MNA are complete. Because there are no off-site complete or potentially complete exposure pathways, that the MNA may take time would not result in unacceptable impact to human health or the environment at the Stations. Additionally, as discussed further below in Section 4.8, WCG recommends implementation of a remedy at the Waukegan Station, which includes the establishment of a GMZ.

[120] Board Opinion, February 6, 2020, pg. 13.

4.7 No further remedy is warranted at the Joliet 29, Powerton, and Will County Stations.

As discussed in Section 4.5, MWG has already committed to following the Federal/State CCR Rules for applicable Existing and Inactive Surface Impoundments at each Station, until closure is complete. Therefore, no additional action beyond continued compliance with these Rules is warranted for these regulated areas of the Stations. In addition, Section 4.3 demonstrates that detections of CCR-related constituents in groundwater at the Joliet 29, Powerton, and Will County Stations are decreasing through natural attenuation. The institutional controls in place at each of the Stations are sufficient to control potential on-site exposures to impacted groundwater while corrective action activities previously implemented under the prior CCAs continue to take effect. Illinois regulatory programs rely on institutional controls when a risk-based evaluation indicates that potential exposures to impacted media may be managed by the implementation of these corrective actions. GMZs and ELUCs are proven as effective, industry-accepted remedial approaches approved by the State of Illinois to adequately control exposure to impacted groundwater. These types of controls can be implemented in lieu of active remediation, when exposures can be controlled. Risk-based remediation is particularly beneficial at sites like the MWG Stations, where both the properties and surrounding areas are industrial in nature and site access can be controlled. Further, as discussed in Section 4.4, there are no off-site complete or potentially complete exposure pathways that would result in unacceptable impact to human health or the environment at the Stations. The administrative record is clear that there are no off-site downgradient potable use wells at any of the Stations, and a review of the Annual CCR Fugitive Dust Reports indicate that there are no significant issues with fugitive dust at the Stations or citizen complaints related to dust originating from the Stations.

Additional support for continuing to utilize monitored natural attenuation at these three Stations includes:

- Groundwater monitoring will continue to be performed while the GMZs are in place, to confirm monitored natural attenuation continues to be effective;
- As discussed above, the existing regulatory framework does not require additional action at the historical fill areas; and
- Illinois EPA has not identified any noncompliance with the CCAs or pursued any enforcement action against MWG, since the CCAs were signed in 2012.

Because the statistical evaluation indicates that natural attenuation is occurring and that there is no unacceptable risk to human health or the environment, no further remedy is required at Joliet 29, Powerton, or Will County Stations to address the regulated CCR units or the historical fill areas.

4.8 Despite the absence of risk, an appropriate remedy is warranted at the Waukegan FS Area to attain compliance with applicable regulations.

The 2020 KRPG investigation[121] indicates that impacts to groundwater at MW-5, MW-7 and MW-16 (downgradient of the FS Area) are potentially caused by leaching of materials at the FS Area. Additionally, migration of impacted groundwater from the upgradient General Boiler and Tannery properties is occurring[122]. The evaluation of groundwater data in Section 4.4 demonstrates that concentrations of CCR-related analytes are attenuating below applicable surface water quality criteria before groundwater leaves the property. However, the statistical evaluation of the groundwater concentration trends in samples collected from downgradient wells at Waukegan indicates that supplemental activities may be implemented to enhance natural attenuation of groundwater underlying the Station.

Therefore, it is WCG's opinion that a presumptive remedy in the form of a low permeability cap be installed in the FS Area in order to enhance the natural attenuation remedy. A presumptive remedy is a technology that regulators believe, based upon prior experience, will be the most appropriate remedy for a specified type of site. Use of presumptive remedies accelerates the remedial alternatives analysis. Capping is a proven remedial technology that has been used for decades and is particularly prevalent as a means of closing solid and hazardous waste landfills, and surface impoundments (usually after removal of liquids) under RCRA.

Capping of the FS Area would reduce infiltration, leading to a decrease in water percolation through the coal ash materials. It is anticipated that this reduction in percolation will significantly decrease leaching from coal ash materials within the FS area. The installation of the cap is expected to reduce the time required for natural attenuation to restore groundwater concentrations to Class I Groundwater Quality Standards.

[121] MWG-13-15_79493-79771; MWG13-15_81195-81293.
[122] MWG Ex. 644; MWG13-15_46627 -46630; 1/30/18 Tr. pp. 135:23-136:18, 138:3-139:3,155:10-21 (Test. of Race); MWG Ex. 644, p.; 1/30/18 Tr. p. 136:19-138:1 (Test. of Race).; Ex. 19D, p MWG13-15_45800.

An evaluation of the potential to reduce infiltration via the installation of a low permeability cap at the FS Area was modeled with the Hydrologic Evaluation of Landfill Performance (HELP) Model, Version 3.07. The results from the HELP Model are presented in **Appendix E**. According to the model results, a cap would significantly reduce infiltration and thereby would be expected to mitigate potential leaching from ash materials to groundwater.

WCG recommends that, if implemented, the cap should be designed specifically for the Waukegan Station by a Professional Engineer licensed in Illinois in consideration of site-specific performance-based infiltration reduction goals. In addition, WCG recommends that initiation of the design of the cap wait until the Board has finalized its rulemaking in the sub-docket A of R20-19 to explore "historic, unconsolidated coal ash fill in the State", located outside of surface impoundments. Because WCG has confirmed that there is no risk to Lake Michigan or other potential offsite receptors and groundwater use on-site is controlled by the ELUC, staying initiation of the corrective actions will not harm the environment nor public health and will also ensure that the corrective actions taken for the FS Area are in compliance with the Board's final rule in R20-19(A).

WCG believes that it is both technically practicable and economically reasonable to implement a low permeability cap for the FS Area. The estimated cost of a low permeability cap is variable and could range from approximately $1.9 million to $3.3 million, depending upon the performance objectives of the cap. The ultimate performance objectives are expected to be informed by regulatory standards, remedial goals, technical practicability and implementability, among other considerations.

A GMZ should be established in conjunction with the implementation of the cap corrective action. When the GMZ is established, the Class I Groundwater Quality Standards are inapplicable, while monitored natural attenuation is occurring in the groundwater at the Station.

4.9 Relevant Section 33(c) and 42(h) Criteria

The record reviewed by WCG and discussed in this Report indicates that all the Stations are located in industrial areas. This is a factor the Board considers under 33(c) of the Act when making its orders and determinations.

The Stations are each surrounded by other industries and commercial properties. Each of the Stations have been at their current location for at least 50 years and nearly 100 years in the case of Powerton and Waukegan Stations. Joliet 29 and Will County were established later, built in 1964 and 1955, respectively. Powerton and Waukegan were both built in the 1920s and are also

surrounded by industrial properties and in many cases, the industrial development surrounding the Stations occurred after original construction of the Stations. For example, Waukegan is surrounded by properties that have historic contamination from prior uses, including the Superfund sites such as the Johns Manville Site to the north, and the General Boiler and Greiss-Pfleger Tannery sites to the west. A SRP site that previously attained a NFR Letter also adjoins the Joliet 29 Station, on the west side. Based upon the age of the Stations and that they are all in industrial areas, the existing environmental conditions are suitable for the areas in which they are located.

It is common in most Federal and State environmental remediation programs to utilize risk-based remedial goals as the basis of a remedial approach. Illinois EPA's method for developing remediation objectives for contaminated soil and groundwater is known as TACO. Remediation objectives developed under TACO protect human health and the environment, take into account site conditions and land use, and are risk-based and site-specific. Therefore, even those adjacent properties that have been, or are currently enrolled within a regulatory program have some level of residual impact corresponding to compliance with risk-based goals. These risk-based goals may consider engineering and institutional controls to preclude exposures to impacted material (such as the ELUCs already established for the Greiss-Pfleger Tannery west of the Waukegan Station and the former Caterpillar facility west of the Joliet 29 Station) which allow impacted materials to remain in-place, if there are no unacceptable hazards posed to human health or the environment. The Stations are located within areas that are known or suspected to be similarly impacted by long-term industrial land use.

