

ILLINOIS POLLUTION CONTROL BOARD

SIERRA CLUB, ENVIRONMENTAL LAW )  
AND POLICY CENTER, PRAIRIE RIVERS )  
NETWORK, and CITIZENS AGAINST ) PCB 13-15  
RUINING THE ENVIRONMENT, )  
Complainants, )  
vs. )  
MIDWEST GENERATION, LLC, )  
Respondent. )

REPORT OF THE PROCEEDINGS held in the  
above-entitled cause before HEARING OFFICER  
BRADLEY P. HALLORAN, taken by Raelene Stamm, CSR,  
Certified Shorthand Reporter licensed by the State  
of Illinois, at 160 North LaSalle Street,  
Room N-505, Chicago, Illinois, on the 16th day of  
May, 2023, commencing at the hour of 9:00 a.m.

Reported By: Raelene Stamm, CSR

License No.: 084-004445

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APPEARANCES:

ILLINOIS POLLUTION CONTROL BOARD  
MS. MICHELLE GIBSON, Board Member  
MS. JENNIFER VAN WIE, Board Member  
MS. CHLOE SALK, Board Member  
MS. CARLIE LEONI, Board Member  
MS. ESSENCE BROWN, Environmental Scientist  
MR. ANAND RAO, Chief Environmental  
Scientist

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APPEARANCES: (Continued)

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On behalf of Complainant,  
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MR. ANDREW NISHIOKA  
NIHMAN FRANZETTI, LLP  
10 South LaSalle Street  
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On behalf of the Respondent.

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I N D E X

WITNESS	DX	CX	RDX	RCX
MARK QUARLES				
By Ms. Nijman		8		
By Ms. Bugel			79	
By Ms. Nijman				112
By Ms. Bugel			120	
JONATHAN SHEFFTZ				
By Mr. Wannier		124		

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E X H I B I T S

NUMBER	MARKED	ADMITTED
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Claimant Exhibit

No. 1201	134	
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Respondent Exhibit

No. 1109	16	
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No. 1110	23	
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No. 1111	32	
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1 HEARING OFFICER HALLORAN: Okay. We're gonna  
2 go back on the record. Good morning. My name is  
3 Bradley Halloran. I'm the hearing officer with the  
4 Illinois Pollution Control Board. This case is  
5 continued from yesterday. This is PCB 13-15.  
6 Today's May 16, 2023.

7 Would the environmental groups like to  
8 introduce themselves, please?

9 MS. BUGEL: Good morning. Faith Bugel  
10 representing Sierra Club.

11 MS. WACHSPRESS: Megan Wachspress representing  
12 Sierra Club.

13 MR. RUSS: Abel Russ representing Prairie  
14 Rivers Network.

15 MR. WANNIER: Greg Wannier representing Sierra  
16 Club.

17 HEARING OFFICER HALLORAN: Thank you.

18 MS. NIJMAN: Jennifer Nijman for respondent,  
19 Midwest Generation, here with Christen Gale and  
20 Andrew Nishioka.

21 HEARING OFFICER HALLORAN: Okay. Thank you. I  
22 think where we left off yesterday, Ms. Nijman was  
23 crossing Mr. Quarles, the expert, and you may  
24 proceed unless there's something else.

1 MR. NIJMAN: Just two housekeeping matters, I  
2 move to admit Exhibit 1106 and 1107 from yesterday.

3 MS. BUGEL: No objection.

4 HEARING OFFICER HALLORAN: No objection. Thank  
5 you. Respondent's Exhibit Number 11, excuse me,  
6 1107 and 1108.

7 MR. NIJMAN: 6 and 7, 1106 and 1107.

8 HEARING OFFICER HALLORAN: Okay. Respondent's  
9 Exhibit 1106 and 1107 admitted.

10 (WHEREUPON, Respondent's Exhibit  
11 No. 1106 and 1107 were admitted  
12 into evidence.)

13 HEARING OFFICER HALLORAN: Thank you.

14 You may proceed.

15 MS. NIJMAN: Thank you.

16 MARK QUARLES,  
17 called as a witness herein, having been first duly  
18 sworn, was examined and testified as follows:

19 CROSS-EXAMINATION

20 BY MS. NIJMAN:

21 Q. Good morning, Mr. Quarles.

22 A. Good morning.

23 Q. Yesterday you spoke on direct about CCAs.

24 Do you remember that testimony?



1 A. I do.

2 Q. What are CCAs for the record?

3 A. Compliance commitment agreements.

4 Q. Are you familiar with the compliance  
5 commitment agreements in this case you testified?

6 A. Yes, ma'am.

7 Q. You've never developed a CCA on behalf of  
8 a client in Illinois, have you?

9 A. I have not.

10 Q. Yesterday you made comments about CCAs  
11 that they are -- and I think I have the wording,  
12 but correct me if I'm wrong -- intended to avoid  
13 contamination.

14 Do you recall saying that?

15 A. I do.

16 Q. And you made citations that the -- or  
17 suggestions that the Board made that statement,  
18 correct?

19 A. I did.

20 Q. I'd like to refer you to Page 82 of the  
21 Board opinion which is up on the screen. If you  
22 look at Paragraph 4, I believe you're referring to  
23 the statement at the second to last sentence in  
24 Paragraph 4, correct?

1           A.     And the CCAs at the four stations indicate  
2 right there, yes, ma'am.

3           **Q.     So go ahead and keep reading that**  
4 **sentence, please.**

5           A.     These actions are intended to avoid and  
6 detect any further contamination or monitor  
7 effectiveness of a corrective action rather than a  
8 remedy -- rather than remedy any contamination or  
9 remove the contamination source.

10          **Q.     Okay. Is that your reference?**

11          A.     It is.

12          **Q.     Do you believe that suggests that the**  
13 **Board was saying CCAs avoid contamination?**

14          A.     Avoid and detect any further  
15 contamination, yes, ma'am.

16          **Q.     Or monitor the effectiveness of a**  
17 **corrective action, correct?**

18          A.     Yes.

19          **Q.     Yesterday on your direct exam you also**  
20 **discussed 2011 hydrogeologic by Patrick Engineering**  
21 **for the four stations.**

22                   **Do you remember that?**

23          A.     I do.

24          **Q.     You're aware that 2011 was prior to the**

1 federal CCR rules being enacted?

2 A. It was.

3 Q. And you're aware that these Patrick  
4 reports were part of the Midwest Gen's voluntary  
5 compliance with Illinois EPA's request to monitor?

6 A. Yes, ma'am.

7 Q. And you're aware that those Patrick  
8 reports were specifically focused on the ponds  
9 only, correct?

10 A. Yes, ma'am.

11 Q. And you're aware that Illinois EPA  
12 specifically approved the location of those  
13 monitoring wells that Patrick installed?

14 A. I'm not aware of that.

15 Q. You're not aware that IEPA, Illinois EPA,  
16 dictated the location of the monitoring wells in  
17 some cases?

18 A. I'm not.

19 Q. You also discussed the CCR rules, and you  
20 mentioned pond closures within 5 feet of  
21 groundwater.

22 Do you remember that testimony?

23 A. I do.

24 Q. That's not the entire -- and you were

1 referring to the CCR regulations when you said  
2 5 feet, right?

3 A. Yes, ma'am.

4 Q. That's not the entire rule about a pond  
5 closure, correct?

6 A. For the location restriction of the  
7 separation between the uppermost aquifer. It also  
8 discusses the intermitent recurring separation  
9 between the seasonal high water table.

10 Q. Right. I'd like to put up on the  
11 screen -- hand you a copy to see it if it's easier.  
12 We've handed you a document which is an excerpt  
13 from Title 35 of the Illinois Administrative Code,  
14 Subchapter J, Coal Combustion Waste Surface  
15 Impoundments, Part 845.

16 Do you see that?

17 A. I do.

18 Q. Are these the rules you're referring to?

19 A. This is the Illinois CCR rule.

20 Q. Are you aware that Illinois has a  
21 similar -- I think we talked about that  
22 yesterday -- has similar rules to the federal  
23 rules?

24 A. Yes, ma'am.

1 Q. If you turn to the second page of this  
2 exhibit, Section 845.300A, do you see that?

3 A. Yes, ma'am.

4 Q. And under Section 845.300A, this is the  
5 reference you were just making now about -- and I'm  
6 reading -- existing and new CCR surface  
7 impoundments and all lateral expansions of CCR  
8 surface impoundments must be constructed with a  
9 base that is located at least 1.52 meters, 5 feet,  
10 above the upper limit of the uppermost aquifer.

11 That's where you got your 5 feet  
12 statement?

13 A. Yes, ma'am.

14 Q. Well, yesterday you didn't mention the  
15 rest. You mentioned it just now. So I'm gonna  
16 keep reading. Or must demonstrate that there will  
17 not be an intermittent, recurring or sustained  
18 hydraulic connection between any portion of the  
19 base of the CCR surface impoundment and the  
20 uppermost aquifer due to normal fluctuations in  
21 groundwater elevations including seasonal high  
22 water table.

23 Do you see that?

24 A. I do.

1           **Q.    You haven't made that assessment -- the**  
2           **second part of this statement about the**  
3           **intermittent, recurring or sustained hydraulic**  
4           **connection, you haven't made that assessment for**  
5           **any of the stations of Midwest Generation, correct?**

6           A.    Well, I have.

7           **Q.    Where would that be?  It's not in any of**  
8           **your?**

9           A.    Powerton, for example.

10          **Q.    Where at Powerton?**

11          A.    Where I looked at the bottom elevation of  
12          the ash surge basin and the uppermost groundwater  
13          elevation that was reported for that area.

14          HEARING OFFICER HALLORAN:  Mr. Quarles, can you  
15          keep your voice up?  I know you got a frog in your  
16          throat.

17          THE WITNESS:  Yeah, sorry.

18          HEARING OFFICER HALLORAN:  Thank you.

19          BY MS. NIJMAN:

20          **Q.    And what did you determine -- which basin?**

21          A.    The ash surge basin.

22          **Q.    And what did you determine?  What -- first**  
23          **of all, what document were you looking at?**

24                   **For the record, are you referring to your**

1 **report?**

2 A. Yeah, it's one.

3 **Q. Yeah. Which report?**

4 A. I'm looking.

5 **Q. I know. Which report, sir?**

6 A. I don't know that. I don't remember which  
7 report that was.

8 **Q. Okay.**

9 HEARING OFFICER HALLORAN: While Mr. Quarles is  
10 looking through the report, I was remiss to let the  
11 people know that we have Board Members Michelle  
12 Gibson and Jennifer Van Wie. We also have Essence  
13 Brown and Anand Rao, environmental scientist. And  
14 we have Chloe Salk and Carlie Leoni with us today,  
15 all from the Pollution Control Board. Thank you.

16 BY MS. NIJMAN:

17 **Q. If you would refer to Page 28 of your**  
18 **rebuttal report?**

19 A. Yes, ma'am.

20 **Q. Last full paragraph on that page?**

21 A. Yes, ma'am.

22 **Q. Is that what you're referring to?**

23 A. No. There was a paragraph where I gave  
24 elevations of the bottom of the pond versus the

1 water table that was reported and made a statement  
2 about the degree of separation in feet between the  
3 two.

4 Q. If you take a look at your main first  
5 report, Exhibit 1101, Page 16?

6 A. Yes, ma'am. That's it.

7 Q. And did you review Midwest Generation's  
8 submittals on its website -- public submittals  
9 regarding placement above the uppermost aquifer  
10 location restrictions?

11 A. I did.

12 Q. Did you review those documents?

13 A. I did.

14 Q. I'd like to show you -- and would you have  
15 made the conclusion in your report that we just  
16 referenced on Page 16, it was based on your review  
17 of Midwest Gen documents?

18 A. That's correct.

19 (WHEREUPON, Respondent's Exhibit  
20 No. 1109 was marked for  
21 identification.)

22 BY MS. NIJMAN:

23 Q. So I'm handing you what I've marked for  
24 identification as Exhibit 1109. The first page is



1 the application for the initial operating permit  
2 for Powerton.

3 Do you see that?

4 A. Yes, ma'am.

5 Q. Dated October 29, 2021, correct?

6 A. Yes, ma'am.

7 Q. And the second page we've referenced as  
8 Attachment 4-1 ASB and ABV location determination.

9 Do you see that title page?

10 A. I do.

11 Q. And that's Midwest Generation Bates  
12 Number 109813. The third page of this document  
13 you'll see is Midwest Generation Bates  
14 Number 109814 at the bottom right.

15 Do you see that?

16 A. I do.

17 Q. And this document is titled, Placement  
18 Above the Uppermost Aquifer Location Restrictions  
19 Ash Surge Basin, Powerton Generating Station,  
20 September 2021.

21 Do you see that?

22 A. Yes, ma'am.

23 Q. Is this the document you reviewed?

24 A. The application for the initial operating

1 permit, I think this postdates the version that was  
2 on the website for the initial location restriction  
3 determination.

4 Q. So the answer is, no, you've not reviewed  
5 this document?

6 A. Not the application for the initial  
7 operating permit.

8 HEARING OFFICER HALLORAN: Mr. Quarles, it  
9 might also help like we had yesterday, kind of face  
10 towards the court reporter. There we go. Thanks.

11 THE WITNESS: Okay.

12 BY MS. NIJMAN:

13 Q. So referring you to Paragraph Number 1  
14 captioned, Placement Location Restriction  
15 Determination, do you see that?

16 A. Yes, ma'am.

17 Q. And in that paragraph Midwest Generation  
18 agrees that the ASB is not separated from the upper  
19 limit of the uppermost aquifer by a minimum of  
20 5 feet.

21 Do you see that?

22 A. I do.

23 Q. Okay. But then Midwest Generation in this  
24 statement, this placement statement, continues and

1       **says in the last sentence, this comparison**  
2       **demonstrated that an intermittent, recurring or**  
3       **sustained hydraulic connection between any portion**  
4       **of the base of the ASB, ash surge basin, and the**  
5       **uppermost aquifer due to normal fluctuations in**  
6       **groundwater elevations is not present.**

7               **Do you see that sentence?**

8           A.    I do.

9           MS. BUGEL:  Can I interrupt?  You didn't give a  
10       copy to counsel.

11          MS. GALE:  Sorry about that.

12       BY MS. NIJMAN:

13          **Q.    So you have not reviewed this statement or**  
14       **this analysis, correct?**

15          A.    I've not reviewed the application for the  
16       initial operating permit, no.

17          **Q.    And that includes this statement and this**  
18       **analysis, right?**

19          A.    That's right.

20          MS. BUGEL:  Objection to the characterization.  
21       Mr. Quarles said he reviewed a previous version, so  
22       the characterization of this statement and this.

23          HEARING OFFICER HALLORAN:  Overruled.

24

1 BY MS. NIJMAN:

2 Q. On direct yesterday you made a statement  
3 about the Waukegan FS fill area that lies to the  
4 west of the ponds, and you said, if I'm remembering  
5 correctly, that there was 22 feet of ash in that  
6 area saturated by groundwater.

7 Do you remember stating that?

8 A. Yes.

9 Q. And you referred to the Board's opinion, I  
10 believe?

11 A. Yes.

12 Q. If you would take a look at the Board's  
13 opinion on Page 67, if you look at the last  
14 sentence on this page, the Board states --

15 A. I think you need to scroll down a little  
16 bit more.

17 Q. There you go.

18 A. Okay.

19 Q. So the Board states the groundwater  
20 elevation at Waukegan fluctuates between 579 and  
21 582 feet above main sea level, groundwater  
22 monitoring from wells around FSFS indicate  
23 potential ash buried around 582 feet leaving about  
24 3 feet of overlap.

1                   **Do you see that?**

2           A.     I do.

3           **Q.     So your statement about 22 feet of ash in**  
4 **groundwater is not accurate.  It's not what the**  
5 **Board said, correct?**

6           MS. BUGEL:  Objection, mischaracterizes the  
7 witness's testimony.

8           MS. NIJMAN:  It's a question.

9           HEARING OFFICER HALLORAN:  I think it's a  
10 question, Miss Bugel.  And, you know, you can do  
11 it -- have your say on redirect.  Thank you.

12                   You may answer, sir.

13           THE WITNESS:  Three feet of overlap -- reread  
14 the sentence above it.  So they seem to be implying  
15 that 3 feet of overlap of the groundwater in the  
16 ash.

