

ILLINOIS POLLUTION CONTROL BOARD

SIERRA CLUB,)
ENVIRONMENTAL LAW AND)
POLICY CENTER, PRAIRIE)
RIVERS NETWORK, and)
CITIZENS AGAINST RUINING)
THE ENVIRONMENT,)
Complainants,)
vs.) No. PCB 13-15
MIDWEST GENERATION,)
Defendant.)

TRANSCRIPT FROM THE DAY ONE of the
PROCEEDINGS taken before HEARING OFFICER BRADLEY
HALLORAN at the Michael M. Bilandic Building, Room
N-505, Chicago, Illinois, on the 15th day of May,
2023, A.D., at 9:00 o'clock a.m.

Reported by: Kari Wiedenhaupt, CSR

License No.: 084-004725

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I N D E X

WITNESS

EXAMINATION

MARK A. QUARLES

By MS. FAITH E. BUGEL

37

By MS. JENNIFER T. NIJMAN

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E X H I B I T S

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| No. 1101 | 69 |
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1 HEARING OFFICER HALLORAN: All
2 right. Good morning. My name is Bradley
3 Halloran. I am the hearing officer at the
4 Illinois Pollution Control Board. I'm also
5 assigned to this matter. It's entitled, Sierra
6 Club Environmental Law and Policy Center, Prairie
7 Rivers Network, and Citizens Against Ruining the
8 Environment are the Complainants. Midwest
9 Generation, LLC is the Respondent.

10 It's docketed as PCB 13-15.
11 It's a citizens enforcement case, water and land.
12 It's been noticed up properly.

13 You know, I should do my MC
14 duties now. We have Jennifer Van Wie, a Board
15 Member with the Illinois Pollution Control Board.
16 We have Anand Rao in the back. He is our
17 environmental scientist. I think that's all we
18 have right now.

19 But in any event, I think this
20 last was 20 -- God, has it been five years? 2015,
21 something like that? February -- oh, 2018,
22 February 2nd, is the last time we all got
23 together, and a lot of things happened, COVID, and
24 Mr. Wannier had two kids.

1 But in any event, back in 2019
2 the Board entered an interim order finding that
3 MWG violated the Illinois Environmental Protection
4 Act, including Sections 12(a), 12(d), 12 -- 21(a),
5 and Section 620.115, 620.301(a), and 620.405 of
6 the Board's regs.

7 The Board further found that an
8 additional hearing -- an additional hearing was
9 required, and that's why we are here, otherwise
10 known as a remedy hearing, because the record
11 lacked sufficient information to determine the
12 appropriate relief and any remedy considering the
13 33(c) and 42(h) factors of the Act.

14 In 2020, following the Board's
15 interim order, the Board issued a revised Board
16 order as a result of MWG's motion to reconsider
17 and clarify. In its revised order, the Board
18 granted in part, and denied in part, MWG's motion
19 to reconsider. The Board reversed its finding in
20 the interim order that found that the GMZs had
21 expired. The dates I'm sure will be discussed at
22 the hearing, or during the hearing, by both sides.

23 Ms. Bugel, would you like to
24 introduce yourself and your Complainants, please?

1 MS. BUGEL: Thank you. I am Faith
2 Bugel, Attorney At Law. I am here representing
3 Sierra Club, and I have with me, Mr. Mark Quarles,
4 who is our expert witness. And I will allow our
5 other attorneys to introduce themselves.

6 MR. RUSS: Abel Russ, Environmental
7 Integrity Project on behalf of Prairie Rivers
8 Network.

9 MS. WACHSPRESS: Megan Wachspress,
10 on behalf of Sierra Club, which is also my
11 employer.

12 MR. WANNIER: Greg Wannier, also on
13 behalf of the Sierra Club, and I don't -- is this
14 the time to offer a preliminary note on
15 scheduling, or should we wait until after this?

16 THE COURT REPORTER: Sorry. It's
17 hard for me to hear you.

18 MR. WANNIER: Oh, sorry. I asked if
19 this would be an appropriate time for a note on
20 scheduling or if I should wait for the
21 introductions to be complete.

22 HEARING OFFICER HALLORAN: Yeah, I
23 think that would be proper after --

24 MR. WANNIER: Yeah.

1 HEARING OFFICER HALLORAN: -- MWG
2 introduces themselves.

3 Ms. Nijman?

4 MS. NIJMAN: Yes. Jennifer Nijman,
5 Nijman Franzetti, LLP, here on behalf of Midwest
6 Generation, the Respondent. I am here with my
7 co-counsel, Kristen Gale, and Drew Nishioka, and
8 we have representatives of Midwest Generation
9 here, Sharene Shealey and Walter Stone.

10 HEARING OFFICER HALLORAN: Thank
11 you, Ms. Nijman.

12 MS. BUGEL: Mr. Halloran, we also
13 have Albert Ettinger, who has popped out at the
14 moment, but will be here today.

15 HEARING OFFICER HALLORAN:
16 Mr. Wannier, if you stand and let me know what
17 you're -- what you wanted to say, please?

18 MR. WANNIER: Sure. Just one note
19 on the schedule. In the event that we complete
20 the testimony of Mark Quarles today, we would
21 request an early recess. Our witness -- our next
22 witness, Jonathan Shefftz, had an unavoidable
23 conflict for today, and he will be in first thing
24 tomorrow morning.

1 We don't anticipate this being
2 necessary, because we believe Mr. Quarles will go
3 the full day, but we wanted the request to be on
4 the record just in case.

5 HEARING OFFICER HALLORAN: Okay. So
6 who do you have present that you are planning to
7 call today?

8 MS. BUGEL: Mark Quarles.

9 HEARING OFFICER HALLORAN: Oh, Mark
10 Quarles. Okay. All right. And Ms. Shealey, is
11 she --

12 MS. SHEALEY: I am here.

13 HEARING OFFICER HALLORAN: Is she
14 going to be called today?

15 MS. BUGEL: I -- my expectation is
16 between opening statements and Mr. Quarles' direct
17 and cross-examinations, I don't think we are going
18 to -- I don't expect that we will finish in the
19 one day, but it really depends on how long the
20 questioning goes, but then next in the sequence we
21 have Mr. Shefftz, and then after that we have
22 Mr. Gnat before Ms. Shealey.

23 HEARING OFFICER HALLORAN: All
24 right. Yeah. I am looking at the May 3rd or

1 something else. I had him in not the order you
2 are telling me now. We had Shealey, Gnat, Callen,
3 Quarles, Shefftz.

4 And was I looking at something
5 else? There was a lot of documents coming across
6 the screen.

7 MS. BUGEL: Right.

8 HEARING OFFICER HALLORAN: But, in
9 any event, it is what it is. So you are planning
10 to call Mr. Quarles today?

11 MS. BUGEL: We are planning on
12 calling Mr. Quarles first.

13 HEARING OFFICER HALLORAN: Okay.

14 MR. WANNIER: And, your Honor, I
15 believe you might be looking at the list of
16 witnesses that was originally sent to you for the
17 January hearing, or if you want to clarify.

18 MS. GALE: If I may, I'm pretty sure
19 what you're looking at, sir, is what they filed in
20 January of 2022 as a preliminary witness list, and
21 that is different than what they filed in --

22 HEARING OFFICER HALLORAN: Okay.
23 Fair enough.

24 All right. Any other

1 administrative duties before the environmental
2 groups call their first witness?

3 MS. BUGEL: Were we doing opening
4 statements or --

5 HEARING OFFICER HALLORAN: Yeah, I'm
6 sorry. Yeah. My bad.

7 Ms. Bugel?

8 MS. BUGEL: And I'm going to pass it
9 to Mr. Russ.

10 MR. RUSS: I got the shorter straw.
11 It's going to be brief. Do you want me to stand
12 at the podium?

13 HEARING OFFICER HALLORAN: Well, if
14 you speak loudly, I think --

15 MR. RUSS: All right. I'll stay
16 here.

17 So we filed this case in October
18 of 2012, over ten years ago. And, actually, I
19 started working on it two years before that when
20 we sought the evidence of groundwater
21 contamination at the four plants, four power
22 plants.

23 But just starting from the 2012
24 date, a lot has changed in ten plus years. Back

1 in 2012, we were all doing conference calls still.
2 Zoom was only being beta tested. There was no
3 Microsoft Teams yet or GoogleMeet. We have gone
4 through the COVID pandemic obviously. There was
5 also the Ebola outbreak, if you want to go back to
6 that. We have had other major diseases across the
7 globe. Russia has invaded Ukraine three times.
8 We have now Crimea and the Donbass in 2014 and
9 then the most recent time.

10 It wasn't all bad news. The
11 Cubs won the World Series. The United States
12 legalized same sex marriage. We signed the Paris
13 Agreement. Solar capacity in the United States
14 has increased 20-fold since we filed this case.

15 In my own personal life, I
16 became a father twice since we filed the case, and
17 they grew up and moved out of the house, and now I
18 have three grand kids. That's not true. That
19 part's not true. That part is not true. My kids
20 are six and eight. But a lot has changed in ten
21 years.

22 But a lot of things haven't
23 changed. There are four power plants at issue in
24 this case. The Joliet 29 power plant in Joliet,

1 there is the Powerton plant in Pekin, there's the
2 Will County plant in Romeoville, the Waukegan
3 plant in Waukegan, and we have known since 2010
4 that the groundwater is being contaminated at all
5 four plants by coal ash. That hasn't changed.

6 Despite what you might hear from
7 Respondents, groundwater quality at the four
8 plants is not improving. There are broadly two
9 kinds of violations that are ongoing at these
10 plants, water pollution and opening dumping.

11 The Board has already found
12 Midwest Generation liable for these violations,
13 specifically to run through the list briefly, at
14 Joliet, the Board found that -- cites three ash
15 ponds had liners that were susceptible to leaking
16 and were likely sources of contamination, and the
17 Board also identified four separate areas of
18 historic ash, is the term that has been used, at
19 Joliet, including a large coal ash landfill on the
20 northeastern part of the site, a coal ash fill
21 area on the southwestern part of the site, a coal
22 ash fill on the northwestern part of the site, and
23 coal ash fill in and around the ponds near
24 Monitoring Wells 9, 10, and 11.

1 These were also, according to
2 the Board, likely sources of contamination, and
3 they were also open dumps. Most or all of that
4 coal ash is still there.

5 At Powerton, the Board
6 identified four ash ponds that were likely sources
7 of contamination and also identified four historic
8 coal ash areas; most notably, coal ash fill that
9 was spread out across the site, in some places up
10 to 16 feet deep, and sometimes saturated with up
11 to nine feet of groundwater, which facilitated the
12 leaching of improper pollutants. That ash is all
13 still there.

14 At Will County the Board
15 identified four ash ponds that were likely sources
16 of contamination, along with two historic ash fill
17 areas, including ash fill around and to the east
18 of the ash ponds up to 12 feet deep. All of that
19 ash is still there.

20 At Waukegan, the Board
21 identified two ash ponds that were potential
22 sources of contamination and a large historic ash
23 fill area west of the ash ponds called the former
24 slag/fly ash area, and also in other places,

1 including south of the East Ash Pond. All of that
2 coal ash fill at Waukegan is still there.

3 So the Board already found that
4 Midwest Generation caused water pollution at the
5 sites using two different metrics; the groundwater
6 exceeds state groundwater quality standards. The
7 groundwater also exceeds background levels as
8 characterized by the 90 percentile of state-wide
9 background for some of the key coal ash
10 pollutants.

11 And the Board was clear that, to
12 quote from the 2019 opinion, it's immaterial
13 whether any specific ash pond or any specific
14 historic ash fill area can be pinpointed as a
15 source. The groundwater was being contaminated by
16 coal ash, and it still is. That hasn't changed
17 since we filed the case.

18 The Board also found Midwest
19 Generation liable for open dumping at all four
20 plants, in large part because Midwest Generation
21 was, to quote from the opinion again, "passive in
22 its response to the coal ash at its stations," and
23 in part because Midwest Generation, "failed to
24 remove the coal ash from those areas."

1 These observations are still
2 true today. After ten years, the groundwater is
3 not improving. The open dumps are still there.
4 Midwest Generation has not removed the ash. They
5 haven't even estimated how much ash there is.
6 They have remained passive in response to evidence
7 of ongoing contamination.

8 Why does this matter? Because
9 Illinois law protects groundwater; specifically,
10 it protects the groundwater under these plants.
11 Resource groundwater --

12 MS. NIJMAN: I'm sorry. Mr. Hearing
13 Officer, I am very sorry to interrupt, but this
14 sounds argumentative, as opposed to an opening
15 statement, which is to present evidence that was
16 going to be presented.

17 HEARING OFFICER HALLORAN: You may
18 proceed, but watch the argumentative nature of it.

19 MR. RUSS: Sure.

20 HEARING OFFICER HALLORAN: Thanks.

21 MR. RUSS: Sure. So resource
22 groundwater is defined as groundwater that's
23 presently being or in the future as capable of
24 being put to beneficial use. Illinois protects

1 groundwater for future use, and Midwest Generation
2 has been saving money by letting these various
3 coal ash disposal areas leach into groundwater.
4 And there has been an economic benefit that the
5 company has realized from noncompliance and
6 externalized those costs.

7 So the remedy in this case, we
8 are going to present evidence of the fact that the
9 groundwater is not improving, the fact that the
10 remedy is going to have to start with a nature and
11 extent investigation because we still don't know
12 how much ash there is and where it all is.

13 But broadly, the remedy in this
14 case has two components. The first is a penalty.
15 A straight application of the statutory formula
16 yields a penalty of over \$400 million. The Board
17 has discretion to adjust that amount, but at the
18 very least, the penalty should be greater than the
19 economic gains that Midwest Generation has accrued
20 through over ten years of noncompliance.

21 The second part of the remedy is
22 simply that Midwest Generation should stop
23 violating the law. They must close all of the
24 open dumps in a way that will restore groundwater

1 quality, and do whatever else it takes to restore
2 groundwater quality, and that has to begin with a
3 long, overdue inventory of --

4 (Cough.)

5 THE COURT REPORTER: Sorry?

6 MR. RUSS: That has to start with a
7 long, overdue inventory of the coal ash disposal
8 areas at each site. And I'm going to stop there.
9 Thank you.

10 HEARING OFFICER HALLORAN: All
11 right. Thank you, Mr. Russ.

12 Ms. Nijman?

13 MS. NIJMAN: Thank you. I am going
14 to stand up just to make sure you can hear me,
15 Kari.

16 So for this second phase, the
17 Board has stated, as Mr. Russ pointed out, that we
18 are to look at the factors of 33(c) and 42(h) of
19 the Act for the final order.

20 Midwest Gen believes that the
21 Act requires the Board to consider 33(c) factors
22 for, in fact, any order, including the interim
23 order, and Midwest Gen introduced many facts on
24 the interim in the first phase regarding the 33(c)

1 factors. We are going to renew a lot of those
2 facts and opinions or refer back to them. And we
3 refer -- reserve the right to assert in the final
4 order that, in fact, the interim order failed to
5 comply with the 33(c) factors.

6 Since this case was filed in
7 2012, the status of the stations has changed
8 dramatically. Three stations have ceased burning
9 coal, and various ponds and impoundments at the
10 station have been emptied. Additionally, since
11 2012, the federal coal combustion residual, CCR,
12 rule, and the Illinois CCR rule were codified and
13 now regulate CCR surface impoundments at all four
14 stations.

15 As Midwest Generation implements
16 the federal and Illinois rules, the CCR surface
17 impoundments will be closed or retrofitted with
18 Illinois EPA oversight and approval. We also note
19 that federal rules to regulate CCR fill areas or
20 historic fill areas, as the Board has referenced
21 them, are going to be issued eminently, and that
22 there are state rules currently pending before
23 this Board. These are key factors the Board is
24 going to need to consider, and was the subject of

1 Midwest Gen's motion to stay these proceedings to
2 allow those regulations to carry through.

3 For this phase of the matter,
4 Midwest will present five witnesses to address the
5 factors of 33(c) and 42(h), and we should note
6 that the listed factors in 33(c) are not
7 inclusive. The Board must take into consideration
8 all the facts and circumstances bearing upon the
9 reasonableness of the emissions or the discharges
10 involved. I will briefly mention those factors
11 and touch on the supporting testimony that the
12 witnesses are going to provide.

13 The first factor of 33(c) is the
14 character and degree of injury or interference.
15 Midwest Generation's expert in the first phase of
16 this hearing did a risk analysis that was
17 uncontroverted in finding no risk to any surface
18 areas and no receptors.

19 In this phase, you will hear
20 from the Weaver Group, Midwest Gen's technical
21 expert for this phase. Weaver did another risk
22 analysis, a second risk analysis, and they came up
23 with the same conclusion.

24 Weaver also performed a trend

1 analysis for each station to show that groundwater
2 is, in fact, improving in many locations, and it
3 is undisputed that there are no potable wells
4 impacted around the stations. The second factor
5 of 33(c) is the social and economic value of the
6 pollution source.

7 In the first phase of the
8 hearing, the Board heard from Maria Race, who was
9 Midwest Generation's former Director of
10 Environmental Programs, and she talked about the
11 value of the stations as having provided needed
12 energy to the energy capacity market.

13 In this phase, you will hear
14 from Sharene Shealey, who is the Environmental
15 Director for Midwest Generation, who is going to
16 testify about the current status of the stations,
17 because a lot has changed.

18 Midwest Generation will then
19 present the evidence of Brian Richard. Brian is
20 the Assistant Director in the NIU Center for
21 Governmental Studies, and he analyzed the
22 economics of the stations and will testify to the
23 value and economic benefit to the regions of
24 Illinois where the stations are located.

1 The third factor to consider in
2 33(c) is the suitability or unsuitability of the
3 source to the area. These facts were also all
4 discussed in the first phase of the hearing. It's
5 undisputed that these stations are more than
6 50 years old, and sometimes older. They are
7 located in industrial areas, and the Board's
8 interim order confirms that.

9 Testimony in phase one from
10 Maria Race; from Midwest Gen's expert, John
11 Seymour; from Richard Gnat from KPRG; and the
12 station operators identified the locations of the
13 stations in heavily industrial areas and often
14 surrounded by and impacted by groundwater
15 contamination from offsite sources.

16 For this phase, Mr. Gnat will
17 also touch on his prior testimony and will confirm
18 those industrial locations, and Ms. Shealey will
19 further describe the industrial locations, as well
20 as their zoning.

21 The fourth factor of 33(c) is
22 the technical practicability or economic
23 reasonableness. Now, economic reasonableness here
24 relates to the potential cost and reasonableness

1 of the remedy, not as Complainant suggests, the
2 affordability of a remedy. The actual costs and
3 reasonableness of the remedy.

4 Here the issue of what is
5 technically practicable and reasonable has to be
6 considered in light of the relative risk to the
7 environment, which Weaver will discuss; has to be
8 considered in light of the federal and state CCR
9 rules for impoundments and the impending federal
10 and state landfill rules for the stations; and
11 finally, in light of the work being done and
12 already done at the stations, both to comply with
13 the existing CCR rules and more. Sharene Shealey
14 and the experts will discuss these facts.

15 Ms. Shealey will also talk about
16 Midwest Gen's recent experience of entering into
17 Illinois EPA Compliance Commitment Agreements,
18 CCAs, spending millions to voluntarily install new
19 Illinois EPA-approved liners in its impoundments,
20 just to have the federal CCR rules come out
21 shortly thereafter making the liners not meet
22 those regulations. We don't want that to happen
23 again.

24 The fifth factor of 33(c) is any

1 subsequent compliance. Much has been done, even
2 since the Board's hearing. Maria Race, again,
3 provided history in the phase one hearing about
4 the voluntary work Midwest Gen has engaged in long
5 before there were any requirements or rules asking
6 them to do so. Ms. Shealey will remind the Board
7 of that history.

8 Midwest Gen didn't believe that
9 its ash ponds were a source of groundwater
10 contamination, because unlike most coal burning
11 stations, Midwest Gen's ponds had thick, concrete
12 liners. They had poz-o-pac, and synthetic liners,
13 and as part of its general maintenance, when
14 Midwest Gen took over operation of these stations
15 in 1999, Midwest Gen voluntarily began a program
16 of relining its ponds. No requirement to do that.

17 The relining project came to a
18 standstill when US EPA announced its impending CCR
19 rules. Then, around the same time, Illinois EPA
20 asked that all coal stations in Illinois begin
21 groundwater monitoring programs.

22 To Midwest Gen's knowledge,
23 Midwest Gen was the only company that agreed to
24 voluntarily do that, even though it did not think

1 the results would show the lined impoundments were
2 a source. Ms. Shealey will discuss that further.

3 In fact, the evidence in this
4 hearing will show that counsel for Complainants,
5 Ms. Bugel, stated to the public that she didn't
6 believe the Midwest Gen ash ponds were the likely
7 sorts of groundwater contamination.

8 MS. BUGEL: I'm going to object
9 to --

10 MS. NIJMAN: Quoting from an
11 article --

12 MS. BUGEL: -- that's -- putting in
13 that statement. That is something we have
14 indicated that we have got an objection to, and it
15 is also hearsay.

16 HEARING OFFICER HALLORAN:
17 Sustained.

18 MS. NIJMAN: Mr. Hearing Officer,
19 the decision on that quote --

20 HEARING OFFICER HALLORAN:
21 Sustained. You may continue, Ms. Nijman. Thank
22 you.

23 MS. NIJMAN: I'm sorry,
24 Mr. Halloran. I need to create a record for the

1 appeal. So I need to put forth --

2 HEARING OFFICER HALLORAN: Okay.

3 You may proceed.

4 MS. NIJMAN: -- the argument.

5 The decision on this article was
6 only that it could not be admitted into evidence.
7 It was not that it could be discussed. I'm not
8 asking that it be submitted into evidence as the
9 article for an expert to rely on, which was the
10 basis for the Board's discussion.

11 HEARING OFFICER HALLORAN: Okay.

12 You may continue.

13 MS. NIJMAN: I would like to quote
14 the article, Mr. Halloran. The article states --

15 MS. BUGEL: We have an objection to
16 quoting it and to getting the quote on the record.
17 I think this is trying to get the substance of the
18 article in.

19 HEARING OFFICER HALLORAN: Yeah, you
20 know, the article is in evidence. So I think
21 that's sufficient. If you want to address that
22 later on in the hearing, maybe I'll reconsider it.

23 MS. NIJMAN: It's not admitted in
24 evidence at this time.

1 HEARING OFFICER HALLORAN: The --
2 well, okay. But the motion in limine was denied
3 or -- and granted.

4 MS. NIJMAN: It was denied -- or
5 excuse me. The motion in limine was granted to
6 the extent that an expert was going to rely on
7 that statement, because you stated that an expert
8 is not --

9 HEARING OFFICER HALLORAN: Right.

10 MS. NIJMAN: It's inappropriate for
11 an expert to rely --

12 HEARING OFFICER HALLORAN: Right.

13 (Cough.)

14 MS. NIJMAN: It's not inappropriate
15 as to the facts.

16 THE COURT REPORTER: I'm sorry.
17 Could you repeat that? There was a cough.

18 MS. NIJMAN: The hearing officer
19 decided that the -- this -- the article could not
20 be used by an expert for reliance, because it is
21 not an appropriate, in your decision, material for
22 an expert to rely upon, but the fact itself that
23 the article exists is evidence and will come into
24 this hearing.

1 HEARING OFFICER HALLORAN: Okay.

2 Are you going to read the whole passage, all the
3 pages or --

4 MS. NIJMAN: No, no, no. One --
5 four lines.

6 HEARING OFFICER HALLORAN: Okay.
7 You may proceed. Overruled.

8 MS. NIJMAN: Thank you.

9 The article states, "Bugel
10 explained that most of the coal ash repositories
11 at Midwest Generation's coal plants are lined, and
12 unlike many other companies, Midwest Generation
13 frequently emptied the ash and sold it for, quote,
14 'beneficial reuse,' as -- closed quote -- as
15 construction materials and other uses. That means
16 Midwest Generation's active coal ash ponds subject
17 to the state and federal rules were probably less
18 likely to be contaminating groundwater than at
19 many other coal ash sites," she said.

20 The voluntary groundwater
21 sampling that Midwest Generation agreed to do
22 resulted in a Compliance Commitment Agreement.
23 Midwest Generation spent significant funds to
24 re-line its ponds, of course turning out that

1 those requirements -- those Illinois EPA-approved
2 liners did not meet the new CCR requirements.
3 Ms. Shealey will explain what happened next. This
4 litigation, ironically, this litigation based on
5 the very same voluntary groundwater sampling that
6 Midwest Gen did.

7 Then, came all the changes at
8 the stations. In 2015, all the stations began
9 implementing the numerous requirements under the
10 federal CCR rule. At Joliet 29, Midwest
11 Generation stopped burning coal in 2016. Also, at
12 Joliet 29, Midwest Gen investigated a single area
13 Monitoring Well 9 that the Board identified in its
14 interim order as a source of groundwater
15 exceedances and found no CCR in those borings.

16 At Waukegan, Midwest Gen
17 investigated the entire grassy field area, and you
18 will hear Mr. Gnat talk about that. Waukegan also
19 ceased burning coal in June of 2022, and closed --
20 is closing its two impoundments pursuant to the
21 CCR rules.

22 At Will County, Midwest -- you
23 will hear evidence that Midwest Gen ceased burning
24 coal in 2022, and closed -- is closing those

1 operations. In 2021, all the stations began
2 implementing the slightly different and even
3 stricter requirements under the Illinois CCR rule.
4 They prepared lengthy, operating permit
5 applications and submitted them to the state, and
6 they prepared and submitted even longer
7 construction permit applications to close or
8 retrofit its surface impoundments.