Another factor included in Section 33(c) of the Act is technical practicability and economic reasonableness. MWG has already implemented multiple measures at the CCR surface impoundments and historical fill areas, including implementing corrective actions (relining the ponds and establishing institutional controls that prevent access to the groundwater). In addition, MWG has implemented GMZs to address violations of Class I Groundwater Quality Standards, while the monitored natural attenuation corrective action at the Joliet 29, Powerton and Will County Stations continues to be implemented. The GMZs were established in accordance with 35 Ill. Adm. Code Section 620.250, which indicates that a GMZ may be established to mitigate impairment caused by the release of contaminants from a site: ***that is subject to a correction action process approved by the Agency*** (emphasis added) or for which the owner or operator undertakes an adequate corrective action in a timely and appropriate manner and provides a written confirmation to the Agency. Therefore, in the case of Joliet 29, Powerton and Will County, the GMZs were established as part of a corrective action process that

has been approved by a regulatory agency. Illinois EPA has not required or requested MWG conduct additional corrective action after establishment of the CCAs.

Duration and gravity of the violation is also listed in Section 33(c) of the Act as a factor utilized by the Board to determine an appropriate remedy. The 2020 Board Order indicates that the violations of Part 620 of the Board regulations do not apply, given the ongoing nature of the previously established GMZs at Joliet 29, Powerton, and Will County. Thus, the duration of the Part 620 violations was limited to the first identification of an exceedance of the Class 1 Groundwater Quality Standards in late 2010, until the GMZs were formally established in 2013.

The comparison of groundwater data to surface water quality standards presented above in Section 4.4 provides further evidence for the lack of gravity of the violations. This evaluation indicates that surface water, including related receptors, will not be adversely impacted by the groundwater concentrations at the Stations. Minimal gravity of the noted violations is also exhibited based on the incomplete exposure pathway for groundwater. Human consumption of groundwater at each of the Stations is controlled using various ELUCs, which prohibit the installation and use of groundwater for potable purposes. In any case, there are no downgradient potable receptors at any of the Stations.

The record indicates that the violation of Section 12(d) of the Act at the Powerton Station was based on temporarily storing coal ash outside of the surface impoundments during a single occasion lasting approximately two to three months during the winter before 2012[123]. The condition was corrected and the materials were removed. Moreover, storage during the winter, when the ground would have been frozen further decreasing the likelihood that runoff from the coal ash could have infiltrated the ground and subsequently impacted groundwater, thus further decreasing the gravity of what was already an event of very limited duration.

Due diligence in attempting to comply is another 33(c) factor supporting WCG's opinion. MWG proactively undertook appropriate investigation of the Stations prior to any agency request beginning in 2002, voluntarily agreed to perform a hydrogeologic assessment and later sampling (where other utilities did not) in 2008-2010 and implemented the CCAs under oversight by the Illinois EPA. MWG consistently attempted to act diligently, based on: early site investigations, sampling for CCB, relining ponds, CCAs (and related GMZs/ELUCs) and other investigations discussed above.

[123]2019 Board Order, pg. 42.

Electronic Filing: Received, Clerk's Office 3/04/2022

EXHIBIT 2

Electronic Filing: Received, Clerk's Office 3/04/2022

Closing the Cloud Factories

Lessons from the fight to shut down Chicago's coal plants

By Kari Lydersen

Published by

MIDWEST ENERGY NEWS

and

RE AMP

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Acknowledgements

Warmest thanks to all the activists, organizers, experts and other Chicago residents who took time to speak with me for this book and for my reporting on this issue in general. Special thanks to Kim Wasserman, Ian Viteri, Claudia Ayala, Jerry Mead-Lucero, Dorian Breuer, Jack Ailey, Pam and Lan Richart, Brian Urbaszewski, Tom Shepherd, Howard Learner, Faith Bugel, Henry Henderson, Kelly Mitchell, Christine Nannicelli, Jack Darin, Emily Rosenwasser, Becki Clayborn, David Jakubiak, Edyta Sitko, Debra Michaud and Josh Mogerman for their time and assistance. Thanks also to Douglas McFarlan of Midwest Generation, whom even fierce industry critics acknowledge for his respectful approach to adversaries. And deepest apologies to all those who were inadvertently not mentioned or given due credit here.

Many thanks to *Midwest Energy News* and Ken Paulman for conceiving of, editing and publishing this book, and to the Joyce Foundation and RE-AMP for their generous support.

- Kari Lydersen, Chicago, June 2014

Electronic Filing: Received, Clerk's Office 3/04/2022

Perhaps for this reason, by the summer of 2003 activists were feeling that Burke himself did not really want the ordinance to pass. “In my opinion Burke did this for some kind of publicity reason, but he wasn’t interested in actually pushing it,” said Ailey.

The local activists were getting frustrated.

Chapter 7: The legal track

In 2001, Illinois passed a law ordering the state EPA to do a “comprehensive review” of the impact of coal-fired power plants on public health. It was supposed to “address the potential need for the control or reduction of emissions” of sulfur dioxide, nitrogen oxides and mercury, while also exploring incentives for renewable energy development.[1]

The legislators who drafted the bill also made sure to note that “Illinois coal is an abundant resource and an important component of Illinois’ economy whose use should be encouraged to the greatest extent possible consistent with protecting the public health and the environment.”[2] Lawyers and public health advocates were encouraged by the study: it offered a chance for public input and could theoretically result in significant emissions reduction requirements for coal plants and incentives for renewable energy.

At the same time, they were also working on another regulatory avenue. Amendments to the Clean Air Act in 1990 created a new permit requirement for all major sources of pollution, known as a Title V permit. In 2002 and 2003 Midwest Generation, like other polluters, was going through the lengthy process of getting this permit. As Environmental Law & Policy Center (ELPC) attorney Faith Bugel explained it, the permit “does not have new emissions limits, but is a way of consolidating all the requirements from the state and federal level in one operating permit.”

Bugel and other environmental attorneys were especially pleased with the avenues that Title V permits opened, because the program required ongoing monitoring and reporting to ensure compliance.

“You can’t just get the permit and say you’re done,” Bugel noted. “You need to show you’re complying.” That means companies have to monitor emissions and keep detailed track of the results, then submit them to the government. Anyone can file under the Freedom of Information Act for access to the records.

Environmental groups and lawyers went through Midwest Generation’s proposed Title V permits “with a fine-toothed comb,” as Bugel described it, and went to the Illinois EPA with their comments, detailing specific ways they thought the permits needed to be more stringent or thorough. They also took their concerns to the U.S. EPA, which can tell the state EPA to make changes in the permit.

his childhood. At the time he was growing up, the families in Bucktown had been Polish, in Pilsen they were Mexican, but the tight-knit, cooperative vibe was the same.

"Everyone knew each other, the youngsters couldn't cause any trouble because of all the eyes on the street, someone's aunt would be watching you," Urbaszewski said.

He had hoped the Illinois EPA report would lay the groundwork for meaningful state legislation mandating emissions reductions, in part to add fuel to the ongoing push for federal legislation targeting coal plant emissions.

Urbaszewski noted that state legislation would have health and environmental benefits and also drive federal legislation, helping "push forward a national effort to slash coal power plant pollution."

"The hope was you get a number of states to pass something, the federal government will say, 'Okay this is a problem, let's solve it,'" he explained.

Instead, the Illinois EPA report "was mealy-mouthed," in Urbaszewski's words. "It didn't really say anything, no recommendations to go forward, nothing." He figured the Illinois EPA and legislators who influenced them had essentially caved to the state's strong coal lobby, the forces of "money, inertia, power."