17           BY MS. NIJMAN:

18           **Q.     So your statement about 22 feet yesterday**  
19 **in saturated water is incorrect?**

20           A.     Well, it's correct from what the Board  
21 concluded in their opinion.

22           **Q.     We just -- you just said to me that it's**  
23 **3 feet.**

24           A.     In that sentence it is.

1 Q. When we left off yesterday we were talking  
2 about sediments, correct?

3 A. We were.

4 Q. And you had not made any assessments  
5 yourself of sediments at any of the four Midwest  
6 Generation stations, correct?

7 A. That's right.

8 Q. You are, however, generally familiar with  
9 the concept of sediment sampling?

10 A. I am.

11 Q. And how it's done?

12 A. I am.

13 Q. In fact, you've done it before yourself,  
14 haven't you?

15 A. I have.

16 Q. Now, you are aware that the sediments in  
17 the Des Plaines River -- let me back up.

18 You're aware that the Des Plaines River is  
19 the river that runs adjacent to the Joliet 29  
20 station?

21 A. I am.

22 Q. And you're aware that sediment in the  
23 Des Plaines River was, in fact, sampled in 2008?

24 A. I'm not.

1 (WHEREUPON, Respondent's Exhibit  
2 No. 1110 was marked for  
3 identification.)

4 BY MS. NIJMAN:

5 Q. So we're showing you what's been marked  
6 for identification as Exhibit 1110. Do you  
7 recognize this document, sir?

8 A. I do not.

9 Q. This is a document that has been  
10 incorporated into the record in this matter.

11 MS. BUGEL: Hearing Officer, at this time we  
12 would like to renew our objections to the Burton  
13 testimony as articulated in briefing. This is  
14 dated testimony, unclear -- you know, its value is  
15 unclear after 15 years, and it's -- it predates the  
16 violations at issue, unclear whether it's  
17 representative currently of the sediment in the  
18 Des Plaines River.

19 HEARING OFFICER HALLORAN: Okay. Yeah, as you  
20 know, you're welcome to renew your objection. I  
21 ruled on that Friday. I found it okay, and any  
22 problems you've got with the antiquated nature of  
23 it you can address in your posthearing briefs or  
24 what not. Thank you. Overruled. Thanks.

1           You may proceed.

2           MS. NIJMAN: Thank you.

3           BY MS. NIJMAN:

4           Q.    If you would turn to -- well, first let me  
5           point for the record that this is marked Bates  
6           Number MWG 107800 and goes through Bates  
7           Number 107917.

8                    If you would turn to Bates Page 107806?

9           A.    Okay.

10          Q.    And just pointing out the captions to you  
11          and the date for the record, this is an electronic  
12          filing with the Pollution Control Board,  
13          September 8, 2008, In the Matter of Water Quality  
14          Standards and Effluent Limitations For the Chicago  
15          Area Waterway System and the Lower Des Plaines  
16          River Proposed Amendments to 35 Illinois  
17          Administrative Code Parts 301, 302, 304,  
18          Rulemaking R 08-9.

19                   Do you see that?

20          A.    I do.

21          Q.    And the caption of this document, this  
22          page, is Prefiled Testimony of G. Allen Burton.

23                   Do you see that?

24          A.    I do.



1 Q. Do you know Mr. Burton at all?

2 A. I do not.

3 Q. If you turn to Page 2 of Mr. Burton's  
4 filed testimony in this matter which is Bates  
5 Number 107807, the carryover paragraph at the top  
6 of the page states, the focus of my testimony is  
7 contained in my written report and assessment of  
8 the Illinois EPA's proposed UAA rules attached  
9 hereto as Attachment 1, which includes supporting  
10 tables, citations and appendices.

11 Do you see that?

12 A. Yes, ma'am.

13 Q. I'm just doing this for orientation, so  
14 now we're going to go to this attachment. So  
15 tabbed in your document -- hold on. Actually, it's  
16 820. Sorry, one more stop before we get there,  
17 Bates Number 107820?

18 MS. BUGEL: Hearing Officer, complainants would  
19 object to questioning this witness about this  
20 document. He doesn't know Mr. Burton, not familiar  
21 with the document, hasn't reviewed it. There's no  
22 basis for questioning him about it.

23 HEARING OFFICER HALLORAN: Ms. Nijman.

24 MS. NIJMAN: The witness specifically stated

1 that one of his complaints about the analysis being  
2 done in this matter is that there were no sediment  
3 sampling in the Des Plaines River, among others.  
4 This is evidence of sediment sampling. It's  
5 directly rebuttal testimony, and the fact that  
6 there is, in fact, sediment sampling is directly  
7 relevant to his position.

8 HEARING OFFICER HALLORAN: I'm sorry. Lower  
9 Des Plaines -- overruled. You may proceed.

10 MS. NIJMAN: Thank you.

11 BY MS. NIJMAN:

12 Q. So this page, Bates 107820, Attachment 1,  
13 states that it is the -- so now we're looking at  
14 the attachment to Mr. Burton's testimony, and it is  
15 titled, Review of the Illinois EPA Water Quality  
16 Standards and Effluent Limitations For the Chicago  
17 Area Water Waste System and the Lower Des Plaines  
18 River Proposed Amendments.

19 Do you see that?

20 A. I do.

21 Q. And on the next page, Bates Number 807821,  
22 you'll see that this is Mr. Allen's report dated  
23 September 4, 2008.

24 Do you see that?

1           A.    I do.

2           Q.    In his appendices he refers to Appendix C,  
3   EA Engineering Science and Technology Report on  
4   Sediment Chemistry. Do you see that reference?

5           A.    Yes, ma'am.

6           Q.    Okay. Now you can go to the tab. The tab  
7   in the document is at Bates Number 107855, and that  
8   is the appendix that Mr. Burton referred to,  
9   EA Sediment Chemistry Study, Upper Illinois  
10   Waterway, Dresden and Lower Brandon Pools.

11                   Do you see that?

12           A.    I do.

13           Q.    Dated September of 2008?

14           A.    Yes, ma'am.

15           Q.    If you look at Bates Page 107857, it  
16   provides a list of figures and tables, and Figure 1  
17   is titled, Sediment Sampling Locations in the  
18   Dresden and Lower Brandon Pools, right?

19           A.    Yes, ma'am.

20           Q.    So I'm gonna try to get us oriented here  
21   so we know where the sediment samples were taken  
22   relative to the Joliet 29 station, okay?

23           A.    Okay.

24           Q.    If you would turn to the map Figure 1 in

1 this EA report, the map is at Bates Number 107872.  
2 So it's difficult to read. It's a small map.  
3 We're gonna try to blow a section up to orient you.  
4 So this document Bates Number 8, excuse me, 107872  
5 states on the bottom, Figure 1, sediment sampling  
6 locations in the Dresden and lower Brandon pools.

7 Do you see that?

8 A. Yes, ma'am.

9 Q. And then to the right of that it says  
10 sediment chemistry study, upper Illinois Waterway,  
11 Dresden and lower Brandon pools?

12 A. Yes, ma'am.

13 Q. Okay. So I'm gonna focus you to the top  
14 right corner of this map. So do you see on this  
15 map the Des Plaines River running along from  
16 northeast to southwest?

17 A. I do.

18 Q. And all along that river you see white  
19 boxes that designate sample locations?

20 A. I do.

21 Q. And the white boxes are labeled either  
22 BR 08 or D, like dog, R 08. Do you see that?

23 A. I do.

24 Q. And if you look at the legend, BR refers

1 to Brandon reach, right?

2 A. Yes, ma'am.

3 Q. DR refers to Dresden reach?

4 A. Yes, ma'am.

5 Q. Okay. And looking at this map in the top  
6 northeast corner, top right corner, you see that  
7 the BR samples 1, so BR 08-1, BR 08-2, 3 and 4, are  
8 all the most northeasterly samples, correct?

9 A. They are.

10 Q. Sample points, okay.

11 And all of the DR, the Dresden reach  
12 sample points, are then below numbering from  
13 Numbers 1 through 31, DR 08, 1 through 31.

14 Do you see that?

15 A. I do.

16 Q. Can you determine on this map where the  
17 Joliet station is?

18 A. I can.

19 Q. Okay. Can you point that out?

20 A. It's across the river from DR 08-27 and  
21 DR 08-28.

22 Q. So those two samples are relevant to the  
23 Joliet 29 station, correct?

24 MS. BUGEL: Objection.

1 HEARING OFFICER HALLORAN: Miss Bugel.

2 MS. BUGEL: It assumes facts not in evidence,  
3 calls for a legal conclusion, vague.

4 HEARING OFFICER HALLORAN: I can't hear you.

5 MS. BUGEL: I'm sorry. Objection, calls for a  
6 legal conclusion, assumes facts not in evidence and  
7 vague.

8 HEARING OFFICER HALLORAN: Ms. Nijman.

9 MS. NIJMAN: Mr. Quarles just stated that those  
10 two samples were right next to the Joliet 29  
11 station.

12 HEARING OFFICER HALLORAN: Yeah. I think he  
13 can give his legal conclusion, and I think it's  
14 proper cross. So overruled. Thank you.

15 THE WITNESS: They're across the river from the  
16 Joliet station.

17 BY MS. NIJMAN:

18 **Q. You did not look at this data, however,**  
19 **the results of the data; is that correct?**

20 A. That's right.

21 **Q. And are you suggesting that the distance,**  
22 **quote, across the river is meaningful to you?**

23 A. It is.

24 **Q. Why is that?**

1           A.     Cause I've seen sediment samples collected  
2 along the shoreline of discharge locations  
3 associated with coal ash impoundments that have  
4 coal ash constituents along the shoreline.

5           **Q.     So you'd be concerned -- even though we**  
6 **have sediment sampling data, you'd be concerned**  
7 **that the sediment sampling data is located close**  
8 **up?**

9           A.     Well, it's across the river, and it's not  
10 along the shoreline.

11          **Q.     If you take a look at DR 29, DR 08-29, do**  
12 **you see that one?**

13          A.     Yes, ma'am.

14          **Q.     Isn't that located along the shoreline**  
15 **next to the northeast area?**

16          A.     It is downstream or upstream, whichever  
17 the way the river is running, but it's far away  
18 from the impoundments.

19          **Q.     I asked about the northeast area, sir.**

20          A.     It is at the far northeast extent of the  
21 Joliet station, yes.

22          **Q.     But near the shoreline, right? It's the**  
23 **other side of the river?**

24          A.     I mean, the scale of this, I can't tell

1 how far off the shoreline that sample was  
2 collected.

3 Q. Okay. You -- I think you said this  
4 already -- have not researched whether additional  
5 sediment data is available on the Des Plaines  
6 River, correct?

7 A. That's right.

8 (WHEREUPON, Respondent's Exhibit  
9 No. 1111 was marked for  
10 identification.)

11 BY MS. NIJMAN:

12 Q. So I've handed you a small binder that's  
13 been marked for identification as Exhibit 1111.  
14 For the record, this binder is of excerpts from a  
15 very large report, publicly available document,  
16 that is available here. We have several copies if  
17 everybody wants to come get the 1900-page document,  
18 but we elected to provide you with a smaller  
19 version so we don't have so many pages. But you  
20 can refer to the larger one at any time. I'll put  
21 it on your desk just in case you want to see it.

22 MS. NIJMAN: If you would like a large copy, we  
23 have one. Would you like one?

24 MS. BUGEL: Yes.



1 BY MS. NIJMAN:

2 Q. So I'm turning to the first page of  
3 Exhibit 1111, the title page in your small binder.  
4 Do you have that in front of you?

5 A. I do.

6 MS. BUGEL: Hearing Officer, right now before  
7 we go down the road with questioning about this  
8 document, we -- complainants have numerous  
9 objections to this document. One is that while  
10 this is a cross-exhibit, certain sediment sampling  
11 was made available to us prior to the hearing.  
12 This is from October 2022. Respondents knew  
13 Mr. Quarles' position on sediments prior to today,  
14 so -- or prior to yesterday. So this is -- this is  
15 really a surprise. This is not a document -- I  
16 think this was provided to us 24 hours ago or --

17 MS. NIJMAN: 48.

18 MS. BUGEL: 48 hours ago. Due to the length of  
19 the document we didn't have time to review it, so  
20 this is a surprise and prejudicial for that reason.  
21 And in addition, with a 2,000-page document, it is  
22 impossible for the he witness to review the whole  
23 document meaningfully or even the number of  
24 excerpts that have been provided and be questioned

1 about it.

2 HEARING OFFICER HALLORAN: Thank you.

3 Ms. Nijman.

4 MS. NIJMAN: Well, this is the very nature of  
5 cross-examination. A witness will be surprised if  
6 the witness did not update his information and did  
7 not do the research that a witness -- expert  
8 witness should do. Then, yes, they will be  
9 surprised about additional data.

10 HEARING OFFICER HALLORAN: Why wasn't this  
11 brought out earlier? You had plenty of time. You  
12 had the burden. You threw that in there, the  
13 sediment study, pre-filed testimony. And, all of a  
14 sudden, everybody's seeing this pretty much for the  
15 first time.

16 MS. NIJMAN: This was a FOIA request that we  
17 made only upon -- and again this is the nature of  
18 rebuttal testimony. Ms. Sharene Shealey will  
19 testify that she was informed by the Illinois  
20 Department of Natural Resources and the Illinois  
21 Army Corps that they are doing an Asian carp study  
22 in this area, that they have sediment sampling.  
23 They were interested in this property, the  
24 northeast area of Joliet, so they contacted her.

1           When we learned that information just two  
2 weeks ago, we did a FOIA request. We received the  
3 FOIA response Tuesday of last week, and I have the  
4 FOIA. We were fortunate that we actually got it in  
5 time. So this is new information to us as well,  
6 but it is public information that exists about  
7 sediment sampling in the Des Plaines River, highly  
8 relevant to Mr. Quarles' opinion.

9           HEARING OFFICER HALLORAN: Miss Bugel.

10          MS. BUGEL: Complainants would be interested in  
11 learning how publicly available this is. It sounds  
12 like Miss Shealey found out about it simply because  
13 the testing was being -- occurring adjacent to or  
14 on the Midwest Gen property. I couldn't completely  
15 follow. But I maintain our objection that this is  
16 surprise, and I also maintain our objection to  
17 asking the witness any questions about this when he  
18 hasn't had an opportunity to review it.

19          HEARING OFFICER HALLORAN: Yeah. You know, I'm  
20 leaning towards agreeing with Ms. Bugel. You know,  
21 maybe taking it as an offer of proof because this  
22 is kind of a Johnny Come Lately document.

23          MS. NIJMAN: It is a public document that is  
24 being presented on cross-examination which based on

1 your prior rules -- rulings you have stated and  
2 allowed public documents into the record. This is  
3 a publicly available document. You will see when  
4 we start asking questions that it is a study by the  
5 U.S. Army Corps of Engineer, a official United  
6 States agency. You have allowed agency documents  
7 in earlier on the direct examination.

8 HEARING OFFICER HALLORAN: Well, when given  
9 proper notice. I mean, this has been out --

10 MS. NIJMAN: I was not given --

11 HEARING OFFICER HALLORAN: Excuse me,  
12 Ms. Nijman.

13 MS. NIJMAN: Sorry.

14 HEARING OFFICER HALLORAN: Been out here since  
15 July 5, 2022, revised October 21. Today is May 16.

16 MS. NIJMAN: Cross-examination is by its very  
17 nature --

18 HEARING OFFICER HALLORAN: I know what  
19 cross-examination is.

20 MS. NIJMAN: And I understand that, but the --

21 HEARING OFFICER HALLORAN: We may proceed to  
22 see where you're going, but, if anything, it may be  
23 limited. And, secondly, I may just take it as an  
24 offer of proof, and the Board can decide what they

1 want to do with this. You may proceed.

2 BY MS. NIJMAN:

3 Q. You see the first title page of this  
4 document says, Phase 2 Report, Brandon Road  
5 Interbasin Project?

6 A. I do.

7 Q. And it's dated July 5, 2022, revised  
8 August 10, 2022, and revised October 31, 2022.

9 You see that?

10 A. Yes, ma'am.

11 Q. And if you would turn to the next page,  
12 Page 1, the executive summary, just pointing out in  
13 the first sentence, the line reads the U.S. Army  
14 Corps of Engineer's Rock Island District has  
15 contracted with Kaskaskia, K-a-s-k-a-s-k-i-a,  
16 Engineering Group under a task number that I don't  
17 need in the record.