9 Based on these 33(c) factors,
10 there is no basis to order more. The cease and
11 desist is already in place.

12 The Board will hear evidence
13 concerning the 42(h) factors and the significant
14 mitigating factors that exist to preclude any
15 further order or penalty. In 42(h), in
16 determining any penalty, the Board can consider
17 mitigation.

18 First, is duration, gravity.
19 Again, historic facilities here. Midwest Gen took
20 over operations in 1999, immediately began
21 voluntary investigations, voluntary re-lining, and
22 then voluntary groundwater sampling. Risk
23 assessments show no harm, no one drinking the
24 water, and heavily industrial areas.

1 The second factor in 42(h) for
2 mitigation is the presence of due diligence and
3 attempting compliance. As just described,
4 Ms. Shealey will talk about the evidence of the
5 significant efforts to voluntarily investigate the
6 stations and agreed to monitor when there was no
7 obligation to do so. And then she will talk about
8 the most recent actions to investigate the areas,
9 close the stations, and close areas at the
10 stations.

11 As to economic benefit accrued
12 by -- allegedly accrued by Respondent, you will
13 hear from our expert, Gayle Koch, who will detail
14 Midwest Generation's past spending on all these
15 efforts and find little or no economic benefit.

16 As far as a deterrent, any
17 violations were historic. Midwest Gen proactively
18 worked to improve the stations that it bought.
19 Ms. Koch will also discuss the deterrence factor.

20 Another mitigating factor is
21 voluntary self-disclosure of noncompliance.
22 Again, this is key, and it's worth restating.
23 Midwest Gen agreed to sample when no one else did
24 at this date. Midwest Gen was already in a

1 re-lining program that it initiated itself.
2 Midwest Gen continues to submit the CCA
3 groundwater results that it's sampling to the
4 Illinois EPA.

5 Another factor for mitigation,
6 successful completion of the CCAs. That's not
7 disputed. Many witnesses already testified, and
8 the Board already found in its interim order, that
9 the CCAs relating to the ash ponds before the CCR
10 regulations even existed, Midwest Gen has
11 conducted all the work Illinois EPA requested of
12 them, and continues to comply with the monitoring
13 required and within the groundwater managing --
14 management zones established by those CCAs.

15 Ultimately, throughout this
16 phase, Midwest Gen's witnesses will remind and
17 further inform the Board of Midwest Gen's long
18 history of voluntary investigation and cooperation
19 with the Illinois EPA of sampling that existed of
20 ash in their ponds and in fill areas and the
21 evidence of no risk.

22 I will further remind the Board
23 of all the facts and circumstances that bear upon
24 the reasonableness of its actions and its

1 decisions. The Board will also hear testimony
2 about the current status of the stations, because
3 it is important to understand where things stand
4 today in order for the Board to make any
5 assessment that does not conflict with the
6 existing and upcoming regulations.

7 Even with all that activity
8 taking place, we find ourselves here at this
9 hearing, and we are ready to proceed. We
10 appreciate your patience both this week and for a
11 week in June as we are scheduled.

12 And then, Mr. Halloran, we do
13 have some housekeeping items that we would like to
14 address.

15 HEARING OFFICER HALLORAN: Thank
16 you. Proceed.

17 MS. NIJMAN: So there were several
18 aspects of the Board's prior rulings in this case
19 that Midwest Gen needs to preserve, pursuant to
20 Illinois Rule of Evidence 103, and specifically,
21 renewing those objections as filed. The first is
22 one I have already mentioned, our motion to stay.

23 We renew and reserve Midwest
24 Gen's arguments that a stay is appropriate, given

1 the status of the CCR rules, the impending fill
2 rules. There is a potential of significant harm
3 and prejudice to Midwest Gen from any decision on
4 a remedy that this Board may make.

5 Second, the Board made a
6 confusing statement in the interim order that
7 appeared to suggest that there was a finding of
8 open dumping at Joliet 29, when, in fact, open
9 dumping was not a claim made in the amended
10 complaint for Joliet, and the Board's authority is
11 limited to the claims on the complaint.

12 Third, the Board made a decision
13 that despite no evidence of groundwater
14 contamination and CCR -- and the fact that CCR was
15 removed from the northwest fill area at Joliet 29,
16 the Board found liability. That ash was, in fact,
17 removed, and the evidence will re-establish that.

18 The Board also denied Midwest
19 Generation's request to include any discussion of
20 remedy for the Powerton former ash basin, which it
21 found was not a source in the interim order, the
22 Will County former slag and bottom ash placement
23 area, and historic areas at Joliet 29, because
24 there is no evidence presented of source

1 contamination and impact to groundwater from those
2 areas. That motion was also denied.

3 We would request that the
4 Hearing Officer and the Board restate on the
5 record whether those rulings are being upheld at
6 this time for the purpose of appeal.

7 HEARING OFFICER HALLORAN: My --
8 yes. The Hearing Officer, correct.

9 MS. NIJMAN: And may I hear from the
10 Board whether existing --

11 HEARING OFFICER HALLORAN: They will
12 take it with the case. Thank you.

13 MS. NIJMAN: Thank you.

14 HEARING OFFICER HALLORAN: All
15 right. Ms. Bugel, Mr. Russ?

16 MS. BUGEL: Yes. Your Honor, may I
17 have a moment just for us to physically re- --
18 switch spots?

19 HEARING OFFICER HALLORAN: Oh,
20 certainly.

21 MS. BUGEL: Hearing Officer, the
22 Complainants call Mark Quarles as our first
23 witness.

24 HEARING OFFICER HALLORAN: Thank

1 you. Mr. Quarles, would you like to step up here,
2 please, and the court reporter will swear you in.

3 (Whereupon, the witness was duly
4 sworn.)

5 HEARING OFFICER HALLORAN: Have a
6 seat.

7 Ms. Bugel, you may proceed.

8 WHEREUPON:

9 M A R K Q U A R L E S

10 called as a witness herein, having been first duly
11 sworn, deposeth and saith as follows:

12 D I R E C T E X A M I N A T I O N

13 by Ms. Bugel

14 **Q. Mr. Quarles, can you briefly state**
15 **your name, for the record?**

16 A. My name is Mark Quarles.

17 **Q. And your employer?**

18 A. BBJ Group.

19 **Q. And who -- and what do you do for**
20 **BBJ Group?**

21 A. I'm a branch manager of the
22 Nashville office, a senior scientist, a project
23 manager and client manager.

24 **Q. And can you briefly tell me about**

1 **your experience, your background and experience?**

2 A. So, I have a degree in environmental
3 engineering, 1985. I have been a practicing
4 consultant for over 30 years. Particularly have
5 been involved in the CCR since the TVA Kingston
6 release. Multi-media, environmental consulting of
7 waste management, permitting, compliance for a
8 variety of clients.

9 **Q. You mentioned the TVA Kingston**
10 **release. What year was that?**

11 A. I believe that was 2008.

12 **Q. And can you briefly tell me about**
13 **any experience you have with CCR?**

14 A. So, ever since the Kingston release,
15 I have worked a lot on CCR throughout the U.S.
16 with a lot of focus in the midwest, the southeast,
17 on looking at coal ash disposal sites, evaluating
18 those in terms of groundwater contamination
19 evidence, compiling a list of sites that were
20 presented to the EPA during the aspects of the
21 formation of the rule, and then once the rule came
22 out, evaluating sites around primarily the eastern
23 U.S. and midwest relative to -- to that rule.

24 **Q. And can you briefly tell me about**

1 **your experience offering expert testimony?**

2 A. The -- I have been involved in the
3 TVA Kingston site and the litigation associated
4 with that. I have testified in a Duke
5 Power-related case of private property damage
6 related to the Dan River release. I have
7 testified in numerous rate case hearings in the
8 Carolinas -- associated with Duke Power in the
9 Carolinas. Also a rate case hearing in Georgia
10 related to Georgia Power, and then various sites.
11 Those have been the -- the main testifying
12 projects.

13 **Q. Can you please --**

14 A. Oh, I'm sorry. And add the TVA
15 Gallatin-related case.

16 MS. BUGEL: Thank you. And Hearing
17 Officer, may we approach?

18 HEARING OFFICER HALLORAN: You may.

19 (Whereupon, Exhibit No. 1101 was
20 marked for identification.)

21 BY MS. BUGEL:

22 **Q. We are placing in front of you what**
23 **has been marked as Exhibit 1101.**

24 **And, Mr. Quarles, are you**

1 familiar with this document?

2 A. I am.

3 Q. And you were talking about your
4 experience. Does this document include your CV?

5 A. It does.

6 Q. And can you please turn to your CV?
7 And looking at your CV, do you have both what you
8 call CCR program experience and CCR project
9 experience on your CV?

10 A. Yes, I do.

11 Q. Can you please tell us what the
12 difference is between program experience and
13 project experience?

14 A. Project -- program experience
15 relates to kind of the big picture of the CCR rule
16 and how it impacts coal-fired power plants, and
17 specific project experience would be evaluating a
18 specific site and/or a particular disposal unit at
19 a site.

20 Q. Thank you. So can you flip back to
21 the beginning of this document? Not your CV, but
22 the whole exhibit.

23 A. Okay.

24 Q. And just for the record, when you

1 use the term "CCR," what does that acronym stand
2 for?

3 A. Coal combustion residuals, which is
4 kind of a fancy name for the term "coal ash,"
5 which could mean everything from fly ash, bottom
6 ash, cinders, kind of all encompassing that
7 burning material.

8 Q. And this whole document that we have
9 placed in front of you, can you explain what it
10 is?

11 A. It's a -- my initial expert opinion
12 that I wrote in January of '21 as related to
13 evaluating the liability phase of the project and
14 leading to the remedy phase.

15 Q. And just at first glance, does this
16 appear to be a true and accurate copy of your
17 expert report from January of 2021?

18 A. It does.

19 Q. Okay. Can you please turn to
20 Section 2.1 of your report? And for the record,
21 can you tell us what page you are on?

22 A. It's page 4.

23 Q. I'm sorry. I just -- I realized I
24 flip-flopped my numbers. Can we please turn to

1 **Section 1.2 of your report?**

2 **And what does Section 1.2 cover?**

3 A. It is the Board's opinion and
4 conclusions related to the liability phase.

5 **Q. And for the purposes of the opinions**
6 **you offer in this report, can you give us a couple**
7 **of highlights of what from the Board's decision**
8 **informed your opinions?**

9 A. Midwest Gen is liable for
10 exceedances of the numeric Part 620 standards.
11 The groundwater management zone CCAs,
12 environmental land use controls, have not resulted
13 in an improvement of groundwater, and it's not
14 expected to improve groundwater to meet the
15 standards, and that both the historical and at the
16 time active disposal units were likely causes of
17 groundwater contamination.

18 **Q. And you said CCAs. Can you tell me**
19 **what that acronym stands for?**

20 A. It's a compliance commitment
21 agreement.

22 **Q. And now, turning to Section 2.1 of**
23 **your report on page 4. Can you tell me what this**
24 **section covers?**

1 A. This is an overview of the Joliet
2 station with some of the particular factors
3 associated with the prior investigations and the
4 ponds. Specifically, it also talks about the
5 existence of historical and active disposal units,
6 how there is an exceedance, multiple exceedances,
7 of 620 standards.

8 And a hydrogeologic assessment
9 that was done in 2011 was inconclusive in terms of
10 the source of contamination because in some cases
11 the contaminant concentrations were the highest in
12 the hydraulically upgradient wells.

13 **Q. And why is it significant to you**
14 **that the concentrations were highest in the**
15 **hydraulically upgradient wells?**

16 A. Both the federal CCR rule and the
17 Illinois CCR rule consider background
18 concentrations related to whether or not there is
19 a trigger to asses the contamination and to have
20 a -- initiate an assessment of corrective measures
21 in the federal rule.

22 So what happens in the federal
23 rule, they allow statistical evaluation of the
24 data, whether it's an upgradient well, it's a

1 downgradient well, or an intrawell where you look
2 at the individual concentrations. In the Illinois
3 rule, they allow more discussion about what is a,
4 quote, unquote, "background." So if your
5 background well, which in Illinois in the CCR
6 rule, the background can become the standard if
7 it's higher than the 620 standard.

8 So, if you -- if you, for
9 example, drill a well into an area that's -- and
10 call it a background well, and if it has been
11 contaminated by current or historical activities,
12 then you have got a naturally high concentration
13 of constituents that will skew your evaluation on
14 whether or not you have a problem that you would
15 compare your downgradient wells to.

16 **Q. And can we please turn to Section**
17 **2.2 of your report on page 5? And can you please**
18 **describe what Section 2.2 covers?**

19 A. That is a summary similar to Joliet
20 for Powerton, some of the key -- key points that
21 were made by the Board in the opinions and also
22 some particular background related to the size of
23 the basins and what they were used for. And it
24 also discusses the fact that there were historical

1 inactive basins and fill areas at that location
2 and in exceedance of the 620 standard, and very --
3 just like Joliet, the 2011 hydrogeologic
4 investigation was inconclusive about the source of
5 contamination because the highest concentrations
6 in some cases were the hydraulically upgradient
7 wells.

8 It also discusses if some of the
9 borings in the wells that were drilled on that
10 were considered to be the upgradient wells were
11 drilled in that ash.

12 **Q. And I'm going to -- let's turn to**
13 **figure 4 attached to your report. And the figures**
14 **are at the back of the report, for ease of**
15 **reference. Can you please describe what you have**
16 **included in figure 4?**

17 A. Figure 4 is labeled, "Historic
18 Powerton Station Conditions in 1961 and 1967."
19 It's an aerial photograph on the left and a
20 topographic map on the right.

21 **Q. And the map on the right, do you**
22 **recall where you got this from?**

23 A. It -- let me see if it's -- it
24 would -- probably came from the USGS, United

1 States Geological Survey, and a historic
2 topographic seven and a half-minute quadrangle
3 map.

4 MS. NIJMAN: I'm going to object to
5 the extent that that's speculation.

6 HEARING OFFICER HALLORAN: Could you
7 speak up, please?

8 MS. NIJMAN: Objection to
9 speculation.

10 HEARING OFFICER HALLORAN: All
11 right. You can answer. Overruled. Thank you.
12 You may proceed.

13 BY MS. BUGEL:

14 Q. And --

15 A. Ah, here we go. Aerial imagery and
16 topographic map sourced from the net -- netonline
17 and dated '61, '67, respectively.

18 Q. And in the map on the right, do you
19 have an understanding of what the tailings pond
20 is?

21 A. I do. That's -- the USGS commonly
22 used that term for a -- a waste disposal pond.

23 MS. NIJMAN: Object to foundation.

24 HEARING OFFICER HALLORAN:

1 Ms. Bugel?

2 BY MS. BUGEL:

3 Q. Mr. Quarles, where did you get your
4 understanding of the definition of a tailings
5 pond?

6 A. A tailings pond in the environmental
7 industry is known as a waste disposal pond
8 typically associated with an industrial activity.
9 That's just common knowledge in -- in our
10 industry.

11 MS. BUGEL: And I think that gives
12 the foundation necessary --

13 HEARING OFFICER HALLORAN: I agree.

14 BY MS. BUGEL:

15 Q. -- Hearing Officer. Thank you.

16 Okay. Can you please turn back
17 to page 7 of your report?

18 A. Okay.

19 Q. I'm looking at the last full
20 paragraph on page 7, or the very last paragraph on
21 the page. Can you please tell us what you discuss
22 in this paragraph?

23 A. KPRG completed two alternate source
24 determinations or ASDs. That's a term that's used

1 in the federal CCR rule in its evaluation where if
2 you have a constituent that exceeds a standard or
3 has a statistically significant increase, you can
4 do a scientific evaluation to determine if another
5 source, other than the coal ash impoundment, is
6 the source of that contamination.

7 **Q. And why do you discuss the alternate**
8 **source determinations, which I will refer to as**
9 **ASDs? Why do you bring those up?**

10 A. Because KPRG determined in their
11 analysis that -- that the leakage may have been
12 associated with one of their ash basins or from an
13 alternate undefined historical source, and the key
14 there is that it was just some other undefined,
15 unnamed historical source.

16 **Q. And what's significant about that?**

17 A. Well, the current ash basins were
18 constructed over the top of the tailings pond,
19 which is also called the former ash basin. And
20 the -- the embankments of the current pond, some
21 of them, were constructed out of ash, and so some
22 of the wells were drilled into ash to monitor
23 whether or not a release occurred from the active
24 basins.

1 Q. And could you please turn -- I'm
2 sorry. Strike that.

3 Okay. Moving on. Can you
4 please turn to Section 2.3 of your report? And we
5 are on page 8 for reference. Can you please tell
6 me, what do you cover in Section 2.3 of your
7 report?

8 A. In a similar manner as the prior
9 power stations evaluate some of the key opinions
10 of the Board, some of the key aspects of
11 construction related to the basins in Waukegan, it
12 discusses the fact that there were -- they began
13 burning coal and making electricity in the 1920s.
14 It means it has been in operation for a little
15 over 100 years.

16 There are historical and active
17 disposal areas, fill areas, associated with --
18 with that area. They exceeded the Part 620
19 numeric standards. They, too, performed an ASD at
20 Waukegan and determined that it was from their
21 releases, or the statistical increases in the
22 wells were also from nonactive, historical,
23 unnamed sources. And there was also wells that
24 were drilled into ash on the upgradient side.

1 Q. I would like to look at the bullet
2 points at the bottom of page 8. And can you tell
3 us what point you are making in the bullet points,
4 those three bullet points at the bottom of page 8?

5 A. The first bullet is that the
6 original ash ponds for the facility were located
7 underneath the current east and west ash ponds.
8 The downgradient monitoring wells were drilled
9 into ash, and that the upgradient monitoring wells
10 were also sometimes drilled into historic fly ash.

11 Q. And on page 8, you also reference
12 figure 6. So can we please turn to figure 6 at
13 the back of your report? And on figure 6, how can
14 you tell from this -- or let me restate that.

15 Why did you include figure 6 in
16 your report?

17 A. We -- we wanted to know -- we knew
18 that we had soil borings and wells that were
19 drilled into ash. So it would be useful to know
20 where the locations of the original ash ponds
21 were. And so we looked back in 1972, and then we
22 were able to overlay the monitoring well locations
23 from a KPRG report and an outline of the basin
24 from the report onto that historic aerial

1 photograph to understand where the current active
2 east and west basins are relative to the original
3 ash basin.

4 Q. Okay. Can you please turn to
5 Section 2.4 of your report? And I'm looking at
6 page 10, carrying over to page 11.

7 Can you tell us what you discuss
8 in Section 2.4 of your report?

9 A. Like the prior three sections of the
10 other power plants, it discusses the Board's
11 opinion, the liability phase. It talks about the
12 620 exceedances, historical and active fill and
13 disposal areas, how wells are sometimes drilled
14 into ash. Also, ASD was -- was done for that
15 location as well.

16 Q. And what's the significance that an
17 ASD was done for this location?

18 A. Again, it determined that it was due
19 to a, quote, unquote, "from other potential source
20 or sources" without any definition or
21 identification of a specific source.

22 Q. And looking at the fourth full
23 paragraph on the page, beginning "soil borings,"
24 do you see that paragraph?

1 A. I'm sorry. What?

2 Q. I'm sorry. Page 11.

3 A. Okay.

4 Q. Fourth full paragraph on the page.

5 A. Uh-huh, yes.

6 Q. Can you please tell us what you are
7 discussing in this paragraph?

8 A. That paragraph begins by saying the
9 soil borings demonstrated that coal ash is buried
10 outside of the ash ponds; meaning, the current ash
11 ponds. And the borings -- we know that because
12 borings were drilled through ash. Therefore, the
13 coal ash is not limited to the active basin
14 footprints.

15 And then most importantly as it
16 relates to, you know, future leaching is that the
17 coal ash was saturated in at least one of the
18 borings, which means that it's wet and most likely
19 in contact with the water table aquifer. And then
20 on the eastern edge, coal ash was found in five of
21 the six borings used to construct the monitoring
22 wells.

23 Q. You mentioned --

24 A. And let me add that the eastern

1 wells were the hydraulically upgradient wells.

2 **Q. You mentioned that coal ash was**
3 **saturated in one monitoring well. Can you explain**
4 **the significance of that point?**

5 A. Coal ash was saturated in a boring
6 associated with a monitoring well, which means
7 that there is coal ash below the water table and
8 within the water table.

9 **Q. And what is the significance of that**
10 **point?**

11 A. Well, that means that -- that you
12 should expect and can expect continued leaching of
13 coal ash constituents for the -- for the future,
14 and it -- it means that you have got historical
15 ash that's below a basin that was constructed at
16 some point or reconstructed with a liner.

17 **Q. Can you please turn to Section 3.1**
18 **of your report? And I'm looking at page 14. And**
19 **can you tell us what you cover in Section 3.1?**

20 A. Section 3.1, the "Regulatory Basis
21 For a Groundwater Remedy", and I talk about how
22 the Board concluded that Part 620 numeric
23 standards had been exceeded at each of the four
24 stations. It talks about the CCAs.

1 The Board determined that the
2 CCAs were intended to avoid and detect any further
3 contamination or monitor the effectiveness or not
4 of the corrective action, rather than being a
5 remedy, and that groundwater management zones
6 don't prevent any future liability, and they are
7 not meant to be a permanent solution or a remedy
8 associated with a power plant, and that the
9 environmental land use controls at Powerton,
10 Waukegan, and Will stations, they are not a
11 corrective action, because they are just meant to
12 be -- to limit exposure, protect against the
13 exposures, rather than remedy -- remedying the
14 contaminants.

15 And then, I guess, lastly, is
16 that the Board concluded that there is no reason
17 to think that the aquifers will naturally restore
18 themselves to the Part 620 standards without some
19 sort of active treatment process, and that the
20 next step of that evaluation of a groundwater
21 remedy would be to complete a nature and extent
22 study.

23 **Q. And I just want to go back. In**
24 **paragraphs 2 and 3 you use the acronym GMZ. Can**

1 **you explain what that stands for?**

2 A. Groundwater management zone.

3 **Q. And you also use the acronym ELUC.**

4 **Can you explain what that stands for?**

5 A. The environmental land use controls.

6 **Q. And you referred to a nature and**
7 **extent investigation. Can you explain what point**
8 **you are making?**

9 A. If you -- if you want to find --
10 well, you have to know what your source is and
11 potential sources are so that you can ultimately
12 evaluate and select a remedy. Without knowing
13 where the sources and potential sources are, you
14 run the risk of selecting a remedy that won't
15 work.

16 And a nature and extent
17 investigation is the foundation of really any
18 environmental regulatory program of understanding
19 what is there, where it is, under what conditions
20 it exists, what's the volume, so that you can
21 ultimately evaluate and select a remedy.

22 **Q. And I'm going to turn to Section**
23 **3.2. Can you please tell us what you have**
24 **discussed in Section 3.2?**

1 A. I talked about missed opportunities
2 to define the contaminant sources, because you
3 need to know where your sources or potential
4 sources are. And so, Patrick Consulting Firm, did
5 the hydrogeologic investigations in 2011 and
6 determined that they were inconclusive about what
7 the source of the groundwater contamination was,
8 because in many cases, or at all four locations,
9 that the highest concentrations were sometimes in
10 the hydraulically upgradient wells, that in
11 Patrick's opinion, he couldn't conclude that the
12 active basins had leaked because of that, and that
13 the ASDs that were done for Powerton, Waukegan,
14 and Will County. They investigated the
15 contamination and determined that they were just
16 unspecified sources or potential sources without
17 trying to identify those.

18 So, for example, the 2011
19 Patrick stuff, that's 12 years ago. It's kind of
20 a missed opportunity to understand what your
21 contaminant sources were and initiate a more
22 thorough investigation to evaluate and select a
23 remedy.

24 **Q. And turning to Section 3.3 on page**

1 **17. Can you please tell us what you are**
2 **discussing in that section?**

3 A. So, you need to identify your
4 contaminant sources, because we talked about the
5 ELUC doesn't -- it is just preventing exposure.
6 It's not a remedy. The CCAs and the groundwater
7 management zones are not a remedy.

8 So you need to understand where
9 your sources are. In particular, you need to know
10 what sources are nearer in contact with
11 groundwater. Any remedial strategy that you are
12 going to select and evaluate needs to work
13 long-term, and it needs to be consistent with the
14 characteristics of the site and understanding of
15 how much is saturated.

16 Is it likely that the
17 constituents are going to continue to leach from
18 the solid waste? And the source identification is
19 a really critical component of that -- of that
20 process, and ultimately, when you evaluate a
21 remedy, source identification enables you to have
22 source control as part of your remedy moving
23 forward.

24 **Q. Can you explain why you bring up**

1 **source control?**

2 A. Source control is a process where
3 you can prevent the continuation of additional
4 leaching, for example, from a -- from a solid
5 waste.

6 **Q. And turning to Section 3.4, what do**
7 **you discuss in this section?**

8 A. I discuss different components that
9 might be associated with a nature and extent
10 investigation. You would like to know, what are
11 your sources? How much exists in the unlined
12 areas? How much are in fill areas? How much are
13 in or below the what are now active basins? What
14 type of coal ash? Is it bottom ash? Is it fly
15 ash? Is it cinder, slag? How much is
16 saturated/unsaturated; the thickness, vertical
17 extent, horizontal extent, chemical, geochemical
18 conditions of the waste and of the aquifer,
19 direction of groundwater flow and any migration
20 pathways, the rate that it could flow from the
21 source area to a receiving water to a receptor.
22 So lots a different components to a nature and
23 extent investigation with specific purposes.