The Illinois EPA said in its report that strict state limits would put Illinois power producers at a disadvantage in the still-emerging interstate energy markets, and worried that the cost of pollution controls were exorbitant or still unknown. It questioned the health and air quality benefits of statewide limits, since neighboring states could still pollute. And it predicted that smaller power plants would close rather than investing in expensive scrubbers for sulfur dioxide or other pollution controls, putting the grid's reliability at risk.[4]

Like Urbaszewski, ELPC attorney Faith Bugel saw the Illinois EPA study as a big disappointment.

She blamed then-Governor Rod Blagojevich. Though there's no way to prove it, she thinks his staff laid a "heavy hand" on the report to shift the focus from protecting public health and reducing emissions to protecting the coal industry and jobs. Between 2002 and 2004, Midwest Generation donated at least $51,500 to Blagojevich's campaign fund.[5]

"We felt like the administration had sold us up the river on doing something on coal plants," she said.

Bugel and other environmental leaders were especially frustrated with Blagojevich because during his 2002 gubernatorial campaign, he had called specifically for state emissions limits on power plants.

"Rod Blagojevich will work with both the environmental groups and industry to set new, long-term emissions standards for the state on a

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graduated schedule," went his campaign promise. "Rod would bring all parties to the table to work out a plan of emissions reductions."[6]

So the environmentalists figured they'd push Blagojevich to redeem himself.

They proposed he do so with a state rule limiting mercury emissions. Blagojevich—a self-styled populist who would later go to federal prison and down in history for brazen acts of corruption—had made children's health one of his priorities. A state program guaranteeing health insurance to all kids was a legacy that would remain long after Blagojevich's name had faded from the headlines. So environmental leaders pushed Blagojevich to understand how mercury emissions from coal plants impacted children's health.

Young children and infants exposed to high levels of mercury in utero or by eating fish can develop mental retardation, cerebral palsy, deafness, blindness or other disorders, and are prone to have lower IQs and slower motor skills. Adults can also suffer nervous system disorders and organ damage from mercury poisoning. Children under 15 and pregnant women are warned not to eat more than one fish a month from Illinois' mercury-contaminated water bodies; other adults are warned not to eat more than one fish per week.[7]

Coal plants are among the major manmade sources of mercury contamination worldwide, responsible for 43 percent of manmade mercury contamination in the U.S. (Volcanoes, forest fires and other natural events also release mercury into the atmosphere). In Illinois in 2006, coal plants were emitting 3.5 tons of mercury each year.[8]

"Mercury was unique in that it really was linked more to children's health than health of the population across the board, and this governor cared most about children's health," noted Bugel. "And mercury is unique because the cost to retrofit a coal plant was not prohibitive—most or all the plants could install mercury controls and it wouldn't be putting any of them out of business."

In March 2005, President George W. Bush's administration issued a federal rule on power plant mercury emissions, which some experts saw as a move to undercut stronger legislation that was being considered by Congress at the time.[9] The Bush administration said their rule would reduce power plants' mercury emissions by nearly 70 percent by 2018, from 48 tons to 15 tons emitted per year.[10] The first round of reductions were actually supposed to come as a side effect from NOx and SOx pollution controls mandated by the Clean Air Interstate Rule, also being developed that spring.[11]

Critics said the federal mercury rule was far too lenient. They said the timetable was too long, and they doubted the rule would even achieve the advertised reductions by 2018, a likelihood the EPA acknowledged. The

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detail processes for decision-making, media outreach, strategy and other important elements of the campaign. It defined the roles of various participants and committees, and laid out how resources would be allocated, how members would communicate and how data and contacts collected in the course of the campaign could be used. Creating the memorandum took a lot of time, and some thought it was an unnecessary distraction. But numerous coalition members later thanked Clayborn for her foresight.

"For me it was to build trust, that we're going to make decisions together and learn about each other's concerns so that we're stronger together," Clayborn said. "I probably was not the most liked person for pushing on it so much. People don't want to think about the pesky process—people just want to go do!"

But she feared the past would repeat itself if the group wasn't careful. "I recognized how powerful this coalition could be if it didn't get stuck on mistrust and if it wasn't splintered," she said. "And I felt this was needed if we were going to win."

Alderman Moore worked with the coalition to draft a new clean power ordinance. Then they held a series of meetings to "roll it out," soliciting feedback from more community and environmental groups and inviting them to join the effort. The core of six organizations quickly grew to a total of 60, with 17 groups constituting the central coordinating committee of the newly minted Chicago Clean Power Coalition.

They formed committees for things like lobbying, coalition-building, media outreach and data management. They mobilized networks of volunteers to help with tasks like sending postcards to aldermen and launching email blasts.

"One of the strengths of this process was that we were able to get group buy-in early on, before beginning to meet with aldermen," noted Pam Richart. "And we built a coalition with diversified groups who could carry messages to aldermen and others in differing ways."

Living on the north side distant from the coal plants, and with a history of taking a stand on larger issues like the Iraq War, Moore was an appropriate politician to bring the coal fight back to the City Council in a new context. Alderman Burke's ordinance had been framed as a public health issue based on the effects of NOx and SOx emissions. The ordinance Moore and the coalition came up with did not limit NOx and SOx but regulated particulate matter, arguably a more serious health danger. Moore's ordinance also limited carbon dioxide and described the plants explicitly as drivers of global climate change.

"When the opportunity came around to do an ordinance again, we focused on particulate matter and carbon dioxide," ELPC attorney Faith Bugel explained. "Particulate matter because that was the pollutant left out

of the state settlement, and of course carbon dioxide because it had gone historically unaddressed."

The ordinance set strict limits on both PM10 and PM2.5 and carbon dioxide emissions, measured per amount of fuel burned. The carbon dioxide limits—"120.36 pounds per million BTU of actual heat input"—would be basically impossible for the coal plants to meet unless they switched from burning coal to natural gas or captured their carbon emissions. Every one-hour period that emitters violated the standard would result in a fine of between $5,000 and $10,000, the ordinance said.

Moore's ordinance began by laying out the city's home rule authority to regulate pollution, noting that "state and federal air pollution regulations do not adequately address local impacts on human health."[1]

As the battle over coal-fired power and coal mining had picked up steam around the country, there was a complicated subtext.

That would be the rise of horizontal drilling and hydraulic fracturing, or "fracking," allowing the extraction of vast quantities of natural gas—and oil—that had previously been locked in inaccessible shale formations. Fracking for natural gas quickly became highly lucrative and highly controversial in the Marcellus and Utica shales underlying western Pennsylvania and New York, Ohio and West Virginia.[2] Illinois is also considered potentially prime territory for fracking, and speculators have laid the groundwork for a possible drilling boom in some of the same areas where residents are fighting coal mining.[3]

The rapid growth of fracking meant natural gas prices dropped to unheard-of lows. Power plants that burned natural gas to produce electricity were able to do it much more cheaply, flooding the energy markets with an influx of low-cost electricity.

This was bad news for merchant coal plants like Fisk and Crawford that sold their power on the open market. It was suddenly hard for them to compete with cheap gas-fired power, and the escalating "natural gas revolution" meant that even more gas-fired plants were being built.

Natural gas burns much more cleanly than coal, releasing significantly less particulate matter, NOx, SOx and carbon dioxide than a coal plant. So environmental and health groups were not sure what to make of natural gas. Some welcomed it as a cleaner "bridge fuel" that could help wean the U.S. off coal and onto renewables, while others warned that natural gas is still a climate change-driving fossil fuel, and its extraction involves significant environmental consequences, including massive water use and potential water contamination.

Around the country some coal-fired power plants had converted to burning natural gas. Such a conversion entails major and costly overhauls, but some of the equipment can be repurposed and the plant is already connected to the grid to transmit electricity. As Alderman Moore's

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By then 16 aldermen were supporting the ordinance. A majority of 26 votes are needed for an ordinance to pass, but even with majority support an ordinance can never progress until it gets a committee hearing.

