

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

In the Matter of:)
)
SIERRA CLUB, ENVIRONMENTAL LAW)
AND POLICY CENTER, PRAIRIE RIVERS)
NETWORK, and CITIZENS AGAINST)
RUINING THE ENVIRONMENT,)
)
Complainants,)
)
-vs-) PCB No. 2013-015
)
MIDWEST GENERATION, LLC,)
)
Respondent.)
_____)

REPORT OF PROCEEDINGS, at the Hearing of the
above-entitled matter held at the James R. Thompson
Center, 100 West Randolph Street, Suite 9-040,
Chicago, Illinois, on the 29th day of January, 2018,
commencing at the hour of 9:00 a.m.

HEARING OFFICER:

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1 THE HEARING OFFICER: Good morning, my name a
2 Brad Halloran. I am the Hearing Officer with the
3 Illinois Pollution Control Board. I'm also assigned
4 to this matter entitled, "Sierra Club Environmental
5 Law and Policy Center, Prairie Rivers Network and
6 Citizens Against Ruining the Environment." They are
7 the Complainants and we've been calling them the
8 "Complainants" or the "Citizens Group." Versus
9 Midwest Generation, LLC, the Respondent.

10 It's docketed as PCB13-15. It's a Citizen
11 Enforcement case, Water. This has been noticed up
12 properly pursuant to Sections 101 and 103. This is a
13 continuation of the hearing that ended on
14 October 27th, 2017, and I would like the attorneys to
15 introduce themselves, please.

16 Ms. Bugel?

17 MS. BUGEL: Good morning, I'm Faith Bugel
18 representing the Sierra Club.

19 MR. RUSS: I am Abel Russ representing
20 Prairie Rivers Network.

21 MS. NIJMAN: Jennifer Nijman and Kristen
22 Gale.

23 THE HEARING OFFICER: Thank you, Ms. Nijman.

24 MS. NIJMAN: We also have two more attorneys

1 with us.

2 MR. WANNIER: Greg Wannier representing the
3 Sierra Club.

4 MS. DUBIN: Lindsay Dubin representing Sierra
5 Club, ELPC, Prairie Rivers, and Citizens Against
6 Ruining the Environment.

7 THE HEARING OFFICER: Ms. Bugel, I think
8 before we get back to cross I believe of Dr. Kunkel
9 you have some housekeeping matters.

10 MS. BUGEL: Right. I have a housekeeping
11 matter as it relates to the board's order of January
12 25th on the appeal of some objections to the board
13 from our last hearing. And specifically on Page 4,
14 referring to the ruling on interrogatory responses,
15 the board concluded that the interrogatory responses
16 were properly admitted and affirmed your ruling. But
17 the board did limit the use of those exhibits and
18 specifically at the middle of Page 4, the third
19 paragraph at the very bottom of the discussion of the
20 interrogatory responses, the board says the board also
21 grants Midwest Gen's request interrogatory objection
22 at 728 to limit the use of the interrogatory responses
23 to those portions that were discussed on the record at
24 the hearing in October 2017.

1 Complainants now are in the position where we
2 were not obviously on notice as to the limitation at
3 the time that we were using those exhibits, and this
4 was with the witness, Maria Race. Because we were not
5 on notice, we would like the opportunity to ask
6 additional questions of Ms. Race simply because we
7 weren't on notice at the time.

8 THE HEARING OFFICER: Did you file a motion
9 for reconsideration of this? Did you argue this
10 point? I didn't read all your pleadings because it
11 was directed towards the board.

12 MS. BUGEL: I will have to go back and look
13 at our arguments that we made. Obviously this was
14 January 25th, so there's still time to move for
15 reconsideration of the board's decision.

16 Your original decision did not limit the use
17 of the exhibits. That was a new request made to the
18 board on the appeal of your original ruling, which is
19 the exact reason we weren't on notice at the time.

20 THE HEARING OFFICER: Ms. Nijman, Ms. Gale?

21 MS. NIJMAN: Yes. Well, you may recall,
22 Mr. Halloran, that Midwest Generation objected to the
23 admission of those interrogatories for this exact
24 reason. And, in fact, we had this discussion on the

1 record at that time and it's in the transcript that we
2 were concerned about this very issue arising, that the
3 complainants would try to get in a document that they
4 didn't address with the witness and the witness would
5 not have an opportunity to address it.