24 **Q. And turning to Section 3.5 on page**

1 **20, can you please tell us what you cover in this**
2 **section?**

3 A. >Data Implications For Existing
4 Compliance Monitoring." So we just talked about
5 at all four -- or three of the four power plants,
6 how it was well-known, well-documented that wells
7 and borings were drilled into ash, and
8 particularly on the upgradient side.

9 So like in the Illinois CCR
10 rule, it enables -- it allows an owner to have an
11 alternate standard if your background well or
12 wells are greater than the numeric standard,
13 right? So if background wells are drilled into
14 ash, clearly that would be a wrong use of a
15 background to create an alternate standard.

16 Similarly, if you want to know
17 if your downgradient wells have been contaminated,
18 you should drill your wells in an area that's
19 hydraulically upgradient where it doesn't contain
20 ash, and then you can compare that, you know,
21 unaffected background to your downgradient --
22 hydraulically downgradient wells.

23 So it becomes the trigger of
24 determining whether or not you even need to

1 perform an assessment, and then whether or not you
2 need to perform a corrective action. So the
3 implications for well location are really, really
4 critical.

5 **Q. And Section 3.6, also on page 20.**
6 **Your heading is, "Regulatory Implications For**
7 **Saturated Coal Ash." Can you explain what you**
8 **mean by that?**

9 A. Yes. So the CCR rule and the
10 federal CCR rule and the Illinois rules both do
11 not allow closure in place of a surface
12 impoundment where you have ash that's in contact
13 with groundwater or less than five feet separation
14 between the bottom of the impoundment and the top
15 of the seasonal high water table.

16 So it's a -- it's -- it's very
17 important to understand how much ash is saturated
18 and how far it is away from the bottom of your --
19 of your impoundment. And then if the ash is
20 saturated, it's reasonable to assume that the
21 leaching is going to continue long term into the
22 future.

23 **Q. You mentioned ponds -- or I'm sorry.**
24 **You mentioned impoundments in your answer.**

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What about the historic ash

areas?

A. Same thing. So if you have historical filler, like Waukegan, for example, everybody -- it's clear in the record. I believe the Board determined that the former slag/fly ash fill area at Waukegan had ash up to 22 feet in the groundwater. All right.

And so one of the -- the only -- the only action that was discussed in the Weaver report related to a corrective action that was not monitored natural attenuation was putting a cap over that area at Waukegan. If -- and it is. The ash is saturated in that fill area. If you build a cap over the top, that will prevent precipitation from -- from infiltrating into the ash, but the ash is submerged in groundwater.

So it won't prevent what I call lateral inflow of the upgradient groundwater from flowing through the submerged ash from a west to east and southeast direction.

Q. And turning to -- turning to Section 4.1, what -- what do you cover in this section?

A. "Recent Cases of Coal Ash Removal

1 Actions." And so I describe and list and tabulate
2 127 coal ash disposal units in 27 states that
3 chose to close by removal instead of closure in
4 place. And some of those -- some of those basins
5 that are proposed are Midwest Gen, and -- and have
6 been closed are Midwest Gen and their parent
7 company sites. So closure by removal and
8 excavation has been relatively common.

9 **Q. What -- aside from Midwest Gen or**
10 **their parent company, what other examples do you**
11 **know of that provides support for your statement**
12 **that closure by removal is relatively common?**

13 A. Well, there was 127. Clearly,
14 Midwest Gen doesn't own or operate all of those.
15 So numerous other utility owner/operators have
16 chosen closure by removal across much of the U.S.

17 **Q. And where do you find Table 1 in**
18 **your report?**

19 A. It is page 29.

20 **Q. And that's -- thank you. Can you**
21 **please turn to Section 4.3 on page 22 of your**
22 **report?**

23 A. Yes.

24 **Q. What do you cover in this section?**

1 A. So once you complete your nature and
2 extent investigation, the next is going towards
3 your remedy, and a common term used to evaluate
4 and select a remedy is a remedial action plan.
5 And so it's -- it talks about different aspects of
6 what would be included in a remedial action plan;
7 such as, an alternative analysis where you
8 evaluate multiple types of candidate remedial
9 alternatives kind of side by side on their ability
10 to remediate a particular standard.

11 What is the timeline associated
12 with remediation? What's -- what's the cost? You
13 know, are there any obstacles that make -- make
14 one better than the other? And then ultimately,
15 are -- are each of them able to meet the -- in
16 this case, the numeric 620 standard?

17 **Q. And why do you recommend an**
18 **alternatives analysis in this section of your**
19 **report?**

20 A. Because it's the part that talks
21 about components of a remedial action plan. It's
22 just -- that's what a remedial action plan,
23 corrective action plan, assessment of corrective
24 measures, whatever you want to call it for

1 whatever program you are in, you evaluate multiple
2 alternatives to eventually select one or two. You
3 might even select a contingency if plan A doesn't
4 work.

5 **Q. Okay. Turning to Section 5.1. What**
6 **do you discuss in this section?**

7 A. It really just sums it up, what we
8 just talked about. The Board determined, and I
9 agree, the historical and active fill areas are,
10 you know, sources and/or potential sources of the
11 groundwater contamination, and that multiple
12 violations exist. Also talked about the phase one
13 ESAs, environmental site assessments, that were
14 done in 1999.

15 What, I'd say 23 years ago, but
16 really that's, what, 24 years ago, 25, whatever, a
17 long time ago, that they identified those
18 historical fill areas, the historical landfills at
19 Joliet, for example.

20 So -- and that was done, I
21 guess, during the acquisition when Midwest Gen
22 took control over these power plants. So the
23 knowledge that these -- you know, historical
24 areas, it's been there a long time. It kind of

1 sums up what we just talked about, you know.
2 We've got coal ash in the borings and coal ash in
3 the -- they used coal ash to build the
4 impoundments at Powerton and Waukegan.

5 And, in fact, the rail spur that
6 goes across the former ash basin at Powerton is
7 made out of coal ash, and then the coal ash
8 beneath Powerton and Waukegan. So really it just
9 kind of sums up everything that, you know, we just
10 talked about in terms of what needs to happen
11 next, identifying the probable and possible
12 sources, and then moving forward for a nature and
13 extent investigation.

14 **Q. So, can you turn to page 24? And**
15 **I'm looking at the first two full sentences on**
16 **page 24. Can you explain what you are discussing**
17 **there?**

18 A. First full sentence. This one?

19 **Q. The first two full sentences. It's**
20 **a partial paragraph.**

21 A. The -- the sentence beginning, "That
22 avoidance was carried over"?

23 **Q. And the one prior to that.**

24 A. Okay. So the full sent- -- oh,

1 there it is, okay.

2 "MWG, KPRG, and Patrick's lack
3 of assigning possible contaminant blame and
4 completing further investigations are consistent
5 with the Board's prior determination that MWG's
6 monitoring and inspection programs for the CCAs
7 were intended to avoid and detect contamination.
8 That avoidance was carried over to the monitoring
9 programs associated with the CCR rule and the
10 CCAs."

11 **Q. And when you say "that avoidance,"**
12 **can you explain what you mean by that?**

13 A. The avoidance of identifying and
14 naming a source, which would allow them to
15 investigate and select a remedy, had they known
16 the source.

17 **Q. And Section 5.2, what do you discuss**
18 **here? I'm sorry. Yeah, Section 5.2.**

19 A. Again, just sum up the need for a
20 nature and extent investigation and what would be
21 some different components of that, how you
22 would -- sampling, analysis, field screening,
23 characterization of sources and potential sources.

24 You ultimately typically end up

1 with a three-dimensional analysis, a conceptual
2 site model, and the -- and then you are just
3 collecting all of those physical
4 geochemical/chemical characteristics that enable
5 you to evaluate the site and select a remedy.

6 **Q. And Section 5.3, what do you discuss**
7 **in this section?**

8 A. It's -- it's a reminder that the
9 Board talked about Midwest Gen's use of -- the
10 CCAs, the GMZs and the ELUCs have not resulted in
11 improving groundwater quality and will not prevent
12 the continued spread of contaminants from source
13 areas. And if you think about it, these power
14 plants have been -- have been in operation for 70
15 to 100 years. It's fair to say that they have
16 generated coal ash during that burning process.

17 And we know that there is
18 historical disposal areas or fill areas all -- in
19 multiple areas at these power plants, right?

20 So the Board's conclusion that
21 the ash is not going to restore itself
22 naturally -- you know, that clearly the CCAs and
23 the GMZs and the ELUC s, we have those, and we
24 still have ongoing contamination. And it also

1 talks about how a remedy has to evaluate and be
2 selected for the current and the future uses of
3 the Class 1 water source.

4 And then how a remedy must be
5 evaluated. It must be reliable. They must -- the
6 Illinois CCR rule says that you should remediate
7 and restore, quote, unquote, "the groundwater."
8 So can that happen within a reasonable amount of
9 time for each of the alternatives?

10 And then it talks about how
11 the -- the closure by removal has been quite
12 common, and it's been practical. It has been
13 economically reasonable, because utilities have
14 chosen to close by removal.

15 MS. BUGEL: Hearing Officer,
16 Complainants move for admission of Exhibit 1101
17 into the record.

18 HEARING OFFICER HALLORAN:
19 Ms. Nijman?

20 MS. NIJMAN: We retain our standing
21 objection to expert reports as evidence in the
22 record. I understand that the Board -- you have
23 stated in the past that the Board prefers it. I
24 just have a standing objection.

1 HEARING OFFICER HALLORAN: So noted.

2 I'm going to allow it.

3 Complainant's Exhibit 1101 is
4 accepted and admitted into evidence.

5 (Whereupon, Exhibit No. 1101 was
6 admitted into evidence.)

7 HEARING OFFICER HALLORAN: You may
8 continue, Ms. Bugel.

9 MS. BUGEL: Thank you. We are now
10 placing in front of you -- Hearing Officer, if we
11 can approach, placing in front of you
12 Exhibit 1102.

13 (Whereupon, Exhibit No. 1102 was
14 marked for identification.)

15 BY MS. BUGEL:

16 Q. And, Mr. Quarles, are you familiar
17 with this document?

18 A. I am.

19 Q. And can you explain what this is?

20 A. It's a rebuttal report to Midwest
21 Gen's Weaver Consulting Group expert report.

22 Q. And does this appear to be a true
23 and accurate copy of this document?

24 A. It does.

1 MS. BUGEL: And, Hearing Officer, in
2 terms of the sequence of witnesses, for
3 efficiency, instead of recalling Mr. Quarles as a
4 rebuttal witness, we would propose to cover
5 rebuttal now.

6 HEARING OFFICER HALLORAN: Okay.
7 Have you talked to Midwest about that?

8 MS. NIJMAN: No.

9 HEARING OFFICER HALLORAN: Let's go
10 off the record for a minute.

11 (Whereupon, a discussion was had
12 off the record.)

13 HEARING OFFICER HALLORAN: We're
14 back on the record now.

15 Ms. Nijman?

16 MS. NIJMAN: So hearing of this
17 intent now, we will not object, given I understand
18 Mr. Quarles' schedule, on the condition that
19 Mr. Quarles is not called back at a later date.

20 MS. BUGEL: We can agree to that.

21 HEARING OFFICER HALLORAN: Okay.
22 Did you get that, Kari.

23 THE COURT REPORTER: Yes.

24 HEARING OFFICER HALLORAN: Thank

1 you. You may proceed.

2 BY MS. BUGEL:

3 Q. Mr. Quarles, can you please tell me
4 what this document -- can you explain what this
5 document is that we have put in front of you?

6 A. It is a rebuttal report that is an
7 evaluation and responses to Midwest Gen's expert
8 report by Weaver Consultants Group.

9 Q. And does this appear to be a true
10 and accurate copy of the document?

11 A. It does.

12 Q. And turning to Section 1.2, starting
13 on page 2, carrying over to page 3, can you give
14 us a quick overview of what you discuss in this
15 section?

16 A. It's a -- it's a reminder that the
17 Board found violations. The 620 standards apply.
18 Historical and active areas are sources or
19 potential sources. It talks about how the -- the
20 CCAs were -- were meant to avoid and detect any
21 further contamination. The groundwater management
22 zones are not meant to be permanent, and land --
23 environmental land use control, ELUC, is -- again,
24 it's not a corrective action. It's just designed

1 to protect against exposures, and that there is no
2 evidence that would suggest that groundwater
3 quality at Joliet, Powerton, and Waukegan will
4 return to the Class 1 groundwater standards of
5 6 -- Part 620.

6 **Q. And can you please turn to Section**
7 **2.2, page 6, of your report? And can you please**
8 **tell me what you are discussing in this section?**

9 A. The Weaver Consulting Group experts
10 had, quote, unquote, "issues" with my prior
11 report, and said that I didn't -- I presented,
12 quote, unquote, "little independent analysis" and
13 how I relied too heavily on the Board's opinion.
14 And though I did rely on the Board's opinion
15 because that was the best historical, factual,
16 regulatory, technical summary of the facts that
17 led to the liability for the multiple violations.

18 It talks about that my -- I
19 didn't have an independent analysis, and I
20 disagree with that, that I had substantial
21 independent analysis in the prior report.

22 **Q. Turning to page 7, the second full**
23 **paragraph after the bullet point, and that**
24 **paragraph begins, "Next, WCG."**

1 **First, when you say WCG, who are**
2 **you referring to?**

3 A. That's the Weaver Consulting Group.

4 **Q. And can you please tell me what**
5 **point of the Weaver Consulting Group witnesses are**
6 **you discussing here?**

7 A. Weaver claimed that I incorrectly
8 applied the requirements of the -- when I used the
9 term "CCR rule," that's an abbreviation for the
10 federal CCR rule, and they are saying I
11 incorrectly applied the CCR rule to the entirety
12 of the stations, including both the federal CCR
13 regulated units and the historic fill areas.

14 And I clarified that I'm aware
15 that the CCR doesn't include any standards for the
16 historic fill areas.

17 **Q. And looking at the last full**
18 **paragraph on page 7, can you please identify what**
19 **point of the Weaver witnesses you are discussing**
20 **in this paragraph?**

21 A. They -- Weaver claimed that I
22 performed no independent analysis to demonstrate
23 that there are or will be source areas at the
24 station.

1 But, again, I rebut that.
2 Midwest Gen was the one that never defined all of
3 these -- and like the ASDs, for example, or the
4 2011 Patrick report where they said other
5 potential sources or other historic sources
6 without naming them. And my analysis certainly
7 suggests that those sources can be named. So I
8 disagree that I didn't have an independent
9 analysis of source areas.

10 **Q. I'm going to turn to page 9, Section**
11 **2.3.2. Can you please tell us what point of the**
12 **Weaver witnesses you are responding to in this**
13 **paragraph?**

14 A. Well, I get criticized for not
15 identifying a specific remedy for each station.
16 And I responded saying that that criticism is not
17 warranted. And it's not warranted, because you
18 can't evaluate and select a remedy until you have
19 completed a thorough nature and extent
20 investigation to know all of the sources and
21 potential sources.

22 It's -- that's the foundation of
23 that evaluation. So, again, that's -- it's just
24 not -- it's the beginning of a process of

1 evaluating selecting a remedy, as opposed to
2 selecting a remedy like the gentleman at Weaver
3 did for monitored natural attenuation without
4 completion of a nature and extent investigation.

5 **Q. And can you please turn to Section**
6 **2.3.3, page 10? And can you tell us what you are**
7 **discussing in this section?**

8 A. So we all know the Board established
9 liability to the Part 620 standards, the Class 1
10 potable standards. And Weaver and Midwest Gen
11 proposed really a risk-based approach for
12 monitored natural attenuation, and they talk about
13 the absence of risk to mitigate violations of the
14 12(a), 12(d), 21(a) for water pollution control,
15 open dumping. They offered then the risk-based
16 approach.

17 If we remind ourselves to the
18 Board's opinion that it's really immaterial about
19 whether the historic ash or the active sources
20 caused the contamination, but it becomes a process
21 of source identification to eventually select a
22 remedy.

23 And the Board also talked about
24 how it's not likely to naturally restore the

1 groundwater, monitored natural attenuation, and
2 really doing nothing that would be an active --
3 short of an active remediation, doing nothing will
4 restore and remediate the groundwater back to its
5 original condition. And I agree, that monitored
6 natural attenuation is not likely to meet the Part
7 620 standards.

8 **Q. Turning to Section 2.3.4, on the**
9 **same page. Can you tell us what you discuss in**
10 **this section?**

11 A. Well, again, the Board determined
12 that the GMZs the CCAs and the ELUCs are not
13 likely to improve groundwater to meet the 620
14 standards. I agree with that. And -- and Weaver
15 concluded that no further investigation is needed,
16 and that monitored natural attenuation is the
17 preferred route for remedy.

18 And -- and again, I -- that's
19 essentially continuing with -- with the same
20 approach that the -- that has been used really
21 since groundwater contamination was first
22 detected, and we still have exceedances of the
23 numeric standards.

24 HEARING OFFICER HALLORAN:

1 Mr. Quarles, your last word or words always tails
2 off.

3 THE WITNESS: Okay.

4 BY MS. BUGEL:

5 Q. And, Mark, if you need to, you can
6 sit facing the court reporter a little more, if
7 that will help.

8 A. Yeah. I should have brought a
9 bottle of water.

10 Q. We can get you water.

11 A. I will be okay.

12 Q. Okay. Turning to Section 2.3.5,
13 "Closure-in-Place Presumptive Remedy" on page 11.

14 Can you tell us what you're
15 covering in this section?

16 A. The Weaver report proposed a cap
17 cover-in-place of Waukegan in the former
18 slag/former fly ash fill area. And they talked
19 about -- they used the term "presumptive remedy,"
20 that caps over solid waste are what they consider
21 to be the presumptive remedy that would be
22 appropriate in this situation and location for a
23 long-term closure of that fill area.

24 And they also talk about in

1 really one sentence is that they talk about how
2 landfills tend to be more protective of
3 groundwater compared to surface impoundments,
4 because they are implied to be dry disposal,
5 whereas a surface impoundment is a, quote,
6 unquote, "wet" disposal process, and that a
7 presumptive remedy of closure with a cap usually
8 involves de-watering.

9 And I go into the conversation
10 and discussion about if that fill area were a
11 surface impoundment, would the cap meet the
12 federal CCR rule and the Illinois rule to protect
13 groundwater long term? And on page 12, the key
14 couple of bullets there, a closure-in-place,
15 according to both Illinois rule and the federal
16 rule -- and the Illinois rule, adopts this
17 language verbatim -- is to "Control, minimize or
18 eliminate, to the maximum extent feasible,
19 post-closure infiltration of liquids."

20 So I talked about earlier about
21 how it was documented that ash was submerged in
22 the fill area in the water table, and how that
23 situation would not be approvable and comply with
24 the CCR rule. And so if you talk about a

1 presumptive remedy for putting a cap over that
2 area of Waukegan, there is no reason to think that
3 that's going to prevent, control or minimize the
4 post-closure infiltration of liquids of
5 groundwater flowing through the ash on its way to
6 the -- to the lake.

7 (Whereupon, Exhibit No. 1103 was
8 marked for identification.)

9 BY MS. BUGEL:

10 Q. And we are going to place an exhibit
11 in front of you. We are distributing what has
12 been marked as Exhibit 1103.

13 Are you familiar with this
14 document?

15 A. I am.

16 Q. Can you explain what it is?

17 A. This is a report written in 2000 --
18 or published in 2001 by the Electric Power
19 Research Institute, otherwise known as EPRI. EPRI
20 is a trade association for the electric power
21 producing industry. And EPRI produces lots of
22 independent studies of technical evaluations.

23 And this is a report that they
24 published where they evaluated three different

1 unlined impoundments, coal ash impoundments, where
2 modeling was performed before a closure to predict
3 how the groundwater concentrations would improve
4 after closure. And they evaluated these three
5 enclosed coal ash impoundments to see whether or
6 not groundwater actually improved, groundwater
7 quality actually improved.

8 **Q. And did you rely on this document in**
9 **forming your opinions for this testimony?**

10 A. I did.

11 **Q. And what did you rely on it for?**

12 A. It was a -- it was a really useful
13 document, because it evaluated whether or not
14 groundwater quality improved after three
15 impoundments were closed, and the conclusion was
16 that if an impoundment is not fully dewatered
17 before you build your cap, you should not expect
18 groundwater quality to improve sufficient to meet
19 your -- your groundwater performance standards.

20 **Q. And does this appear to be a true**
21 **and accurate copy of the document that you relied**
22 **on?**

23 A. It does.

24 MS. BUGEL: Complainants move for

1 the admission of Exhibit 1103 into the record.

2 HEARING OFFICER HALLORAN:

3 Ms. Nijman?

4 MS. NIJMAN: Simply because --
5 object to the extent that simply because an expert
6 relied on the report does not make it admissible.
7 He can rely on it without it being admissible.

8 We don't know anything about the
9 authors of this report or the conclusions made
10 here.

11 HEARING OFFICER HALLORAN:

12 Ms. Bugel?

13 MS. BUGEL: This is a publicly
14 available document. It's -- for that reason, it's
15 presumed to be, you know, authentic, and the
16 reliability is established by it being a published
17 report, and Mr. Quarles in his expertise found
18 this to be a reliable document. And on top of
19 that, this is -- goes to the remedy being proposed
20 by the Weaver witnesses. So it is a helpful
21 document to the Board.

22 HEARING OFFICER HALLORAN: Any
23 response, Ms. Nijman, other than your original
24 objection?

1 MS. NIJMAN: Same. Original

2 objection.

3 HEARING OFFICER HALLORAN: So noted.

4 You know, I'm going to let it in. It has a, I

5 think, sufficient indication of being trustworthy.

6 Mr. Quarles has relied on it. It's a public

7 document. And, again, I think it would assist the

8 Board, and Ms. Nijman and Ms. Gale can file an

9 objection before the Board if so needed.

10 So Exhibit 1103 is admitted over

11 objection.

12 (Whereupon, Exhibit No. 1103 was

13 admitted into evidence.)

14 BY MS. BUGEL:

15 Q. And, Mr. Quarles, you can set aside

16 1103 for the moment. I'm going to turn back to

17 your report, page -- page 13.

18 A. The rebuttal report?

19 Q. Yes, your rebuttal report. Thank

20 you. And on page 13, I'm looking at the second

21 full paragraph on the page.

22 And do you discuss a presumptive

23 remedy in this paragraph?

24 A. Yeah, the opening sentence is that

1 Weaver did not define what a presumptive remedy
2 is, other than describing that they consider a low
3 permeability cap to be a technology that
4 regulators believe based on prior experience would
5 be the most appropriate remedy --

6 HEARING OFFICER HALLORAN:

7 Mr. Quarles, your -- can you keep it up, please,
8 your voice?

9 BY THE WITNESS:

10 A. So, the Weaver experts described it
11 as being a technology that the regulators believe
12 based on prior experience would be the most
13 appropriate remedy for a specified type of site,
14 and it's -- they go on to say that it's a proven
15 remedial technology that has been used for
16 decades, and particularly prevalent as a means to
17 closing solid and hazardous waste landfills and
18 surface impoundments. And they talk about how it
19 will reduce infiltration and mitigate potential
20 leaching from ash materials, and that the cap
21 should be designed by a licensed professional
22 engineer.

23 So that's really kind of a
24 paragraph that summarizes why Weaver believes a

1 cap that they have proposed at Waukegan would be
2 appropriate.

3 MS. BUGEL: And, Hearing Officer, we
4 have a bottle of water for Mr. Quarles. Can we
5 approach the witness and give it to him?

6 HEARING OFFICER HALLORAN: You may.

7 BY MS. BUGEL:

8 Q. Thank you.

9 A. Thank you.

10 Q. And, Mr. Quarles, can you explain
11 what your understanding -- sorry. I will just ask
12 the question.

13 Can you explain what your
14 understanding of the term "presumptive remedy" is?

15 A. A presumptive remedy is -- it's
16 generally regarded as a -- and I gave an italics
17 on page 13. It's a grab from presumptive remedy
18 for a municipal solid waste landfill. It's a
19 preferred technology that's common for a category
20 of sites, and in this case, the category of sites
21 for this document is a municipal solid waste
22 landfill and its historical patterns of remedy
23 selection that seems to be appropriate for that
24 type of contaminant and that kind of disposal

1 unit.

2 Q. Okay. And can you please look at
3 the fifth full paragraph on page 13, and it
4 begins, "First, CCRs at the FS/FAS Area." Do you
5 see that paragraph?

6 A. I do.

7 Q. Can you please tell us what you
8 are -- what point you are making in this
9 paragraph?

10 A. The CCRs in that area are
11 well-documented to be saturated below ground and
12 buried as deep as 22 feet below ground, and coal
13 ash is saturated. If you build a cap over the top
14 of that area, and the ash is in contact within the
15 aquifer, and the groundwater follows from the west
16 to the east, the cap is not going to prevent that
17 continued contact of the aquifer with the waste,
18 and that continued contact can be continued
19 leaching of constituents to groundwater long-term,
20 even after construction of the cap. And so I go
21 on to say, those same saturated conditions at
22 Waukegan might also exist at other historical fill
23 areas; at, for example, the two ash landfills at
24 Joliet.

1 So, again, that's why it's
2 important to understand the nature and extent of
3 contamination.

4 **Q. And turning to page 14, Section**
5 **2.3.6, can you please tell us what you are -- what**
6 **you are covering in this section?**

7 A. The first paragraph talks about how
8 Weaver concluded that monitored natural
9 attenuation is an appropriate remedy for Joliet,
10 Powerton, and Will County. And that constructing
11 a low permeability cap over that slag/fly ash area
12 at Waukegan is the presumptive remedy, and they
13 describe it as enhancing natural attenuation or
14 natural degradation.