Hundreds turned out for the People's Hearing, and activists had fun with the Valentine's Day theme. The Rainforest Action Network set up a kissing booth, and a young couple held signs saying, "Make love, not smog" and "I like dirty talk, not dirty power." LVEJO brought their elaborate dioramas of the coal plants, nearby schools and a mountain with a shorn-off top, an homage to their allies in West Virginia. The dioramas also featured what they'd like to see instead of the coal plants: cardboard homes with tinfoil solar panels on top. Youth in face masks held a banner saying, "30 more died while we waited for our hearing"—the number based loosely on the Harvard study premature death estimates.

Activists and residents packed in for the hearing, with Moore and a few other aldermen in attendance. Congressmen Jan Schakowsky and Mike Quigley sent statements of support. Leaders of the coalition and other lawyers and scientists testified one after another about the health, environmental and economic impacts of the coal plants.

ELPC attorney Faith Bugel described the center's study showing the plants had caused up to a billion dollars worth of health and environmental impacts since 2002, based on analysis from the National Research Council blaming the plants' particulate matter emissions for $127 million in annual costs.[9] And speakers cited a 2010 study by the Clean Air Task Force estimating that the Chicago coal plants caused 42 premature deaths, 66 heart attacks and 720 asthma attacks each year.[10]

Alderman Moore took testimony from several Pilsen and Little Village elementary school students, holding the microphone up gently as the boys—one of them sporting a cool sunglasses-indoors look—gave earnest statements.

Attendees decried the fact that despite the obvious public and political support for the ordinance, it couldn't even get a committee hearing.

"If citizens are demanding a hearing and if the normal procedure is to have a hearing, there should be one," said Bugel. "Obviously some members of government don't want this. As to why, that is baffling."[11]

Chapter 17: Changing of the guard

Coalition leaders and political insiders knew that Mayor Daley's refusal to crack down on the coal plants was the reason for the council's inaction, though none of them were sure exactly why the so-called "Green Mayor" was so recalcitrant. The new mayor would be elected on February 22, 2011, and by this point it was clear that Rahm Emanuel would win.

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to the plumes coming from the stacks with a touch of bemusement and wonder, and made sure to snap photos. It wouldn't be long.

By the end of August, nothing came out of the stacks. The coal plants had gone dark. The red lights on top of their stacks could still be seen winking from miles away. But electricity was being made no more.

Officials at Midwest Generation emphasized the factor that everyone knew played a central role in the deal: old coal plants were just unable to compete on the open market with electricity generated by natural gas.

"Unfortunately, conditions in the wholesale power market simply do not give us a path for continuing to invest in further retrofits at these two facilities," said Pedro Pizarro, president of Midwest Generation's parent company Edison Mission Energy.[3]

Midwest Generation president Douglas McFarlan noted both the market and community forces.

"Make no mistake, the decision to announce timeframes for the retirements of Fisk and Crawford was driven by sustained, depressed power prices that make it impossible for us to see a viable path for continuing to retrofit those particular plants, and by our desire to address the unique community concerns associated with densely-populated neighborhoods having grown up around the plants," he said, adding that "We are as committed as ever to the belief that the environmentally responsible use of coal is essential to maintaining a reliable, affordable supply of electricity."[4]

The lawyers and policy experts in the Clean Power Coalition knew well the impact of natural gas prices. But they said gas prices were far from the overwhelming factor driving the agreement to finally close the coal plants.

"You can never say it was this one single thing that did it," said Faith Bugel. "The ordinance and the organizing were critical and also coming at a time when natural gas prices and electricity prices were putting pressure on coal. We've seen this repeated in a number of places where organizing and some sort of activist pressure has toppled a bunch of plants. With coal teetering on the brink, everything came together."

August 30, 2013 marked the one-year anniversary of the coal plants closing. That night wild lightning lit up the sky, flashing horizontally behind the now-silent coal plant and reflecting in the river. Debris and dust swirled through the air, and the streetlights on the blocks around the National Museum of Mexican Art were out.

Inside, electricity was on everyone's minds. Members of the Clean Power Coalition and supporters from across the city were gathered in the museum to see *Monsters*, a documentary by Greenpeace filmmaker Melissa Thompson featuring PERRO member Leila Mendez.

"We will no longer have a Dia de los Muertos march with a clean air brigade," PERRO member Sarah Finkel told the crowd. "That's a victory, and we're here to celebrate that victory." She called the other PERRO

EXHIBIT 3

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ENERGY NEWS NETWORK

MIDWEST NEWS

Illinois coal plant epitomizes state's dysfunctional air permit system, advocates say

by **Kari Lydersen**
September 13, 2016

Advocates say emissions permitting issues with the Dallman coal-fired power plant in Springfield, Ill., symbolizes a larger problem in the state. Credit: Springfield City Water, Light and Power

For seven years, one of the four boilers at the **Dallman coal-fired power plant** run by the public utility in Springfield, Illinois has been operating without a permit under the Clean Air Act.

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The boiler has not been covered by a permit because the permit currently governing emissions from the entire power station is from 2005, years before the fourth boiler was launched in May 2009.

That permit was never actually activated until 2013, though when it was written it was meant to expire in 2010. That means the Springfield plant — like many others statewide — has essentially been operating for years without an updated permit setting emissions limits and other requirements.

Attorney Faith Bugel says this plant is symbolic of a larger problem, wherein many coal plants in Illinois are operating without Clean Air Act "Title V" permits because of the Illinois EPA's slow pace in processing them and power companies' challenges to proposed permits.

A one-stop permit

Under the Clean Air Act's **Title V, operating permits** set limits on various emissions that are intended to help states comply with limits on the concentration of criteria pollutants under **National Ambient Air Quality Standards.** State agencies are typically responsible for granting and enforcing Title V permits. And since enforcement of the Clean Air Act depends largely on lawsuits by citizens and advocates, the single permit for different emissions should make it easier for them to monitor compliance.

"Part of the disaster here is that these permits were supposed to be finalized 10 years ago, and that creates issues for enforceability," Bugel said. "The whole point of the Title V program was to get all the parts of the permit in one place."

At the Springfield plant, she continued, "They're 10 years late, and now we have a whole new boiler that hasn't had a permit for seven years. The Illinois EPA has blown by all the **deadlines the U.S. EPA** set."

Amber Sabin, spokesperson for Springfield **City Water, Light & Power**, which runs the plant, said that the newest boiler still complies with the draft

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permit and other environmental regulations even though it wasn't written into the permit. And, she said, "CWLP employs some of the cleanest operating coal plants in the country," including that boiler.

Now state regulators have made revisions to the **proposed permit**, including covering the fourth boiler. A **public comment period** on that proposed permit runs through September; it was extended after a previous July 15 deadline.

Scott Gauvin lives about three miles from the plant and serves as chair of the **Sangamon Valley Group of the Sierra Club**. As he sees it, a strong permit for the Dallman plant is particularly important since it is publicly owned.

"This is a public utility, so we're trying to get a public process that is a little more transparent, information that is a little more available, not just on environmental issues but financial issues about where the plant stands right now," said Gauvin.

Questions about the future

The newest 200-megawatt boiler has **been the bedrock** of the plant's operation, often single-handedly producing enough power for customers. The three decades-old boilers, which are used primarily during times of peak demand and to generate extra energy to sell to the grid, may need upgraded pollution control equipment to comply with environmental regulations that kick in by 2018. The measures the plant must take to comply will be in part determined by the new permit.

Numerous coal plants in Illinois and nationwide have closed rather than make expensive upgrades. The Dallman plant's four boilers burn coal to make steam that power turbines to generate electricity.

Sabin said the three older boilers have been converted to burn natural gas during their startup phase, which makes them cleaner. "Ultimately, the

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deciding factor on continued operation of the older coal-fired units is dependent upon energy prices and final environmental regulations," she said.

Last year the **utility announced** that rate restructuring and other measures, including a reduction of 150 employees, were helping improve its financial position after serious blows from the recession and dropping power prices.

"We are a citizen-owned utility," said Gauvin. "There's not been the forethought in the planning to understand these regulations coming down the line, and how we should start preparing for them. Whether it's the air side, the water side, the after-products side — i.e., coal ash — that cost will be passed on to citizen-owners."