18 The second sentence, the primary  
19 objectives for the request of services were to  
20 define overall site geology and engineering,  
21 properties of site soils and bedrock, and to  
22 perform engineering analyses relating to bedrock  
23 excavation, electrical conductivity and grounding  
24 for the proposed electrical barrier feature and

1 **design recommendations for future structural**  
2 **features.**

3 **Do you see that?**

4 A. Yes, ma'am.

5 MS. NIJMAN: Mr. Hearing Officer, I wanted to  
6 add one further comment that the witness  
7 specifically objected to and counsel specifically  
8 objected to the date of the 2008 sediment data  
9 being too old. So we were directly responding to  
10 an open door that we were provided by data being,  
11 quote, too old.

12 HEARING OFFICER HALLORAN: So noted for the  
13 record. You may proceed.

14 MS. NIJMAN: Thank you.

15 BY MS. NIJMAN:

16 **Q. If you would turn to Page 2 of the Phase 2**  
17 **report, Exhibit 1111, under Section 2,**  
18 **introduction, it states that the Brandon Road**  
19 **interbasin project is located immediately**  
20 **downstream of the Brandon Road lock and dam.**

21 **Are you familiar with the location of the**  
22 **Brandon Road lock and dam?**

23 A. I'm not.

24 **Q. All right. We're gonna pull up a map in a**

1 minute and take a look at that.

2 The next sentence, while we're on this  
3 page, states, the navigation lock is located near  
4 Illinois Waterway River Mile Number 286 on the  
5 Des Plaines River in the city of Joliet in Will  
6 County, Illinois. And then you will see on Page 2,  
7 Attachment A, boring location map, right?

8 A. Yes.

9 Q. We're gonna go to the map to orient where  
10 we are, Attachment A, boring location map. So on  
11 this page there is a very large blowup of the  
12 Des Plaines River, a close-up, and then on the  
13 right side of the page is the location of the  
14 close-up.

15 Do you see that?

16 A. I do.

17 Q. Okay. So we're gonna try to focus on the  
18 right side of the page, the small map, so that we  
19 can see --

20 A. If you could go to the left at the bottom  
21 for the scale and blow that up. Okay.

22 Q. Mr. Quarles, I'm gonna hand you the map  
23 that you created for Joliet 29 from your report,  
24 your expert report, Exhibit 1101, so that you can

1 have that for reference.

2 So looking at this Page 1 of 7 of the  
3 maps, Attachment A to Exhibit 1111, you see on the  
4 right-hand side there are a series of seven blocks?

5 A. Yes.

6 Q. Okay. And each block -- this one is  
7 identified in yellow is block one on this page.  
8 Each block then corresponds to the close-up map to  
9 the left, correct?

10 A. Yes, ma'am.

11 Q. Do you see on this small map, Attachment A  
12 of the Exhibit 1111, do you see the road running  
13 north to south across the map?

14 A. I do.

15 Q. And across the river?

16 A. Yes.

17 Q. Do you know whether that road is Brandon  
18 Road?

19 A. I don't.

20 Q. If you refer back to your map of the  
21 Joliet 29 station, Figure 1 of your Exhibit 1101,  
22 you see you've noted Larkin Avenue on that map  
23 running north to south?

24 A. Yes.



1 Q. And Larkin Avenue terminates at the north  
2 side of Joliet 29 station.

3 Do you see that?

4 A. Yes.

5 Q. Okay. If you blow out -- look further,  
6 make your BBJ map larger. If you look at the  
7 entire Figure 1 of your map, look to the far right  
8 of your map, and you see Brandon Road there?

9 A. Crossing the river.

10 Q. Correct.

11 A. Okay.

12 Q. Okay. So Brandon Road is the north end of  
13 the Joliet 29 station.

14 Do you see that?

15 A. The northeast end, yes.

16 Q. Okay. Yeah, northeast end.

17 Going back then to Attachment A, the  
18 boring location plan in Exhibit 1111, so now you  
19 see Brandon Road, correct?

20 A. Yes.

21 Q. As the north/south street running across  
22 the river, and it runs through what appears to be  
23 Block Number 58 on this map.

24 Do you see that?

1 A. Yes.

2 Q. And then you can see on this map the area  
3 to the west of Brandon Road, that's the Joliet  
4 northeast area, right?

5 A. It is.

6 Q. Looking back at the close-up of the map on  
7 Attachment A, Page 1 of 7, if you look at the  
8 legend at the top of the page, the legend has in  
9 pink boring location as drilled.

10 Do you see that?

11 A. Yes.

12 Q. Okay. And then underneath that it has  
13 sediment grab samples environmental.

14 Do you see that?

15 A. I do.

16 Q. And those are in yellow. So we can see  
17 looking at the close-up that in Segment 1, Block 1,  
18 we have three yellow sediment samples.

19 Do you see that?

20 A. I do.

21 Q. And those would be BR 2021 Number 110,  
22 BR 2021-111 and BR 2021-78, 078.

23 Do you see that?

24 A. I do.

1 Q. Okay. So I'm gonna turn to the next page  
2 in this Exhibit 1111, Page 2 of 7 of these maps in  
3 Attachment A, and you see the next segment of the  
4 Des Plaines River sampling locations.

5 Do you see that?

6 A. I do.

7 Q. Block 2, and that's also adjacent to the  
8 northeast area at Joliet 29, right?

9 A. Yes.

10 Q. And continuing -- well, let me back up.

11 Those samples in Segment 2, the sediment  
12 grab samples are titled BR 2021-106, sorry, 105,  
13 106, 107, 108, 109, and we see the corner of 110?

14 A. Yes, we do.

15 Q. And continuing on Pages -- Page 3, we see  
16 Block 3, and we see another series of samples,  
17 BR 2021-102, 103, 104, 105?

18 A. I don't see 105 on the blowup. There. Is  
19 that 105 and 106 on the left?

20 Q. Correct.

21 A. Okay.

22 Q. Okay. And that area also lies adjacent to  
23 the Joliet northeast area, correct? The sampling?

24 A. It does.

1 Q. And in Block 4 on the next page, Page 4 of  
2 7, we see two grab samples, BR 2021-100 and  
3 BR 2021-101?

4 A. Yes, we do.

5 Q. Okay. And in Block 5, which we agreed is  
6 right on top of Brandon Road, we don't have any  
7 sediment samples there, correct?

8 A. Correct.

9 Q. But we have soil borings on the land, on  
10 the shore. Do you see that?

11 A. I do.

12 Q. So if you would turn to the next -- the  
13 third tab in your binder, these are the analytical  
14 reports for the samples, correct?

15 A. They seem to be, yes.

16 Q. And these are from Environmental  
17 Monitoring and Technologies and dated May 31 of  
18 2022. Can you see?

19 A. Yes.

20 Q. And this is noted -- the first page is  
21 Page 1 of 106?

22 A. I see Page 1 of 100.

23 Q. The third tab in your binder, I think you  
24 jumped ahead.

1 A. Sorry.

2 Q. **That's okay.**

3 A. Yes.

4 Q. **Okay.**

5 MS. BUGEL: Hearing Officer, I'm gonna object  
6 as we move to these attachments. Again, this  
7 report is absolutely voluminous, and without an  
8 opportunity to review it more, it's unclear how  
9 these attachments relate back to the pinpoint  
10 samples that we're seeing.

11 HEARING OFFICER HALLORAN: I've heard the  
12 argument. What I'm gonna do is take Mr. Quarles'  
13 testimony as an offer of proof. The Board can  
14 decide. I just -- it's a surprise, and Mr. Quarles  
15 hadn't even had a chance to review this before  
16 cross. And, you know, I may or may not be  
17 overruled. It wouldn't be the first time, but from  
18 the beginning of Mr. Quarles' testimony regarding  
19 this Phase 2 report, July 5, 2022, it's an offer of  
20 proof. And that'll be noted in the transcript.

21 You may proceed, Ms. Nijman. Thank you.

22 MS. NIJMAN: I would just add that if the Board  
23 is interested in of course determining the best  
24 remedy for these stations, that I believe it would

1 be assistant -- of great assistance to the Board to  
2 have the most recent data that's available given  
3 that Mr. Quarles argued that the data that we  
4 presented was too old. It goes to nature and  
5 extent which is also what Mr. Quarles is asking us  
6 to or is opining upon.

7 HEARING OFFICER HALLORAN: Thank you.

8 MS. BUGEL: Objection. Your Honor, may I  
9 respond to Ms. Nijman's argument?

10 HEARING OFFICER HALLORAN: Yes, Ms. Bugel.

11 MS. BUGEL: One final point, if the concern is  
12 making this available to the Board, that can be  
13 done through Midwest Gen's expert, not from  
14 Mr. Quarles.

15 MS. NIJMAN: If we have agreement -- again,  
16 this is rebuttal. This is caused by the order in  
17 which we're doing witnesses. So if we have  
18 agreement that we can talk to Weaver about these  
19 documents in the record as evidence, then we will  
20 wrap this up with Mr. Quarles.

21 MS. BUGEL: I'm not sure I would agree to that.  
22 I think my initial objection is using it through  
23 Mr. Quarles. I'm gonna reserve the right to object  
24 to Weaver because the surprise element is still

1 there.

2 HEARING OFFICER HALLORAN: Okay. When we get  
3 to Weaver, you can make your objection. My ruling  
4 is this is an offer of proof when Mr. Quarles  
5 started testifying regarding this Phase 2 report.  
6 Thank you.

7 MS. NIJMAN: Thank you.

8 BY MS. NIJMAN:

9 Q. If you would turn to Page 3 of 106?

10 A. Okay.

11 Q. That provides you with the sample summary  
12 of what's in this data package, correct?

13 A. It does.

14 Q. And it lists sample identifications  
15 Numbers 100 through 106, right?

16 A. Yes.

17 Q. So if we were to go through this entire  
18 data package, we would see the sample results for  
19 the sediment for BR 2021-100 through 106?

20 A. We would.

21 Q. If you look at the fourth tab in your  
22 binder, we're just gonna identify what's here.  
23 That is also an analytical data package, correct?

24 A. Yes, it is.

1 Q. And it's by Environmental Monitoring and  
2 Technologies, Inc., dated May 23, 2022?

3 A. Yes.

4 Q. And the bottom of the page says Page 1 of  
5 100, right?

6 A. Yes.

7 Q. And again turning to Page 3 of this data  
8 package, we see the sample ID Numbers that are  
9 identified in this data package, correct?

10 A. Yes.

11 Q. And that includes sample ID 100, 107, 109  
12 and 108, excuse me, 110, 107, 109, and 108?

13 A. Yes.

14 Q. So going again through this data package  
15 we would expect to see the analytical results for  
16 those sample points, correct?

17 A. That's right.

18 Q. So if you would turn back to the -- we'll  
19 put it on the screen -- the maps, 2, Map 2 of 7 of  
20 this Exhibit 1111, you have that in front of you?

21 A. I do.

22 Q. So I'd like to refer you to sample  
23 BR 2021-109. Do you see that?

24 A. I do.



1 Q. And that is adjacent to the shoreline of  
2 Joliet 29 northeast area, correct?

3 A. According to the scale it's about 35 feet  
4 off of the shoreline.

5 Q. If you go to the fourth tab in your binder  
6 again, we will look at the data for sample well  
7 BR 2021-109, and that's Page 19 of 100?

8 A. Yes, it is.

9 Q. And if we look at the top paragraph of  
10 this page, it provides the analysis for metals,  
11 correct?

12 A. It does.

13 Q. And looking at arsenic which I believe you  
14 stated was related to CCR; is that correct?

15 A. Yes.

16 Q. So we have a reporting limit of 1.31.  
17 What's a reporting limit, sir?

18 A. It's the reporting limit of the analysis,  
19 and anything less than that would be reported as a  
20 less than.

21 Q. And we have here for arsenic a less than,  
22 correct?

23 A. We do.

24 Q. Then we have cadmium. Do you see the

1 reporting limit of 0.131, and a cadmium result of  
2 0.624?

3 A. I do.

4 Q. So cadmium was detected?

5 A. It was.

6 Q. Are you familiar with the term threshold  
7 effects concentration?

8 A. I'm not.

9 Q. Probable effects concentration?

10 A. No, ma'am.

11 Q. You're not aware that those are standards  
12 by which sediments are compared in your experience?

13 MS. BUGEL: Objection. You've asked him if  
14 he's aware. He answered.

15 THE WITNESS: I'm not.

16 HEARING OFFICER HALLORAN: He can answer if  
17 he's able.

18 BY MS. NIJMAN:

19 Q. What standard have you used to compare  
20 sediment results?

21 A. I've used EPA. They have fresh water  
22 sediment standards that are numeric values for  
23 metals.

24 Q. Okay. I'm gonna have to refer you back to

1 the 2008 Burton testimony that's been incorporated  
2 into the record identified as Exhibit 1110, and the  
3 EA chemistry study that we were looking at that was  
4 an attachment to the Burton testimony Exhibit 1110  
5 which is Bates Number 107855?

6 A. Okay.

7 Q. And if we go to Page 9 of this study which  
8 is Bates Page 107866?

9 A. Yes, ma'am.

10 Q. In the section under 3.2, comparison to  
11 sediment benchmarks, the third sentence in this  
12 paragraph provides one of the biological effects  
13 approaches that have been used to assess sediment  
14 quality relative to potential for adverse effects  
15 on benthic organisms in fresh water ecosystems is  
16 the threshold effects concentration, TEC, slash  
17 probable effects concentration approach.

18 Do you see that?

19 A. I do.

20 Q. Does that refresh your recollection as to  
21 whether you know of these effects or these  
22 standards?

23 A. It does not.

24 Q. If you would refer still in this same EA

1 report, Exhibit 1110, if you refer to Bates  
2 Page 107875 and 107876?

3 A. Yes, ma'am.

4 Q. That is Table 7A, concentrations of target  
5 analytes in sediments from the Dresden pool of  
6 May 2008.

7 Do you see that?

8 A. I do.

9 Q. And you see there that the PEC and TEC  
10 limits or comparison standards are listed for  
11 metals?

12 A. I do.

13 Q. Do you have any opinion as to whether  
14 those PEC or TEC standards are similar to the  
15 standards you've applied in the past?

16 A. I don't.

17 Q. Turning back to your Tab 4 in your binder,  
18 the analytical results in Exhibit 1111 which was on  
19 Page 19 of 100?

20 A. Okay.

21 Q. We were just discussing a cadmium result  
22 of 0.624 in this sediment.

23 Do you see that?

24 A. I do.

1 Q. And if you look at the screen for the TEC  
2 and PEC standards, standard for cadmium, the lowest  
3 standard available is 0.99?

4 A. Yes.

5 Q. So the cadmium found in this sample  
6 2021-109 is less than the TEC, correct?

7 A. It is.

8 Q. For chromium, which you've stated is a  
9 metal you would look for for CCR, correct?

10 A. Yes.

11 Q. So chromium we have a reporting limit of  
12 1.31 and a result of 6.52.

13 Do you see that?

14 A. Yes.

15 Q. And the chromium threshold level is 43.

16 Do you see that? 43.4?

17 A. I do.

18 Q. Let's look at lead. That's you've stated  
19 potentially related to CCR in your report, I  
20 believe?

21 A. It can be.

22 Q. We have a reporting limit of 1.31, a  
23 result of 23.0, and the TEC standard -- which is  
24 coming right back, there it is -- for lead is 35.8?

1 A. Yes, ma'am.

2 MS. NIJMAN: So, Mr. Hearing Officer, as an  
3 offer of proof I can go through each one of these  
4 which I'm certainly happy to do in order to ensure  
5 that the Board has access to this data.

6 HEARING OFFICER HALLORAN: Okay. It's your  
7 prerogative, Ms. Nijman, under an offer proof.  
8 Whatever you think is justified, it's your call.

9 MS. NIJMAN: The only other alternative is to  
10 again allow Weaver to testify as to it.

11 HEARING OFFICER HALLORAN: I'm not gonna allow  
12 that. You know, that'll be an offer of proof as  
13 well. It's your prerogative as of now.

14 MS. NIJMAN: Well, we will be here for a while.

15 HEARING OFFICER HALLORAN: Sounds good.

16 BY MS. NIJMAN:

17 Q. All right. Let's go back to -- turning to  
18 Page 20 of 100 of Exhibit 1111, you see mercury?

19 A. I do.

20 Q. And mercury there has a reporting limit of  
21 0.100. I think the point is missing, but there's  
22 clearly a space there. And the result is less than  
23 the reporting limit?