15 And I continue to agree with the
16 Board, that the groundwater is -- will not improve
17 with such -- such an approach. One of the
18 interesting parts about the -- the -- kind of the
19 proposal for a cap and a risk-based closure is
20 that Weaver was not specific or even roughly
21 estimated, other than describing it in decades,
22 how long it will take for the groundwater to be
23 remediated and restored to the Part 620 standards.

24 The last paragraph on that page,

1 it's really just a continuation or a proposed
2 continuation of the GMZs and the ELUCs where they
3 are proposing can be implemented in lieu of an
4 active remediation when exposures can be
5 controlled. So they didn't define what an active
6 remediation is, but I'm assuming that it is, you
7 know, anything that's kind of a manmade influence
8 other than a monitored natural attenuation.

9 **Q. And I want to turn to page 15. The**
10 **second bullet point on the page, can you explain**
11 **what point you are discussing in that second**
12 **bullet?**

13 A. I can. The Weaver report looked at
14 decreasing groundwater concentrations in
15 hydraulically downgradient wells, and in some
16 cases they were far away from any of the active
17 basins, for example, at Powerton. They talked
18 about how there is no risks to off-site receptors,
19 as if the property line in the downgradient
20 monitoring wells are the compliance point where
21 groundwater protection standards must be met.

22 According to the federal CCR
23 rule and the Illinois rule, that is not correct.
24 The -- instead, the numeric standards must be met

1 at what is defined as the waste boundary, which if
2 you could imagine, looking down at a map, the
3 perimeter of an ash basin, and if you drew a
4 vertical line around that perimeter, that is the
5 waste boundary on the downgradient side of that
6 perimeter.

7 And that's where the groundwater
8 protection standards must be met according to
9 this, the federal rule and the Illinois rule.

10 **Q. And turning to -- turning to the**
11 **second half of page 15, looking at the paragraph**
12 **right in the middle of that page that's not**
13 **bulleted. Can you tell us what you are discussing**
14 **in that paragraph?**

15 A. So, Weaver used the term "restore,"
16 when they were talking about their planned
17 approach would be expected to restore the
18 groundwater quality, and I disagreed with that
19 conclusion, that it was not supported by facts,
20 and that the monitored natural attenuation would
21 not remedy all of the violations identified by the
22 Board. And then I go on to talk about some other
23 facts associated with the proposed monitored
24 natural attenuation as not meeting the minimum

1 requirements.

2 **Q. Okay. You can turn to Section**
3 **2.3.7, page 16. And what opinion do you offer in**
4 **this section?**

5 A. I talk about beneficial use of CCRs,
6 whether or not -- whether or not the waste that is
7 on these properties is considered to be a
8 beneficial use, and the Board concluded that the
9 placement and use of the CCRs at all of the
10 stations, it does not meet the term of a
11 beneficial use by definition, and that it's a
12 discarded waste.

13 I also talk about leaching tests
14 that are typically used and have been used to
15 support the beneficial use determinations. I also
16 talk about how Midwest Gen had never applied for,
17 received approval for any beneficial use at any
18 station, and when -- when and how an EPA-approved
19 leaching test should be used and what test that
20 should be.

21 **Q. And turning to page 17, Section**
22 **2.4.1, can you please tell us what this section is**
23 **about?**

24 A. So, leaching tests are predictor

1 tests. You are trying to predict what
2 constituents would be expected or could be
3 expected to leach from a discarded waste. The EPA
4 is clear to say the best demonstration of
5 determining if something is leachable is to
6 install wells to sample the water, particularly
7 where you have got a bunch of historic fill areas
8 in wells that are located in a downgradient
9 direction of an active impoundment.

10 I talk about the leach tests
11 that were used and discussed in the Weaver report.
12 Much of the results for the prior leaching test,
13 they seem to have been done in support of a
14 beneficial use, not leach tests that were
15 performed to know whether or not the ash was
16 leachable from an environmental protection
17 standpoint.

18 EPA came out with a test called
19 the LEAF, L-E-A-F, test method. That is an
20 acronym for the Leaching Environmental Assessment
21 Framework test. EPA came out with that test in
22 the last few years along the same time the final
23 CCR rule came out, because they had recognized
24 that prior leach tests, including the -- I will

1 use a lot of acronyms, the ASTM test, the NLET,
2 E -- excuse me -- NLET and the SPLP test did not
3 accurately predict leachability from coal ash at
4 the multiple pHs that are expected at a coal ash
5 disposal site. And the LEAF test accomplished
6 that goal of predicting leachability at multiple
7 pHs.

8 Q. And turning to Section 2.4.2. I'm
9 looking down -- about halfway down the page,
10 halfway down page 20. You have a heading, Phase
11 I?

12 A. I'm sorry. Say that again?

13 Q. I'm looking at page 20.

14 A. Page 20.

15 Q. Section 2.4.2, halfway down the
16 page, the heading that says, "Phase I and II
17 Environmental Site Assessments."

18 Can you please tell us what you
19 discuss in this subsection?

20 A. Yeah. Phase I and Phase II
21 Environmental Site Assessments, it talks about
22 what those reports are usually meant to do. And I
23 didn't remember the date of the transaction or
24 when Midwest control -- Midwest Gen took control

1 over these sites, but I think Ms. Nijman discussed
2 1999, which would make sense. The dates of these
3 Phase I and Phase II environmental site
4 assessments done by a firm called ENSR, E-N-S-R,
5 they were done in 1999.

6 And they are really very cursory
7 reviews of a prior site history and regulatory
8 review of permits and a site evaluation, and they
9 are typically associated with a property
10 acquisition or sale to meet the -- all appropriate
11 inquiry requirements of an innocent landowner
12 defense for a purchaser. They are not meant to be
13 exhaustive, detailed nature and extent
14 investigations. They are supposed to identify
15 historic and current areas that might have a
16 recognized environmental condition, which is an
17 ASTM definition, to know whether or not any
18 contaminant might exist or does exist after you
19 acquire a property.

20 **Q. And I would like to jump back up a**
21 **little bit to the top of that page, "Coal Sources**
22 **and Contaminant Variability." Do you see that?**

23 **A. I do.**

24 **Q. Can you give us a quick overview of**

1 **your points in this section?**

2 A. Of -- coal sources can vary the
3 contaminants associated with that source. So, for
4 example, some of these power plants, you know,
5 they began in the 1920s. The source of coal that
6 was burned decades ago versus the source of coal
7 that's burned today, you might be burning a
8 Wyoming coal today, versus an Illinois coal
9 50 years ago. The metal content and the sulfate
10 content of the coal varies depending on where it
11 came from. So then when you burn it, the coal ash
12 would be expected to have varying degrees of
13 contaminants in the ash.

14 Similarly, once you add air
15 pollution control technology to the conversation,
16 you are removing metals from the air and
17 transferring that to a solid waste. So an ash
18 that is associated with a more sophisticated type
19 of pollution control would be expected to differ
20 from an ash that did not. So if you have
21 historical disposal areas with historical
22 different types of coal, one can expect different
23 types of constituents associated with that.

24 **Q. And turning to page 25, Section**

1 **2.4.3, your Joliet specific comments, can you**
2 **please tell us what you discuss in this section?**

3 A. That section discusses Joliet's
4 specific comments. Weaver had a -- a diagram that
5 showed, in their opinion, extensive locations of
6 borings, historic borings, and wells, surface
7 samples, all in support of their conclusions that
8 no more investigations were needed.

9 We need to remember that some of
10 these leaching tests were done by methods that
11 were not the LEAF method. The sampling program
12 diagram didn't show any samples collected from two
13 ash landfill areas that they identified in their
14 report, and the highest density of samples came
15 from a northwest area, and those were only
16 collected for a beneficial use leaching test.

17 The Phase II environmental site
18 assessment that was performed only shows sporadic
19 locations of boring. So it's clear that a
20 thorough investigation at Joliet has not yet been
21 completed.

22 Q. And turning the page then to page
23 **27, Powerton specific comments, can you summarize**
24 **the points you make in this section?**

1 A. That is a summary of my review of
2 Weaver's evaluation and determination that the
3 borings and wells and pit -- test pits and samples
4 were adequate, and no more investigations were
5 needed. And -- and I described that the only
6 historic area with a high density of samples was a
7 former ash basin.

8 The Phase II Environmental Site
9 Assessment, sporadically located borings. There
10 were other suspected unrecognized historical fill
11 and disposal areas located at the property. And
12 then -- then I evaluated in my report the
13 direction of groundwater flow, and -- and
14 interpretation of using wells that showed a radial
15 mounded groundwater flow that they disagreed with.

16 **Q. And turning to Waukegan on page 29,**
17 **can you give us an overview of your opinions**
18 **offered in this section?**

19 A. Well, again, Weaver concluded that
20 the historical data were sufficient to
21 characterize the historical areas at Waukegan, and
22 they had an illustration that showed the locations
23 of their wells and borings and sediment samples,
24 surface samples, and the only historic area that

1 they illustrated with a high density of samples
2 was the former slag/fly ash disposal area, which
3 was west of the east and west basin. No high
4 density around the east and west basin.

5 And then the Phase I
6 Environmental Site Assessment, again, was very
7 sporadic with few borings and how that there were
8 other suspected fill areas or disposal areas on
9 site that have not been investigated.

10 **Q. Turning to page 30, you have your**
11 **Will County specific comments. Can you summarize**
12 **these comments?**

13 A. Same thing for Will County. Weaver
14 evaluated or kind of summarized with a diagram
15 that had historical soil borings and wells and
16 different samples, and I concluded that -- that
17 there are really no areas of high density sampling
18 anywhere on the property, and no borings or
19 virtually no borings on the south end of the ash
20 complex, which is part of the original former ash
21 basin, and that the Phase I environmental site
22 assessment, again, had very few and sporadic
23 boring locations.

24 **Q. On page 31 you turn to the**

1 **discussion of decreasing groundwater concentration**
2 **trend. Do you see that?**

3 A. I do.

4 **Q. And what conclusion of the Weaver**
5 **witnesses do you discuss in this section?**

6 A. Weaver concluded from a -- their
7 statistical evaluation of historical data that
8 groundwater concentrations at Joliet, Powerton,
9 and Will County are decreasing. And I looked at
10 their data, and they looked at approximately ten
11 years of well data. They did not look at all of
12 the wells. They looked at select wells that were,
13 quote, unquote, the "farthest downgradient
14 locations," because "these wells are the most
15 relevant, because they represent groundwater
16 quality after the natural groundwater mechanisms
17 of invective dispersion and attenuation," and then
18 it goes on to say "before reaching the
19 downgradient property line."

20 So, again, the point is, they
21 looked at wells that were the furthest
22 downgradient locations that they could find, and
23 that means they ignored some of the wells and all
24 of the wells that were closest to the disposal

1 areas if you have those wells in addition to some
2 near the property line. It also means that in
3 their evaluation, they evaluated groundwater
4 quality away from the EPA and the
5 Illinois-specific definition of a waste boundary
6 at the downgradient extent of the active ponds.

7 So then I evaluated whether or
8 not I believed or agreed with the -- if the
9 concentrations were decreasing.

10 **Q. And you have some bullet points**
11 **starting at the bottom of page 31 and carrying**
12 **over to page 32. Can you tell us what you cover**
13 **in those bullet points?**

14 **A.** Yes. So the Weaver report had
15 tables that listed the number of analyses they
16 performed, what constituents they evaluated, and
17 what wells they evaluated.

18 And in Joliet, for example, they
19 had 132 tests, and they concluded that 74 percent
20 exhibited either an upward trend or no trend at
21 all, and 26 percent had a downward trend. And of
22 the downward trend, only 32 percent of those
23 results of a downward trend were reliable at their
24 desired 99 percent confidence level.

1 So that means that they
2 concluded that 26 percent was -- a downward trend
3 was better than the upward trend of 10 percent.
4 Right? So it misses the point that some wells had
5 no trend, and then of those with the downward
6 trend, most of the results were not statistically
7 reliable.

8 **Q. Okay. And on page 32, I'm looking**
9 **at -- I'm looking at your discussion at the second**
10 **half of the page, the first bullet point after the**
11 **paragraph in the middle of the page. Can you tell**
12 **us what you're covering there?**

13 A. So, as I briefly mentioned just a
14 minute ago, the Weaver evaluation looked at wells
15 that were the furthest downgradient near the
16 property line for their decreasing concentration
17 conclusion, and Weaver failed to include all of
18 the historically contaminated wells in its
19 analysis at all four stations. And the first
20 bullet I give an as an example is Joliet Well
21 MW-9.

22 **Q. And Section 2.6 on page 33, you**
23 **discuss risks to off-site receptors. Can you tell**
24 **us what opinions you offer in this section?**

1 A. Weaver concluded that, quote,
2 unquote, "There is no unacceptable risks to
3 off-site receptors at the four stations." And I
4 disagree with that, because Midwest has not yet
5 collected enough information to know the risk,
6 because they have not yet performed a nature and
7 extent investigation to define all of the sources
8 and the pathways and the conditions of which the
9 ash exists.

10 The second paragraph talks about
11 how all of the stations are bordered by surface
12 water, and that the shallow groundwater discharges
13 into those surface waters. What that -- what that
14 suggests is that we are relying on a dilution once
15 that groundwater reaches a surface water, and that
16 the only risk would be the surface water users
17 associated with that determination.

18 And I might add, you know, as it
19 relates to this migration to the downgradient
20 receptors, Weaver had talked about dispersion and
21 attenuation during that migration process that it
22 would -- it would be that process of monitored
23 natural attenuation, and that dilution process
24 associated with that dispersion is -- it can't be

1 the only -- only mechanism to evaluate the
2 adequacy of a monitored natural attenuation.

3 The EPA is clear that dispersion
4 and dilution won't be considered and should not be
5 considered the sole monitored natural attenuation
6 selection criteria.

7 MS. BUGEL: Hearing Officer, at this
8 point Complainants move for the admission of
9 Exhibit 1102 into the record.

10 HEARING OFFICER HALLORAN:

11 Ms. Nijman?

12 MS. NIJMAN: We would object based
13 on our continued standing objection. In addition,
14 we renew our objection to the portions of this
15 report that include an attack on the
16 qualifications of Respondent's experts.

17 HEARING OFFICER HALLORAN: I'm
18 sorry. I can't --

19 MS. NIJMAN: An attack on the -- we
20 renew our request to strike the portions of this
21 report that discuss the attack on the
22 qualifications of Respondent's experts.

23 HEARING OFFICER HALLORAN: Okay.
24 And that's been addressed before, I think.

1 MS. NIJMAN: It has been addressed
2 in the written motion. We renew our request and
3 request the Hearing Officer's decision.

4 HEARING OFFICER HALLORAN: As it was
5 before, I will overrule. I will allow Complainant
6 Exhibit No. 1102 into evidence.

7 (Whereupon, Exhibit No. 1102 was
8 admitted into evidence.)

9 MS. BUGEL: And Complainants now are
10 putting in front of you --

11 HEARING OFFICER HALLORAN: Let's --
12 Ms. Bugel, I'm sorry.

13 MS. BUGEL: Yes.

14 HEARING OFFICER HALLORAN: We have
15 been at this for almost two and a half hours. Do
16 you want to take a 15-minute break? And we are
17 still on the record, Kari. And when you're on
18 your break, kind of figure out when you want to
19 take a lunch and for how long.

20 And before I go off the
21 transcript, I noticed our Chairperson, Barbara
22 Flynn-Currie entered. She is back there listening
23 intently. We have her staff attorney, Vanessa
24 Horton, and I think another environmental

1 scientist, Essence Brown came in. I think that's
2 all the folks. All right. Fifteen minutes, guys.
3 We're off the record. Thank you.

4 (Whereupon, a short break was
5 taken.)

6 HEARING OFFICER HALLORAN: We're
7 back on the record. You may resume, Ms. Bugel

8 MS. BUGEL: I have got to take out
9 my glasses. Okay. We are on to what Complainants
10 have marked Exhibit 1104.

11 (Whereupon, Exhibit No. 1104 was
12 marked for identification.)

13 BY MS. BUGEL:

14 Q. And this has a Bates number of
15 67340.

16 And, Mr. Quarles, are you
17 familiar with this document?

18 A. I am.

19 Q. Can you explain what this document
20 is?

21 A. It is a 1999 EPA -- I'm trying to
22 see what they call it. It's a document related to
23 the use of monitored natural attenuation at a
24 variety of different sites; superfund RCRA,

1 corrective action, and underground storage tank
2 sites.

3 **Q. And did you rely on this document in**
4 **forming your opinions for your testimony today?**

5 A. I did.

6 **Q. What did you rely on it for?**

7 A. This document is -- is an early -- I
8 say early 1999 discussion about -- about when and
9 how monitored natural attenuation should be used
10 to evaluate a site, and how it should be used in
11 an evaluation selection of a remedy.

12 **Q. And is there anything from this**
13 **document that's particularly relevant to your**
14 **opinions?**

15 A. It talks about how -- like on page
16 3, the top, the EPA expects its source control and
17 long-term performance monitoring will be
18 fundamental components of any MNA, and so source
19 control being a key part of that use of monitored
20 natural attenuation.

21 **Q. And what would source control**
22 **involve at the Midwest Generation sites?**

23 A. So, a source control is where you
24 identify through a nature and extent investigation

1 what sources exist, and then you evaluate how I
2 can control that source, and/or remediate that
3 particular source so that it won't be a continued
4 source of contamination.

5 And a good example would be like
6 in my prior report where I talked about a removal
7 action, for example, where you have excavated and
8 hauled material away. That would be a source
9 control of a coal ash.

10 MS. BUGEL: And Complainants move
11 for the admission of Exhibit 1104 into the record.

12 HEARING OFFICER HALLORAN:
13 Ms. Nijman?

14 MS. NIJMAN: Objection. Again, the
15 fact that he relied on it and referenced one page
16 only means that one page is potentially relevant,
17 and it does not need to go into the record as an
18 entire document.

19 HEARING OFFICER HALLORAN: What --
20 I'm sorry, Ms. Nijman. What page was that?

21 MS. NIJMAN: Mr. Quarles only
22 testified that something on page 3 was relevant to
23 him. The entire document, otherwise, would not be
24 relevant. So there is no need to have this in the

1 record.

2 HEARING OFFICER HALLORAN: So, yeah,
3 just one paragraph on page 3.

4 Ms. Bugel, would you care to
5 respond?

6 MS. BUGEL: Yeah. I would -- can I
7 ask some additional follow-up questions to
8 Mr. Quarles, then, please?

9 HEARING OFFICER HALLORAN: Yes.
10 Yes, you may.

11 MS. BUGEL: Thank you.

12 BY MS. BUGEL:

13 Q. Mr. Quarles, is there anything else
14 in this document that's relevant to your opinions?

15 A. It talks about when and how
16 monitored natural attenuation should be used. It
17 talks about how it should be compared with an
18 evaluation of time frame compared to other
19 different remedial alternatives. It talks about
20 how you need to understand the complexities of
21 what is below ground before you think -- talk
22 about the use of monitored natural attenuation.

23 Q. And how are those items relevant to
24 your opinions in this proceeding?

1 A. Well, monitored natural attenuation
2 is a -- is not a sole remedy. It's used in
3 conjunction with other types of remedies, and it
4 also has to have an -- an end goal of -- of
5 meeting the water qualify objectives within a
6 reasonable time frame compared to other
7 alternatives.

8 MS. BUGEL: Thank you. With that
9 additional testimony of Mr. Quarles, Complainants
10 renew their motion for the admission of
11 Exhibit 1104 into the record. And monitored
12 natural attenuation is central to this whole
13 proceeding, especially between the Weaver experts
14 and Mr. Quarles and their various opinions on it.
15 So this document would be helpful to the Board and
16 is very informative to the central issues in this
17 hearing.

18 HEARING OFFICER HALLORAN:
19 Ms. Nijman?

20 MS. BUGEL: All that Mr. Quarles
21 just did was flip through pages and summarize what
22 he thinks this says and make generalities. There
23 are no page numbers provided, no citations to
24 where he relied on this report, and no relevance,

1 therefore, directly associated with this document.

2 I have no objection to his
3 reliance on this report. That is appropriate. It
4 is not appropriate when he does not cite to what
5 he is relying on to put it in the record.

6 HEARING OFFICER HALLORAN:

7 Ms. Bugel?

8 MS. BUGEL: So this is a document
9 that Mr. Quarles discussed in his deposition, and
10 Mr. Wannier was asking Mr. Quarles additional
11 questions about this document and its relevance to
12 his opinion, and Ms. Nijman ceased the deposition.

13 So we have made every attempt to
14 communicate Mr. Quarles's reliance on this
15 document to counsel for Midwest Generation, and --

16 MS. NIJMAN: If you can provide us
17 with the page numbers and citations he is
18 referring to, it can make the document somewhat
19 relevant for the record.

20 HEARING OFFICER HALLORAN:

21 Ms. Bugel?

22 MS. BUGEL: Yeah. May I ask
23 Mr. Quarles further questions?

24 HEARING OFFICER HALLORAN: Yes, you

1 may.

2 MS. BUGEL: Thank you.

3 BY MS. BUGEL:

4 Q. Mark, in reviewing some of the
5 statements you just made, can you -- well, let me
6 start by asking, have you read this whole
7 document?

8 A. I have.

9 Q. And can you give us specific page
10 numbers for the aspects of this document that
11 support your opinions?

12 A. Without -- without reading it again,
13 I can't give you the page numbers. I don't
14 remember.

15 MS. NIJMAN: Mr. Hearing Officer,
16 that makes it impossible for me to do a
17 cross-examination.

18 MS. BUGEL: If you --

19 BY THE WITNESS:

20 A. All right. So page 11. I have --
21 previously, I talked about how monitored natural
22 attenuation should not be -- it should be in
23 conjunction with other types, and on page 11,
24 there is a very bold statement according to EPA,

1 Monitored -- "MNA should not be considered a
2 default or presumptive remedy at any contaminated
3 site."

4 Q. And, Mark, if we give you a moment
5 just to look through it, can you find additional
6 page numbers, if we just --

7 A. Yes.

8 Q. -- take a moment?

9 A. Yes. Page 13, last full paragraph
10 in bold, "Decisions to employ MNA as a remedy or
11 remedy component should be thoroughly and
12 adequately supported with site-specific
13 characterization data and analysis." Again, that
14 goes back to my comment about the need for a
15 nature and extent investigation before you would
16 evaluate and ultimately select monitored natural
17 attenuation as the gentleman at Weaver did.

18 Page 18 -- oh, here we go. Page
19 17, first full paragraph. EPA expects that MNA
20 will be most appropriate when used in conjunction
21 with other remediation measures; source control,
22 groundwater extraction, as examples, or as a
23 follow-up to active remediation measures that have
24 already been implemented.

1 And then page 18, talking about
2 when MNA should be used. The sites where the
3 contaminant plumes are no longer increasing and
4 instead are shrinking would be the most
5 appropriate candidates for MNA remedies.

6 Page, 22, first full paragraph
7 in bold, that goes to what I previously said.
8 "EPA therefore expects that source control
9 measures will be evaluated for all contaminated
10 sites and that source control measures will be
11 taken at most sites where practical --
12 practicable." And those were the main points that
13 I took from this guidance document.

14 MS. BUGEL: Okay. Hearing Officer,
15 with that testimony, we renew our motion for
16 Complainants Exhibit 1104 to be admitted into the
17 record.

18 HEARING OFFICER HALLORAN:
19 Ms. Nijman?

20 MS. NIJMAN: Still objecting,
21 Mr. Hearing Officer, and now since it has now been
22 read into the record, there is no need to put the
23 document into the record itself. He has read the
24 relevant portions of it.

1 HEARING OFFICER HALLORAN: All
2 right. But it is -- it is a US EPA directive and
3 our Board regs stated in 101.626 if a reasonable
4 and prudent person would rely on it, it's okay to
5 admit it, and I consider the Board reasonable and
6 prudent, so I'm going to take it over objection.
7 Thank you.

8 (Whereupon, Exhibit No. 1104 was
9 admitted into evidence.)

10 MS. BUGEL: And Complainants now
11 have our final exhibit. This has been marked
12 Exhibit 1105.

13 (Whereupon, Exhibit No. 1105 was
14 marked for identification.)

15 BY MS. BUGEL:

16 Q. We are placing 1105 in front of you,
17 and I'm just going to give Mr. Wannier a minute to
18 finish distributing the remaining copies.

19 And, Mr. Quarles, are you
20 familiar with this document?

21 A. I am.

22 Q. And have you read this document in
23 the entirety?

24 A. I have.

1 **Q. Can you explain what this document**
2 **is?**

3 A. This is a companion document dated
4 2015 from EPA that is a follow-up to the 99
5 document, and this is a "Use of Monitored Natural
6 Attenuation For Inorganic Contaminants in
7 Groundwater At Superfund Sites."

8 So it's a follow-up with more
9 explanation about the use of monitored natural
10 attenuation for sites that have inorganic
11 contaminants such as metals.

12 **Q. And did you rely on this document in**
13 **forming your opinions for this proceeding?**

14 A. I did.

15 **Q. And can you explain why inorganics**
16 **are relevant to this proceeding?**

17 A. Inorganics being metals, arsenic,
18 boron. Chloride is thrown into that, that
19 conversation. So many of the Part 620 standards
20 that are exceeded are metals at the four plants.

21 **Q. And can you point to the portions of**
22 **this document and provide page numbers for the**
23 **aspects of this document that are particularly**
24 **relevant? And we can give you a minute to --**

1 A. Well, I mean, I will start -- I will
2 start by giving an overview of the table of
3 contents. And what's important to note is that it
4 talks about a tiered analysis approach with
5 multiple lines of evidence. What that means is,
6 it's a step-by-step process where you have
7 multiple lines of evidence that would support the
8 use and monitored natural attenuation as a
9 remedial component.