Glacial progress

An application for the Springfield plant's Title V permit was first filed in 1995. After a decade-long process, in 2005 the Illinois EPA issued a permit. But the Springfield utility appealed the permit to the Illinois Pollution Control Board, and the board ruled that the entire permit be stayed while the contested parts were reviewed.

This is a process Bugel sees as a problem statewide. She said that when a company objects to parts of the permit, just those parts should be stayed while under review, and the other pieces of the permit should go into effect. The U.S. EPA has also recommended this approach, and expressed concerns with Illinois' process.

The IEPA did not respond to a request for comment.

In May 2013, the IEPA and the Springfield utility jointly asked that the uncontested parts of the 2005 permit be put into place, while the contested parts remained stalled. That did occur, and now the proposed revised permit is finally being considered — more than 20 years after the permit application was first filed.

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"IEPA has put in place until 2018 a Clean Air Act Permit Program permit that omits many legally applicable requirements, based on an application submitted *eighteen years ago* and an initial permit that should have expired five years after it was first issued, in 2010," says a public comment filed by the Environmental Law & Policy Center, Sierra Club and Natural Resources Defense Council.

A challenge on SSM

Meanwhile, those groups allege other insufficiencies including that the plant's particulate matter emissions violate the **State Implementation Plan** meant to keep Illinois in compliance with national ambient standards, and that the plant lacks an adequate action plan for when limits are violated.

Bugel said environmental leaders are also concerned that Title V permits often allow coal plants to avoid reporting emissions that are considered to happen during start-up, shutdown and maintenance or malfunction ("SSM") of equipment. This has been an **ongoing issue at the troubled** E.D. Edwards coal plant owned by Dynegy in central Illinois, where a judge recently ruled in favor of environmental groups alleging emissions violations.

Bugel said the Springfield power plant could set a positive example for the industry on this front, by agreeing to forego in its new permit what she described as the "loophole" regarding **SSM emissions**.

Sabin said the utility does not plan any challenges or changes to the currently proposed Title V permit, and she said the utility welcomes public input during the comment period.

"As a not-for-profit vertically-integrated municipal utility, CWLP is more responsive to the citizens and businesses of the City of Springfield" than investor-owned utilities would be, she said.

"The Springfield City Council is responsible for setting our rates and policies and the public can approach our Mayor and City Aldermen to regularly voice

Electronic Filing: Received, Clerk's Office 3/04/2022

concerns with the utility at any of our public meetings. CWLP managers, directors and plant personnel live and work in the community and are engaged with utility customers regularly to know and respond to their concerns, as well."

A 'degenerating process'?

Bugel said advocates are hopeful the Springfield plant's permit will be finalized in coming months, and that the IEPA moves forward on other pending permits. She said the agency appears to be more active than it was last summer when Bugel (representing the Sierra Club) and an ELPC attorney sent a letter to the U.S. EPA complaining about Illinois' Title V permit backlog and "degenerating process."

"IEPA and USEPA agreed to a specific timeline to address this issue, but IEPA has not adhered to that timeline," the letter said. "For example, although IEPA agreed to issue eight permits for coal-fired power plants by July 1, 2015, when that date came it had issued only three in final form."

They also charged that as permit processes drag on, the proposed permits get progressively weaker.

"The problem is becoming ever larger as each passing year brings with it additional important air pollution obligations, and further dates the already-weak controls" in the proposed permits, the letter said. "This is particularly troubling because, in fact, the permits should be getting stronger."

[newsletter_signup]

KARI LYDERSEN

Kari has written for the Energy News Network since January 2011. She is an author and journalist who worked for the Washington Post's Midwest bureau from 1997 through 2009. Her work has also appeared in the New

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York Times, Chicago News Cooperative, Chicago Reader and other publications. Based in Chicago, Kari covers Illinois, Wisconsin and Indiana as well as environmental justice topics.

More by Kari Lydersen

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EXHIBIT 4

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ENERGY NEWS NETWORK

MIDWEST NEWS

After Dynegy negotiates new pollution standard with Illinois EPA, advocates fear cleaner coal plants could close

by **Kari Lydersen**
September 27, 2017

Advocates are concerned the Coffeen power plant, which has sophisticated but expensive scrubbers for sulfur dioxide, could close under new pollution rules. Credit: Luke Sharrett/Bloomberg

Correction: A previous version of this story incorrectly referred to the Baldwin plant, on second reference, as not having scrubbers. The Baldwin plant does have scrubbers, and additional clarifying information has been added to this story.

Electronic Filing: Received, Clerk's Office 3/04/2022

Documents and emails obtained by environmental groups show that Dynegy representatives were in close contact with Illinois Environmental Protection Agency officials as the agency drafted changes to Dynegy's responsibilities under a pollution reduction agreement.

Dynegy made significant specific edits to the text of the proposed new rules, changes which were incorporated into the IEPA's next draft, according to the documents, which were obtained through a Freedom of Information Act request.

It's not easy to decipher the likely impact of the complicated changes to the agreement originally negotiated between power companies and the state in 2006, known as the Multi-Pollutant Standard, or MPS.

But environmental lawyers and advocates fear the company pressed for the changes in order to be able to close one or more coal plants that have scrubbers installed to remove sulfur dioxide, while continuing to run or even ramping up generation from its dirtier plants without scrubbers.

"Ten years ago we fought for this rule and we got assurances about the scrubbers being installed," said Faith Bugel, an attorney representing the Sierra Club. "Now there's an incentive to retire cleaner plants and hundreds of millions of dollars invested in scrubbers will just be thrown away, along with the clean air benefits. That outcome to me is absurd."

Illinois EPA director Alec Messina and Dynegy spokesman David Byford both countered that under the new proposed rules, the total amount of sulfur dioxide the Dynegy plants can emit is lower than under the existing rules. And Byford said that in the past the company has retired "a number" of plants without scrubbers while only retiring one plant with scrubbers.

Messina said Dynegy approached his agency about a year ago "looking for some flexibility" in the MPS, and then the agency and company went through what he described as a typical process to reach a new proposal.

Electronic Filing: Received, Clerk's Office 3/04/2022

"We are obligated by law to make sure there is no backsliding" in protections, Messina said. "Regardless of whether they keep operating or close down plants, their allowable emissions will get lower than they are today."

Fears scrubbers could be scrapped

Under **the MPS,** Illinois power companies Dynegy, Ameren and Midwest Generation agreed to install pollution control equipment for sulfur dioxide, mercury and nitrogen oxide by certain deadlines. Some plants **were allowed to delay or avoid** installing certain controls if the companies promised to make upgrades on other plants.

Under a deal approved in 2013, Dynegy acquired Ameren's five Illinois coal plants, which had become so financially problematic that **Ameren essentially paid Dynegy** to take them off its hands.

In Dynegy's 9,000-MW **Illinois fleet,** the Baldwin, Duck Creek, Havana and Coffeen plants have scrubbers installed, while other plants, including Joppa and E.D. Edwards, do not. The 1,000-MW **Coffeen plant** in southern Illinois **has been lauded** for its high-performance scrubbers and related pollution controls. But scrubbers are expensive to run, requiring extra power inputs, staff and disposal of the scrubbing byproduct.

Under the current MPS agreement, Dynegy's fleet has to meet a certain rate of average sulfur dioxide emissions per amount of energy produced. This means that running the cleaner plants with scrubbers helps balance the emissions of running the dirtier plants.

The new draft rules instead give Dynegy a limit on total tonnage of sulfur dioxide emissions each year.

Environmental experts who analyzed documents obtained under the FOIA request and publicly available emissions and generation data said that it appears Dynegy is comfortably able to meet both the current and proposed new limits with its current generation mix. But they suggest Dynegy might

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not be able to meet the existing average rate of emissions limit if Coffeen or other plants with scrubbers were to close.

"Coffeen has a big very effective scrubber that makes it the cleanest plant in their operations and probably one of the cleanest in the country, but it has all this extra cost" to run, said Brian Urbaszewski, director of environmental health programs at the **Respiratory Health Association**.