24 A. It is.

1           **Q.    Okay.  Let's look back at --**

2           HEARING OFFICER HALLORAN:  Let me know when a  
3           good time for Midwest to take a break.

4           MS. NIJMAN:  Anytime is fine.

5           HEARING OFFICER HALLORAN:  Is now a good time?

6           All right.  Let's take a 10, 15 minute break.

7           We're off the record.  Thank you.

8                                 (WHEREUPON, a short recess was  
9                                 taken.)

10          HEARING OFFICER HALLORAN:  We're back on the  
11          record.  We're in the middle of cross.

12          BY MS. NIJMAN:

13                 **Q.    Mr. Quarles, would you take a look at**  
14                 **Tab 3 in your binder which is the data package**  
15                 **we've identified for Exhibit 1111, Pages 1 of 106.**

16                         **Are you there?**

17           A.    Yes, ma'am.

18                 **Q.    Okay.  If you can take a look at Page 5 of**  
19                 **106?**

20           A.    Okay.

21                 **Q.    We're gonna do the same thing we did with**  
22                 **the data for BR 2021-109 and go through some of the**  
23                 **metals as compared to the TEC standard, okay?**

24                         **So arsenic in BR 2021-100 is -- the result**

1 for arsenic is less than 1.32 which is the  
2 reporting limit, correct?

3 A. It is.

4 Q. And we've already established that the TEC  
5 for arsenic is 9.79, correct?

6 A. Yes.

7 Q. Cadmium again we have a reporting limit of  
8 0.132. We have a cadmium result of less than 0.132  
9 for cadmium, and we have a TEC level of 0.99 as  
10 comparison, right?

11 A. Yes.

12 Q. For chromium we have a result of 13.5.  
13 And let me just clarify for all of these, these are  
14 milligrams per kilogram, correct? If you look just  
15 further to the right, it says milligrams per  
16 kilogram?

17 A. Yes.

18 Q. All of these results are milligrams per  
19 kilogram. Yes?

20 A. Yes.

21 Q. So we have chromium here at  
22 13.5 milligrams per kilogram, and we have a TEC  
23 threshold level of 43.4.

24 Do you see that?



1 A. I do.

2 Q. And for -- we can go through lead. Do you  
3 believe -- you sort of hesitated when I asked you  
4 if lead was relevant to look at. Is it relevant as  
5 to CCR to review lead?

6 A. I've seen lead as CCR sites. It's less  
7 common than other metals, but I have seen it  
8 before.

9 Q. Okay. Is it -- would it be relevant to  
10 your opinion in sediments to look at lead?

11 A. It's appropriate to look at the result.

12 Q. Okay. So if we look at lead, we have 111  
13 here as milligrams per kilogram.

14 Do you see that?

15 A. I do.

16 Q. And we see for lead our TEC standard is  
17 35.8, but the PEC is 128. So it still lies below  
18 the PEC standard, correct?

19 A. It's above the TEC, but below the PEC.

20 Q. Right. And then turning the page to  
21 Page 6 of 106 for sample BR 2021-100 we see  
22 mercury, and we have no mercury, correct?

23 A. That's right.

24 Q. Okay. Turning to Page 12 of this same

1 data package, do you see that these are the  
2 analytical results for sample point BR 2021-101?

3 A. Yes.

4 Q. Looking again at arsenic, we see arsenic  
5 as not found, correct?

6 A. Less than 1.32.

7 Q. So less than the reporting limit?

8 A. Yes.

9 Q. Is that essentially equivalent to a  
10 non-detect sir?

11 A. It is a non-detect.

12 Q. Okay. Cadmium we have a non-detect,  
13 right?

14 A. We do.

15 Q. Chromium we have a result of  
16 3.04 milligrams per kilogram, and we have the  
17 comparison TEC level, the lowest comparison level  
18 of 43. So we're well below, correct?

19 A. Correct.

20 Q. And then we have lead at 3.51 milligrams  
21 per kilogram, and we have a lead TEC standard of  
22 35.8, well below the TEC standard, correct?

23 A. Yes.

24 Q. And if we turn the page to mercury, we

1     **have a non-detect for mercury, correct?**

2             A.     Let me see where -- what page?

3             **Q.     13 of 106.**

4             A.     Yes, yes.

5             **Q.     Okay.  If you would turn to Page 19 of**  
6 **this data package in Exhibit 1111?**

7             A.     Did you say Page 19?

8             **Q.     Page 19.**

9             A.     Yeah.

10            **Q.     Those are the analytical results for**  
11 **BR 2021-102.  Do you see that?**

12            A.     I do.

13            **Q.     Once again arsenic we have a non-detect,**  
14 **right?**

15            A.     Yes.

16            **Q.     Cadmium we have a non-detect?**

17            A.     Yes.

18            **Q.     Chromium we're at 44.1 milligrams per**  
19 **kilogram as the result as compared to a chromium**  
20 **TEC standard of 43.4, correct?**

21            A.     Correct.

22            **Q.     So it's below the lowest comparison**  
23 **standard?**

24            A.     No.  It's above.

1 Q. I'm sorry, slightly above the lowest  
2 comparison standard. And the PEC for chromium is  
3 111. So it's well below the PEC is what I meant to  
4 say, correct?

5 A. Yes.

6 Q. And for lead we have 154 milligrams per  
7 kilogram, and we have a lead standard of between  
8 35.8 and a PEC of 128.

9 Do you see that?

10 A. I do.

11 Q. And on the next page, Page 20 of this data  
12 package for BR 2021-102 sample point, you see  
13 mercury again is non-detect, correct?

14 A. Yes.

15 Q. If you would turn to Page 25 of 106 of  
16 this data package in Exhibit 1111, this is the data  
17 for sample point BR 2021-103, correct?

18 A. Yes.

19 Q. Okay. And we see arsenic again  
20 non-detect?

21 A. Yes.

22 Q. We see cadmium non-detect?

23 A. Yes.

24 Q. We have chromium at 4.78. You see the

1     **decimal point is missing there, but it's 4.78?**

2           MS. BUGEL:  Objection, speculation.

3           HEARING OFFICER HALLORAN:  I'm sorry,  
4     objection?

5           MS. BUGEL:  Speculation.  Ms. Nijman is  
6     speculating.

7           MS. NIJMAN:  I'll reask.

8           HEARING OFFICER HALLORAN:  Thank you.

9     BY MS. NIJMAN:

10           **Q.  Do you see 47 -- 4 space 78 for chromium?**

11           A.  I do.

12           **Q.  And would you agree that that should be**  
13     **4.78 based on the space that's there?**

14           MS. BUGEL:  Same objection.

15           HEARING OFFICER HALLORAN:  He can answer if  
16     he's able.

17           THE WITNESS:  It probably is a point.

18           MS. NIJMAN:  Thank you.

19     BY MS. NIJMAN:

20           **Q.  And the chromium standard again for the**  
21     **TEC lower level is the 43, and we have 4.78.  For**  
22     **lead in sample BR 2021-103 we have 21.3?**

23           A.  Yes.

24           **Q.  With a lower threshold level comparison of**

1 35.8?

2 A. Yes.

3 Q. And then turning the page for sample 103,  
4 we again have a non-detect for mercury, correct?

5 A. That's right.

6 Q. Turning to Page 32 of this data package,  
7 this is the analytical data for sample point for  
8 sediment BR 2021-104?

9 A. Yes.

10 Q. And looking at the results we have a  
11 non-detect for arsenic?

12 A. Yes.

13 Q. For cadmium we have a detection of 0.171.  
14 Do you see that?

15 A. I do.

16 Q. And cadmium threshold level comparison  
17 point is 0.99. Do you see that?

18 A. Yes.

19 Q. So below the threshold level?

20 A. Yes.

21 Q. Chromium again we have a 3 space 00 which  
22 we would agree is a 3.00. You can look at copper  
23 two points down. You'll see how there's also a  
24 space there and clearly a decimal. Would you agree

1     **that the 3 space 00 is a 3.00?**

2           MS. BUGEL: Same objection as to speculating as  
3     to whether there should be decimals.

4           HEARING OFFICER HALLORAN: Yeah. The Board  
5     will take note of that in their offer of proof. If  
6     he can answer, I think he did.

7     BY MS. NIJMAN:

8           **Q. For the other example you said that's**  
9     **probably what happened?**

10          A. That's right.

11          **Q. Okay. Thank you.**

12                   **For lead for sample 104 we have**  
13     **5 milligrams per kilogram as compared to a**  
14     **threshold level of 35.8.**

15                   **Do you see that?**

16          A. I do.

17          **Q. And then turning the page to mercury,**  
18     **Page 33 of 106, again we have a non-detect for**  
19     **mercury?**

20          A. That's correct.

21          **Q. Turn to Page 39 of 40 in this data**  
22     **package, this is a continuation of the data package**  
23     **in Exhibit 1111, and we see that's the analytical**  
24     **data for sample sediment point BR 2021-105.**

1           Do you see that?

2           A.    I do.

3           Q.    And we have arsenic as a non-detect?

4           A.    We do.

5           Q.    We have cadmium at 0.210 and compared to a  
6 threshold of 0.99, correct?

7           A.    Correct.

8           Q.    We have chromium at 6.13 compared to a  
9 threshold of 43.4, correct?

10          A.    Yes.

11          Q.    And for lead we have a finding of  
12 13.6 milligrams per kilogram with a comparison  
13 threshold level of 35.8.

14          Do you see that?

15          A.    I do.

16          Q.    So well below the threshold level again.  
17                Yes?

18          A.    Yes.

19          Q.    Thank you.

20                And then turning the page to mercury we  
21 have a non-detect for mercury again?

22          A.    We do.

23          Q.    Turning to Page 46 of this data package,  
24 these are the analytical results for sediment



1 sample ID BR 2021-106, correct?

2 A. Yes.

3 Q. Again, we have arsenic as non-detect?

4 A. Yes.

5 Q. We have cadmium, a finding of  
6 0.216 milligrams per kilogram as compared to a  
7 threshold level of 0.99, correct?

8 A. Correct.

9 Q. We have chromium at 5.86 milligrams per  
10 kilogram compared to a chromium threshold level of  
11 43.4, correct?

12 A. Yes.

13 Q. And looking at lead we have a lead level  
14 of 17.9 milligrams per kilogram as compared to a  
15 threshold level of 35.8.

16 Do you see that?

17 A. Yes.

18 Q. And then on the next page, Page 47 of 106,  
19 you see a non-detect for mercury?

20 A. I do.

21 Q. Turning to the next tab in your binder,  
22 we've already identified this document as being the  
23 data package for BR sample points 110, 107, 109 and  
24 108, correct?

1           A.    Yes, and also some 3 to 5 feet at two  
2 other locations.

3           Q.    Correct.  So in this data package which is  
4 dated May 23, 2022, Pages 1 through 100, if you  
5 would turn to Page 12 of 100, okay.  Looking at  
6 sediment sample results for BR 2021-107, we have a  
7 non-detect for arsenic, correct?

8           A.    That's correct.

9           Q.    For cadmium we have a 0.306 milligrams per  
10 kilogram compared to a threshold level of 0.99, so  
11 below the threshold, correct?

12          A.    That's right.

13          Q.    We have a chromium finding in this  
14 sediment sample 107 of 5.48 milligrams per  
15 kilogram, and that's as compared to a TEC threshold  
16 standard of 43.4, correct?

17          A.    That's right.

18          Q.    And for lead in sample 107 we have  
19 14.8 milligrams per kilogram, correct?

20          A.    Yes.

21          Q.    As compared to a threshold level of 35.8?

22          A.    Yes.

23          Q.    Turning to Page 13 of 100, you see mercury  
24 is again non-detect?

1 A. I do.

2 Q. If you would go to Page 26 of 100, you see  
3 there the sample point, excuse me, the analytical  
4 results for sediment sample point BR 2021-108?

5 A. Yes.

6 Q. You see once again arsenic is a  
7 non-detect, right?

8 A. Yes.

9 Q. Cadmium, 0.277 milligrams per kilogram,  
10 again below the threshold level, correct?

11 A. Yes.

12 Q. Chromium we have a finding or result of  
13 5.29 milligrams per kilogram which is below the TEC  
14 standard of chromium 43.4, correct?

15 A. Yes.

16 Q. And for lead we have a result of  
17 13.4 milligrams per kilogram as compared to a  
18 threshold comparison of 35.8, correct?

19 A. Yes.

20 Q. And if you turn the page to Page 27 of 100  
21 in this data package, we have mercury as a  
22 non-detect, right?

23 A. That's right.

24 Q. Okay. If you would turn to -- oddly

1 enough they're a bit out of order -- Page 5 of 100  
2 in this data package, you see that this presents --  
3 this page presents the sample analytical results  
4 for sediment sample BR 2021-110.

5 Do you see that?

6 A. I do.

7 Q. Arsenic again we have a non-detect?

8 A. Yes.

9 Q. Cadmium we have a non-detect?

10 A. Yes.

11 Q. Chromium we have a 2.98 result milligrams  
12 per kilogram as compared to a -- sorry, this is  
13 chromium -- as compared to a TEC of 43.4, correct?

14 A. Yes.

15 Q. For lead we have 2.27 milligrams per  
16 kilogram as compared to a lead TEC of 35.8,  
17 correct?

18 A. Yes.

19 Q. And turning the page to mercury, we have a  
20 non-detect for mercury, correct?

21 A. Correct.

22 Q. As an expert preparing analyses, you would  
23 want to have review of all available data, would  
24 you not?

1 A. Yes.

2 Q. And you would want to see recent data,  
3 correct?

4 A. Yes.

5 Q. I'd like to turn your attention --

6 HEARING OFFICER HALLORAN: Are we out of the  
7 offer of proof now?

8 MS. NIJMAN: One more aspect of it.

9 HEARING OFFICER HALLORAN: Okay. Sorry.

10 BY MS. NIJMAN:

11 Q. So one of the things you -- one of the  
12 topics you testified about a little bit earlier  
13 today was distance from the shoreline, correct?

14 A. Yes, ma'am.

15 Q. Okay. So referring you back to what we've  
16 marked as Exhibit 1111 that's in front of you, this  
17 Phase 2 report dated July 5 of 2022, if you look  
18 again at the first attachment -- the first tab in  
19 your binder which is the boring location maps we  
20 looked at earlier, I'd like you to look back at  
21 boring map 5 of 7. And when we spoke about this  
22 boring map a little earlier today, we noted that  
23 there were pink boring locations noted along the  
24 shoreline here.

1           Do you see that?

2           A.    I do.

3           Q.    And we determined that this area -- can  
4 you see on this map running from north to south is  
5 a -- is Brandon Road?  It's this grayish line.

6           Do you see that?

7           A.    I do.

8           Q.    And these pink well locations which are  
9 numbered -- I can't see the numbers -- BR 2021-89  
10 through 93?

11          A.    Can you scroll down and blow up the scale  
12 on the far left?  Okay.

13          Q.    So I'd like to refer you back for a second  
14 to your Figure 1 in your BBJ group exhibit, the map  
15 that we -- I gave you a separate copy of it, if  
16 that's easier.  It's Figure 1 in your Exhibit 1101.

17                So you see that your red dotted line on  
18 your Figure 1 you state reflects the subject  
19 property for Joliet 29?

20          A.    Yes.

21          Q.    I'd like to show you --

22                HEARING OFFICER HALLORAN:  Are we out of the  
23 offer of proof?  Are we done with the Phase 2?  I'm  
24 sorry to keep interrupting.  I just want to make a

1 clean record.

2 MS. NIJMAN: We are, but I'm gonna go back to  
3 it. I have to explain where I am. I have to  
4 orient him.

5 HEARING OFFICER HALLORAN: Okay. So we're out  
6 of the offer of proof then.

7 MS. NIJMAN: For the next few questions, yes.

8 HEARING OFFICER HALLORAN: Okay. Just let me  
9 know. Thank you.

10 BY MS. NIJMAN:

11 Q. So I'm going to show you what was  
12 previously marked in the first part of this first  
13 phase of this hearing as Exhibit 601, and we have  
14 the -- I'm providing you with a segment of it.  
15 It's a very large survey map. We have the original  
16 survey map here if anyone would like to see it. So  
17 referring you to the top right corner of that  
18 survey map which is the smaller piece of paper I  
19 gave you, might be easier to look at?

20 A. Okay.

21 Q. So if you look at this top right corner,  
22 the northeast corner of the Joliet 29 station that  
23 was provided in the survey, Exhibit 601, do you see  
24 Brandon Road to the far right of this map?