10 It goes into a discussion about
11 dispersion, which is a word that the folks at
12 Weaver used. It talked about reasonable time
13 frame, cleanup levels, and then how you evaluate
14 the tiered analysis. It talks about a site
15 characterization that is actually more complex,
16 because you are now needing additional information
17 to support what's happening below ground for the
18 attenuation rates, for example, which involves an
19 understanding of the geochemistry of the aquifer,
20 and then the attenuation processes of microbial
21 degradation, chemical transformation, absorption
22 precipitation, as examples, and they use some
23 modeling.

24 So it's -- there are lots of

1 aspects of this document -- well, the whole
2 document is relevant for these four plants, or
3 three plants where monitor natural attenuation are
4 proposed to be employed as the sole remedy.

5 **Q. And you were looking at the table of**
6 **contents. I think it would be helpful to the**
7 **record and this proceeding if you could give some**
8 **page -- some citations to where those various**
9 **items are found. So --**

10 A. Well, so page 13, it echoes and
11 restates the 1999 document that cites where plumes
12 are no longer increasing and/or shrinking would be
13 the most appropriate candidate.

14 Page -- page 14, this speaks
15 directly to the -- to the -- what seems to be the
16 argument for MNA and the Weaver report that talked
17 about dispersion and attenuation between the
18 source area and the property line and the most
19 downgradient wells. If you look at the bottom of
20 page 14, the last paragraph in bold, dilution and
21 dispersion generally are not appropriate as a
22 primary MNA mechanism, because they reduce
23 concentrations through dispersal of contaminant
24 mass, rather than destruction or immobilization of

1 contaminant mass. It's very important as it
2 relates to the proposed use of -- of MNA.

3 Page 18, again, echoes the 1999
4 document, that it -- the inset paragraph where it
5 begins with, "Control of source materials is the
6 most effective means of ensuring the timely
7 attainment of remediation objectives. EPA,
8 therefore, expects that source control measures
9 will be evaluated for all contaminated sites, and
10 that source control measures will be taken at most
11 sites where practicable."

12 And then it goes on to repeat at
13 the bottom, "Not appropriate for plumes that are
14 considered stable." They want to see a decreasing
15 and shrinking plume. What other page?

16 On page 34 or 35, 36, it talks
17 about the thorough characterization steps that are
18 needed to support selection of monitored natural
19 attenuation.

20 And then page 50, 51 there is a
21 list of one, two, three, four, five, six bullets
22 under their summary where it talks about several
23 key issues and ideas to know regarding MNA for
24 inorganic contaminants. First bullet, "Because

1 MNA does not use any active remedial measures, MNA
2 does not constitute a treatment process for
3 inorganic contaminants." Very important.

4 Second bullet to the dispersion
5 and attenuation discussion in the Weaver report,
6 "Dilution and dispersion are generally not
7 appropriate as a primary MNA mechanism because
8 they -- they accomplish concentration reduction
9 through dispersal of the contaminant mass, rather
10 than destruction or immobilization." And then
11 they, again, talk about "not appropriate for
12 plumes that are stable," and then site specific
13 data is needed. So, those are the main points
14 from that document.

15 MS. BUGEL: Okay. Thank you.

16 Complainants move for the admission of
17 Exhibit 1105 into the record.

18 HEARING OFFICER HALLORAN:

19 Ms. Nijman?

20 MS. NIJMAN: Same objection. No
21 need for it to be in the record.

22 HEARING OFFICER HALLORAN: Thank

23 you. I'm going to admit it over objection for the
24 same reasons I took Exhibit 1104.

1 (Whereupon, Exhibit No. 1105 was
2 admitted into evidence.)

3 MS. BUGEL: And, Hearing Officer,
4 Complainants have no further questions for this
5 witness.

6 HEARING OFFICER HALLORAN: Okay.
7 Thank you. I think what we are going to do is
8 take an hour-and-15-minute lunch, and I will see
9 you at 1:15. Thank you. We are off the record.

10 (Whereupon, a lunch break was
11 taken.)

12 HEARING OFFICER HALLORAN: We are
13 back on the record. It's approximately 1:22. You
14 may proceed, Ms. Nijman.

15 MS. BUGEL: Again, to preserve the
16 record, Mr. Halloran, we will object -- renew our
17 objection that we prepared in our motion in limine
18 to exclude Quarles' opinions based on all the
19 related briefing in that case and the appeal of
20 that decision regarding the fact that Mr. Quarles
21 did not comply with your order to build upon or
22 amplify testimony of prior experts in this case.

23 HEARING OFFICER HALLORAN: Thank
24 you. Your objections are preserved, and as an

1 aside; me, as I sit here, I don't know whether he
2 amplified or elaborated on the opinions that are
3 already in the record, but the transcript will so
4 note. Thank you.

5 C R O S S E X A M I N A T I O N

6 by Ms. Nijman

7 **Q. Good afternoon, Mr. Quarles.**

8 A. Good afternoon.

9 **Q. So we met before, sort of, over**
10 **video, during your deposition, correct?**

11 A. We did.

12 **Q. And you were deposed under oath**
13 **during that deposition?**

14 A. I was.

15 **Q. That was October 12th of 2021. Do**
16 **you recall that?**

17 A. I don't remember the exact date.

18 **Q. Do you doubt that it was**
19 **October 12th of 2021?**

20 A. I don't.

21 **Q. I can show it to you, if you like.**

22 A. Okay.

23 **Q. Okay. And do you recall that in**
24 **that deposition we discussed your background in**

1 **some detail?**

2 A. I do.

3 **Q. Did you review the deposition**
4 **transcript for your preparation?**

5 A. I did.

6 **Q. For your preparation today?**

7 A. I did.

8 **Q. When did you look at it?**

9 A. Sometime in the last two weeks.

10 **Q. Okay. So I'm going to just go over**
11 **some of the same background questions so we have**
12 **them on the record here. Okay?**

13 A. Okay.

14 **Q. All right. You are a geologist?**

15 A. I am.

16 **Q. You are not licensed in Illinois,**
17 **correct?**

18 A. That's correct.

19 **Q. You are not a licensed professional**
20 **engineer, correct?**

21 A. That is correct.

22 **Q. You are not a toxicologist, correct?**

23 A. That's correct.

24 **Q. You have never developed a**

1 **site-specific human health ecological risk**
2 **assessment, correct?**

3 A. Correct.

4 Q. You are located in Tennessee?

5 A. Correct.

6 Q. Your office is in Tennessee?

7 A. Correct.

8 Q. And you have mentioned the four
9 stations, Midwest Generation stations, during your
10 testimony. You have never been to the stations,
11 correct?

12 A. Correct.

13 Q. You currently work for BBJ, correct?

14 A. Correct.

15 Q. You joined BBJ in February of 2020?

16 A. Correct.

17 Q. Prior to BBJ, from 2004 to 2020, for
18 about 16 years you were working from your home,
19 correct?

20 A. Correct.

21 Q. You worked alone with no employees,
22 correct?

23 A. Correct.

24 Q. Your company was first called

1 **Globally Green Consulting, correct?**

2 A. Correct.

3 Q. **And during that time you called**
4 **yourself a public interest consultant, correct?**

5 A. Correct.

6 Q. **In fact, you identified being a**
7 **public interest consultant on your resumé at that**
8 **time?**

9 A. Correct.

10 Q. **On direct you also discussed your**
11 **experience with CCR, right?**

12 A. Correct.

13 Q. **And your -- you pulled out your --**
14 **or Ms. Bugel pulled out your CV that identifies**
15 **your CCR experience, correct?**

16 A. I don't remember that specifically,
17 but I will take your word for it.

18 Q. **I'm sorry. You -- I'm talking about**
19 **this morning when Ms. Bugel showed you --**

20 A. Oh, yeah. Yeah, yeah, yeah, yeah.

21 Q. **-- your CV.**

22 A. Yes, ma'am.

23 Q. **You remember that?**

24 A. I do.

1 Q. Okay. When we spoke during your
2 deposition in 2021, you told me that you had never
3 personally designed a groundwater monitoring
4 program for a CCR surface impoundment, correct?

5 A. That's correct.

6 Q. And you had never personally
7 designed a groundwater monitoring program for a
8 CCR fill area, correct?

9 A. Correct.

10 Q. And you told me that's because you
11 reviewed the work of others, right?

12 A. That's right.

13 Q. And you never personally conducted
14 work to implement a groundwater sampling and
15 analysis program, correct?

16 A. At a CCR site?

17 Q. You said it generally during your
18 deposition.

19 A. Say that again?

20 Q. You said it beyond CCRs.

21 A. No. Repeat the question, please.
22 Sorry.

23 Q. You have never personally conducted
24 the work to implement a groundwater sampling and

1 analysis program?

2 A. I mean, I have, but not at a CCR
3 site.

4 Q. Could you pull up Quarles'
5 deposition, page 29, lines 1 through 3?

6 A. Can you go to the prior page?

7 Q. Well, let me finish my question
8 first. Lines 1 through 3.

9 "Question: Did you actually
10 conduct or supervise work to implement a
11 groundwater sampling and analysis program?"

12 "Answer: I did not."
13 Do you see that?

14 A. I do see that.

15 Q. And based on what you have
16 identified -- oh, one more thing.

17 In fact, you told me you had
18 never supervised work to implement a groundwater
19 sampling and analysis program.

20 A. Okay.

21 Q. And based on what you identified in
22 your CV, you also told me you had not personally
23 developed a remedy for groundwater impacts around
24 a CCR unit, correct?

1 A. That's right.

2 Q. You also mentioned that the last
3 time -- and you are familiar with a cap. You
4 talked about that on direct?

5 A. I did.

6 Q. You have to answer.

7 A. Yes.

8 Q. The last time you were involved in a
9 project that involved a cap you told me was back
10 in the 1990s; is that correct?

11 A. Yes.

12 Q. And that was a landfill closure
13 situation, correct?

14 A. Correct.

15 Q. You have never developed a
16 groundwater remedy in the State of Illinois
17 before, have you?

18 A. I have not.

19 Q. Do you recall during your deposition
20 that we discussed the tiered approach to
21 corrective action in Illinois, also referred to as
22 TACO?

23 A. I do.

24 Q. You have never performed a project

1 in Illinois using TACO, correct?

2 A. That's right.

3 Q. And you would agree that your
4 knowledge of TACO is a cursory review of its
5 approach, correct?

6 A. Correct.

7 Q. You said that you were familiar with
8 the term "groundwater management zone" on direct.
9 Do you remember that from this morning?

10 A. I did.

11 Q. You have never performed work to get
12 a groundwater management zone in place in
13 Illinois, have you?

14 A. I have not.

15 Q. And other than this matter, you have
16 never dealt with a groundwater management zone
17 before?

18 A. I have not.

19 Q. And you are not opining as to what a
20 groundwater management zone even requires, are
21 you?

22 A. I'm certainly not an expert in the
23 groundwater management zone.

24 Q. Would you bring up deposition page

1 43, lines 15 through 21? I'm going to ask the
2 same -- "Question: I'm going to ask the same type
3 of question. Once a GMZ is in place in Illinois,
4 is additional --" oh, hold on. 15 through 21 --
5 "is additional remediation required?"

6 "Objection: Legal conclusion."

7 "Answer: Yeah. I don't know
8 what the regulation says, particularly about the
9 GMZ."

10 MS. BUGEL: We object, again, to
11 this line of questioning, because it does call for
12 a legal conclusion, again.

13 HEARING OFFICER HALLORAN:

14 Overruled.

15 BY MS. NIJMAN:

16 Q. When we spoke at your deposition in
17 2021, you told me that you had not been
18 disciplined by any professional body, correct?

19 A. Correct.

20 Q. And that has not changed, I assume?

21 A. No.

22 Q. And you told me you have not had a
23 judicial body reject your opinions in a case,
24 correct?

1 A. Correct.

2 Q. And that has not changed?

3 A. That has not changed.

4 Q. And you have never had a judicial
5 body reject any portions of your opinions, right?

6 A. Right.

7 Q. And that's not changed?

8 A. That has not changed.

9 Q. And you have never had a judicial
10 body question your credibility, correct?

11 A. Correct.

12 Q. And that's not changed?

13 A. That's not changed.

14 Q. And you told me that no judicial
15 body has ever found your opinions or portions of
16 your opinions to be unpersuasive, correct?

17 A. I think I said I was not aware of
18 any -- any -- any decision like that.

19 Q. And you are still not aware?

20 A. I'm not.

21 Q. Are you familiar with the case
22 called Evelyn Zarate, et al versus Carol Couch,
23 Director of the Environmental Protection Division,
24 Georgia Department of Natural Resources?

1 page it says, "Final Decision." Do you see that?

2 A. I do.

3 Q. Do you recall testifying in this
4 case?

5 A. I do.

6 Q. And this was in May of 2008,
7 correct, this decision?

8 A. Yeah.

9 Q. And for the record, the first page
10 states, "Filed May 14th, 2008"?

11 A. Correct.

12 Q. If you turn to the last page of your
13 exhibit, this is a decision by Kristin L. Miller,
14 Administrative Law Judge, correct?

15 A. Uh-huh.

16 Q. You have to answer verbally.

17 A. Yes, ma'am.

18 Q. Thank you. Now, you already
19 mentioned that this case concerns a permit to
20 construct and operate a solid waste landfill,
21 right?

22 A. That's correct.

23 Q. And the plaintiffs, the petitioners
24 in this case, contested the permit, right?

1 A. That's correct.

2 Q. And you testified as an expert to
3 support the petitioners in their claims, correct?

4 A. Correct.

5 Q. Now, you first opined in this case
6 that the landfill site at issue was a groundwater
7 recharge area, correct?

8 A. Correct.

9 Q. The ALJ, the Administrative Law
10 Judge, in that case found your position, your
11 opinion, to be unpersuasive, correct?

12 A. I don't remember what the opinion
13 was.

14 Q. Okay. If you would turn to page 10.

15 A. Of 42?

16 Q. That's correct. I'm going to read
17 from Section 2 on page 10 of 42, the last sentence
18 in the first paragraph in that section.

19 "However, the Petitioners
20 contend that the site nonetheless bears the
21 characteristic of a significant groundwater
22 recharge area and should be recognized as such.
23 The testimony of Petitioner's expert, Mark A.
24 Quarles, in this regard was simply not

1 persuasive." Do you see that?

2 A. I do.

3 Q. And you also opined in this case
4 that the landfill would affect private wells.

5 Do you remember that?

6 A. I don't.

7 Q. Okay. And would you turn to page 12
8 of 42, please? Reading from the last sentence on
9 the carryover paragraph on page 12 of 42.

10 "These experts, therefore,
11 opined that the proposed landfill will not affect
12 the qualify of water in the surrounding public and
13 private wells." Citation. "Mr. Quarles'
14 testimony, to the contrary, was not persuasive."

15 Do you see that?

16 A. I do.

17 Q. And then there is a Footnote 11.
18 Footnote 11 states, "Mr. Quarles erroneously
19 concluded that one of the private wells was
20 immediately adjacent to and downgradient of Cell
21 No. 10B." Citation. "Although this well is the
22 closest of any of the wells to the waste disposal
23 area (and is therefore a subject of greater
24 concern), the evidence showed that the groundwater

1 at the site does not travel towards the well."

2 Citation. "Further, no credible evidence
3 supported Mr. Quarles' conclusion that the
4 groundwater continues to move south through the
5 fractured bedrock underlying Blue Creek." Do you
6 see that?

7 A. I do.

8 Q. Continuing on page 12. In the first
9 full paragraph you opined that the drawdown from
10 residents' use of their wells could cause a
11 reversal of groundwater flow.

12 Do you see that?

13 A. First full paragraph?

14 Q. First sentence of the first full
15 paragraph --

16 A. Oh, yeah.

17 Q. -- on page 12.

18 A. Yes, ma'am.

19 Q. And the Hearing Officer, the ALJ
20 states, "However, this possibility was considered
21 and rejected by Mr. Preddy when he prepared the
22 hydrogeologic assessment."

23 And further in the paragraph,
24 the last sentence on this page, "Given the nature

1 of Piedmont geology, the relatively low pumping
2 rates of domestic wells, and the distance of the
3 private wells from the landfill site, there is no
4 basis for a conclusion that drawdown from domestic
5 wells would cause a cone of depression or
6 otherwise change the direction of groundwater
7 flow."

8 So the ALJ disagreed with that
9 opinion, too, correct?

10 A. Yes, ma'am.

11 Q. On page 13, the first full
12 paragraph, you raised an opinion about drought
13 potentially impacting the direction of groundwater
14 flow.

15 Do you see that?

16 A. I do.

17 Q. And the hearing officer stated --
18 the ALJ stated, "Petitioner presented no evidence
19 to support a conclusion that the drought will
20 impact direction or flow of groundwater at the
21 site."

22 Do you see that?

23 A. I do.

24 Q. I would like you to turn to page 15

1 of this decision. You gave an opinion in this
2 case about the groundwater velocity at the
3 landfill site. Do you recall that?

4 A. I don't.

5 Q. Okay. Looking at page 15, the
6 second paragraph. Mr. Quarles -- reading from the
7 decision of the administrative law judge.

8 "Mr. Quarles, in contrast to the
9 other experts, used the highest values for all
10 three variables (hydraulic conductivity, hydraulic
11 gradient, and effective porosity) when he
12 determined that the worse-case scenario for
13 groundwater velocity at the site, which he
14 calculated at 0.9 feet -- 0.90 feet per day in
15 deep residuum, 1.6 feet per day in partially
16 weathered rock, and 3.4 feet per day in bedrock."

17 Do you recall that opinion?

18 A. I don't, but I see that here.

19 Q. The administrative law judge in her
20 final decision states, "However, Mr. Quarles'
21 presentation of the worst-case scenario was an
22 unrealistic interpretation of the hydrogeology of
23 the site. The mathematical laws of hydrogeology
24 dictate that hydraulic conductivities and

1 gradients are balanced to maintain the flux of
2 groundwater movement, such that hydraulic
3 conductivity increases as the hydraulic gradient
4 decreases, and vice versa." Citation.

5 And the following sentence on
6 this page: "Mr. Quarles' utilization of the
7 highest values for both variables cannot occur in
8 nature, and his calculations are, therefore, less
9 reliable than the calculations of the other
10 experts."

11 Do you see that there?

12 A. I do.

13 Q. Now, in this case you also expressed
14 concern about the groundwater monitoring system,
15 right?

16 A. I did.

17 Q. I would like to refer you to page
18 24. That opinion was also rejected, wasn't it?

19 A. I don't know.

20 Q. Referring you to the last lines on
21 page 24.

22 "Both Mr. Lee and Mr. Quarles
23 expressed concerns about the effectiveness of the
24 groundwater monitoring system." Do you see that?

1 A. I do.

2 Q. I'm going to refer to page 25, the
3 **first full paragraph on the page.**

4 Mr. Quarles suggested -- I'm
5 quoting from the opinion now. "Mr. Quarles
6 suggested that a double row of monitoring wells be
7 installed at the site." Citation. "However,
8 given that the groundwater monitoring system
9 detailed in the design and operation plan is
10 adequate to detect potential contamination from
11 the landfill, a second row of monitoring wells is
12 both unprecedented and unnecessary."

13 Do you see the finding of the
14 **ALJ there?**

15 A. I do.

16 Q. Now, you were very careful when I
17 asked you about prior times when you had been
18 rejected by a court to say you weren't aware of
19 any, and -- correct?

20 A. Yeah.

21 Q. So you weren't aware of this
22 **decision?**

23 A. Not all the particulars that you
24 have just read.

1 **Q. Well, let's clarify. What were you**
2 **aware of?**

3 A. I knew that we lost the case, and
4 they elected to build a landfill next to a -- a
5 lake that was used as a community water supply.

6 **Q. Okay. But you have never seen this**
7 **opinion?**

8 A. I don't -- if I did, I don't -- I
9 don't remember ever seeing the full opinion, no.

10 **Q. Okay. Well, you said you -- have**
11 **you seen this opinion at all?**

12 A. I -- this was 15 years ago. I just
13 knew that we lost, and the lawyer --

14 **Q. I'm -- uh-huh.**

15 A. -- that I worked with, I haven't
16 talked to him in years.

17 **Q. You mentioned earlier today the TVA**
18 **case. Do you remember that?**

19 A. I do.

20 **Q. Tennessee Clean Water Network versus**
21 **Tennessee Valley Authority. Is that the case you**
22 **are referring to when you say TVA case?**

23 A. There were two cases. There was one
24 involving the TVA Kingston and one involving TVA

1 Gallatin.

2 Q. You testified in Tennessee Clean
3 Water Network and Tennessee Scenic Rivers
4 Association versus Tennessee Value Authority,
5 correct?

6 A. Correct.

7 Q. And that was in January of 2017. Do
8 you remember that?

9 A. I certainly remember. I don't
10 remember the date, but, yes, I do remember that
11 case.

12 Q. Okay. You remember 2017?

13 A. I do.

14 Q. Roughly?

15 A. Yeah.

16 Q. Okay. And that was in the United
17 States District Court for the Middle District of
18 Tennessee, correct?

19 A. Yes, ma'am.

20 Q. And that was before the Honorable
21 Judge Waverly Crenshaw, a district court judge?

22 A. That sounds correct.

23 Q. Okay. So in that case you actually
24 were asked about the Couch decision that I just

1 showed you. Do you not recall that?

2 A. I don't, no.

3 Q. So when you just told me a minute
4 ago it was too old, but here you are -- you
5 testified about it in 2017. You don't remember
6 2017?

7 A. I don't remember that particular --
8 MS. BUGEL: Objection. Asked and
9 answered.

10 HEARING OFFICER HALLORAN: She was
11 just trying to clarify. Overruled.

12 BY MS. NIJMAN:

13 Q. I would like to show you a copy of
14 your transcript from the proceedings before the
15 United States District Court, which we will mark
16 as Exhibit 1107.

17 (Whereupon, Exhibit No. 1107 was
18 marked for identification.)

19 BY MS. NIJMAN:

20 Q. For the record, I will also identify
21 this document as Bates numbered COMP063063.

22 Do you recognize this
23 transcript?

24 A. I don't, but it is before the Judge

1 Crenshaw for Tennessee Clean Water Network versus
2 TVA.

3 Q. In fact, this is a transcript that
4 you provided to counsel in this case regarding
5 your experience of CCR landfills, correct?

6 MS. BUGEL: Objection, assumes facts
7 not in evidence.

8 MS. NIJMAN: It's Bates numbered
9 COMP, which means complainants.

10 HEARING OFFICER HALLORAN: I will
11 allow it.

12 BY MS. NIJMAN:

13 Q. Do you not recall providing this to
14 your counsel?

15 A. I don't.

16 Q. If you would turn to page 220.
17 Looking at the bottom of the page of the
18 transcript from the trial in the district court,
19 federal district court, on page 220, lines 22
20 through 25 you are asked the question.

21 "Question: In your CV you say
22 that you provided testimony in an appeal of a
23 municipal solid waste landfill permit in Georgia,
24 correct?"

1 A. Yes, ma'am.

2 Q. "Answer: Correct." Do you see
3 that?

4 A. Uh-huh.

5 Q. And then turning to the next page,
6 page 221.

7 "Question: And I believe the
8 title of that case was Segraves versus Couch.
9 That's what it says on your CV." Do you see that?

10 A. I do.

11 Q. That's the same case that we were
12 just talking about, isn't it?

13 A. I believe so.

14 Q. And in that case, as you say here in
15 2017, lines 8 through 12 -- 9 through 12.

16 "Question: But in that case the
17 court found your opinion was not persuasive,
18 correct?"

19 "Answer: Correct?"

20 MS. BUGEL: I am going to --

21 BY MS. NIJMAN:

22 Q. Line 12.

23 "Question: Okay. And in that
24 case the court found no credible evidence

1 supported Mr. Quarles' conclusion that groundwater
2 continues to move south through the fractured
3 bedrock."

4 "Answer: I don't remember that
5 specifically."

6 MS. BUGEL: I'm going to object to
7 this line of questions as to relevance, simply
8 because this is another body discussing a case and
9 testimony that we have already discussed here.
10 This is not adding anything relevant or helpful to
11 the Board in this proceeding.

12 HEARING OFFICER HALLORAN:
13 Ms. Nijman?

14 MS. NIJMAN: It actually goes
15 directly to Mr. Quarles' credibility or lack
16 thereof for, frankly, telling me untruths during
17 the deposition and this morning in front of this
18 Board.

19 MS. BUGEL: Mr. Quarles did not tell
20 untruths.

21 HEARING OFFICER HALLORAN: Yeah, I
22 don't think he told untruths, but I definitely
23 think it goes to his credibility. So, you know, I
24 will allow you -- do you have much more,

1 Ms. Nijman, on this?

2 MS. NIJMAN: Not on this topic.

3 HEARING OFFICER HALLORAN: All
4 right. You may proceed. Overruled.

5 BY MS. NIJMAN:

6 Q. Continuing on page 221 of the TVA
7 transcript in the federal district court.

8 A. 221?

9 Q. Page 221, line 20.

10 Further, as read, "No credible
11 evidence supported Mr. Quarles' conclusion that
12 the groundwater continues to move south through
13 the fractured bedrock underlying Blue Creek,
14 correct?"

15 "Answer: That's what they
16 concluded."