"Right now because of the way the rule is set up, every time they run a dirty plant to make money, they have to run the clean plant to make sure the rate evens out. If the rule were changed to allow [the annual tonnage] cap, they could just ditch Coffeen."

"Just because Dynegy has decided to shut down some of its uneconomic coal plants, doesn't give it a hall pass to not clean up its older coal plants," added Howard Learner, executive director of the Environmental Law & Policy Center.

The company has not indicated any plans to close plants, and advocates note they are speculating based on larger trends in the power industry.

The new draft rules say that if Dynegy retires plants, their total annual tonnage limit for sulfur dioxide remains the same. In this case the remaining plants could each theoretically emit more sulfur dioxide, critics note.

Both of these changes were requested and language was drafted by Dynegy, as shown in the documents obtained under the FOIA. Byford said that the federal acid rain program and Cross-State Air Pollution Rule use tonnage limits, and so the switch simplified Dynegy's planning process.

"Both [types of limits] are equally acceptable methods of controlling emissions, and are widely used across the industry," he said. "The advantage of a tonnage approach is that it caps the amount of emissions that can be released, whereas a rate limit has no cap…The MPS rules were created when

Electronic Filing: Received, Clerk's Office 3/04/2022

the plants were owned and operated by separate owners, so it simply makes good policy to bring all the plants under a single, consistent rule."

Byford said the emissions limit should stay the same even if plants close.

"If plants are closed in the future, it does not mean that there is a corresponding drop in the demand for electricity; in all likelihood, other Dynegy plants would be called on to ramp up and meet the demand," he said. "If emissions are lower across the fleet, the public is better served by the rule."

Disparate impacts?

The proposed new rules drafted by the IEPA limit Dynegy's Illinois plants to 55,000 tons of sulfur dioxide emissions annually. Byford said that in 2014, Dynegy would not have met that cap, with emissions around 70,000 tons. Charts obtained under the FOIA request appear to show that in 2002, the fleet's sulfur dioxide emissions were about four times greater.

Emissions data available in the **EPA's Air Markets Program** database shows that in 2016 Coffeen emitted only 33 tons of sulfur dioxide, and the 425 MW Duck Creek plant only 10 tons. Plants without scrubbers — Hennepin, E.D. Edwards, Joppa and Newton— emitted 4,065; 5,890; 7,634 and 7,743 tons respectively. The Baldwin plant has scrubbers but still emitted 4,020 tons of sulfur dioxide, since it was designed to burn Western coal that is lower in sulfur than the Illinois coal that can be burned in the Coffeen and Duck Creek plants, hence the Baldwin scrubbers didn't need to remove as much sulfur to comply with the state limits.

Robin Garlish is a teacher who lives across the river from the **E.D. Edwards** plant near Peoria. She blames the plant for her teenage daughter's asthma and serious respiratory problems she's suffered over the past year, forcing her to take leave from work and undergo breathing treatments every four hours. She said her daughter had to quit high school volleyball and softball because of her asthma, but now that she is at college in Chicago she has few problems.

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"I'm a Girl Scout leader, and during the introductions I show them my rescue inhaler and ask how many have one of these. One hundred percent of the hands go up," Garlish said. "When people come to visit me they get a tickle in their throat and can't stop coughing. The coal plant is doing it."

Sulfur dioxide is known to have localized **health impacts,** so people living closer to plants without scrubbers may disproportionately suffer increased risk of respiratory problems, and increased risk of cardiac disease and cancer linked to particulate matter that can form as a result of sulfur dioxide concentrations.

Environmental advocates cite this as another reason to worry about cleaner plants closing and dirtier ones continuing to run or ramping up. Messina said that given the height of stacks, there should not be local health impacts from the plants. He added that the IEPA demanded and the proposed rule includes special provisions to make sure the Joppa plant can't run at its full capacity, since that would affect a non-attainment area under federal air pollution standards.

The history

In September 2016, Dynegy's subsidiary alerted the Illinois Pollution Control Board that it was not able to install scrubbers on its Newton plant, as it had promised to do under the MPS. That move nullified a variance the pollution control board had previously granted Dynegy giving it more time to install the scrubbers on Newton.

In November 2016, Dynegy state government affairs senior director Jeffrey Ferry asked Messina via email about including the rule change in a "large energy legislation package," presumably meaning the Future Energy Jobs Act that was being negotiated at that time. The provision did not end up in the FEJA, which was **signed by Governor Bruce Rauner** a few weeks later. Messina said he does not remember a proposal to fold the MPS change into the legislation.

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Stakeholders including companies and environmental groups regularly have an inside track working with regulators and lawmakers on the policies that affect them, including helping to draft legislation and rules. But environmental leaders said the communications revealed in the FOIA go beyond what they see as typical and appropriate.

Emails between the IEPA and Dynegy as well as multiple drafts of the rules show how the entities discussed aspects of the rule, with Dynegy appearing to get its way on the points most important to the company.

“The FOIA shows how much control Dynegy had over this rule,” said Bugel. “And IEPA, the agency that was tasked with regulating the environment, managing pollution and protecting the environment for this state is conceding to what Dynegy was demanding.”

Messina countered that Dynegy was not happy with some of the provisions the IEPA demanded, and said, “we talk to people all the time about things that are important to them,” including talking to environmental groups and companies.

The Illinois Pollution Control Board and a legislative rules committee will need to approve the proposed new rules for them to take effect. A public comment period on the IEPA’s draft of the rules is closed, and there will be another public comment period during the pollution control board’s deliberations.

KARI LYDERSEN

Kari has written for the Energy News Network since January 2011. She is an author and journalist who worked for the Washington Post's Midwest bureau from 1997 through 2009. Her work has also appeared in the New York Times, Chicago News Cooperative, Chicago Reader and other publications. Based in Chicago, Kari covers Illinois, Wisconsin and Indiana as well as environmental justice topics.

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More by Kari Lydersen

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EXHIBIT 5

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ENERGY NEWS NETWORK

MIDWEST

EPA coal ash announcement turns up the heat on Illinois municipal utility

Residents fear groundwater contamination from coal ash, but Springfield's City, Water, Light and Power says closing ash ponds will actually endanger water supply.

by **Kari Lydersen**
January 18, 2022

Speaker Nick Dodson, a leader with the Sangamon Valley Group of Sierra Club Illinois, is among critics of Springfield's City, Water, Light and Power's coal ash plans. Credit: Courtesy

The municipal utility serving Springfield, Illinois, needs to stop putting new material into its coal ash ponds as soon as summer, under a **U.S. EPA**

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decision announced Jan. 11 among its first-ever enforcements of the federal 2015 coal ash law.

That law demanded all unlined ash ponds initiate closure by April 2021, and City Water, Light and Power (CWLP) was among many utilities nationwide that sought an extension.

The federal Environmental Protection Agency ruled that CWLP's 1,264-page request, filed in November 2020, was woefully incomplete, and the EPA is moving forward with the process to set a deadline by which the ash ponds must stop receiving new material.

Coal ash is no longer placed in the two adjacent ponds in question, which are separated from Lake Springfield — the city's drinking water source — by a dike.

But much coal ash remains in the ponds, and now CWLP uses the ponds for wastewater from its coal plant and lime residue from treating the city's drinking water. With no alternative place for the lime, closing the ponds will cause a "public health crisis" leaving residents without water, CWLP spokesperson Amber Sabin told the Energy News Network. She said the utility will continue to seek an extension through October 2023.

Nick Dodson, a leader with the Sangamon Valley Group of Sierra Club Illinois, said the utility should have been prepared for the finding and worked sooner to find alternatives.

"The best technology you were using was simply putting wet coal ash into a pond that was unlined in the center of a flood zone?" he said. "For them to act so surprised — come on, guys. This was coming for quite some time."

Closure controversy

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The EPA decision does not immediately affect the ongoing debate over whether the utility will leave the ash in place, in contact with groundwater, or move it to a dry, secure location.