1 A. I do.

2 Q. Okay. And we've established that the  
3 northeast area lies to the west of Brandon Road,  
4 correct?

5 A. Yes.

6 Q. So you see the Joliet station and the  
7 northeast area on this survey, correct?

8 A. I do.

9 Q. And do you see the words sale tract?

10 A. I do.

11 Q. And that would be part of the northeast  
12 area at the Joliet 29 station, right?

13 A. Yes.

14 Q. And below that you see a dark black line  
15 that designates the property boundary?

16 A. I do.

17 Q. And do you see that there's a strip of  
18 land after the dark black line for the property  
19 land -- property boundary that is not part of the  
20 property, the Joliet 29 property, as owned or  
21 operated by Midwest Generation?

22 A. Yeah. I see a line with three dots. I  
23 don't -- see if there's a scale that -- yeah, the  
24 edge of water, okay.



1 Q. So just referring to what you just did,  
2 Mr. Quarles, you referred to the legend to conclude  
3 that the line and the three dots that lies just  
4 below the dark boundary line is the edge of the  
5 water, correct?

6 A. Yes.

7 Q. So I'd like to refer you to the words, if  
8 you can read them, that exist below that dark black  
9 line. Can you read exception to Parcel 11?

10 A. Yes.

11 Q. What does that say?

12 A. Exception to Parcel 11 land conveyed to  
13 the State of Illinois per doc -- looks like a  
14 414955.

15 Q. So based on that statement, that strip of  
16 land was conveyed to the State of Illinois?

17 A. Yes.

18 Q. So looking back at your figure for  
19 Joliet 29, Figure 1 in Exhibit 1101, your dotted  
20 red line fails to reflect this strip of land that  
21 is not owned by Midwest Generation, correct?

22 A. I wouldn't say that at all. I would say  
23 that the scale of this figure and the placement of  
24 the red line is accurate from the source that we

1 used.

2 Q. And what source was that?

3 A. In the notes from the Will County JIS  
4 station dated 2020.

5 Q. You believe the Will County JIS division  
6 provided that red line?

7 A. No.

8 Q. No. You have the red line going basically  
9 right to the water, right? And, Mr. Quarles, for  
10 the record I will note that this is the same in  
11 other maps. You are not the only one to have done  
12 this. So I understand how this happened, but we  
13 want to clear up the record here, okay?

14 A. Fine.

15 Q. So again I just want to confirm that in  
16 your Figure 1, this red line does not reflect what  
17 we're seeing in the actual survey map, correct?

18 MS. BUGEL: Objection, asked and answered.

19 HEARING OFFICER HALLORAN: She's just  
20 clarifying. He may answer if he's able.  
21 Overruled.

22 THE WITNESS: I mean, you know, the red line,  
23 we would have gotten that from the local parcel  
24 viewer, and it was overlaid onto an aerial

1 photograph. But a land survey that shows that  
2 set aside that was offered to the State of  
3 Illinois, I don't have any reason to doubt that.

4 MS. NIJMAN: Okay. Going back to the offer of  
5 proof Mr. Hearing Officer.

6 HEARING OFFICER HALLORAN: Okay. We're back in  
7 the offer of proof. Thank you.

8 BY MS. NIJMAN:

9 Q. If you could look at the second tab in  
10 your binder, so this is the Exhibit 1111,  
11 Attachment B to the study, Boring Logs and Well  
12 Diagrams, Brandon Road Interbasin Project.

13 Do you see that?

14 A. I do.

15 Q. So we discussed earlier that there were  
16 five boring locations that were taken on the  
17 Joliet 29 northeast area property, correct?

18 A. Yes.

19 Q. And those were BR 2021-89, 90, 91, 92 and  
20 93. So I'm showing you here the boring logs that  
21 were provided in this report for BR 2021-89 on the  
22 northeast Joliet northeast area. I'd like you to  
23 just take a look at this and identify -- tell me if  
24 you identify any CCR related material.

1           A.    I do not.

2           **Q.    Turning to the next page for the boring**  
3 **log for BR 2021-090 also in the Joliet 29 northeast**  
4 **area, can you identify any CCR related material in**  
5 **this boring?**

6           A.    The only thing that I would say, nothing  
7 is called out as a specific to a coal ash name, but  
8 what I have seen is like bottom ash can be  
9 considered a gravel. So some people at times have  
10 gotten bottom ash confused. They called it a  
11 gravel by the USCS classification, but there's  
12 nothing in either one of those borings that calls  
13 out coal ash by name.

14          **Q.    Turning to the next boring, might be on**  
15 **the back of the page, boring 2021-091, any CCR**  
16 **material in this boring in the northeast area of**  
17 **Joliet 29?**

18          A.    No CCR was called out by name.

19          **Q.    Anything -- other than called out by name,**  
20 **anything that you would suspect as CCR?**

21          A.    Other than my prior comment about  
22 sometimes folks can call bottom ash gravel.

23          **Q.    And in the next page boring 2021-092 from**  
24 **the Joliet northeast area, do you see any CCR**

1 related material there in that boring?

2 A. No CCR that was called out by name.

3 Q. Or any material that would look like it  
4 other than your comment with gravel?

5 A. Right.

6 Q. And same, turning the page to BR 2021-093,  
7 boring location in the northeast area of Joliet,  
8 anything there appear to you to be CCR related  
9 material?

10 A. None called out by name.

11 Q. And none other suspect to you other than  
12 your comment about gravel?

13 A. Yes.

14 MS. NIJMAN: I'm finished with the offer of  
15 proof.

16 HEARING OFFICER HALLORAN: Thank you. We're  
17 outside the offer of proof. Thank you.

18 MS. NIJMAN: May I just have three or four  
19 minutes, and then I can tie up? I'll be done.

20 HEARING OFFICER HALLORAN: Yes. We're off the  
21 for the record for three, four minutes.

22 (WHEREUPON, a short recess was  
23 taken.)

24 HEARING OFFICER HALLORAN: We're back on the

1 record. Thank you.

2 MS. NIJMAN: We had identified as Exhibit 1110  
3 the Burton testimony that had already been  
4 incorporated into this record. I move to admit  
5 that testimony as Exhibit -- just identified as  
6 Exhibit 1110.

7 HEARING OFFICER HALLORAN: Ms. Bugel.

8 MS. BUGEL: Objection. Same objections that  
9 we've already stated.

10 HEARING OFFICER HALLORAN: Okay. I'm going to  
11 allow it. Overruled. What did we name Burton's  
12 pre-file exhibit?

13 MS. NIJMAN: The exhibit number that I noted it  
14 for identification was 1110.

15 HEARING OFFICER HALLORAN: So admitted. Thank  
16 you. Over objection.

17 MS. NIJMAN: Thank you.

18 (WHEREUPON, Respondent's Exhibit  
19 No. 1110 was marked for  
20 identification.)

21 MS. NIJMAN: That's all I have, sir. Thank  
22 you.

23 HEARING OFFICER HALLORAN: Thank you.

24 Ms. Bugel, you want to take a minute before your

1 redirect?

2 MS. BUGEL: I don't actually think I need to  
3 take a minute. We're ready.

4 HEARING OFFICER HALLORAN: Let me know if you  
5 plan to redirect on the Phase 2 that's in the offer  
6 of proof already.

7 MS. BUGEL: Yes, I do.

8 HEARING OFFICER HALLORAN: Just let me know.  
9 You may proceed. Thank you.

10 REDIRECT EXAMINATION

11 BY MS. BUGEL:

12 Q. Mr. Quarles, could you please start by  
13 finding Exhibit 1106, and that is the Zarate v.  
14 Couch decision you were asked about yesterday.

15 A. Yes.

16 Q. And can you provide a little context for  
17 that case?

18 A. Yes. This was a proposed very large  
19 regional municipal solid waste landfill that was  
20 proposed for this property in what I would call a  
21 fairly sensitive location relative to a watershed  
22 lake. It was on a parcel that was adjacent to the  
23 lake, and the lake was used as a community drinking  
24 water system intake. And then there were private

1 wells in the vicinity, so it had -- you know, just  
2 by location it had water quality risks.

3 **Q. And what opinion did you offer on putting**  
4 **a landfill on that parcel next to the drinking**  
5 **water lake?**

6 A. I offered the opinion that -- I stated  
7 that landfills -- line landfills can leak and  
8 sometimes do leak. And if they do and constituents  
9 get into the drinking water supply, that can be  
10 catastrophic. So my opinion was on the  
11 conservative side about location and placement of  
12 wells in particular regarding that water quality  
13 threat.

14 **Q. And you can set aside Exhibit 1106.**

15 **Mr. Quarles, can you tell me how many old**  
16 **cases you've been involved in?**

17 A. Old cases related to testifying?

18 **Q. Well, go ahead. Why don't we -- let me**  
19 **strike that question. Let me reask it.**

20 **Can you give an estimate of how many**  
21 **cases, in general, how many cases you have offered**  
22 **testimony in?**

23 A. Golly, I'm trying to imagine my full list.  
24 Maybe -- maybe 15 or so, most of which related to



1 CCR.

2 Q. And, Mr. Quarles, how do you feel your  
3 memory is of things -- when you're asked about  
4 things from several years ago?

5 MS. NIJMAN: Objection, form.

6 HEARING OFFICER HALLORAN: You can answer.  
7 Overruled.

8 THE WITNESS: I work on projects all across the  
9 country every week, and, you know, the names of  
10 sites, numbers and names of wells, depositions. I  
11 see -- I see that quite often, and I get thousands  
12 of pages that are given to me on some of these  
13 cases to review, internal documents, external  
14 documents. And so at times it's a challenge to  
15 remember particular names, well locations,  
16 specifics associated with an individual site. It's  
17 easy to get them confused.

18 BY MS. BUGEL:

19 Q. And how do you handle that when you're  
20 preparing for a case?

21 A. Well, I try to memorize as much as I can,  
22 and the prior record and the liability phase had  
23 lots and lots of names and numbers and well  
24 locations, basin names, numbers, sites, rivers,

1 lakes. And it's hard to remember it all. It's a  
2 challenge.

3 **Q. And how long ago did you get involved in**  
4 **this case?**

5 A. We first started talking back in 2019,  
6 three years ago. And then there were lots of  
7 starts and stops, so it was not a continuous  
8 process of reviewing information and writing  
9 reports.

10 **Q. And what were you provided with in terms**  
11 **of the record in this case?**

12 MS. NIJMAN: I'm gonna object to just the  
13 nature of the question as beyond direct.

14 HEARING OFFICER HALLORAN: I'll allow leeway.  
15 You may proceed.

16 THE WITNESS: I was provided essentially  
17 thousands of pages of the record dating back end of  
18 the liability phase. And it was provided  
19 electronically, and it was -- that's when I began  
20 my initial dive into the information.

21 BY MS. BUGEL:

22 **Q. And in that initial dive into the**  
23 **information, what was your process for selecting**  
24 **what to review?**

1           A.     So my -- this phase of the process is a  
2     remedy phase.   So the Board had already reviewed  
3     all the prior testimonies of name -- named the  
4     folks who, you know, worked on the project, the  
5     experts, Seymour Kunkel, whomever.   The Board had  
6     already reviewed those and came to its conclusion  
7     about the liability for the exceedances.   And so at  
8     this point it's a remedy discussion, and the  
9     Board's opinion was the best factual summary of  
10    that prior history of the expert opinions.

11           **Q.     Can you give an estimate of how many**  
12    **documents you reviewed for preparing for your**  
13    **testimony in this case?**

14           A.     Oh, so part -- the first part of the  
15    process is when I get a record, an electronic  
16    record, is to look at the names of the individual  
17    folders as they would relate to a remedy.   And then  
18    I would flip through those documents and see what  
19    they discuss and what they describe.   And then  
20    those that were really good to talk about, the  
21    geology, the hydrogeology, the investigations that  
22    were related to groundwater like the Patrick  
23    investigation was very, very useful.   The KPRG  
24    investigations related to groundwater flow and

1 quality were very useful.

2 And I might add I was able to obtain some  
3 of the publicly available documents from Midwest  
4 Gen's CCR website, for example, related to location  
5 restrictions.

6 **Q. Yesterday Ms. Nijman asked you about coal**  
7 **ash indicators relative to the groundwater**  
8 **protection standards. Do you recall that?**

9 A. I do.

10 **Q. Have you ever seen a coal ash indicator**  
11 **below groundwater protection standards, but above**  
12 **background?**

13 A. I have.

14 **Q. And what would that tell you?**

15 A. So an indicator parameter is a parameter  
16 that is common in coal ash, and it could be a  
17 metal. It could be a metal without a threshold  
18 standard without a primary drinking water standard.  
19 It could be a nonmetal like sulfite.

20 So when we talk about indications or  
21 indicators of a CCR, we commonly look at  
22 constituents that both have numeric standards and  
23 may not.

24 **Q. And what's the significance of an**

1 **indicator being above background?**

2 A. If it's above background, then if you have  
3 a background groundwater sample that's indicative  
4 of non-leakage from a CCR disposal area, if it's  
5 above background, then that would indicate that you  
6 might have a release that is associated with CCR.

7 **Q. And yesterday you also testified about the**  
8 **need for an assessment of corrective measures under**  
9 **the federal CCR rule. Do you recall that?**

10 A. I do.

11 **Q. Does the federal CCR rule as currently**  
12 **written apply to historic ash areas?**

13 A. Repeat the question.

14 **Q. Does the federal CCR rule as currently**  
15 **written apply to historic ash areas?**

16 A. No.

17 **Q. And yesterday you also testified that you**  
18 **have not assessed the quantities of ash for removal**  
19 **at the Midwest Generation sites. Do you recall**  
20 **that?**

21 A. I do.

22 **Q. Why haven't you assessed the quantities of**  
23 **ash for removal?**

24 A. Because the nature and extent of the

1 contamination or the extent of the ash in historic  
2 fill areas hasn't been determined, so it's  
3 impossible to determine the volume.

4 **Q. And yesterday there was some discussion**  
5 **about emptying ponds. Do you recall that?**

6 A. I do.

7 **Q. Is dredging a pond the same as closing a**  
8 **pond?**

9 A. It is not.

10 **Q. Can you explain why not?**

11 A. Dredging is simply removing ash that's  
12 above the bottom of the pond. And we've seen, too,  
13 that some of these ponds are constructed with  
14 embankments made out of ash.

15 **Q. And following on, in your experience does**  
16 **dredging a pond remove all ash?**

17 A. If you have a designated identifiable  
18 liner on the bottom of it, then you can see what  
19 amount of ash has been removed where you get to  
20 that bona fide bottom of the liner, the bottom of  
21 the impoundment.

22 **Q. Does dredging a pond remove ash underneath**  
23 **the liner?**

24 A. It does not.

1           **Q.    And does dredging a pond remove ash in**  
2 **embankments?**

3           A.    It does not.

4           **Q.    Does dredging a pond remove ash that might**  
5 **be intermixed with a warning layer of crushed**  
6 **limestone?**

7           A.    It does not unless you excavate the  
8 warning layer.

9           **Q.    Is dredging a pond the same thing as clean**  
10 **closing a pond under the Illinois rule?**

11          A.    Clean closing a pond is removing the all  
12 aspects of the pond.

13          **Q.    And when you say all aspects, what are you**  
14 **referring to?**

15          A.    You're removing the ash, the liner, in  
16 this case the embankments.

17          **Q.    And can you please find Exhibit 1103 in**  
18 **your exhibits up there?**

19          A.    Yes.

20          **Q.    Can you please turn to Bates Page 065928?**

21          A.    Okay.

22          **Q.    And do you see the heading that says**  
23 **results?**

24          A.    Yes.

1           Q.    And can you please read the first  
2 paragraph -- or, you know what, I'll read it out  
3 loud. I'm looking at the first paragraph under  
4 results. Two of the three impoundments achieved  
5 significant groundwater quality improvements after  
6 dewatering the enclosure. Of these two  
7 impoundments, one was capped and the other was not  
8 capped suggesting that the cap had little bearing  
9 on overall closure performance. The key factor for  
10 achieving concentration reduction at these two  
11 facilities was dewatering the ash. Groundwater  
12 quality improvement closely parallel improvement  
13 predicted using groundwater models at these two  
14 sites.