17 Q. So you didn't remember this case
18 from testifying about it in 2017? You didn't
19 remember the Couch case?

20 A. I remember the case, but not the
21 particulars about the case.

22 Q. You previously identified the two
23 reports that you prepared in this case as Exhibits
24 1101 and 1102. Correct?

1 A. Correct.

2 Q. And each of your opinions in this
3 case are set out in those reports?

4 A. I'm sorry. Ask the question again.

5 Q. Each of your opinions are set out in
6 those reports?

7 A. I'm not -- I'm not understanding
8 what -- each of my opinions about what?

9 Q. About everything in this case.

10 A. Of these two reports?

11 Q. I'm asking if all of your opinions
12 are included in your report.

13 A. Yeah. The opinions that I -- that I
14 discussed are included in the two reports.

15 Q. It's not a trick question. I'm just
16 asking you if it's all there.

17 And, in fact, in your deposition
18 you told me that, that the reports contain all
19 your opinions from this matter, correct?

20 A. Correct.

21 Q. Now, one of the topics you discuss
22 in your report that was the subject of one of
23 Midwest Generation's motions in limine relates to
24 the qualifications of the Weaver experts Doug

1 Dorgan and Michael Maxwell. Do you recall --

2 A. I do.

3 Q. -- making those opinions?

4 You have to wait until I'm
5 finished. Go ahead.

6 A. I do.

7 Q. Thank you. And prior to -- and that
8 was in your rebuttal report, correct?

9 A. Correct.

10 Q. And prior to writing your rebuttal
11 report, you had never met Mr. Dorgan?

12 A. That's right.

13 Q. And you had never met Mr. Maxwell?

14 A. That's right.

15 Q. You had never worked with
16 Mr. Dorgan?

17 A. That's right.

18 Q. And you had never worked with
19 Mr. Maxwell?

20 A. Correct.

21 Q. Are you aware of any judicial body
22 rejecting Mr. Dorgan's opinions?

23 A. Yes. I wrote about an opinion, I
24 believe it was in Indiana, about the groundwater

1 monitoring system.

2 Q. Is that the IDEM opinion you
3 discussed?

4 A. It is.

5 Q. Okay. The Illinois Department of
6 Environmental Management?

7 A. Of Indiana.

8 Q. Okay. Indiana Department of
9 Environmental Management, correct?

10 A. Yes.

11 Q. Yes. And that's not a judicial
12 body, right?

13 A. No, ma'am.

14 Q. Okay. It's not unusual for an
15 environmental agency to disagree with a
16 consultant, is it?

17 A. I don't know how you would define
18 it, unusual. It happens when -- when there is a
19 disagreement.

20 Q. You have disagreed with
21 environmental agencies, correct?

22 A. I have.

23 Q. In fact, in the TVA case, you
24 disagreed vehemently with the environmental

1 experts, didn't you?

2 A. We -- we disagreed.

3 Q. I would like to refer you to the TVA
4 transcript you have in front of you. If you
5 would, turn to page 213. 213. Looking at the
6 bottom of this page of your testimony.

7 "Question: And then Mr. Flood
8 responded and you wrote back, and you accused TVA
9 staff of being idiots or liars; isn't that right?"
10 Turning to the next page, page 214, line 1.

11 "Answer: "I'm sorry. Where?

12 "Question: Directing you right
13 here, Mr. Quarles, at 12."

14 "Answer: I'm sorry."

15 "Question: Reading -- (as read)
16 it states in the transcript. Pat, one last
17 comment to your desire to have more similar TVA
18 meetings in the future. A couple of
19 observations."

20 "Answer: Yeah."

21 "Question: (As read) TVA staff
22 did not really answer my questions, choosing
23 instead, to say only URS knows the answer. Either
24 they are idiots or lying. That's what you said."

1 **Answer by Mr. Quarles: "Yeah.**

2 **The comment was, tell URS."**

3 **"Question: That's what you**
4 **said; isn't it, sir?"**

5 **"Answer: That's what I said."**

6 MS. BUGEL: I'm going to object to
7 this line of questions, first as to relevance,
8 that Ms. Nijman hasn't established anything that's
9 relevant here. Second as to the language, using
10 language that the Hearing Officer and the Board
11 has already ruled prejudicial and should not be
12 included in this hearing.

13 HEARING OFFICER HALLORAN:
14 Ms. Nijman?

15 MS. NIJMAN: Actually, your ruling
16 was a little bit different, and I was not actually
17 going to reference the word specifically.

18 But let me ask the following
19 question. Can I follow-up to show relevancy?

20 HEARING OFFICER HALLORAN: Well, I
21 think what was just read by you from the dep
22 transcript is more prejudicial than probative. I
23 really -- you know, I would ask the Board to
24 disregard the last couple of things that you read

1 into the record.

2 MS. NIJMAN: Well, I would object to
3 that decision, obviously, because we were not
4 granted the right to strike his opinions,
5 Mr. Quarles' opinions, about unprecedented and
6 unsupported opinions about Mr. Dorgan and
7 Mr. Maxwell from Weaver, and we have a right,
8 then, to cross-examine him about his practice of
9 disparaging experts when they disagree with him.

10 HEARING OFFICER HALLORAN: Are you
11 planning to offer this into evidence?

12 MS. NIJMAN: The transcript?

13 HEARING OFFICER HALLORAN: Uh-huh.

14 MS. NIJMAN: I am not.

15 MS. BUGEL: Complainant -- I'm sorry
16 to interrupt.

17 HEARING OFFICER HALLORAN: Go ahead.

18 MS. BUGEL: Complainants would
19 object and move to strike, and it's -- it's very
20 far afield to call this a practice based on one or
21 two incidents that this -- we don't even have any
22 of the context of this discussion.

23 So it's -- it feels very far
24 afield, and irrelevant, and prejudicial.

1 MS. NIJMAN: I would argue that
2 there -- if there is any cross-examination on the
3 issue, they may certainly do that, but the door
4 was wide open by his opinions about Weaver's
5 experts and his tendency to do that elsewhere. I
6 would also note that in the motion in limine, the
7 decision was that the notes -- the notes where
8 Mr. Quarles identifies the Weaver consultants in a
9 very similar, if not identical, disparaging
10 comment, those notes are not being offered as an
11 exhibit, which was the limitation of the motion in
12 limine.

13 MS. BUGEL: And if the intention is
14 to read the notes into the record, Complainants
15 object.

16 HEARING OFFICER HALLORAN: Yeah.
17 That -- that can't happen. But, what, you are
18 going to read in, to what I have excluded as far
19 as the motion in limine and as far as --

20 MS. NIJMAN: I'm not reading
21 anything into the record at this point.

22 HEARING OFFICER HALLORAN: Okay.
23 From that. At this point. Do you plan to as you
24 are reading this transcript?

1 MS. NIJMAN: It depends upon his
2 answer. My question was going to be, as an offer
3 of proof, that you called the Weaver consultants
4 that very similar disparaging name, didn't you?

5 HEARING OFFICER HALLORAN: Yeah, you
6 know, it's a tweener. It's -- you're on the
7 fence.

8 And I think -- I think what I
9 would like to do is -- I can't get the can of
10 worms back in. Yeah. I'm not real comfortable
11 with this, Ms. Nijman. You are going on and on
12 about what he is considering with the other
13 consultants there.

14 I would take it as an offer of
15 proof, and what you have read into the record, as
16 far as his remarks about the other consultants,
17 and that's -- that's about as far as I will go,
18 and then the Board can sort it out.

19 MS. BUGEL: And, Hearing Officer, if
20 I may, I would just move to strike that from the
21 record. The prejudice and the damage is done if
22 it's appearing in the record.

23 HEARING OFFICER HALLORAN: Well, the
24 Board will -- in their own wisdom they can strike

1 it, if they so choose. I don't really strike
2 anything, because if I strike it, they can't
3 review it.

4 MS. BUGEL: Understood.

5 BY MS. NIJMAN:

6 Q. We have established on your
7 examination this morning that you wrote two
8 reports in this case, Exhibits 1101 and 1102,
9 correct?

10 A. Yes, ma'am.

11 Q. And for those reports you listed the
12 documents you relied on for your opinion, correct?

13 A. I did.

14 Q. And are you familiar with the name,
15 Mr. Kunkel or Dr. Kunkel, as he is sometimes
16 known?

17 A. It doesn't ring a bell.

18 Q. So you did not list -- all right.
19 You are not aware that Mr. Kunkel was the prior
20 expert for Complainants in this case?

21 A. I don't remember the names of the
22 prior experts in the case.

23 Q. And you didn't review any opinions
24 or reports by Mr. Kunkel in this case?

1 A. I can't say that I did. I looked at
2 a couple of reports very early on, but I can't say
3 if Mr. Kunkel was one of the reports and what
4 degree I would have reviewed it.

5 **Q. And, in fact, in October in 2021 in**
6 **your deposition you told me that you were never**
7 **even aware that Mr. Kunkel wrote three reports.**
8 **Is that a fair statement?**

9 A. Yes, that's a fair statement.

10 **Q. So you have not attempted to**
11 **elaborate upon Mr. Kunkel's opinions, correct?**

12 A. That's correct.

13 **Q. And you have not attempted to**
14 **amplify Mr. Kunkel's opinions, correct?**

15 A. That's right.

16 MS. NIJMAN: Again, renew our motion
17 to strike the opinions of Mr. Quarles.

18 MS. BUGEL: Hearing Officer, if I
19 may respond.

20 HEARING OFFICER HALLORAN: I'm
21 sorry. You're -- Ms. Nijman, you are asking me to
22 strike the --

23 MS. NIJMAN: Everything.

24 HEARING OFFICER HALLORAN: Okay.

1 Well, as I told Ms. Bugel, I don't strike, because
2 then the Board can't review it.

3 MS. NIJMAN: We are renewing the
4 motion that we filed to preserve for appeal the
5 fact that this opinion goes directly contrary to
6 the order that you issued in this case, and that
7 was affirmed by the Board, to elaborate or amplify
8 Mr. Kunkel's opinions.

9 HEARING OFFICER HALLORAN: Okay.
10 That's the one, the motion in limine, I have not
11 ruled on, right?

12 MS. NIJMAN: No. These are the
13 historic motions that were issued at the time
14 Complainants requested to change experts.

15 HEARING OFFICER HALLORAN:
16 Ms. Bugel?

17 MS. BUGEL: Well, this was intensely
18 briefed at that time, and nothing new is being
19 established today, and we have pointed out time
20 and time again that what Mr. Quarles has relied
21 upon and elaborated on is the Board's decision
22 being the ultimate findings in this case, and
23 having parsed what from the record is most
24 relevant.

1 And Mr. Quarles -- you know, I
2 could do some questions on that, but he has not
3 had an opportunity to respond to Ms. Nijman's
4 allegations right now about Mr. Kunkel's -- the
5 extent to which he relied on Mr. Kunkel. So, you
6 know, the point being, this was all intensely
7 briefed, and both the Hearing Officer and the
8 Board made a well-informed decision based on the
9 same facts that are being elicited right now. I
10 don't think we need to rehash it again.

11 HEARING OFFICER HALLORAN: Well, I'm
12 just hearing -- you know, I don't plan to rehash
13 it right now, but I'm just hearing Mr. Quarles
14 saying that he really can't remember whether he
15 looked at it or not. Maybe yes. Maybe no.

16 I don't know. I can't -- I
17 can't figure out if he did take a look at it and
18 rely on anything, or if he even elaborated or
19 amplified. It sounds like no.

20 MS. BUGEL: Well, I could ask some
21 questions of Mr. Quarles to clarify that.

22 HEARING OFFICER HALLORAN: Okay.

23 MS. NIJMAN: I would prefer that
24 Ms. Bugel do that on her own re-direct, if she so

1 chooses

2 HEARING OFFICER HALLORAN: That's
3 what I was planning to do, Ms. Nijman.

4 MS. NIJMAN: Thank you.

5 HEARING OFFICER HALLORAN: Thank
6 you. You may proceed. Your objections are noted,
7 though, on the previous motions in limine, I think
8 you mentioned.

9 MS. NIJMAN: I will point out again
10 for the record that the decision that the Board
11 made on this issue stated that they would assess
12 during the testimony whether, in fact, there was
13 compliance with your rule.

14 HEARING OFFICER HALLORAN: And as I
15 stated earlier, as I sit here today, I can't tell
16 whether there is an amplification or additional
17 stuff, elaboration.

18 MS. NIJMAN: The witness just stated
19 he did not elaborate, and he did not amplify.

20 HEARING OFFICER HALLORAN: Well, but
21 then he is kind of -- the testimony was unclear.
22 So at this point --

23 MS. NIJMAN: I have to --

24 HEARING OFFICER HALLORAN: -- no --

1 MS. NIJMAN: I'm sorry. For the
2 record, Mr. Hearing Officer, I completely disagree
3 with that analysis.

4 HEARING OFFICER HALLORAN: Well,
5 okay. Your objection is noted, Ms. Nijman. You
6 may proceed.

7 BY MS. NIJMAN:

8 Q. Thank you. I'm going to refer
9 you -- to make this testimony very, very clear on
10 the record, refer you to your deposition, page 53,
11 lines 19 through 23.

12 A. Are we still on the TVA?

13 Q. Your deposition. So I'm showing you
14 your transcript from your Quarles deposition in
15 2021.

16 Line 19. "Question: Do you
17 recognize the name James Kunkel?"

18 "Answer: I do recognize the
19 name."

20 "Question: From what?"

21 "Answer: I think he had some
22 involvement in the prior phase of this case."

23 "Question: Did you review any
24 of the reports Mr. Kunkel prepared for this case?"

1 We are now continuing onto the
2 next page.

3 "Answer: No, not in detail."

4 "Question: What do you mean,
5 not in detail?"

6 "Answer: I can't even -- I
7 didn't even review his entire report."

8 "Question: Okay. Are you aware
9 he wrote three reports in this case?"

10 "Answer: I'm not."

11 Let's turn to some of your
12 opinions in this case.

13 MS. BUGEL: I'm going to object to
14 what that just was. There was no question of
15 Mr. Quarles presented there. That was just
16 Ms. Nijman reading the deposition testimony into
17 the transcript. It was unclear if that was for
18 impeachment purposes or not, and that was
19 inappropriate.

20 MS. NIJMAN: I think I stated pretty
21 clearly that was I was going to make it clear in
22 the record for purposes of appeal that I am
23 preserving these arguments, and because the
24 Hearing Officer had some confusion about

1 Mr. Quarles' -- Mr. Quarles' review of
2 Mr. Kunkel's reports, I stated I would make that
3 very clear.

4 HEARING OFFICER HALLORAN: And I
5 stated I'd wait for Ms. Bugel's re-direct. You
6 agreed with me. You did not want her to ask --
7 ask -- ask her -- him questions at your time.

8 MS. NIJMAN: Correct.

9 HEARING OFFICER HALLORAN: So I was
10 waiting for Ms. Bugel's re-direct, correct?

11 MS. NIJMAN: Correct.

12 HEARING OFFICER HALLORAN: Okay.

13 MS. NIJMAN: All I was attempting to
14 do in response to Ms. Bugel's argument is make the
15 record clear, and for the purposes of appeal,
16 that's my obligation to do so.

17 MS. BUGEL: Hearing Officer, I think
18 it's --

19 HEARING OFFICER HALLORAN: You may
20 proceed. You may proceed, Ms. Nijman.

21 Unless you want to make
22 something for the record, Ms. Bugel?

23 MS. BUGEL: I just wanted to say
24 that witnesses give testimony, not attorneys. By

1 Ms. Nijman reading something into the record
2 without asking a question, that is argument, not
3 testimony. That is testimony and not an argument,
4 and I think it's inappropriate to read the
5 deposition testimony into the record without
6 asking the witness a question.

7 HEARING OFFICER HALLORAN: Yeah.

8 I -- so noted. I agree, but it's in the record.

9 You may proceed, Ms. Nijman.

10 Ask questions, please.

11 BY MS. NIJMAN:

12 Q. Was that your testimony during the
13 deposition?

14 A. It was.

15 Q. Thank you. You talked this morning
16 about a nature and extent investigation, correct?

17 A. We did.

18 Q. And you're not opining about what
19 the scope of that nature and extent investigation
20 should be, right?

21 A. Not specific to each location, but I
22 did discuss and write about the typical components
23 of what you would look for in the nature and
24 extent investigation.

1 Q. General components?

2 A. That's right.

3 Q. Some would apply, some wouldn't
4 apply, depending on the station in this case; is
5 that fair to say?

6 A. I would say -- I think it's fair to
7 say, but more will apply than not, just given the
8 scale and the scope of -- of the size and the --
9 the years that these power plants were in
10 operation.

11 Q. But so we are clear, you are not
12 opining specifically as to the scope of the nature
13 and extent investigation at each of the stations,
14 correct?

15 A. That's right.

16 Q. In your report, you also mentioned
17 several possible options, and you mentioned one
18 this morning, an option of removal. Do you
19 remember that?

20 A. I do.

21 Q. But, again, you are not recommending
22 any particular remedy at this point, correct?

23 A. That's right.

24 Q. What you are doing is explaining a

1 process? Is that a fair way to explain it?

2 A. That's a fair way.

3 Q. I would like to understand this
4 process and how you think this is going to -- how
5 the process works.

6 So it would start with a nature
7 and extent in your view, correct?

8 A. That's right.

9 Q. And those studies would be different
10 for each of the four stations, correct?

11 A. That's right.

12 Q. And the studies would take into
13 account whatever existing sampling data is present
14 for those stations, correct?

15 A. It could.

16 Q. And you would start with a scope of
17 work for the stations?

18 A. You would come up with a sampling
19 and analysis plan.

20 Q. And if there is disagreement on the
21 scope of that sampling analysis plan, would the
22 Board hear more testimony about it?

23 A. I don't know if the Board would be
24 involved in the approval of a sampling and

1 analysis plan.

2 Q. So what happens when you and Weaver
3 have -- disagree on the scope of the sampling plan
4 at one of the stations?

5 A. I don't even know that we would meet
6 to discuss it.

7 Q. So who would decide the scope of the
8 investigation under your process?

9 A. Well, it's Midwest Gen's
10 responsibility for implementing the scope of work
11 and coming up with an approach.

12 Q. So Midwest Gen would decide the
13 scope of the investigation?

14 A. And their consultants.

15 Q. Uh-huh. Now, you mention that the
16 Board identified exceedances of the 6 -- Illinois
17 620 regulations. Do you recall that?

18 A. I'm sorry. And the question again?

19 Q. You mentioned this morning that the
20 Board had identified exceedances of the Illinois
21 620 regulations?

22 A. Yes, ma'am.

23 Q. I don't think you mentioned it this
24 morning, but in your reports you talked about

1 certain constituents that are typical indicators
2 of coal ash, right?

3 A. Yes, ma'am.

4 Q. And that would include boron,
5 sulfate, and manganese?

6 A. They are very good indicators.

7 Q. So let's say there is a facility
8 where there are no exceedances for boron, sulfate,
9 and manganese above the 620 standards. In that
10 scenario, no additional study would be needed for
11 those areas, correct?

12 A. So, certain constituents are good
13 indicators of certain types of coal ash. Bottom
14 ash disposal sites can have a different --
15 sometimes bottom ash is high in metal. Sometimes
16 it's not. Fly ash could be high in arsenic at
17 some locations, but not in other locations.

18 So it really kind of varies.
19 And we talked this morning about the coal
20 variability that -- over time. We talked about
21 the air pollution control technology. So boron is
22 a great indicator, but it kind of also depends on
23 the type of CCRs that have been disposed.

24 Q. So if there was a different

1 **constituent that you would be looking for to focus**
2 **on a different type of CCR, what would that be, if**
3 **not boron, sulfate, and manganese?**

4 A. Well, you look at -- you look at pH.
5 You look at total dissolved solids. You are
6 looking at the typical metals, but those are the
7 general list of constituents.

8 Q. Okay. So, again, I go back to my
9 **question.**

10 **If I don't see those**
11 **constituents; boron, sulfate, manganese, TDS, pH**
12 **exceedances over 620 standards, no studies --**
13 **additional study would be needed for those areas,**
14 **correct?**

15 A. It depends on the location and the
16 depth of the wells. So it all depends on the site
17 conditions of the existing monitoring program and
18 the adequacy to detect constituents in the
19 groundwater.

20 So, again, it all depends. I
21 have seen wells that are drilled too deep, that
22 they would miss the uppermost contamination
23 closest to the waste. I have seen variability in
24 groundwater constituent concentrations by depth.

1 **Q. Are you talking about this station**
2 **or a general experience at this point? Or a**
3 **station, a Midwest Gen station?**

4 MS. BUGEL: Objection.

5 BY THE WITNESS:

6 A. I'm talking about my past
7 experience --

8 MS. BUGEL: Just objection.

9 THE COURT REPORTER: Sorry?

10 HEARING OFFICER HALLORAN: Ms. Bugel
11 has an objection.

12 MS. BUGEL: Just an objection to the
13 form of the question, and compound, and vague.

14 HEARING OFFICER HALLORAN: Do you
15 want to restate, Ms. Nijman?

16 MS. NIJMAN: Sure.

17 HEARING OFFICER HALLORAN: Please?

18 BY MS. NIJMAN:

19 **Q. You started discussing, Mr. Quarles,**
20 **that you had seen cases of a deeper or too deep**
21 **well that misses the contamination. Do you**
22 **remember just saying something like that?**

23 A. I do.

24 **Q. But you are not talking about the**

1 **four Midwest Generation stations, correct?**

2 A. That's correct.

3 **Q. That was based on your general**
4 **experience?**

5 A. General experience, yeah.

6 **Q. Thank you. So going back to the**
7 **process that you are recommending here, after a**
8 **nature and extent study, you mentioned performing**
9 **an alternative study, correct?**

10 A. I talked about an alternative
11 analysis.

12 **Q. Okay. Is there a difference between**
13 **an alternative study and an alternatives analysis?**

14 A. Well, in the context of a remedial
15 action plan, you would do an alternative analysis
16 during that process where you would look at
17 multiple different types of corrective actions
18 that might be applicable or useful at the site.

19 **Q. How is an alternative study**
20 **different from an alternatives plan, or analysis.**
21 **I'm sorry. You used the word "analysis."**

22 A. Alternative analysis. I'm not sure
23 what -- if you'll refer me to my report where I
24 talked about that so that I can understand.

1 Q. I'm just trying to clarify your
2 terminology. I used the word "study," and you
3 corrected me to "analysis," correct?

4 A. Yeah. Like I'm trying to remember
5 to understand where you are coming up the with the
6 term "alternative study."

7 Q. Okay. And in your report you
8 actually refer to it as a remedial or corrective
9 action plan should include an alternatives
10 analysis that considers multiple potential
11 remedial technologies?

12 A. Alternative analysis.

13 Q. Okay. And so I'm asking, is there a
14 difference between an analysis and a plan?

15 A. I mean, an analysis is in part a
16 study of different -- different types of remedial
17 alternatives that you would consider.

18 Q. Right, right. Okay. So we will use
19 your word "analysis"?

20 A. Okay.

21 Q. So we do the alternatives analysis,
22 right?

23 A. Yes, ma'am.

24 Q. And we pick an alternative. Who

1 **picks the alternative?**

2 A. Midwest Gen.

3 **Q. And what happens when you disagree**
4 **with the alternative being chosen?**

5 A. If we are given the opportunity to
6 review and comment, boy, we can certainly have
7 that conversation.

8 **Q. So then we are back here in front of**
9 **the Board again?**

10 A. I don't know if that means we are
11 back in front of the Board or what.

12 **Q. Now, you haven't assessed the amount**
13 **of time your process would take to play out,**
14 **right?**

15 A. I'm sorry. Say that again? I have
16 not assessed?

17 **Q. You have not assessed the amount of**
18 **time this process would take?**

19 A. No, ma'am.

20 **Q. And you talked about the CCR rules a**
21 **lot this morning. Do you recall that?**

22 A. I do.

23 **Q. You haven't considered how the CCR**
24 **rules fit into your process, have you?**

1 A. Oh, I make -- make mention to the
2 federal rule and the Illinois rule quite a bit in
3 my reports.

4 **Q. How do they fit into the process of**
5 **the remedial action analysis?**

6 A. Well, to be compliant with the
7 federal rule, if you exceed a standard, it
8 triggers assessment in -- a development of an
9 assessment of corrective measures report, ACM
10 report.

11 **Q. So if Midwest Generation is**
12 **complying with the already applicable federal**
13 **rules, it's already doing -- it's going to have to**
14 **do an alternative analysis as part of the rules**
15 **requirements, correct?**

16 A. Yeah. The federal rule still
17 applies, so an assessment of corrective measures
18 is required. The federal rule doesn't give a
19 specified number of days to write that.

20 **Q. But it's a requirement of the rules**
21 **that it would be done?**

22 A. It is a requirement to be done.

23 **Q. And do you know if Illinois has a**
24 **similar requirement in its CCR rules?**

1 A. There is a -- I don't think it's
2 called an Assessment of Corrective Measures, but
3 it does have a similar requirement.