A 2020 report required under the federal law showed the nearby groundwater contaminated with arsenic, boron, cobalt, lithium, and other compounds at significantly higher than background levels.

At a December public meeting on coal ash closure plans required under **Illinois's new state coal ash law**, residents and environmental advocates pled with CWLP to move the ash out of the pond to a dry area. Sabin said the utility's planned closure-in-place will cost $8 million to $12 million and "achieves the same groundwater protection standard as closure by removal," whereas removal would cost $145 million, and spark a rate increase.

"Cost is obviously something that matters to a community — but public health isn't something that should be quantified," said Dodson, who testified at the public hearing. "This is something that could affect everyone's health and resources — this is everyone's groundwater that we know is being polluted."

CWLP's studies show there is no hydrologic connection between the coal ash-laden groundwater and Lake Springfield. But environmental experts question those models and worry that groundwater can make its way into Lake Springfield or nearby Sugar Creek, particularly during heavy rains that put pressure on the hydrologic system.

Teresa Haley, president of the Illinois NAACP, was unimpressed with the EPA setting a deadline for closing the ash ponds, and said the real issue is whether they are closed in place.

"It feels like they're putting a Band-Aid on the problem," she said. "The old ash is still sitting there in the ponds and it's not being lined. We know it's going to leak into the groundwater, there's no way around it. Shame on them — they should be mandated to put a liner on it or move it out of Springfield."

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Long-awaited federal action

Many environmental leaders described the EPA's Jan. 11 announcement as long-awaited evidence the agency plans to enforce the 2015 coal ash law. So far, companies have largely gotten away with ignoring provisions of the law — including that they post documents on publicly available websites — and avoided action through extension requests.

"We are applauding U.S. EPA for their decision, and we are pleased that CWLP is being held to account," said Faith Bugel, an attorney representing the Sierra Club. "But it's fair to say we would rather have seen this happen sooner for ponds that are causing groundwater contamination."

The **EPA announced** it is issuing orders on 57 extension requests, with the first batch including the Springfield "incomplete" ruling and the denial of extensions for plants in Ohio, New York, Iowa, and Indiana.

Earthjustice attorney Jenny Cassel said that the EPA's language in those decisions could set a precedent that impacts whether the CWLP ash pond and others in Illinois are allowed to close in place.

"It's huge," Cassel said of the announcement's ramifications. "EPA has said in no uncertain terms that closure of ash in contact with groundwater is impermissible and is not an option for cleanup; it does not meet the standards for an allowable remedy under the federal rule."

A flawed request

Among the reasons for its ruling of incomplete, the EPA noted that CWLP failed in its extension request to propose any alternative solutions or locations for disposing of ash or other material placed in the ponds.

CWLP's request "contains no evaluation of any potential offsite alternative capacity options, as required," the EPA decision said. CWLP had argued the

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site is "landlocked" by interstate highways, a residential subdivision and Sugar Creek, hence it has nowhere else to store the ash. But coal ash is often stored off the site of coal plants, and the EPA found that CWLP's argument "is an insufficient evaluation of possible off-site alternative disposal options."

The EPA also said CWLP "fails to provide either explanation or justification for the amount of time being requested for the Dallman Ash Pond to continue operation, or substantiation that this is the fastest feasible time to cease receipt of waste."

CWLP's request additionally "fails to contain any of the necessary details" regarding issues like the generating rate of the units contributing ash, and the size of the lime pond that would need to be built to stop putting it in the current pond, the EPA said.

A press release quoted CWLP chief utility engineer Doug Brown defending the utility's work: "We believe we made a clear and concise application pointing to the exact issues as to why we need time to mitigate new disposal options and have no choice but to work within the time constraints of our current ash pond closure plan along with time to complete construction of our new lime lagoon for the water plant."

The EPA's decision triggered a public comment period, after which EPA will issue its final decision, and then the company will have 135 days to stop putting material in the ash pond.

Reliability red herring

In addition to raising the water treatment issue, CWLP originally argued that it needed an extension on the April 2021 deadline because it had no other place to put ash from its power plant. Without an extension, the company said, there might be an outage that would leave local residents without power and violate reliability promises made to MISO, the regional grid administrator.

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The EPA decision notes that CWLP provided no evidence that the ash ponds need to keep receiving ash to ensure power reliability, and noted that MISO has enough extra capacity and new generation coming online to provide adequate local power even if the Springfield coal plant were sidelined. If the coal plant needs to go off-line as the coal ash deadline nears, CWLP should work with MISO to make sure sufficient power is available, the EPA decision says.

Meanwhile the coal plant unit that had long sent wet ash to the pond actually **closed down permanently** this fall because needed repairs would be too expensive.

The argument about electricity reliability is "completely irrelevant at this point because the only unit [that was] still sluicing wet ash to the ponds has shut down," Bugel said.

The coal plant unit still operating — known as Dallman 4 — has a dry ash handling system that collects ash that is reused in cement or related products, or stored in old coal mines. That system malfunctioned last summer, sending **a large dust cloud of fly ash** into the air.

Haley, of the Illinois NAACP, said the debacle exacerbated her asthma and landed her in the emergency room. She said coal dust or fly ash from the plant a mile and a half away frequently coats her deck furniture, and she is upset the utility doesn't notify the public when extra ash might be in the air. All this makes her that much less likely to trust the utility's assurances that the ash ponds are not endangering water supplies.

"I didn't know whether I was having an asthma attack or a heart attack," Haley said of the Aug. 31 dust cloud. "It was devastating, and really unfortunate because the city [utility] plays it down — they don't think of it as being as serious as they should."

KARI LYDERSEN

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More by Kari Lydersen

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EXHIBIT 6

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ENERGY NEWS NETWORK

MIDWEST NEWS

Illinois Pollution Control Board finds NRG liable for coal ash at power plants

by **Kari Lydersen**
June 26, 2019

NRG Energy's Powerton Generating Station in Pekin, Illinois. Credit: formulanone / Wikimedia Commons

The pollution control board will hold additional public hearings to determine a remedy for the violations.

Illinois environmental groups say they will press for strict measures to deal with coal ash contamination at four NRG power plants after state regulators

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ruled last week that the company is to blame for groundwater pollution at the sites.

The June 20 ruling by the Illinois Pollution Control Board was a major development in the 7-year-old case but not the final word. The board will hold public hearings to determine the remedy for the violations it found.

The Sierra Club, Environmental Law & Policy Center, Prairie Rivers Network and Citizens Against Ruining the Environment launched the proceedings in 2012 by filing a citizen lawsuit of the type meant to spark regulatory action. The complaint called for civil penalties against the company and forcing the company to clean up coal ash and polluted groundwater, **which experts fear also contaminates nearby rivers**.

The Illinois Pollution Control Board agreed with environmental groups that NRG's subsidiary Midwest Generation violated environmental rules at all four of its Illinois coal plants: Waukegan north of Chicago, Joliet and Will County southwest of Chicago, and Powerton in central Illinois.

The environmental groups alleged that since groundwater monitoring began in 2010, contaminants related to coal ash were found in groundwater above allowable levels between 396 and 443 times each at the Powerton, Will County and Waukegan sites and 69 times in Joliet.

Faith Bugel, an attorney for the environmental groups, said that while specific remedies will be determined during the upcoming litigation phase, environmental groups are hopeful that the board will address past contamination and prevent future pollution from coal ash.

"I hope that all the sources of the ash contamination at all four of the sites are addressed; legally they have to be addressed," she said. "Exactly what that looks like will be determined so that the contamination stops and the groundwater at all those sites is protected for future use."

Probable pollution

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While the board did not agree with some of the environmental groups' allegations, it found that overall it was more likely than not that coal ash at each of the sites contributed to groundwater contamination violating laws, and that Midwest Generation was responsible.

The pollution control board determined that coal ash was likely responsible for boron and sulfate, which are known components of coal ash, found at levels higher than the 90th percentile for groundwater statewide at all four sites. It also found coal ash likely responsible for arsenic, total dissolved solids and antimony at above allowable levels at some sites.