15                   Do you see that?

16           A.    I do.

17           Q.    And did I read that correctly?

18           A.    You did.

19           Q.    Can you please tell me what that paragraph  
20 says to you?

21           A.    What's important is they evaluated three  
22 surface impoundments, and the cap had little  
23 bearing of protecting groundwater if ash is in  
24 contact with the groundwater. So the key factor,



1 whether you construct the cap or not, was  
2 dewatering the ash to result in a groundwater  
3 improvement.

4 Q. And looking at the second paragraph under  
5 results, I'm gonna read this one aloud, too.  
6 Groundwater quality did not improve at one of the  
7 three impoundments. This site differed from the  
8 other two in that a portion of the ash was below  
9 the current water table, the full extent of which  
10 was not known prior to closure of the site and was  
11 not reflected in the closure modeling. Dewatering  
12 and closure were not effective at this site because  
13 leaching continued from the saturated ash. In this  
14 particular case could concentrations actually  
15 increased because the contact time of groundwater  
16 moving through the saturated ash increased when the  
17 hydraulic gradient of the pond was removed. A cap  
18 would have had little or no effect on this process.

19 Do you see that?

20 A. I do.

21 Q. And did I read that correctly?

22 A. You did.

23 Q. Can you please tell me what this paragraph  
24 means to you?

1           A.     So I'll jump to the second and third line  
2 where it was talking about what was different where  
3 it begins with the full extent of which was not  
4 known prior to closure of the site. So what that  
5 suggests is that they initiated a closure without  
6 knowing something that was critical about that ash  
7 pond, and groundwater didn't improve as they  
8 expected and hoped it would at one of the three  
9 impoundments. And in this case dewatering and  
10 closure were not effective because leaching  
11 continued, and in this case the concentrations  
12 actually increased because what they referred to  
13 the hydraulic gradient of the pond was removed.

14                 So the takeaway is that -- is that you  
15 should understand your impoundment characteristics  
16 related to saturation before you design, evaluate  
17 and select a closure.

18           **Q.     And looking at that paragraph, what's your**  
19 **reaction to the last sentence?**

20           A.     A cap would have little or no effect on  
21 the process of groundwater improvement where you  
22 have ash that's saturated in groundwater.

23           **Q.     And yesterday you also talked about the**  
24 **federal CCR rule in relation to your recommendation**

1 in your two reports. Do you recall that?

2 A. I do.

3 Q. Do you have an opinion on whether your  
4 recommendation goes beyond the federal CCR rule?

5 A. The recommendation for what part? What --

6 Q. Well, your recommendation for a nature and  
7 extent?

8 A. No. A nature and extent thoroughly  
9 discussed the need in both the federal rule and the  
10 Illinois rule.

11 Q. Is there anything in your recommendation  
12 that is inconsistent with the federal rule?

13 A. No.

14 Q. And you already answered my question as to  
15 the Illinois rule.

16 Is there anything in your recommendation  
17 that is inconsistent with the Illinois rule?

18 A. No.

19 Q. I'd like to turn to Exhibit 1108, and this  
20 is the presumptive remedy for municipal landfill  
21 sites; is that right?

22 A. Yes.

23 Q. And I'd like to turn it Page 6, and under  
24 Number 4 there's a heading that says, Presumptive

1     **Remedy, with five bullet points.**

2             **Do you see that?**

3             A.     Yes.

4             **Q.     In particular -- well, what is your**  
5     **understanding of these five bullet points?**

6             A.     So these are stated as the objectives for  
7     a presumptive remedy for a municipal landfill.

8             **Q.     And do you see the second bullet point**  
9     **where it says, minimizing infiltration and the**  
10    **resulting contaminant leaching to groundwater?**

11            A.     I do.

12            **Q.     And can you think about the Joliet site**  
13    **and tell me, has Midwest Gen minimized infiltration**  
14    **and the resulting contaminant leaching to**  
15    **groundwater at the northeast ash area at Joliet?**

16            A.     They've not.

17            **Q.     And can you explain why not?**

18            A.     There's not an engineered cap that I'm  
19    aware of over the landfill area.

20            **Q.     And at Joliet has Midwest Gen minimized**  
21    **infiltration and the resulting contaminant leaching**  
22    **to groundwater at the southwest ash area?**

23            A.     No.

24            **Q.     And can you explain why not?**

1           A.     For the same reason, I'm not aware of an  
2     engineered CCR compliant cap over that area.

3           **Q.     And thinking about the Waukegan site, has**  
4     **Midwest Gen minimized infiltration and the**  
5     **resulting contaminant leaching to groundwater at**  
6     **the former slag flash storage area at Waukegan?**

7           A.     The cap would minimize infiltration from  
8     above, from precipitation, but it would not  
9     minimize infiltration of that lateral inflow of  
10    groundwater through the ash below ground and  
11    wouldn't -- as such, one could expect continued  
12    contaminant leaching to groundwater.

13          **Q.     Turning to Powerton, has Midwest Gen**  
14    **minimized infiltration and the resulting**  
15    **contaminant leaching to groundwater from ash**  
16    **outside of the ponds at Powerton?**

17          A.     No.

18          **Q.     And can you explain why not?**

19          A.     There -- everybody knows about the former  
20    ash basin, and it doesn't have an engineered cap,  
21    and it's expected to be closed. There are other  
22    suspected historical fill areas that are in the  
23    area that have not been thoroughly examined, and as  
24    a result, too, there's no planned cap over that or

1 there's no -- not enough information to know if a  
2 cap would be a correct closure to minimize future  
3 infiltration because we don't know to what degree  
4 ash in the historical areas may also be below  
5 ground.

6 **Q. And it turning to Will County, has**  
7 **Midwest Gen minimized infiltration and the**  
8 **resulting contaminant leaking to groundwater from**  
9 **ash outside of the ponds at Will County?**

10 MS. NIJMAN: I'm gonna object to way beyond the  
11 scope of redirect.

12 HEARING OFFICER HALLORAN: I'm sorry?

13 MS. NIJMAN: Way beyond -- these questions are  
14 way beyond the scope of the cross-examination, and  
15 none of this was discussed. The only cap  
16 presumptive remedy that was discussed at Waukegan  
17 which Miss Bugel's already talked about, so we're  
18 way beyond where we should be at this point.

19 HEARING OFFICER HALLORAN: Ms. Bugel.

20 MS. BUGEL: Hearing Officer, this Exhibit 1108  
21 was discussed at length. My question relates to  
22 the exhibit, and that is fair game within the scope  
23 of redirect to question about an exhibit that has  
24 been introduced through this witness and admitted

1 into the record.

2 MS. NIJMAN: This exhibit was specific cited by  
3 Mr. Quarles as to address the Waukegan  
4 recommendation of a cap only, and that's how it was  
5 addressed on cross.

6 HEARING OFFICER HALLORAN: How much more do you  
7 have, Ms. Bugel? I may give you a little more  
8 latitude depending.

9 MS. BUGEL: This is my last question about this  
10 exhibit.

11 HEARING OFFICER HALLORAN: Okay. You may  
12 proceed. Overruled.

13 BY MS. BUGEL:

14 **Q. Okay. So turning to Will County, has**  
15 **Midwest Generation minimized infiltration and the**  
16 **resulting contaminant leaching to groundwater from**  
17 **ash outside of the ponds at Will County?**

18 A. No.

19 **Q. And can you explain why not?**

20 A. For the same reason, we know we have ash  
21 below ground outside of the active ash basin. And  
22 we don't know to what extent the ash extends  
23 laterally, and we don't have any detailed  
24 information about to what degree that lateral

1 placement of waste is wet. And there's no plan to  
2 contain it or to evaluate a full remedy.

3 Q. And, oh, next I want to turn to the  
4 Board's decision from June 20, 2019. And,  
5 Mr. Quarles, were you ever given a copy of that?  
6 If not, I've got copies.

7 A. Yeah, let me see that.

8 Q. And can you please turn to Page 67 of the  
9 Board's decision?

10 A. Yes.

11 Q. And this Page 67, if you just flip back,  
12 you know, to 64, 65, you can see that this is  
13 discussing Waukegan.

14 Do you see that?

15 A. Yes.

16 Q. And then on 67 do you see the heading,  
17 Coal Ash in Fill Areas?

18 A. I do.

19 Q. And do you see the first sentence, the  
20 record also shows the presence of coal ash buried  
21 around the ponds going as deep as 22 feet below  
22 ground surface?

23 A. Yes, I do.

24 Q. And earlier today Ms. Nijman pointed you



1 to the very last sentence that talks about three  
2 feet of overlap.

3 Do you see that?

4 A. I do.

5 Q. Can you please explain how those two  
6 points relate to your testimony?

7 A. The presence of coal ash buried around the  
8 ponds going as deep as 22 feet below ground  
9 surface, and at the bottom it's talking about  
10 3 feet of overlap of water. The challenge with the  
11 borings is that some of the borings are measured in  
12 this case near the fill areas. So we know we have  
13 coal ash buried 22 feet below ground, and I've seen  
14 groundwater data that in discussions that say the  
15 aquifer -- uppermost aquifer is about 5 feet below  
16 ground. So there's plenty of evidence that there's  
17 more than 3 feet of ash that's saturated in  
18 groundwater.

19 Q. And can you please look at -- let's see.  
20 I've got the fourth sentence after Coal Ash in Fill  
21 Areas heading where it says, further, the boring  
22 logs indicate the condition of the samples at  
23 depths of 10 to 20 feet as "wet" or "slightly  
24 moist."

1           **Do you see that statement?**

2           A.    I do.

3           **Q.    What does that tell you?**

4           A.    So in a boring log when you are pulling up  
5 soil intervals, you're making an evaluation of the  
6 soil type and the characteristics, and one of the  
7 characteristics you are recording and observing is  
8 whether or not it's wet, dry, or moist.  And  
9 they're saying here the condition of the samples at  
10 depths 10 to 20 feet were wet or slightly moist  
11 meaning they were saturated.

12          **Q.    Okay.  And in that case do you have an**  
13 **understanding of saturated with what?**

14          A.    In this case below ground it would be the  
15 uppermost aquifer.

16          **Q.    I think we can set aside the Board**  
17 **decision, and next can you please find**  
18 **Exhibits 1110 and 1111?**

19          MS. NIJMAN:  This portion is to be designated.

20          HEARING OFFICER HALLORAN:  Is this Phase 2?

21          MS. BUGEL:  Let me ask -- I will limit my first  
22 question to Exhibit 1110 so that we can then be  
23 more clear on the record about what is the offer of  
24 proof.

1 BY MS. BUGEL:

2 Q. First, looking at Exhibit 1110, do you  
3 know where this -- well, let me restate this.

4 You discussed sediment sampling in  
5 relation to this exhibit. Do you recall that?

6 A. I do.

7 Q. And do you know where this sediment  
8 sampling took place?

9 A. The specific locations I'm aware of are  
10 from the Exhibit 1111.

11 Q. Okay. Why don't you turn to the figures  
12 towards the back of the exhibit starting at 107871?  
13 That's the Bates Number 107871.

14 A. Yeah.

15 Q. And looking at those figures, do you  
16 generally know where this sampling took place?

17 A. Yes, yes.

18 Q. And where is that?

19 A. In the northeast section of that. Again,  
20 across the river from the DR 08-27. Over the  
21 northeast corner would be the BR 080 looks like  
22 DR 08-29.

23 Q. Okay. So referring to the DR 08-29, and  
24 I'm asking very generally, like a city or a region,

1     **do you know where that is?**

2           A.     It looks to be down -- down proximity  
3     depending on the direction of flow of the river,  
4     but it's near an urban area.  And that's one of the  
5     things that the Kaskaskia report discussed.  It was  
6     in an urban environment.

7           **Q.     Right.  And I'm trying to just -- do you**  
8     **know what Midwest Gen plant that is near?**

9           A.     Yes.  That is the -- that's the Joliet  
10    plant.

11          **Q.     Thank you.**

12                   **And we can set aside Exhibit 1110 and turn**  
13    **to Exhibit 1111.**

14          MS. BUGEL:  And this is the exhibit that was  
15    taken on an offer of proof, Hearing Officer.

16          HEARING OFFICER HALLORAN:  We're within the  
17    offer of proof now.  Thank you.

18    BY MS. BUGEL:

19          **Q.     And turning to the -- I'm turning to the**  
20    **first tab, Attachment A boring location map,**  
21    **Brandon Road Interbasin Project.**

22                   **Do you see that?**

23          A.     I do.

24          **Q.     And looking at -- turning to the -- it**

1 doesn't say Figure 1, but Attachment A, boring  
2 location plan. There's a little -- in the  
3 right-hand corner with the satellite image it says  
4 Page 27. Do you see that? Right-hand side?

5 A. Yes, yes, yes.

6 Q. And there's a little box that says one?

7 A. Yes.

8 Q. Okay. So based on looking at these  
9 satellite images in this and subsequent pages, do  
10 you know where this sampling took place?

11 A. I do.

12 Q. And where is that?

13 A. It's according to this scale approximately  
14 anywhere from -- those three locations are anywhere  
15 from an inch to 2 inches away from the shoreline  
16 which would be 70 to a hundred feet, 140 feet off  
17 of the shoreline.

18 Q. Off of the shoreline.

19 And do you know what plant of  
20 Midwest Gen's this is in the vicinity of?

21 MS. NIJMAN: Asked and answered.

22 THE WITNESS: It's Joliet.

23 HEARING OFFICER HALLORAN: Overruled.

24

1 BY MS. BUGEL:

2 Q. And just to make sure the record is clear,  
3 I think people were speaking over each other,  
4 Mr. Quarles, can you answer again?

5 A. Joliet.

6 Q. And can you please turn to the very first  
7 page of this document, the executive summary?

8 A. Yes.

9 Q. And I'd like you to look at the second  
10 sentence, and I'll read it for the benefit of  
11 everybody. The primary objective for the request  
12 of services were to define overall site geology and  
13 engineering properties of site soils and bedrock,  
14 and to perform engineering analyses related to  
15 bedrock excavation, electrical conductivity and  
16 grounding for the proposed electrical barrier  
17 feature and design recommendations for future  
18 structural features.

19 Do you see that?

20 A. I do.

21 Q. And do you have an understanding of  
22 whether this was a nature and extent study for a  
23 CCR site?

24 A. Well, it's certainly not a nature and

1 extent study. And according to that primary  
2 objective, it has nothing to do with an  
3 environmental investigation looking for CCR  
4 contaminants. It's defining site geology and  
5 engineering properties of soil and rock for an  
6 electrical barrier feature.

7 **Q. And when you looked at the borings for --**  
8 **that are attached to this Phase 2 report, you said**  
9 **in your testimony that CCR material might be**  
10 **recorded as gravel in a boring.**

11 **Can you explain that further?**

12 A. So when you -- when you create a boring  
13 log, you're evaluating the characteristics of what  
14 you see, and you are looking at the boring log in  
15 Tab 2, the one of the main columns is  
16 classification of materials. And in this case you  
17 see the capital letters where they say a silty loam  
18 or sandy clay loam or dolomite, and those are  
19 standard terms used by the industry that are  
20 associated with particle size, for example.

21 So I have seen some consultants, for  
22 example, call fly ash a sand because fly ash is in  
23 the size of a sand-sized particle according to the  
24 classification system. Similarly on gravel, as

1 I've -- I have seen bottom ash be called a gravel.

2 MS. BUGEL: Hearing Officer, we're done with  
3 Exhibit 1111 now.

4 HEARING OFFICER HALLORAN: Thank you. We're  
5 outside the offer of proof.

6 BY MS. BUGEL:

7 Q. And, Mr. Quarles, in the course of  
8 preparing your testimony and in the course of your  
9 testimony over the last two days, have you seen any  
10 sediment sampling from the vicinity of the Waukegan  
11 coal plant?

12 MS. NIJMAN: Objection, goes beyond the scope  
13 of the cross which was limited to Joliet.

14 HEARING OFFICER HALLORAN: Can you rephrase  
15 that? Or could you read that question back,  
16 please?

17 (WHEREUPON, the record was read  
18 as requested.)

19 MS. BUGEL: Hearing Officer, if I may respond,  
20 sediment sampling has been highly contested in the  
21 past couple of days, and there have been in the  
22 course of that -- there's been a lot of emphasis on  
23 the need for and the importance of sediment  
24 sampling, and this goes to exactly where we have it



1 from and where we don't have it from in relation to  
2 complainant's remedy request.