4 **Q. And you're aware that US EPA has**
5 **agreed to issue proposed rules for fill areas in,**
6 **actually, a consent decree they signed. You are**
7 **aware of that?**

8 A. I'm aware of proposed rules are
9 imminent for inactive landfills.

10 **Q. And you are aware that Illinois has**
11 **a sub-docket for CCR fill areas, correct?**

12 A. Yes. But I'm not familiar with the
13 details of that.

14 **Q. Are you familiar with the details of**
15 **the federal proposals?**

16 A. No. I haven't seen the proposed
17 rule. It hasn't been published.

18 **Q. One of the other possibilities, I**
19 **suppose, you mention in your report is pumping**
20 **wells and chemical treatment. Do you remember**
21 **that?**

22 A. I do.

23 **Q. Would you refer to that as a "pump**
24 **and treat," in parlance?**

1 A. Pump and treat for the pumping well
2 description that you gave.

3 **Q. And you haven't assessed whether**
4 **pump and treat would be an effective remedy at any**
5 **of the four stations, correct?**

6 A. I have not.

7 **Q. And you didn't review the opinions**
8 **of any prior experts for Complainants in this case**
9 **regarding the viability of a remedy that includes**
10 **pumping and treating?**

11 MS. BUGEL: Objection. Asked and
12 answered on reviewing the prior opinions.

13 HEARING OFFICER HALLORAN:
14 Reviewing?

15 MS. BUGEL: Prior opinions.

16 HEARING OFFICER HALLORAN:
17 Ms. Nijman?

18 MS. NIJMAN: The testimony, as I
19 recall, was based on removals. I'm asking now
20 about pump and treat.

21 HEARING OFFICER HALLORAN:
22 Overruled.

23 BY MS. NIJMAN:

24 **Q. Is it correct that you have not**

1 reviewed the opinions of prior experts for
2 Complainants in this case regarding the viability
3 of a remedy that includes pumping wells?

4 A. That's correct.

5 Q. Have you ever heard of the name,
6 Mr. Hennett?

7 THE COURT REPORTER: I'm sorry?

8 BY MS. NIJMAN:

9 Q. H-E-N-N-E-T-T.

10 A. I -- I don't recall.

11 MS. BUGEL: Hearing Officer, I'm
12 going to object to a line of -- any line of
13 questions about Mr. Hennett, and especially the
14 illusion that he was a testifying expert for us in
15 this case. Because this is assuming a lot of
16 facts that are established and in the record.

17 MS. NIJMAN: Again, for the record,
18 Mr. Kunkel relied on Mr. Hennett when he made his
19 opinions.

20 MS. BUGEL: But I believe that is
21 assuming facts that are not in the record.

22 HEARING OFFICER HALLORAN: Well,
23 I -- it seems like Ms. Nijman is trying to figure
24 out if -- Mr. Quarles, if you -- you know, you

1 relied on anything Mr. Kunkel stated.

2 MS. BUGEL: Mr. Nijman is asking
3 about Mr. Hennett right now, not Mr. Kunkel.
4 Mr. Hennett offered no testimony for Complainants
5 in this case.

6 MS. NIJMAN: In response to our
7 motion to dismiss, in 2013 Mr. Hennett's report
8 was filed in the record in this case.

9 MS. BUGEL: Filing a report at
10 motion to dismiss stage is not testimony.

11 HEARING OFFICER HALLORAN: You know,
12 I'm going to allow it. You may proceed,
13 Ms. Nijman.

14 BY MS. NIJMAN:

15 Q. You talked this morning about
16 removal being an option, correct?

17 A. I did. For source control.

18 Q. Right. And I just want to, again,
19 make sure you haven't assessed whether removal is
20 a viable option at any of these four stations,
21 correct?

22 A. Well, if you know where it is, it's
23 always going to be an option, for sure.

24 Q. Please answer my question.

1 **You haven't assessed whether it**
2 **is an option, a viable option, as a remedy --**

3 A. Well, conceptually it is an option
4 as a viable portion of a remedy, a component.

5 **Q. You haven't specifically assessed**
6 **how a removal would occur at the stations,**
7 **correct?**

8 A. I have not, and one of the big
9 questions is --

10 **Q. I'm sorry, sir.**

11 A. -- where is the -- where are the
12 historic sites?

13 **Q. If you can just limit your answers**
14 **to my questions.**

15 **And you haven't assessed then an**
16 **impact on traffic conditions potentially from a**
17 **removal action?**

18 A. No, ma'am.

19 **Q. And you haven't assessed the issue**
20 **of air pollution potentially from trucks from a**
21 **removal action, correct?**

22 A. Correct.

23 **Q. And you haven't assessed the**
24 **quantities for a removal, correct?**

1 A. That's correct.

2 Q. Do you still have your report in
3 front of you, Mr. Kunkel, Exhibit 1101?

4 A. Mr. Kunkel? Mr. Quarles.

5 HEARING OFFICER HALLORAN:

6 Mr. Quarles.

7 BY MS. NIJMAN:

8 Q. I'm sorry. Mr. Quarles. That was a
9 Freudian slip.

10 Mr. Quarles, do you still have
11 your report in front of you?

12 A. Yes, ma'am, the 1101?

13 Q. Yes, sir. If you would turn to page
14 29, please.

15 A. Okay. Okay.

16 Q. Page 29 is Table 1. It comes after
17 all of your figures in the report, correct?

18 A. Oh.

19 Q. It actually has a page 29 on it.

20 A. Yes, yes.

21 Q. And you discussed this table this
22 morning, correct?

23 A. I did.

24 Q. And you mentioned that there were

1 some Midwest Generation stations listed on this
2 table, right?

3 A. I did.

4 Q. Now, all the entries on this chart
5 relate to surface impoundments, correct?

6 A. That's right.

7 Q. None of them are fill areas?

8 A. That's right.

9 Q. And the closure method that you have
10 listed on this chart in the second to last column
11 is based on the CCR regulation requirements,
12 correct?

13 A. It is.

14 Q. So if the rule -- the CCR rule
15 requires a removal, the facility will do the
16 removal if they comply with that rule, correct?

17 A. They are supposed to comply with the
18 rule. If they choose foreclosure by removal, then
19 they have the standard that they have to meet for
20 the closure by removal.

21 Q. Uh-huh. What is the date of the
22 information on this Table 1?

23 A. I don't -- I don't know the date of
24 that. I don't -- I mean, we have dated that

1 January 2021, which is the date of the whole
2 report, but I can't tell you the -- the date of
3 the summary of the 127 sites.

4 Q. Going back to the column of this
5 closure method per the CCR rule closure plan.

6 Now, removals are required under
7 the regulations under certain conditions or if
8 certain conditions are met for a surface
9 impoundment, correct?

10 A. They are.

11 Q. And the rules also allow CCR to
12 remain in place under certain conditions, right?

13 A. They do.

14 Q. Now, since your drafting of this
15 report in January of 2021, you didn't update this
16 chart?

17 A. I have not.

18 Q. And since drafting your rebuttal
19 report in July of 2021, you didn't update this
20 information?

21 A. I have not.

22 Q. You are aware that Midwest
23 Generation reports its plans and compliance for
24 the CCR impoundments on its website?

1 A. They do.

2 Q. And you didn't review Midwest Gen's
3 website for any of this -- updating any
4 information on this chart?

5 A. I have not.

6 Q. You list Joliet 29 as your first
7 station, Ash Pond 2. Do you see that?

8 A. I do.

9 Q. And you are aware that Joliet 29
10 station has not been burning coal since 2016,
11 correct?

12 A. I'm aware of that.

13 Q. And you are aware that Joliet 29 Ash
14 Pond 2 has been emptied since 2019?

15 A. I'm trying to remember in my report
16 if I discussed that or not. I don't recall
17 specifically about Ash Pond 2.

18 Q. Well, you reviewed the Weaver report
19 in this case, right?

20 A. Yes, ma'am.

21 Q. And, in fact, you did a rebuttal of
22 the Weaver report, correct?

23 A. Yes, ma'am.

24 Q. Can we pull up the Weaver report,

1 page 9? I'm not going to request that it be put
2 in the record at this point, because it will be
3 during Weaver's testimony, but for
4 cross-examination purposes, page 9, the last
5 paragraph on the page states, "Coal ash from Pond
6 2 was removed by November 22nd, 2019 and is in the
7 process of being closed as soon as the permit is
8 received" with a citation. Do you see that?

9 A. I do.

10 Q. Does that refresh your memory as to
11 whether there is ash in coal Ash Pond 2 at Joliet
12 29?

13 A. Yes, ma'am.

14 Q. So you would agree there is no ash
15 there?

16 MS. BUGEL: Objection. Assumes
17 facts not in evidence.

18 MS. NIJMAN: I just put the facts in
19 the evidence.

20 HEARING OFFICER HALLORAN:
21 Overruled.

22 BY MS. NIJMAN:

23 Q. Next on your list on page 29 of your
24 report, Exhibit 1101, is the Powerton ash bypass

1 **basin. Do you see that?**

2 A. Yes, ma'am.

3 **Q. Now, you are aware that the bypass**
4 **basin is only used when the ash surge basin is**
5 **being emptied, right?**

6 A. Uh-huh. Yes, ma'am.

7 **Q. So it doesn't usually contain ash,**
8 **does it?**

9 MS. WACHSPRESS: Objection.

10 MS. BUGEL: Objection. I apologize.
11 Objection. Assumes facts not in evidence.

12 HEARING OFFICER HALLORAN: Could
13 you -- Kari, could you read the question back
14 again, please?

15 (Whereupon, the record was read
16 as requested.)

17 HEARING OFFICER HALLORAN:
18 Ms. Nijman?

19 MS. NIJMAN: First of all, this was
20 a fact established in the first phase of the
21 hearing. Secondly, Weaver explains it as well in
22 their report, which he has just said he
23 testified -- or he reviewed.

24 HEARING OFFICER HALLORAN: Yeah. I

1 am going to let Ms. Nijman continue. Overruled.

2 BY THE WITNESS:

3 A. I'm sorry. What was the question?

4 BY MS. NIJMAN:

5 Q. So you said that you were aware that
6 this bypass basin is only used when the ash surge
7 basin is being emptied, right?

8 A. That's correct.

9 Q. So it doesn't usually contain ash,
10 correct?

11 MS. BUGEL: Hearing Officer, I'm
12 going to maintain my objection, because usually is
13 vague and subjective and a different assumption
14 than the first question given by Ms. Nijman.

15 HEARING OFFICER HALLORAN:

16 Ms. Nijman?

17 MS. NIJMAN: I can clarify the
18 question.

19 HEARING OFFICER HALLORAN: Thank
20 you.

21 BY MS. NIJMAN:

22 Q. So the ash bypass basin only
23 contains ash when it's being emptied, correct,
24 when the ash surge is being emptied?

1 A. You know, I have never seen that
2 basin operated, but it sounds like that's the way
3 it's supposed to be operated, and then what I
4 don't know is how the long ash sits in the basin
5 once it's used as a bypass.

6 **Q. You didn't review the testimony of**
7 **the station operators for Powerton in the first**
8 **phase of this hearing?**

9 A. I can't -- I don't remember if I did
10 or not.

11 **Q. Are you aware that the Ash bypass**
12 **basin, in fact, does not contain ash?**

13 A. Yeah. I mean, it's -- it's a bypass
14 basin that's supposed to be used in that emergency
15 situation, but the small basins, I do remember
16 that they are periodically emptied, but I don't
17 remember how often they are emptied.

18 **Q. Are you aware that Midwest**
19 **Generation has elected to retrofit this bypass**
20 **basin to a CCR-compliant impoundment?**

21 A. The bypass basin?

22 **Q. Yes.**

23 A. I don't -- I don't think I am aware
24 of that.

1 **Q.** **Okay. You mentioned some**
2 **alternative closure demonstrations this morning.**
3 **Do you remember that?**

4 **A.** **Be a little bit more specific,**
5 **please, on the alternative closure demonstration.**

6 **Q.** **Well, I'm mistaken, actually. I'm**
7 **sorry. I'm sorry. This morning you testified**
8 **about ASDs, not an alternative closure. My**
9 **mistake.**

10 **Are you aware that Midwest Gen**
11 **submitted an alternative closure demonstration**
12 **proposal to EPA for the ash bypass basin at**
13 **Powerton?**

14 **A.** **I'm aware that -- I think I looked**
15 **at -- are you talking about the Part A extension**
16 **request?**

17 **Q.** **Yes.**

18 **A.** **For the alternative closure?**

19 **Q.** **Yes?**

20 **A.** **I'm not -- I don't remember if**
21 **Powerton was one of those, but I'll take your**
22 **word. But I was -- I am familiar with with the**
23 **fact that Midwest had applied for some Part A**
24 **extensions.**

1 Q. You haven't reviewed Midwest Gen's
2 documentation in support of that request?

3 A. I have -- I have not. No, ma'am.

4 Q. Turning to the Powerton ash surge
5 basin. Are you aware that Midwest Gen also
6 submitted an alternative closure demonstration for
7 that basin?

8 A. Like the -- I know that Midwest had
9 submitted some Part A extensions, but I don't
10 remember which location and what impoundment they
11 applied for those extensions.

12 Q. And you are not aware that that
13 basin, the ash surge basin, will also be
14 retrofitted to a CCR-compliant impoundment?

15 A. No, ma'am.

16 Q. Okay. So this morning -- while we
17 are on the topic of Powerton -- you talked about
18 the groundwater units at Powerton. Do you
19 remember that?

20 A. I do.

21 Q. And that's in your report as well?

22 A. Yes, ma'am.

23 Q. And you would agree that there are
24 two distinct, but hydraulically connected

1 **groundwater units at Powerton, correct?**

2 A. The reports I have read -- I don't
3 remember if it was certainly Weaver -- talks about
4 two different -- two different zones of
5 groundwater that are hydraulically connected.

6 Q. **Is that a yes?**

7 A. Yes, ma'am.

8 Q. **Thank you. You state in your**
9 **report, your rebuttal report, that it's your**
10 **opinion that groundwater elevations from both of**
11 **those units should be combined into a single**
12 **contour map, correct?**

13 A. Correct.

14 Q. **Are you familiar with the firm of**
15 **KPRG?**

16 A. I am.

17 Q. **And you are aware that KPRG**
18 **developed the two separate contour maps for**
19 **Powerton?**

20 A. I am.

21 Q. **And you disagree with KPRG on that**
22 **point?**

23 A. I do.

24 Q. **Are you aware that Complainant's**

1 prior expert, Dr. Kunkel, agreed with KPRG about
2 the two units and the contour maps?

3 A. I am not.

4 Q. And that in the hearing -- at the
5 hearing in phase one Mr. Kunkel did not dispute
6 the two contour maps. Are you aware of that?

7 A. I am not.

8 Q. Do you know the name, John Seymour?

9 A. I do. That name rings a bell.

10 Q. John Seymour was Midwest
11 Generation's expert in phase one of this hearing.

12 Did you review any of
13 Mr. Seymour's reports in this case?

14 A. I believe so.

15 Q. Are they listed in your report?

16 A. No, ma'am.

17 Q. And you told me that you -- anything
18 you relied upon was listed in your report.

19 MS. BUGEL: Objection to the
20 characterization of the testimony. Reviewed and
21 relied upon are different things.

22 HEARING OFFICER HALLORAN: Do you
23 want to rephrase that, Ms. Nijman?

24 BY MS. NIJMAN:

1 Q. Understood.

2 Did you -- you did not put John
3 Seymour's reports into your own reports, correct?

4 A. That's correct.

5 Q. As a document you had relied upon
6 correct?

7 A. That's correct.

8 Q. What is the nature of the review
9 that you did of Mr. Seymour's reports?

10 A. It would have been kind of a cursory
11 review to see who he was, what he wrote about.

12 Q. So you are aware that Mr. Seymour
13 also understood the two separate contour maps for
14 Powerton and agreed with them?

15 A. I'm not aware of that.

16 Q. Okay. So you disagree with
17 Mr. Seymour?

18 MS. BUGEL: Objection.

19 HEARING OFFICER HALLORAN:

20 Sustained.

21 BY THE WITNESS:

22 A. I guess so.

23 BY MS. NIJMAN:

24 Q. And you are aware that Illinois EPA

1 **has never disagreed with the separate contour**
2 **maps --**

3 MS. BUGEL: Objection.

4 BY MS. NIJMAN:

5 **Q. -- provided for -- may I finish?**
6 **Provided by KPRG for the last ten years?**

7 HEARING OFFICER HALLORAN:

8 Ms. Bugel?

9 MS. BUGEL: Objection. Assumes
10 facts not in evidence.

11 HEARING OFFICER HALLORAN: I will
12 overrule. You may answer, if you are able,
13 Mr. Quarles.

14 BY THE WITNESS:

15 A. I am not. I haven't seen any review
16 by IEPA of any report.

17 BY MS. NIJMAN:

18 **Q. You are aware that Midwest**
19 **Generation provides reports on a monthly basis to**
20 **Illinois EPA, correct? Quarterly basis. Excuse**
21 **me.**

22 A. Yes, ma'am.

23 **Q. And you have reviewed those reports,**
24 **correct?**

1 A. I have.

2 Q. And those reports go directly to
3 Illinois EPA, don't they? Pardon me?

4 A. Yes, ma'am.

5 Q. And those reports contain contour
6 maps for the Powerton facility, do they not?

7 A. Yes, ma'am.

8 Q. How long do you think those reports
9 have been sent to Illinois EPA by Midwest
10 Generation?

11 A. I'm assuming as long as the CCAs
12 have been in place.

13 Q. Looking back at the chart on page 29
14 of your expert report. You mentioned the Waukegan
15 station here, East Ash Pond and West Ash Pond. Do
16 you see that?

17 A. Yes, ma'am.

18 Q. You're aware that the Waukegan
19 station was no longer burning coal as of June of
20 2022?

21 A. I'm not.

22 Q. So you are not aware that both ponds
23 are no longer being used?

24 A. No, ma'am.

1 **Q. As to the East Pond listed on your**
2 **chart, are you aware that it will be closed in**
3 **place under the CCR rules?**

4 A. I don't -- I don't -- I don't
5 remember if I was aware; a closure-in-place,
6 closure by removal. It seemed like I was thinking
7 there was one that was going to be planned or two,
8 in this case, for closure by removal.

9 So I'm a little surprised at the
10 closure-in-place as being considered.

11 **Q. So you have not seen the**
12 **documentation in Midwest Generation's website**
13 **regarding this pond?**

14 A. No, ma'am.

15 **Q. And the West Ash Pond, are you aware**
16 **that it doesn't contain ash?**

17 MS. BUGEL: Objection. Assuming
18 facts not in evidence.

19 MS. NIJMAN: I -- this is -- this is
20 the problem of doing a rebuttal before I can do
21 the rest of my case. I have no choice.

22 HEARING OFFICER HALLORAN:
23 Overruled. You may ask it.

24 BY THE WITNESS:

1 A. I'm not.

2 BY MS. NIJMAN:

3 Q. Looking at Will County on your
4 chart. You have Ash Pond 2 South.

5 A. Yes, ma'am, yeah.

6 Q. Are you aware that facility no
7 longer burns coal as of June of 2022?

8 A. No, ma'am.

9 Q. And you are not aware that those --
10 both those ponds at Will County are to be closed
11 in place under the CCR rules?

12 A. When you say both ponds, Pond 2 and
13 3?

14 Q. That's correct.

15 A. No, ma'am.

16 Q. And just so I'm clear, you didn't
17 update the information on this chart for any of
18 the other companies listed here, correct?

19 A. Correct.

20 Q. Now, you -- let's talk about
21 Waukegan for a minute.

22 You mentioned this morning that
23 you disagree with the potential remedy of a cap
24 for the Waukegan -- what area did you call it?

1 The area to the --

2 A. The former slag/fly ash area.

3 Q. Okay. All right. I'm going to call
4 it the fill area, the former fill area?

5 A. Okay.

6 Q. Okay?

7 A. Perfect.

8 Q. Just to make it simple.

9 You disagreed, correct, with the
10 concept of a cap in this area?

11 A. I did.

12 Q. If you could turn to your rebuttal
13 report at page 13. Exhibit 1102, in the third
14 paragraph starting with "although." And I think
15 you read this, this morning. You talk about --
16 and you say, "according to US EPA," and then you
17 cite to US EPA 1993 at 1. Do you see that
18 citation?

19 A. Yes, ma'am.

20 Q. That's US EPA's presumptive remedy
21 analysis for landfills that you mentioned this
22 morning?

23 A. Yes, ma'am.

24

1 (Whereupon, Exhibit No. 1108 was
2 marked for identification.)

3 BY MS. NIJMAN:

4 Q. I'm showing you what's been marked
5 as Exhibit 1108 for identification. Do you see
6 that document?

7 A. I do.

8 Q. That's the Presumptive Remedy For
9 CERCLA Municipal Landfill Sites, correct?

10 A. Yes.

11 Q. That's the document you cite to in
12 your report?

13 A. Yes, ma'am.

14 Q. Dated September 1993? It's on the
15 top, right-hand side of the first page.

16 A. Yes, ma'am.

17 Q. And I'll point out, to avoid any
18 confusion, you referenced this morning on page 13
19 a paragraph you have in italics in your report --
20 I'm sorry -- page 13 of the -- your expert
21 rebuttal opinion at Exhibit 1102. You identified
22 a paragraph you had in italics in the middle of
23 your page 13 on your Exhibit 1102, and if you look
24 at the first page of the new exhibit, 1108, the

1 EPA Presumptive Remedy For CERCLA Municipal
2 Landfill Sites, if you look at the second
3 paragraph, that's the same, correct?

4 A. It is.

5 Q. Looking at your report -- I would
6 like you to have both documents in front of you --
7 your report, page 14, your expert rebuttal
8 opinion, Exhibit 1102, page 14, first full
9 paragraph.

10 Do you see the paragraph in your
11 report that begins, "The US EPA considers"?

12 A. Yes, ma'am.

13 Q. So you state in your report --
14 expert opinion -- expert rebuttal opinion,
15 Exhibit 1102, you have the following: "The US EPA
16 considers remediating groundwater at a landfill to
17 be a non-presumptive remedy - meaning that other
18 remedial alternatives should be chosen for
19 long-term groundwater restoration."

20 Do you see that sentence in your
21 report?

22 A. I do.

23 Q. And you cite to this document,
24 correct, US EPA 1993?

1 A. I do.

2 Q. And you cite to page 2?

3 A. I do.

4 Q. So let's go to page 2 of what has
5 now been marked as Exhibit 1108. The heading of
6 this section is, "Containment As a Presumptive
7 Remedy," and the first paragraph -- I'm reading
8 from the middle of the paragraph starting from
9 waste. The word, "waste." Do you see that?

10 A. Yes, ma'am.

11 Q. And the document says, "Waste in
12 CERCLA landfills usually is present in large
13 volumes and is a heterogenous mixture of municipal
14 waste frequently co-disposed with industrial
15 and/or hazardous waste." Do you see that?

16 A. I do.

17 Q. Because treatment -- continuing to
18 read: "Because treatment usually is
19 impracticable, EPA generally considers containment
20 to be the appropriate response action or the
21 presumptive remedy for the source areas of
22 municipal landfill sites."

23 Do you see that statement?

24 A. I do.

1 Q. That's what EPA's guidance says.

2 I'm going to read a little more, and then we are
3 going to talk about it, okay?

4 The second sentence there says,
5 "The presumptive remedy for CERCLA municipal
6 landfill sites relates primarily to containment of
7 the landfill mass and collection and/or treatment
8 of landfill gas. In addition, measures to control
9 landfill leachate-affected groundwater at the
10 perimeter of the landfill and/or upgradient
11 groundwater that is causing saturation of the
12 landfill mass may be implemented as part of the
13 presumptive remedy."

14 Do you see that?

15 A. I do.

16 Q. Okay. And in the next paragraph,
17 "The presumptive remedy does not address exposure
18 pathways outside the source area, nor does it
19 include the long-term groundwater response
20 action."

21 Is this the section you were
22 referring to when you cited to this page in your
23 report about a non-presumptive remedy?

24 A. Actually, I remember reading that,

1 and if the term "non-presumptive remedy" for --
2 for groundwater? Let me see.

3 Yeah, actually, it looks like
4 that was a mistake on the citation at page 2. It
5 refers -- that comment is on page 6.

6 Q. Okay. Let's go to page 6.

7 A. Under "Non-Presumptive Remedy" on
8 the left-hand column.

9 Q. So I see on page 6 of what has been
10 marked as Exhibit 1108, the EPA Presumptive Remedy
11 Guidance, the text beneath the paragraph or the
12 reference to non-presumptive remedy states, "As
13 discussed in Section 3, defining risks is the --
14 excuse me.

15 "'Defining risks,' in quotes,
16 the containment presumptive remedy accomplishes
17 all but the last three of these objectives by
18 addressing all the pathways associated with the
19 source." Do you see that?

20 A. I do.

21 Q. Okay. And then the following
22 sentence, "Therefore, the focus of the RI/FS can
23 be shifted to characterizing the media
24 expressed -- addressed in the last three

1 objectives (contaminated groundwater, surface
2 water and sediments, and wetlands areas), and on
3 collecting data to support design of the
4 contaminant remedy."

5 That's what it says?

6 A. Yes, ma'am.

7 Q. So my question relating to that
8 paragraph is, by referencing this non-presumptive
9 remedy, EPA is not saying here that you can't use
10 a presumptive remedy, correct?

11 A. What they are saying is the
12 containment presumptive remedy, and in the case of
13 putting a cap over waste that is saturated with
14 groundwater flowing through it, it wouldn't be
15 fully contained.

16 Q. What we just read in this last line
17 does not preclude using a presumptive remedy when
18 there is saturation, correct?

19 A. You are referring to the sentence
20 that begins with "therefore"?

21 Q. Yes.

22 A. Certainly collecting, characterizing
23 the media addressed of contaminated groundwater,
24 surface water, sediments, and wetlands is

1 consistent with a nature and extent investigation.

2 Q. That's not what I asked you. I
3 asked you if the presumptive remedy is still -- is
4 still available, is it not, even if there is a
5 groundwater contamination issue; contaminated
6 groundwater as stated in this sentence?

7 A. Yes, ma'am. Contaminated
8 groundwater is -- is given in that sentence.
9 Contaminated groundwater could mean -- you could
10 have contaminated groundwater from a landfill
11 that's above the water table, and at Waukegan
12 we've got fill material that's in the aquifer.