The board also found that at the Powerton plant, the company violated a separate standard against open dumping by depositing coal ash cinders on the ground.

The company had argued that it did everything it was required to do by the Illinois Environmental Protection Agency including when it entered corrective action agreements with the agency. Hence, the company argued that even if groundwater pollution from coal ash was present, it should not be held responsible or forced to take further actions. At the request of the Illinois EPA, the company had installed groundwater monitoring wells and upgraded some coal ash facilities including with new liners.

The pollution control board agreed with environmental groups that even in cases where the company installed high-quality liners, they could have cracked and leaked, including because of damage by dredging equipment. The board cited evidence of past tears in liners and the words of Midwest Generation employees who were worried about liners cracking.

"The [Illinois] EPA had already washed their hands of this, saying they had their violation notices, came to an agreement with the company about what compliance means and they were done," Bugel said. "So we feel like [the pollution control board ruling] is a pretty big victory."

Historic ash

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The company argued that it was not liable for coal ash deposited when the utility ComEd owned the plants before deregulation in the late 1990s prohibited it from owning generation. NRG acquired the plants in 2014, as Midwest Generation was going through bankruptcy after closing two other Chicago plants in 2012.

The company also argued that contaminants associated with coal ash did not exceed background levels, taking issue with the way environmental groups defined background levels based on statewide medians.

The company argued that the longtime industrial sites have higher background levels of contaminants than most parts of the state. The board, for example, found that a former tannery and boiler likely contributed arsenic to groundwater near the Waukegan plant. But the board said that while site-specific background levels are preferable, in the absence of adequate data it supported the use of statewide background levels.

Monitoring compared contaminant levels upgradient and downgradient of coal ash, with the assumption that upgradient wells would not be affected by coal ash leakage or leaching while downgradient ones might be. However, environmental groups argued that because of flooding and changes in groundwater flow, coal ash repositories could also contaminate wells considered upgradient.

Ultimately the board found that: “It is immaterial whether any specific ash pond or any specific historic ash fill area can be pinpointed as a source to find [Midwest Generation] liable … As the owner or operator of these Stations, [Midwest Generation] has control over both its active ash ponds and historical coal ash storage areas.”

The board wrote that while the company has taken actions under its agreements with the Illinois EPA, it is aware that “persistent” contamination has continued and it has not taken adequate further action to identify the specific cause or prevent it. “The board is, thus, not persuaded that [Midwest

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Generation] took 'extensive precautions' to prevent the releases," as the company had said it did.

Waste or beneficial reuse material?

The company also argued that some coal ash met federal definitions of material for "beneficial reuse," so it should be allowed to stay onsite. Coal ash cinders were stored on the ground at the Powerton site until a contractor could remove them for beneficial reuse in roofing shingles and sandblasting, according to the board ruling. The pollution control board found that the cinders temporarily stored there nonetheless contributed to water contamination and represented a violation of law.

Similarly, the board found that coal ash that built up outside of repositories and in historic disposal sites did not meet the definition of beneficial reuse material, and hence could not be openly stored.

In response to questions, NRG spokesperson David Knox said: "Midwest Generation, which was acquired by NRG in 2014, has worked cooperatively with the IEPA over many years to continually take steps to protect the environment, including entering into compliance commitment agreements and implementing groundwater management zones. The issues raised in this proceeding are complex, the circumstances at each site vary and involve historic activities that occurred under the prior utility ownership of the plants. Midwest Generation continues to review the decision to understand it and determine appropriate next steps."

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EXHIBIT 7

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BBJ GROUP

Expert Opinion, Rebuttal Report of Mark A. Quarles, P.G.

July 2021

Sierra Club, Environmental Law and Policy Center, Prairie Rivers Network, and Citizens Against Ruining the Environment v. Midwest Generation, LLC

Prepared for:

Sierra Club
50 F Street NW
8th Floor
Washington, DC 20001

Prepared by:

Mark A. Quarles, P.G.
Georgia Professional Geologist No. 2266
New York Professional Geologist No. 779
Tennessee Professional Geologist No. 3834

- In response to the contamination, IPL initiated a nature and extent investigation and developed a Corrective Measures Assessment report that created a Conceptual Site Model (CSM) and evaluated seven potential groundwater corrective action options. (Haley Aldrich 2019 at 17 through 30).

In summary, Maxwell has very limited CCR related experience: four projects in 24 years of environmental consulting. That small number of projects does not support his or MWG's claim that he is an "expert" in the CCR Rule; designing, installing, and sampling CCR disposal unit groundwater monitoring systems; investigating the nature and extent of CCR contamination; or designing and implementing groundwater corrective actions to achieve groundwater protection standards required by the CCR Rule.

Mr. Maxwell's role as a testifying expert in this case is especially concerning given that one of his demonstrative example projects was rejected by IDEM and another consulting firm. As previously discussed, Mr. Maxwell claimed in his resume that his work was "intended" to support closure of a surface impoundment at the Indiana facility. That intended purpose was never realized because the groundwater monitoring system and his determination for upgradient and downgradient well designations were rejected and disapproved by the regulatory agency.

2.2 "Issues" with My Prior Expert Report

WCG concluded that it had four main "issues" with my prior expert report, where it determined that I relied too heavily on the 2019 Board Opinion and that I either "incorrectly" applied a regulatory standard or that I failed to consider specific data or factors. (WCG at 26-27). I disagree with those conclusions.

First, WCG believed that my prior expert report relied too heavily on the Board's Opinion and resulted in a report that presented "little independent analysis." (WCG at 26). The historical aspects of waste disposal have already been covered by MWG and Complainant experts during the liability phase of this case. My first expert report discussed the facts associated with each site that would affect the ability to establish a remedy, and the Board's opinion was the best summary of that history. As a result, I relied on the Board's Opinion. Consider that the Board has already established MWG's liability when it concluded in its Opinion that:

- "Environmental Groups met their burden in establishing that it is more probable than not that MWG violated the Act and Board regulations as alleged in the amended complaint." (Opinion at 1).

- "It is immaterial whether any specific ash pond or any specific historic ash fill area can be pinpointed as a source to find MWG liable." (Opinion at 79).

- "Contaminants are leaking from MWG's property and that MWG's active coal ash ponds or historical coal ash storage sites of fill areas are the source of that contamination." (Opinion at 79).

- "MWG knew that contaminants that include coal ash constituents are leaking from its property but did not fully investigate specific sources or prevent further release." (Opinion at 79).

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EXHIBIT 8

ILLINOIS POLLUTION CONTROL BOARD

SIERRA CLUB, ENVIRONMENTAL LAW AND POLICY CENTER, PRAIRIE RIVERS NETWORK, AND CITIZENS AGAINST RUINING THE ENVIRONMENT,	)	
Complainants,	)	
vs.	)	PCB 2013-015 Enforcement-Water
MIDWEST GENERATION, LLC,	)	
Respondent.	)	

Zoom video conference, evidence deposition, of MARK QUARLES, pursuant to notice, commencing at 10:00 a.m., Tuesday, October 12, 2021, before Connie L. James, CSR.

Reported by: Connie L. James

CSR No. 084.002510

for about how many years?

A. Almost 35 years.

Q. And so you're counting from 1985 to the present roughly?

A. Yes, ma'am.

Q. And generally you have referred to yourself as a public interest environmental consultant?

A. Yeah. There was a period of about 15 years where I did have a focus on the public interest side.

Q. And that's how you referenced yourself, as a public interest environmental consultant?

A. Right.

Q. And in the last -- Would you agree that your experience with groundwater impacts in the last 10 years has been essentially reviewing technical reports or systems prepared by other consultants?

A. A large part of what I did was reviewing the work of others. And I would disagree with your comment about the last 10 years. Certainly the last year and-a-half I'm actively involved in designing and implementing groundwater systems around the country.

Q. And that's since you started with BBJ?

A. Yes.

Q. Who are you designing systems for?