3 HEARING OFFICER HALLORAN: Ms. Nijman.

4 MS. NIJMAN: Which is something that could have  
5 been addressed on direct but was not and is already  
6 in Mr. Quarles' report which is in the record. On  
7 cross my direction -- my questions were limited to  
8 Joliet 29.

9 HEARING OFFICER HALLORAN: Yeah. I've already  
10 given some latitude, Ms. Bugel, so Ms. Nijman's  
11 objection is sustained. Move on. Thank you.

12 BY MS. BUGEL:

13 Q. Okay. I'd like to pull up Exhibit 1109.

14 A. What is that?

15 Q. This is the location restriction that was  
16 attached to the application for the operating  
17 permit. And, Mr. Quarles, I'm looking at the  
18 paragraph --

19 MS. NIJMAN: Could you just hold on one second?  
20 I think we gave all our copies away, so we're  
21 trying to find one.

22 BY MS. BUGEL:

23 Q. Referring to Exhibit 1109, if you can flip  
24 to the page after the title page, two pages after?

1           A.     Okay.

2           **Q.     And under heading number one, Placement**  
3 **Location Restriction Determination, if you can take**  
4 **a minute just to review that paragraph?**

5           A.     Okay.

6           **Q.     And my question is, can you tell me what**  
7 **evidence there is in this paragraph on the**  
8 **placement location restriction determination in**  
9 **support of the conclusion?**

10          A.     Well, it's -- there's 3 feet difference  
11 between the base of the surge basin and the what  
12 they call the upper limit of the groundwater. So  
13 it doesn't meet the -- it's not separated by the  
14 5-foot standard in the state and federal rule.

15                 And then they go on to talk about they're  
16 claiming that there is no intermittent, recurring  
17 or sustained connection, hydraulic connection,  
18 between the base and the uppermost aquifer; but yet  
19 there is not the minimum 5 feet separation.

20          **Q.     So my question is, is there any support**  
21 **for the conclusion that this comparison**  
22 **demonstrated that an intermittent recurring or**  
23 **sustained hydraulic connection between any portion**  
24 **of the base of the ASB and the uppermost aquifer**

1 **due to normal fluctuations in groundwater**  
2 **elevations is not present?**

3 A. So they're basing it on groundwater data  
4 from wells around the perimeter. And so they're  
5 saying that it's not hydraulically connected even  
6 intermittently, but yet the idea of that 5-foot  
7 separation is that -- is that it has to be between  
8 the seasonal high water table which they're stating  
9 was -- during that 10-year period was 449 and the  
10 base which is 452. So, again, there is still not  
11 that 5-foot separation.

12 **Q. And the elevations that you cited, are**  
13 **those -- I'm sorry. The groundwater monitoring**  
14 **well data that you cited, is that provided here in**  
15 **this paragraph?**

16 A. It does. It mentions -- according to them  
17 that was there, the base of the surge basin and the  
18 upper limit what they call was 449. And the  
19 separation intent is that you have --

20 MS. NIJMAN: Objection. We're going beyond the  
21 question that was asked.

22 HEARING OFFICER HALLORAN: I'm sorry?

23 MS. NIJMAN: There's no question pending.

24 HEARING OFFICER HALLORAN: Yeah. No question.

1 Sustained.

2 BY MS. BUGEL:

3 Q. And, Mr. Quarles, do you have an  
4 understanding of why 5 feet is the separation  
5 requirement by the federal CCR rule on placement  
6 location restrictions?

7 MS. NIJMAN: I'm gonna object to the  
8 mischaracterization of the rule. The witness has  
9 already testified that the rule contains two  
10 separate requirements, the 5 feet or the  
11 intermittent, recurring or sustained hydraulic  
12 connection. It's not one standard that applies.

13 HEARING OFFICER HALLORAN: I believe I heard  
14 that. Ms. Bugel, can you rephrase?

15 BY MS. BUGEL:

16 Q. Do you have an understanding of why 5 feet  
17 is provided by the location restriction as one of  
18 the two prongs that need to be met --

19 MS. NIJMAN: No.

20 BY MS. BUGEL:

21 Q. -- under the federal CCR rule?

22 MS. NIJMAN: Same objection. It's not one of  
23 two prongs. It's either or.

24 HEARING OFFICER HALLORAN: He can answer if

1 he's able. Overruled.

2 THE WITNESS: The 5-foot separation, it's quite  
3 common that in a RCRA solid waste landfill design  
4 standard is that there is a specified number of  
5 feet that should separate the bottom of the unit,  
6 the disposal unit, and the top of the aquifer. And  
7 what that does is we've learned in the historical  
8 record that liners can and sometimes do leak,  
9 right. So it gives a little bit of a separation  
10 between that uppermost aquifer and the bottom of  
11 the waste in the event that that happens.

12 And then, secondly, you may be monitoring  
13 quarterly or monthly, and you may not be recording  
14 data that would be the highest that actually occurs  
15 during that 10-year period. Because if you get a  
16 substantial rainfall on, for example, January the  
17 5th, and the water rises 3 feet, 4 feet, and you  
18 sample out there are at the end of the month or the  
19 next month, you may show a groundwater elevation  
20 that's much lower.

21 BY MS. BUGEL:

22 Q. And, Mr. Quarles, if there is not a  
23 5-foot separation and groundwater or an aquifer  
24 rises up to be in contact with a pond liner, if

1     **there's a tear in the liner, would there be a**  
2     **hydraulic connection between the bottom of the pond**  
3     **and the aquifer?**

4           MS. NIJMAN:  Again, we are way beyond  
5     cross-examination here, and the document has  
6     nothing do with liners or anything else.

7           HEARING OFFICER HALLORAN:  Ms. Bugel.

8           MS. BUGEL:  Again, location restrictions and  
9     the two different ways that location restrictions  
10    can be demonstrated has been at issue.  The  
11    hydraulic connection has been at issue, and this  
12    is -- I'm asking for his expert opinion on  
13    scenarios where there might be a hydraulic  
14    connection especially with evidence in the record  
15    of liner tears at Midwest Gen ponds.

16          MS. NIJMAN:  Again, way beyond the scope of my  
17    cross-examination.  My cross-examination related to  
18    the finding at this one location where we don't  
19    have evidence, and all that we're getting is a  
20    speculation of what might happen and could happen  
21    and potentially did happen.  I'm not getting any  
22    specifics, and it's beyond the scope of the  
23    cross-examination.

24          HEARING OFFICER HALLORAN:  Yeah.  I'm not too

1 worried about the speculation. We are going afield  
2 of the cross-examination. What I can do, I can  
3 sustain Ms. Nijman's objection; and if you feel  
4 strongly, I can let it in as an offer of proof.

5 MS. BUGEL: I don't feel strongly.

6 HEARING OFFICER HALLORAN: Okay. Thank you.  
7 Sustained. Thank you.

8 BY MS. BUGEL:

9 **Q. And, Mr. Quarles, for the placement above**  
10 **the uppermost aquifer location restriction**  
11 **demonstration, who bears the burden on making that**  
12 **demonstration?**

13 A. Midwest Gen.

14 MS. BUGEL: Thank you, Hearing Officer. I have  
15 no further questions.

16 HEARING OFFICER HALLORAN: Thank you. We're  
17 off the record for a second.

18 (WHEREUPON, a short recess was  
19 taken.)

20 HEARING OFFICER HALLORAN: Back on the record,  
21 please. All right. We're gonna take an  
22 hour-and-15-minute lunch, so please be back here by  
23 1:20, something like that. Thank you.

24

1 (WHEREUPON, a short recess was  
2 taken.)

3 HEARING OFFICER HALLORAN: Back on the record.  
4 We're in the middle of recross or, excuse me, just  
5 started recross with Ms. Nijman, Midwest Gen, of  
6 Mr. Quarles. He's still under oath. You may  
7 proceed.

8 RECROSS-EXAMINATION

9 BY MS. NIJMAN:

10 Q. Mr. Quarles, on redirect Ms. Bugel asked  
11 you about the Zarate, Z-a-r-a-t-e, versus Couch  
12 case. Do you remember?

13 A. I do.

14 Q. Now, when we talked about that case  
15 yesterday, isn't it true that each of the opinions  
16 identified -- that we identified at the hearing  
17 were explicitly rejected by the ALJ in that case?

18 MS. BUGEL: Object to the characterization of  
19 the testimony.

20 HEARING OFFICER HALLORAN: Can you rephrase  
21 that in any way? Otherwise, I'll let it go.

22 MS. NIJMAN: I'd lake to hear the answer.

23 HEARING OFFICER HALLORAN: You may proceed.

24 Overruled.



1 THE WITNESS: I'm sorry. State the question  
2 again.

3 BY MS. NIJMAN:

4 Q. Of the opinions that you and I went  
5 through from the Zarate versus Couch case, each of  
6 those opinions was explicitly rejected your  
7 opinions explicitly rejected by the administrative  
8 law judge, correct?

9 A. That's right. It was not persuasive.

10 Q. Thank you.

11 You spoke a little bit with Ms. Bugel  
12 about not having identified the quantities of ash  
13 that would be required for a theoretical removal  
14 project, correct?

15 A. Yes.

16 Q. And you did not review Mr. Kunkel's expert  
17 report, correct?

18 A. Correct.

19 Q. And you're not aware of whether Mr. Kunkel  
20 identified quantities of ash for a potential  
21 removal?

22 A. I'm not.

23 Q. You were speaking with Ms. Bugel about the  
24 Waukegan grassy field area or FS fill area,

1 correct?

2 A. Yes, ma'am.

3 Q. Okay. The area to the west of the ponds,  
4 so we're all clear.

5 A. Yes, ma'am.

6 Q. Okay. And you were comparing it to the  
7 EPRI report of not knowing enough information about  
8 the area, correct?

9 MS. BUGEL: Object, mischaracterizes the  
10 witness's testimony.

11 BY MS. NIJMAN:

12 Q. Please tell me if I'm mischaracterizing  
13 your testimony, but I'm just trying to get to the  
14 question as a foundation.

15 A. Well, we know that it's a historical fill  
16 area, and we know that some of the ash is saturated  
17 and how deep it is. We have wells NW 5 on the  
18 downgradient side which is the upgraded well for  
19 the active monitoring system, but I haven't seen a  
20 volume calculation of the amount of ash or the  
21 thickness of the ash that's saturated.

22 Q. I think you testified during my cross  
23 yesterday that you had not reviewed the sampling  
24 data from the Waukegan fill area that was done by

1 **Midwest Generation in 2022. Excuse me, the field**  
2 **data was taken in 2020.**

3 A. I don't remember specifically, but I guess  
4 my answer is no.

5 Q. So you're not aware that 40 borings were  
6 taken in that grassy field area?

7 A. Yep, yep, yep.

8 Q. And those samples were analyzed for CCR  
9 parameters, right?

10 A. Yes, ma'am.

11 Q. And those samples --

12 A. That's right.

13 Q. -- included leaf testing, right? L-e-a-f.

14 A. Uh-huh.

15 Q. Yes?

16 A. Yes, I believe so.

17 Q. Okay. So we do know what is exactly in  
18 that area, correct?

19 A. The leaf testing, I don't remember how  
20 many samples were analyzed out of that -- of the  
21 40 borings.

22 Q. But we took 40 borings investigating that  
23 area, so we know what is in that area, do we not?

24 MS. BUGEL: Hearing Officer, I'm gonna object

1 to this line of questions as being beyond the scope  
2 of the cross. We talked about the EPRI report, but  
3 we did not question -- I did not question  
4 Mr. Quarles about the Waukegan field investigation  
5 at all.

6 HEARING OFFICER HALLORAN: As I gave you my  
7 latitude, I will give Ms. Nijman latitude.  
8 Overruled. You may proceed.

9 MS. NIJMAN: Thank you.

10 BY MS. NIJMAN:

11 Q. And I'm also referring back to the  
12 statement you made to Ms. Bugel that there was  
13 5 feet of -- that the groundwater elevation was at  
14 5 feet. I'd like to get there which is where I'm  
15 going and why this is relevant.

16 So you're aware, though, that there were  
17 borings taken then, 40 borings taken, and that  
18 would include an identification of where  
19 groundwater is throughout the area, correct?

20 A. It should have.

21 Q. And it's not 5 feet, is it?

22 A. I don't remember for those 40 borings.

23 Q. Okay. Well, you mentioned 5 feet on your  
24 testimony, so you're correcting that now that you

1     **don't remember?**

2           A.     Well, my testimony -- I remember borings  
3     that were in the vicinity around the east and west  
4     basin that talked about the depth of groundwater  
5     below the natural ground surface.

6           **Q.     Well, you specifically said groundwater**  
7     **was saturated in that area 5 feet.  So that's not**  
8     **correct, is it?**

9           A.     If you'll show me boring logs for those  
10    40 borings, I'd be glad to see what depth  
11    groundwater was reported in those borings.

12          **Q.     Ms. Bugel showed you Exhibit 1109 again**  
13    **which was the placement above the uppermost aquifer**  
14    **location restrictions, right?**

15          A.     Yes, ma'am.

16          **Q.     Have you reviewed in detail the operating**  
17    **permit application that was -- that accompanied**  
18    **this placement statement?**

19          A.     I've not reviewed the application of the  
20    operating permit.

21          **Q.     So you're not aware that the operation**  
22    **permit application contains all the supporting data**  
23    **for these statements?**

24          A.     I haven't seen the operating permit

1 application.

2 Q. You see that this document  
3 Bates-numbered 109814 is signed by an Illinois  
4 professional engineer, correct?

5 A. I'm sorry. Which document are you talking  
6 about?

7 Q. The placement document, Exhibit 1109.

8 A. Okay. Yes, it is.

9 Q. And certified, correct, by an Illinois  
10 licensed professional engineer?

11 A. It is.

12 Q. And you're not a professional engineer,  
13 correct?

14 A. That's correct.

15 Q. When a licensed professional engineer  
16 certifies something, they are certifying that they  
17 have the data to support it, are they not?

18 A. They are.

19 Q. Thank you.

20 You also were discussing with Ms. Bugel  
21 the boring logs that I had shown you.

22 MS. NIJMAN: I'm sorry. This may be part of  
23 offer of proof question.

24 HEARING OFFICER HALLORAN: Okay. Yes. We're

1 in the offer in proof. Thank you.

2 BY MS. NIJMAN:

3 Q. You mentioned on the boring logs that you  
4 saw --

5 MS. NIJMAN: Oh, actually, I'm sorry,  
6 Mr. Halloran. This is not. Unrelated.

7 HEARING OFFICER HALLORAN: Okay. Unrelated.  
8 We're outside the offer of proof. Thank you.

9 MS. NIJMAN: Apologies.

10 BY MS. NIJMAN:

11 Q. You were referring to Page 67 of the Board  
12 order when you talked about boring logs and  
13 referencing that wet means saturated, right?

14 A. Wet is a term that's commonly used on a  
15 boring log for saturated.

16 Q. But moist does not equate to saturated,  
17 correct?

18 A. That's right.

19 MS. NIJMAN: Okay. That's all I have.

20 HEARING OFFICER HALLORAN: Thank you,  
21 Ms. Nijman.

22 Miss Bugel, re-redirect?

23 MS. BUGEL: We have re-redirect, we just need a  
24 moment to pull out an exhibit.

1 HEARING OFFICER HALLORAN: Okay. Off the  
2 record for a minute. Thanks.

3 (WHEREUPON, a short recess was  
4 taken.)

5 HEARING OFFICER HALLORAN: We are back on the  
6 record. Thank you.

7 MS. BUGEL: Just one or two questions, Hearing  
8 Officer.

9 RE-REDIRECT EXAMINATION

10 BY MS. BUGEL:

11 Q. Mr. Quarles, you've been asked a lot of  
12 questions in the past two days about various  
13 exhibits. Are you able to remember exactly what  
14 any specific exhibit says, for instance, what a  
15 boring log says without having it in front of you?

16 MS. NIJMAN: I'm gonna object to beyond the  
17 scope of my very brief recross.

18 THE WITNESS: No.

19 HEARING OFFICER HALLORAN: He can answer if  
20 he's able. I think he just did.

21 THE WITNESS: No.

22 MS. BUGEL: Thank you. No further questions.

23 HEARING OFFICER HALLORAN: Thank you. All  
24 right. We're off the record. You may step down.



1 (Witness excused.)

2 (WHEREUPON, a short recess was  
3 taken.)

4 HEARING OFFICER HALLORAN: On the record.  
5 Ms. Nijman stated she has some housekeeping issues  
6 before we start our direct on Mr. Wannier's  
7 witness.