13 Q. Is it your opinion that US EPA would
14 preclude a presumptive remedy for the landfill
15 that has some aspect of the landfill in
16 groundwater in the aquifer?

17 A. So, like, a municipal solid waste
18 landfill, the term "presumptive remedy" would give
19 you sometimes -- let's just say if you had
20 trichloroethylene in a well at a municipal
21 landfill. You have no idea where that
22 trichloroethylene came from. It could have been a
23 single drum. It could have been multiple drums.
24 It could have been --

1 Q. I think -- I'm sorry. I think we
2 are getting a little far afield from my question.

3 MS. BUGEL: I am going to object to
4 the interruption of the witness when he was giving
5 an answer.

6 HEARING OFFICER HALLORAN: Yeah.

7 MS. NIJMAN: It's not responsive to
8 the question, Mr. Hearing Officer.

9 HEARING OFFICER HALLORAN: You know,
10 I kind of agree. So sustained.

11 BY THE WITNESS:

12 A. So I can -- I can answer?

13 So, again, the example, if you
14 have a contaminant that is trichloroethylene and
15 it came from a single drum, or multiple drums, or
16 a bunch of parts wash or rags from auto parts
17 stores, being able to go and do a source
18 identification and do a targeted remediation in a
19 municipal solid landfill -- solid waste landfill,
20 that's where that aspect of a presumptive remedy
21 applies.

22 In this case, we have got --
23 we've got fly ash, bottom ash cinders, whatever,
24 in this fill area that are in the aquifer itself.

1 BY MS. NIJMAN:

2 Q. If you would refer back to page 2.
3 We read this into the record already.

4 A. Page 2 of --

5 Q. Page 2 of Exhibit 1108, EPA Guidance
6 on Presumptive Remedies that specifically states,
7 "Waste in these landfills is a mixture of
8 municipal waste frequently co-disposed with
9 industrial and/or hazardous waste."

10 And that does not preclude a
11 presumptive remedy, correct?

12 A. So, again, in a municipal solid
13 waste landfill, they are -- generally, they are
14 permitted to receive municipal solid waste,
15 industrial waste, construction demolition debris.
16 They are not permitted for hazardous waste, but
17 again, you -- they are commingled together with
18 stuff that would be generated at anybody's home.

19 Q. Are you suggesting that CCR is a
20 hazardous waste?

21 A. I'm not.

22 Q. Okay. Thank you.

23 Did you have the opportunity to
24 review the site investigation that was conducted

1 **for the Waukegan fill area?**

2 A. I think so. I don't -- I don't
3 remember that specifically, but -- again, I don't
4 remember it specifically.

5 MS. BUGEL: If I may interrupt, I
6 just want to ask if anybody is thinking of a break
7 at any point, and I want to be mindful of if the
8 witness needs a break.

9 HEARING OFFICER HALLORAN:
10 Ms. Nijman, do you have a lot more to go?

11 MS. NIJMAN: We do.

12 HEARING OFFICER HALLORAN: Do you
13 think this is a good time to take a break?

14 MS. NIJMAN: It's as good as any.

15 HEARING OFFICER HALLORAN: All
16 right. We're off the record, Kari. Thank you.

17 (Whereupon, a short break was
18 taken.)

19 HEARING OFFICER HALLORAN: We are
20 back on the record. Ms. Nijman is going to
21 continue her cross of Mr. Quarles.

22 MS. NIJMAN: I move to admit
23 Exhibit 1108, the EPA guidance document.

24 MS. BUGEL: No objection.

1 HEARING OFFICER HALLORAN: 1108 is
2 admitted. No objections.

3 (Whereupon, Exhibit No. 1108 was
4 admitted into evidence.)

5 BY MS. NIJMAN:

6 Q. Mr. Quarles, you spoke this morning
7 about the risk assessment that was performed by
8 Weaver. I think you did. I think you referenced
9 it in your report?

10 A. I may have mentioned, you know, in a
11 sentence that -- a risk assessment, but --

12 Q. Okay.

13 A. -- that's about the limit of that.

14 Q. Are you aware that Midwest
15 Generation's expert, John Seymour, also conducted
16 a risk assessment?

17 A. I'm not aware of any in-depth risk
18 assessment, human health --

19 Q. Okay.

20 THE COURT REPORTER: Sorry. Could
21 you --

22 BY THE WITNESS:

23 A. I'm not aware of any in-depth human
24 health and ecological risk assessment.

1 BY MS. NIJMAN:

2 Q. Let me ask the question again.

3 Are you -- are you aware that
4 John Seymour conducted a risk assessment?

5 A. I'm not.

6 Q. And you never reviewed it,
7 therefore, correct?

8 MS. BUGEL: Objection.
9 Mischaracterizes the witness's testimony.

10 THE WITNESS: Again, Mr. --

11 HEARING OFFICER HALLORAN: He can
12 answer if he --

13 BY THE WITNESS:

14 A. Mr. Seymour, three years ago, you
15 know, I perhaps reviewed kind of a cursory review,
16 but --

17 MS. NIJMAN: I'm sorry. Object to
18 speculation in the witness's answer.

19 BY THE WITNESS:

20 A. I don't know if I reviewed it or
21 not.

22 BY MS. NIJMAN:

23 Q. Thank you.

24 And you didn't conduct a risk

1 **assessment, correct?**

2 A. That's correct.

3 Q. **In fact, I think you told me during**
4 **the deposition that BBJ does not even have a risk**
5 **assessment division or group, correct?**

6 A. No. I believe I mentioned a
7 gentleman who does our risk assessment. He is our
8 primary risk assessor.

9 Q. **Let's pull up your deposition at**
10 **page 39. I'm sorry. I'm actually looking at page**
11 **40, lines 14 through 18.**

12 **So, I asked the question, "Do**
13 **you know at BBJ who runs the risk assessment**
14 **program?"**

15 **"Answer: We don't -- we don't**
16 **formally have a risk assessment program, but Andy**
17 **Bajorat has been a senior participant in risk**
18 **assessments."**

19 **Is that the reference you are**
20 **talking about?**

21 A. Yes, ma'am.

22 Q. **You referenced the Board's opinion**
23 **quite a bit this morning?**

24 A. Yes, ma'am.

1 Q. The Board also concluded that
2 groundwater contamination from off-site as
3 impacting the Waukegan fill area, correct?

4 A. That's correct.

5 Q. And that groundwater contamination
6 would be -- excuse me.

7 So the groundwater will continue
8 to be impacted by this off-site source, correct?

9 MS. BUGEL: Objection.

10 BY THE WITNESS:

11 A. I don't know any --

12 HEARING OFFICER HALLORAN:

13 Ms. Bugel?

14 MS. BUGEL: I am going to object to
15 the form of the question, vague, and this one is
16 assuming facts not in evidence.

17 HEARING OFFICER HALLORAN: All
18 right. All denied. If you can answer, you may.

19 BY THE WITNESS:

20 A. I mean, I -- other than the -- I'm
21 aware that off-site contamination, I believe, from
22 a tannery is coming onto the property at Waukegan,
23 and there is maybe a metal associated with that.
24 I'm not -- I can't comment any further than that.

1 BY MS. NIJMAN:

2 Q. Are you familiar with the **HELP**
3 **model?**

4 A. I am.

5 Q. **What does that stand for?**

6 HEARING OFFICER HALLORAN: Let's go
7 off the record for a minute. I'm sorry,
8 Mr. Quarles. Ms. Nijman and Ms. Gale have a phone
9 call.

10 (Whereupon, a short break was
11 taken.)

12 HEARING OFFICER HALLORAN: All
13 right. We are back on the record, Kari. Thank
14 you.

15 Ms. Nijman?

16 MS. NIJMAN: The counsel for Midwest
17 Generation and counsel for Complainants just had a
18 conversation with Ms. Marie Tipsord, Ethics
19 Officer for the Board, and the reason for the call
20 that we made to Ms. Tipsord was that we felt an
21 obligation to report an ex-parte conversation
22 between one of the Board members, Chief Currie,
23 Chair Currie, with our client, Midwest Generation,
24 Walter Stone.

1 Ms. Tipsord recommended that we
2 provide a little bit of background, that the
3 Hearing Officer -- the issue is, NRG, the parent
4 company, and its involvement in this proceeding,
5 which has been significantly briefed. Both the
6 Hearing Officer and the Board affirmed that NRG is
7 not a participant in this hearing, and its
8 finances or financial information are not relevant
9 to this hearing.

10 Chief Currie asked a question of
11 my client today, Mr. Walter Stone, concerning that
12 issue, and asked, "Are you guys going to pick up
13 the slack for Midwest Gen?"

14 That was, as I understand it,
15 the extent of the ex-parte communication.
16 Mr. Stone attempted to respond by simply saying,
17 "That's not a question at issue today." But it
18 was left -- that question was left hanging.

19 In order to cure the ex-parte
20 communication, Ms. Tipsord recommended that we put
21 this conversation on the record.

22 HEARING OFFICER HALLORAN: All
23 right. Thank you, Ms. Nijman.

24 Do you want to -- let's go off

1 the record for a minute.

2 (Whereupon, a discussion was had
3 off the record.)

4 HEARING OFFICER HALLORAN: Back on
5 the record, Kari.

6 BY MS. NIJMAN:

7 Q. Okay. So maybe you've -- we were
8 talking about the HELP model.

9 A. Yes.

10 Q. And maybe you have had a chance to
11 go look up what it stands for?

12 A. No.

13 Q. Do you know what it stands for?

14 A. I don't, but I know what it's used
15 for.

16 Q. Okay. My understanding, tell me if
17 I'm wrong, it's the hydrologic evaluation of
18 landfill performance. Does that sound right?

19 A. In fact, I can't say for sure.

20 Q. Okay. Have you ever conducted a
21 HELP model?

22 A. No. But I have -- some of the
23 landfill projects I have worked on, we used the
24 HELP model for those projects.

1 Q. Other people have performed the HELP
2 model?

3 A. Yes, ma'am.

4 Q. You are aware that Weaver conducted
5 a HELP model to assess the viability of the cap at
6 the Waukegan fill area?

7 A. I don't remember that specifically.

8 Q. Okay. You did not conduct a HELP
9 model as to the Waukegan fill area, correct?

10 A. No, ma'am.

11 Q. This morning you referenced the EPRI
12 report, E-P-R-I, which was marked as Exhibit 1103
13 over objection. Do you remember that?

14 A. I do.

15 Q. Now that report addresses only coal
16 ash impoundments, correct?

17 A. That's right.

18 Q. An impoundment, it means it's
19 designed to hold water, correct?

20 A. Call it a pond, call it -- it does
21 retain water and solids. Typically sluiced
22 solids, to some degree.

23 Q. Waukegan area, the fill area we have
24 been talking about, is not an impoundment, is it?

1 MS. BUGEL: Objection. Assumes
2 facts not in evidence.

3 MS. NIJMAN: Again, Mr. Hearing
4 Officer, I can't help that because of the nature
5 of this rebuttal testimony.

6 MS. BUGEL: I don't think this goes
7 to the rebuttal testimony. I think it goes to a
8 disputed -- an issue that can be disputed in this
9 case, and the way Ms. Nijman is presenting it, as
10 if it's established fact.

11 MS. NIJMAN: And it will be an
12 established fact if this were not --

13 HEARING OFFICER HALLORAN: I kind of
14 agree with the rebuttal going before it should,
15 but it seems to be in your plan, and you agreed on
16 it. So overruled.

17 MS. BUGEL: Hearing Officer, might I
18 say something further on this?

19 HEARING OFFICER HALLORAN: Sure.

20 MS. BUGEL: This is an issue that is
21 actually disputed. So even if the Weaver
22 witnesses go and say that it's their opinion that
23 it's an -- it's not an impoundment, that doesn't
24 establish it as not an impoundment.

1 Mr. Quarles -- you know, this is
2 something that is disputed in multiple documents
3 relative to this proceeding that will get
4 introduced over time. So even if the Weaver
5 witnesses have given their opinion, it doesn't
6 mean that Ms. Nijman can present it as a fact.
7 It -- most appropriately, it can be presented as
8 the Weaver witnesses have offered an opinion that
9 that area is not an impoundment.

10 HEARING OFFICER HALLORAN: Is there
11 a way to rephrase that, Ms. Nijman?

12 MS. BUGEL: Not really, because
13 there are so many points that will come up in the
14 rest of the hearing on our direct case that will
15 reflect this point. Not just from Weaver. From
16 other witnesses as well. So I -- I guess I can
17 ask it as to whether he is aware. Maybe that
18 would help.

19 HEARING OFFICER HALLORAN: Yeah. I
20 think it would. I'm not sure if it would
21 alleviate Ms. Bugel's objection, but I will allow
22 that.

23 MS. BUGEL: Okay. And, Hearing
24 Officer, we just will be putting in documents as

1 well that will create this -- some questions
2 around this.

3 HEARING OFFICER HALLORAN: Okay.

4 Thank you.

5 BY MS. NIJMAN:

6 Q. You are not aware whether the
7 Waukegan area is a CCR impoundment, are you?

8 A. I'm not.

9 Q. Have you ever made that assessment
10 of whether it is or is not an impoundment?

11 A. I have not.

12 Q. Do you still have the EPRI report,
13 Exhibit 1103, in front of you?

14 A. Yes, ma'am.

15 Q. I would like to refer you to page
16 5-1 of that report.

17 A. Okay.

18 Q. You discuss the fact on your direct
19 that contaminants increased after closure; is that
20 correct?

21 A. I said it's possible that
22 constituent concentrations can increase with a
23 cap.

24 Q. Okay. But you relied on this report

1 to reach that conclusion?

2 A. Yes, ma'am.

3 Q. Okay. And this report deals with
4 three separate areas, I think you mentioned,
5 correct? Three separate impoundments?

6 A. Yes, ma'am.

7 Q. And looking at the last sentence in
8 the first paragraph, there is a discussion of the
9 HNW impoundment. Do you see that?

10 A. Yes, ma'am.

11 Q. Is that the impoundment you are
12 referencing that had an increase?

13 A. I don't know by name which
14 impoundment had the increase.

15 Q. Okay. Well, if you can read that
16 sentence, does that help you?

17 A. Yes, ma'am.

18 Q. Okay. So it's the impoundment
19 called HNW, correct?

20 A. Yes, ma'am.

21 Q. And that stands just for HM West.
22 If you would turn to page 4-1. Page 4-1 of
23 Exhibit 1103 discusses HN West impoundment. Do
24 you see that?

1 A. I do.

2 Q. And if you look at the second
3 paragraph here, they refer, you see, to HNW as is
4 HN West. Do you see that connection?

5 A. I do.

6 Q. So we agree that HNW stands for HN
7 West? I'm sorry, sir?

8 A. I'm reading it.

9 Q. Oh, okay.

10 A. It just says that HNW impound was
11 located on the south bank of the large, regional
12 river.

13 Q. Right. My question was, does HNW
14 stand for HN West impoundment?

15 A. Um...

16 Q. If you look at the title at the top
17 of the page?

18 A. Yes, ma'am.

19 Q. So we agree that HN West means HNW.
20 That's used interchangeably?

21 A. Yes, ma'am.

22 Q. Thank you. Do you see on the bottom
23 paragraph of this page that this impoundment, the
24 HNW impoundment, in the EPRI report consists of

1 **three ponds. Do you see that?**

2 A. Yes, ma'am.

3 **Q. And if you look at the last**
4 **sentence, those ponds cover roughly 30 acres when**
5 **you add those amounts up; Pond 1, 9.3 acres; Pond**
6 **3, 16.4; and a secondary pond, 4.7 acres. Roughly**
7 **30 acres?**

8 A. Yes, ma'am.

9 **Q. Do you know the size of the Waukegan**
10 **grassy fill area?**

11 A. I don't, but I know it would be
12 significantly less than 30 acres. I believe --

13 **Q. If you could turn to page 4.3?**

14 MS. BUGEL: I just want to
15 interrupt. Mark was looking at something to try
16 to refresh his recollection on the last question,
17 and I want -- the witness should have an
18 opportunity to refresh his recollection and
19 respond.

20 BY MS. NIJMAN:

21 **Q. The witness answered the question.**
22 **I'm ready to move on.**

23 A. Um...

24 **Q. Mr. Quarles, there is no question**

1 **pending.**

2 A. Okay. What page would you like,
3 4-3?

4 Q. If you turn to page 4-13. Sorry.
5 4-3. Not 13. The first paragraph after the
6 bullet, the first sentence states, "The HNW
7 impoundment was not capped after it was removed
8 from service." Do you see that?

9 A. Yes, ma'am.

10 Q. There was no cap on this
11 impoundment, correct?

12 A. At the time it was removed from
13 service.

14 Q. Do you believe a cap was installed
15 at this impoundment at a later date?

16 A. I assume so.

17 Q. What's the basis of your assumption?

18 A. If you are -- if you are telling me
19 that the HNW was the impoundment that groundwater
20 didn't improve even after construction of the cap,
21 then that would imply that it had a cap.

22 Q. Would you turn to page 4-13?

23 A. Under the caption, "Site Summary,"
24 it states, "The HNW impoundment was closed with no

1 cap under the assumption that ash would be mined
2 in the future." Do you see that?

3 A. I do.

4 Q. Are you still assuming that a cap
5 was placed on this impoundment?

6 A. I'm not.

7 Q. Now, these three HNW ponds that make
8 up one impoundment in this study, they had been
9 used up until the late 1990s, right?

10 A. I don't know when they stopped their
11 use.

12 Q. If you look at the report at page
13 3-1, in the middle of the first paragraph it
14 states, "The west impoundment and unlined portions
15 of the east impoundment were removed from service
16 in late 1996." Do you see that?

17 A. Yes, I do.

18 Q. You also commented this morning
19 about Weaver's trend analysis, that you didn't
20 agree with it, correct?

21 A. That's right.

22 Q. And I'm not sure if you said this
23 already, but you didn't review the trend analysis
24 done by John Seymour, correct?

1 A. For the most part, correct, no
2 detailed evaluation.

3 Q. Okay. Earlier you had told me you
4 hadn't looked -- that you cursory -- did a cursory
5 review of Mr. Seymour's report maybe, correct?

6 A. Correct.

7 Q. You couldn't remember?

8 A. Yes, ma'am.

9 Q. So is it fair to say you don't
10 remember whether you conducted a trend -- a review
11 of his trend analysis?

12 A. It was not an in-depth review.

13 Q. And you didn't write anything about
14 it in your reports?

15 A. No, ma'am.

16 Q. And you didn't perform a trend
17 analysis, correct?

18 A. That's right.

19 Q. One of the things you mentioned --
20 you talked about monitored natural attenuation
21 this morning, and you referred to your report at
22 page 22.

23 A. Which report?

24 Q. This is Hearing Exhibit 1101. I am

1 right. I just couldn't find it.

2 Okay. On page 22 of your
3 January report marked as Exhibit 1101, in the
4 second paragraph it starts with the sentence --
5 the second sentence starts with "also."

6 MS. BUGEL: Can you tell us -- are
7 you in the bullet points or the paragraphs without
8 bullets?

9 MS. NIJMAN: I am in the
10 paragraph -- the second paragraph of the page,
11 second sentence that begins with "also."

12 BY MS. NIJMAN:

13 Q. Do you see that, Mr. Quarles?

14 A. I do, yes.

15 Q. It says, "The Board concluded that
16 there is no evidence to expect that groundwater
17 quality at Joliet, Powerton or Will, will
18 naturally return to groundwater -- to Class 1
19 groundwater quality standards." And you cite to
20 Opinion at page 83. Do you see that?

21 A. Yes, ma'am.

22 Q. I would like to turn to page 83 of
23 the Board's interim opinion. In the first full
24 paragraph on the second line -- I'm sorry. The

1 second sentence, the fourth line.

2 What the Board actually stated
3 is that there is no evidence in the record,
4 correct?

5 A. Yes, ma'am.

6 Q. You left out the words "in the
7 record" in your opinion, correct?

8 A. I did.

9 Q. Now, the Board made the statement in
10 its decision for the first phase of this case,
11 correct?

12 A. Yes, ma'am.

13 Q. And the Board also said that this
14 hearing that we are in today was necessary because
15 there wasn't evidence in the record to allow for a
16 remedy, correct?

17 A. That's right.

18 Q. There was no discussion of a remedy
19 at the first phase of this hearing, correct?

20 A. That's right.

21 Q. I would like you to -- refer you to
22 your rebuttal report at page 10 marked as
23 Exhibit 1102. Under Section 2.3.4 at the bottom
24 of the page you make the same statement, and you

1 cite to Opinion at 83. Do you see that?

2 A. I do.

3 Q. And, once again, it's missing the
4 words "in the record" that the Board put in its
5 opinion, correct?

6 A. Correct.

7 Q. Okay. Also referring you to your
8 opinion at page -- your rebuttal opinion, 1102,
9 Exhibit 1102 at page 3.

10 A. Page 3?

11 Q. Yes, sir.

12 A. Okay.

13 Q. In the second to last bullet on that
14 page, you state, again, "there is no evidence to
15 expect" and you cite to the Opinion at 83. Do you
16 see that?

17 A. I do.

18 Q. And the Board's opinion was that
19 there was no evidence in the record, correct?

20 A. That's right.

21 Q. Now, in your January 2021 report in
22 this case you noted a concern for discharges along
23 the shorelines. Do you recall that?

24 A. I do.

1 Q. And you call them seeps?

2 A. Yes, ma'am.

3 Q. S-E-E-P-S. Correct?

4 A. Yes, ma'am.

5 Q. And I would like to refer you to
6 page 19 of your first report, your January report,
7 Exhibit 1101. And in the third bullet there you
8 are talking about groundwater discharges along
9 shorelines, correct?

10 A. Yes, ma'am.

11 Q. Now, you didn't visit the stations
12 to look for seeps, right?

13 A. I did not.

14 Q. You have a photo listed here of a
15 seep, correct?

16 A. Yes, ma'am.

17 Q. And that photo is not any one of the
18 Midwest Generation stations, is it?

19 A. It's not -- well, not of the four
20 stations.

21 Q. Do you think this photo represents a
22 Midwest Generation station?

23 A. I don't, but it's from Vermilion
24 River, and I don't know if Midwest or NRG is an

1 owner/operator of that station.

2 MS. NIJMAN: Objection. Strike the
3 testimony as unresponsive and irrelevant. Midwest
4 Generation -- first of all, NRG is not a party to
5 this matter, and I asked you about the four
6 stations in this case.

7 HEARING OFFICER HALLORAN: I will
8 sustain, but I can't strike.

9 MS. NIJMAN: Thank you.

10 HEARING OFFICER HALLORAN: And ask
11 the Board to disregard.

12 BY MS. NIJMAN:

13 Q. Now, you are aware that KPRG does
14 NPDES stormwater permitting inspections at Joliet
15 in the northeast fill area?

16 A. I'm not.

17 Q. So you didn't review any of KPRG's
18 inspection reports for those areas or that area?

19 MS. BUGEL: Objection.
20 Mischaracterizes the witness' testimony.

21 MS. NIJMAN: It's a question.

22 HEARING OFFICER HALLORAN: Could you
23 rephrase that? I missed some of it. I'm sorry.

24

1 BY MS. NIJMAN:

2 Q. So you did not review any inspection
3 reports prepared by KPRG of the Joliet northeast
4 area?

5 A. Not that I recall.

6 Q. Did you review any stormwater
7 inspections at any of the facilities, the four
8 stations?

9 A. I did not.

10 Q. I will refer you to your rebuttal
11 report at page 33, Section 2.6, which is
12 Exhibit 1102. In the last full paragraph on this
13 page you state that there is no indication that
14 Midwest Gen has ever inspected shorelines. Do you
15 see that?

16 A. I do.

17 Q. You haven't inspected the shorelines
18 for the stations, have you?

19 A. I have not.

20 Q. And you haven't reviewed testimony
21 from station operators in the first phase of this
22 hearing, have you?

23 A. No, ma'am.

24 Q. I'm actually at a good spot to -- a

1 couple questions.

2 Are you aware -- you are aware
3 that there are inspection reports prepared by
4 operators at the stations?

5 A. I'm aware that, like you mentioned,
6 the stormwater inspections that are done.

7 Q. Are you aware of any other
8 inspections that the operators would do at the
9 stations, operating stations?

10 A. I'm aware of the CCR rule that
11 requires inspections that are primarily related to
12 stability inspections.

13 Q. Have you reviewed any inspection
14 reports for any of the stations?

15 A. I did not.

16 Q. In your rebuttal report at page 33,
17 again, Exhibit 1102, in the third paragraph under
18 Section 2.6, you discuss a concern about
19 groundwater discharges accumulating in sediments.
20 Do you see that?

21 A. I do.

22 Q. You have no evidence of sediment
23 impact from the four stations, do you?

24 A. I do not.

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Q. And you haven't reviewed any sediment data at any of the stations?

A. I have not.

MS. NIJMAN: Okay. So I'm at a good spot to stop.

HEARING OFFICER HALLORAN: Okay. Sounds good. We will go off the record, Kari.

(END OF PROCEEDINGS.)

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I, KARI WIEDENHAUPT, do hereby certify that the foregoing was reported by stenographic and mechanical means, which matter was held on the date, and at the time and place set out on the title page hereof and that the foregoing constitutes a true and accurate transcript of same.

I further certify that I am not related to any of the parties, nor am I an employee of or related to any of the attorneys representing the parties, and I have no financial interest in the outcome of this matter.

I have hereunder subscribed my hand on the ____ day of _____, 2023.

KARI WIEDENHAUPT, CSR

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