8 MS. NIJMAN: Yes, Mr. Hearing Officer. Based  
9 on the testimony we've heard from Mr. Quarles, we  
10 again renew our objection to the Quarles opinion  
11 based on our motion in limine to preserve our  
12 rights under Rule of Evidence 103 that he entirely  
13 disregarded opinions by complainant's original  
14 expert, never mentioned the expert, never reviewed  
15 any of his information, and, therefore, failed to  
16 build on or amplify any of the opinions as required  
17 by the hearing officer's order and Illinois law.

18 HEARING OFFICER HALLORAN: Your objection is so  
19 noted.

20 MR. WANNIER: You don't need a response then?

21 HEARING OFFICER HALLORAN: If you'd like.

22 MR. WANNIER: I'll just say it's our belief  
23 that Ms. Nijman has completely misconstrued the  
24 hearing officer's order and also ignored and

1 misconstrued the subsequent order from the Board,  
2 and we obviously disagree both with the legal  
3 conclusions and with her characterization of  
4 Mr. Quarles' testimony.

5 HEARING OFFICER HALLORAN: All right.  
6 Everything is in the transcript. The Board will  
7 take a look at it.

8 You may proceed, Mr. Wannier.

9 MR. WANNIER: Thank you, your Honor. We'd like  
10 to call complainant's expert witness, Jonathan  
11 Shefftz.

12 (WHEREUPON, the witness was  
13 duly sworn.)

14 MS. GALE: And, Mr. Hearing Officer, again a  
15 bit of housekeeping, to preserve our appeal under  
16 Rules of Evidence 103, we object to and reassert  
17 our objections that are outlined in our motion in  
18 limine to the opinions given by Mr. Shefftz because  
19 they are not based upon facts or data that are  
20 reasonably relied upon.

21 The data that he relied upon in on Table 6  
22 of the Kunkel remedy report has no basis or  
23 foundation in fact. There are no facts to support  
24 assumptions fed by Mr. Shefftz by complainant's

1 counsel, and he admits that he has no independent  
2 knowledge or expertise that would allow him to rely  
3 upon Kunkel's table or counsel's report.

4 HEARING OFFICER HALLORAN: I was kind of  
5 waiting to see what he had to say first. I haven't  
6 ruled on your most recent motion in limine. I  
7 believe it came in, and then they filed a response.  
8 But, in any event, that's still laying out there.  
9 I think I just ruled on the motion incorporated.

10 MR. WANNIER: If I could clarify.

11 HEARING OFFICER HALLORAN: Let Ms. Gale finish.

12 MS. GALE: I just want to clarify for the  
13 record, Mr. Hearing Officer. What we are talking  
14 about is preserving our rights under the motions in  
15 limine that were filed a year ago.

16 HEARING OFFICER HALLORAN: Okay. I can't keep  
17 up because there's been a plethora, but the  
18 transcript record so notes. Thank you.

19 Mr. Wannier.

20 MR. WANNIER: I had the same clarification  
21 Miss Gale just offered.

22 HEARING OFFICER HALLORAN: Okay. Thank you.

23

24

1 JONATHAN SHEFFTZ,  
2 called as a witness herein, having been first duly  
3 sworn, was examined and testified as follows:

4 DIRECT EXAMINATION

5 BY MR. WANNIER:

6 Q. Okay. Can you please state your name for  
7 the record?

8 A. First name is Jonathan, J-o-n-a-t-h-a-n.  
9 Last name is Shefftz, S-h-e-f-f-t-z.

10 Q. What's your current employment situation?

11 A. I'm self-employed doing business as J.  
12 Shefftz Consulting.

13 Q. And what did you do before you were  
14 self-employed?

15 A. I worked at an environmental economics and  
16 public policy consulting firm called Industrial  
17 Economics, Incorporated, in Cambridge,  
18 Massachusetts.

19 Q. And, sorry, for how long have you been  
20 self-employed, and then for how long --

21 (Reporter clarification.)

22 BY MR. WANNIER:

23 Q. I'll do it one at a time.  
24 For how long have you been self-employed?

1           A.     Since spring of 2006.

2           **Q.     And how long were you in your previous**  
3 **position?**

4           A.     Since 1992 after finishing graduate school  
5 at Harvard University.

6           **Q.     That leads into my next question.**  
7 **What's your educational background?**

8           A.     I have an undergraduate degree majoring in  
9 economics and an interdisciplinary major in  
10 historical political economy at Amherst College  
11 where I graduated magna cum laude and Phi Beta  
12 Kappa. And then I obtained a master's degree in  
13 public policy with two concentrations of government  
14 and business and energy and environmental policy at  
15 the John F. Kennedy School of Government at Harvard  
16 University.

17           **Q.     What professional societies, if any, are**  
18 **you involved with?**

19           A.     The main one I've been involved with is  
20 the National Association For Forensic Economics. I  
21 previously served as a regional vice president and  
22 also have served as a referee -- article referee  
23 for their peer-reviewed journal. I also have  
24 memberships in other professional societies, but

1 I've not been involved to the same extent that I  
2 have been with the previous one I mentioned.

3 **Q. Any other activities you'd like to share**  
4 **related to your consultant practice such as**  
5 **volunteer positions?**

6 A. I have a number of volunteer activities  
7 both current and in the past including chairing the  
8 town planning board in Amherst and also serving as  
9 the treasurer for three different entities, a local  
10 house -- religious house of worship, the U.S. Ski  
11 Mountaineers Association, and coming up at the  
12 beginning of next year the American Avalanche  
13 Association.

14 **Q. Starting immediately after graduate**  
15 **school, what were your job responsibilities over**  
16 **the course of your time at Industrial Economics?**

17 A. So I started off as an associate and then  
18 became a senior associate, so essentially starting  
19 off as a kind of mid level analyst and then  
20 becoming a senior manager. I essentially performed  
21 and managed analyses including work like in this  
22 case and also more broadly public policy work which  
23 I sometimes described as looking at the  
24 environmental impact of economic regulations and

1 the economic impact of environmental regulations.

2 HEARING OFFICER HALLORAN: Can you --

3 Mr. Shefftz, without being a contortionist, could  
4 you kind of talk to the court reporter.

5 THE WITNESS: Talk to the court reporter.

6 Sure. I'm used to having a microphone.

7 BY MR. WANNIER:

8 **Q. And can you describe your current**  
9 **consulting practice?**

10 A. So my current consulting practice, it  
11 still has some potent policy work such as analyzing  
12 proposed regulations and permit applications, but  
13 most of it is serving as an expert witness, not  
14 necessarily in caption cases or testifying in  
15 person, but in different types of litigation where  
16 there's potential for expert testimony or at least  
17 an expert report. So that includes cases like this  
18 one, opining on the same topics, as well as other  
19 types of litigation disputes entirely unrelated to  
20 the environment, so business damages, personal  
21 losses, topics like that. Basically anything --  
22 anything having to do with financial economics in  
23 the context of litigation disputes. Sometimes also  
24 corporate control issues.

1           **Q.    Have you published?**

2           A.    Yes.  I have published three articles, two  
3           of them on economic benefit issues, and one of them  
4           on taxation issues and commercial damages.

5           **Q.    And have you made any public**  
6           **presentations?**

7           A.    Yes.  I've made I think it's a couple  
8           dozen or so public presentations.  Some of them  
9           have been on economic benefit.  Others have been on  
10          different types of damages topics at economics  
11          conferences entirely unrelated to the environment.

12          **Q.    Have you ever testified as an expert**  
13          **witness in depositions, administrative hearings or**  
14          **trials?**

15          A.    Yes, probably several dozen times by now.

16          **Q.    So, well, my next question was, about how**  
17          **many times have you done that?  I take it your**  
18          **answer stands?**

19          A.    Yes.

20          **Q.    How many times have you been qualified as**  
21          **an expert witness in administrative proceedings,**  
22          **federal court or state court trials?**

23          A.    It's been a few dozen times.

24          **Q.    Okay.**



1 A. Basically all the times I've testified.

2 Q. And have you ever worked as an expert in  
3 environmental enforcement cases on behalf of  
4 defendant?

5 A. Yes, I have.

6 Q. About how many times?

7 A. The last couple or so years I think it's  
8 about half a dozen cases.

9 Q. Thank you.

10 On what topics have you been hired to  
11 opine in this case?

12 A. So in this case I was opined -- I was  
13 retained to opine on the potential economic benefit  
14 that was gained by respondent and the economic  
15 impact on respondent of a penalty and compliance  
16 cost.

17 Q. Okay. So let's start with the economic  
18 benefit issue. Have you previously worked on  
19 calculating the economic benefit of noncompliance?

20 A. Yes, I have, dating back to 1992.

21 Q. Please describe in a little more detail  
22 your experience with that --

23 (Reporter clarification.)

24 HEARING OFFICER HALLORAN: You're trailing off

1 right at the end, Mr. Wannier.

2 BY MR. WANNIER:

3 **Q. Please describe in a little more detail**  
4 **your experience with economic benefit calculations.**

5 A. So much of that has been in the context of  
6 casework similar to this matter. I was also very  
7 heavily involved from 1992 into 2017 in providing  
8 support to the U.S. Environmental Protection Agency  
9 on its BEN computer. That's B-E-N all capital  
10 letters, no periods, for the court reporter.

11 So that model allows financial laypersons  
12 to perform economic benefit calculations in a more  
13 routine matter. In addition to work directly on  
14 the model, I also provided support to USEPA in  
15 aspects such as developing training materials to  
16 the model, delivering in-person training courses to  
17 federal and state staff, and supporting EPA in  
18 various public comment processes and drafting  
19 guidance, documentation and activities, what not.

20 **Q. So for all types of clients combined on**  
21 **either side including the government work,**  
22 **approximately how many economic benefit**  
23 **calculations do you estimate that you have**  
24 **performed since you first started working in this**

1 **field in 1992?**

2 A. I've worked on many hundreds of cases. If  
3 we wanted to count individual calculations, it  
4 would probably be in the thousands by now, many  
5 thousands.

6 **Q. Okay. And you mentioned EPA's BEN model.**  
7 **Did you use the BEN model you helped create in this**  
8 **case?**

9 A. No, I did not.

10 **Q. Why not?**

11 A. Not to criticize the BEN model, I'm kind  
12 of proud of it since I'm the one who created the  
13 current version of it back in 1988, but although it  
14 would produce accurate results in a case like this,  
15 it would end up producing dozens or hundreds of  
16 pages as opposed to the relatively small number of  
17 tables that I was able to condense my calculations  
18 to in this case.

19 And also the main point of the BEN model  
20 is for financial laypersons to use it as opposed to  
21 someone like myself who is specializing in this  
22 area, and therefore I can produce spreadsheets that  
23 accomplish the same calculations but in a more  
24 presentable manner, easily presentable and

1       comprehensible manner.

2           **Q.     In your opinion what is the purpose of**  
3       **calculating economic benefit for noncompliance?**

4           A.     Although I'm not an attorney, and I'm not  
5       here to offer a legal opinion, from the viewpoint  
6       of as an economist, the point of calculating  
7       economic benefit is to quantify the extent to which  
8       an entity is financially better off from its  
9       violations of environmental regulations with the  
10      idea that a penalty at least to -- to at least  
11      create financial indifference has to recapture the  
12      probability weighted amount of that economic  
13      benefit.

14           **Q.     And you mentioned in your response that a**  
15      **penalty should at least create financial**  
16      **indifference. In what circumstances should a**  
17      **penalty do more than recapture financial**  
18      **indifference?**

19           A.     If the goal of the penalty is not just to  
20      make a violator financially indifferent between  
21      compliance versus noncompliance, then additional  
22      amounts would be necessary to be added to the  
23      probability to adjust economic benefit to achieve  
24      financial deterrence. In the USEPA world of its

1 various penalty policies, they call that the  
2 gravity component of the penalty in addition to the  
3 economic benefit component.

4 **Q. Can you expand a little more on that**  
5 **probability concept regarding detection and**  
6 **prosecution and payment from the perspective of an**  
7 **economic analysis of the law?**

8 A. Sure. So what I'd like to use is an  
9 analogy, and one that actually was true when I was  
10 at graduate school in Harvard. Parking was tight  
11 when I didn't have a permit one year for one of the  
12 student lots, and there was ample street parking,  
13 but only for a short amount of time. So if the  
14 City of Cambridge wanted to deter people like me  
15 from parking there illegally, how much should the  
16 parking fee -- how much should the fine be set to.

17 One approach would be, well, just set it  
18 equal to the price of parking in a nearby  
19 commercial garage. However, that would establish  
20 only financial indifference between getting a  
21 parking ticket versus paying for the nearby garage.  
22 So an additional amount would be necessary.  
23 Moreover, even if the amount was set exactly equal  
24 to a parking garage, that still would not establish

1 financial indifference because I knew that there  
2 was some chance that if I didn't park there too  
3 long, the meter enforcement would not be coming by  
4 during that interval, so I would get away with the  
5 illegal parking and not have to pay anything at  
6 all.

7 So ideally the parking fine should be, in  
8 order to establish indifference in the first place,  
9 would need to be equal to legal parking weighted by  
10 the chance on whether or not the enforcement  
11 authority would ticket in time.

12 MR. WANNIER: May we approach, your Honor?

13 HEARING OFFICER HALLORAN: Yes, you may.

14 (WHEREUPON, Claimant's Exhibit  
15 No. 1201 was marked for  
16 identification.)

17 BY MR. WANNIER:

18 **Q. I'm going to place in place in front of**  
19 **you what we have marked as Exhibit Number 1201.**

20 MS. GALE: Mr. Hearing Officer, this document  
21 is noted as contains non-disclosable information  
22 which the parties have agreed to and have a  
23 standing agreed order to maintain it as  
24 non-disclosed information. So we request that this

1 be on a separate record or transcript and that we  
2 make sure that when it is entered into as an  
3 exhibit, it is marked accordingly with the Board  
4 and secluded or excluded from the general record.

5 HEARING OFFICER HALLORAN: Yeah. That's kind  
6 of a big mistake, Mr. Wannier. Do you plan to  
7 question Mr. Shefftz on this non-disclosable?

8 MR. WANNIER: Yes. I was planning to make this  
9 request as the first question. We haven't -- I  
10 haven't asked any questions about it, but we don't  
11 have any objection to that, and we were planning to  
12 request confidential treatment for the questions.

13 HEARING OFFICER HALLORAN: I'm sorry. You're  
14 tailing off again.

15 MR. WANNIER: We were planning to request  
16 confidential treatment for discussion of this  
17 exhibit, and I just hadn't gotten there yet because  
18 I was waiting for the exhibits to be distributed,  
19 but I agree with Miss Gale that would be  
20 appropriate.

21 HEARING OFFICER HALLORAN: Do we need to put  
22 some sort of sign up in the room saying this is a  
23 closed hearing now or take back some of these  
24 exhibits that are passed out?

1 MS. GALE: Well, this is the first one,  
2 Mr. Hearing Officer.

3 MS. WACHSPRESS: There are three that are  
4 marked as non-disclosable.

5 HEARING OFFICER HALLORAN: Yeah. So should we  
6 take -- I just have one up here that I guess has  
7 non-disclosable stuff in it.

8 MS. NIJMAN: Yes, anyone who's not a party to  
9 the proceeding should be asked to leave during  
10 this.

11 HEARING OFFICER HALLORAN: Yeah, I totally  
12 agree. And I'll just keep an eye out for the  
13 doors.

14 Anybody not affiliated with the parties, I  
15 would ask to leave at this point. The Board  
16 employees can stay obviously.

17 THE WITNESS: I think the only non-disclosable  
18 part is one very small part of this report. I  
19 don't know if it matters, but I think there's only  
20 one line of questioning that's going to come in the  
21 end that contains the non-disclosable information.

22 HEARING OFFICER HALLORAN: We're off the record  
23 now.

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(WHEREUPON, a short recess was  
taken.)

(WHEREUPON, proceedings were had  
not herein transcribed.)

1 STATE OF ILLINOIS )  
2 ) SS:  
3 COUNTY OF C O O K )  
4

5 RAELENE STAMM being first duly sworn, on  
6 oath says that she is a court reporter doing  
7 business in the City of Chicago; and that she  
8 reported in shorthand the proceedings of said  
9 hearing, and that the foregoing is a true and  
10 correct transcript of her shorthand notes so taken  
11 as aforesaid, and contains the proceedings given at  
12 said hearing.

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Certified Shorthand Reporter

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