6 When we objected, you stated that the use of
7 the interrogatories was permissible if you have a
8 question about them, but could not be used to -- I'm
9 sorry, I argued -- could not be used to sweep the
10 information into the record.

11 Complainants were actually well aware that we
12 objected to the admission and use of those documents
13 and had full opportunity to ensure all of the
14 information they wanted from those documents was in
15 the record.

16 What you said at the time is you admonished
17 Ms. Bugel specifically to, quote, just make it clear
18 Ms. Bugel what the heck is going on with the document.
19 That's your statement from the record.

20 There's no doubt that the complainants were
21 on notice by both Midwest Generation and the Hearing
22 Officer to get in every question they wanted to get in
23 on these documents and we would object to recalling
24 any witnesses for that purpose.

1 The last point I'll make is that with regard
2 the exhibit -- one of the exhibits, Exhibit 5.5. I am
3 not sure exactly which one Ms. Bugel is referring to,
4 Ms. Race already testified that she had no knowledge
5 and recollection of that document in any case. And
6 that's on the record.

7 THE HEARING OFFICER: You know I kind of
8 remember that. Ms. Bugel -- and again, this is beyond
9 my purview. It's with the supremes, as I like to call
10 them. I can't rule either way if you file an
11 expedited motion for reconsideration. I am not even
12 sure you argued it in your response or motions
13 regarding your appeal.

14 MS. BUGEL: Okay.

15 THE HEARING OFFICER: I don't know. I'd have
16 to go back. But again, at this point I can't do
17 anything about it. I'll think it over. That's about
18 the best I can tell you.

19 MS. BUGEL: Okay. Thank you.

20 All right. Are we ready to begin --

21 MS. NIJMAN: I'm sorry, Mr. Halloran, we have
22 one exhibit issue. One of the exhibits that the
23 complainants entered in October was an incorrect copy
24 and we only noticed it -- there were a few extra pages

1 attached onto the last exhibit.

2 It's an Exhibit 15-C, which is the
3 Hydrogeologic Assessment Report for Will County. And
4 we were looking at it, really, over the weekend. We
5 noticed that there were pictures attached at the back
6 that weren't actually a part of the report. So we
7 brought replacement reports and I have marked them as
8 15-C.

9 THE HEARING OFFICER: Is that Complainant's
10 15-C?

11 MS. NIJMAN: It is Complainant's 15-C.

12 THE HEARING OFFICER: Were you aware of that?

13 MS. BUGEL: We were not aware of that until
14 this moment.

15 MR. RUSS: We are now.

16 MS. NIJMAN: I e-mailed you.

17 MR. RUSS: Right, That was done this week.

18 MS. NIJMAN: One, it was disclosed there were
19 separate PDFs. Two, the other reports don't have
20 photos attached, so there would be no reason that this
21 one would have photos attached.

22 MR. RUSS: So for the paper copies, it looks
23 like double-sided in the way that you could just take
24 them off.

1 MS. NIJMAN: Okay. That's fine.

2 MS. GALE: Yeah, you could just pull the
3 photos off the exhibits, that's fine.

4 THE HEARING OFFICER: Four page pages of
5 photos, or actually eight but double-sided.

6 MR. RUSS: Yes, I think those are not part of
7 that document.

8 THE HEARING OFFICER: They're gone.

9 MS. GALE: Thank you.

10 THE HEARING OFFICER: We are still on the
11 record. I did get Midwest Gen's additional
12 demonstrative exhibits that were filed Friday. I just
13 got them this morning at 7:30. I think I printed all
14 of them out, but we can address that when need be.

15 I forget who had Dr. Kunkel.

16 MS. NIJMAN: That would be me.

17 THE HEARING OFFICER: Could you please raise
18 your hand, Dr. Kunkel. It's been a few months, but
19 the court reporter will swear you in.

20 (Witness duly sworn.)

21 CROSS-EXAMINATION

22 BY MS. NIJMAN:

23 Q. Good morning again.

24 A. Good morning. How are you?

1 Q. Very well.

2 I'd like to start out by finishing our
3 discussion about the exhibits you presented during
4 your testimony in October, okay?

5 A. Yes.

6 Q. You may recall you have to answer audibly so
7 the court reporter can get it down.

8 A. I recall.

9 Q. Thank you.

10 So if you would turn to what was marked as
11 Tab 411, the very last tab in your binder. And you
12 could turn to the Page 37 of the summary table?

13 THE HEARING OFFICER: Page 37, Ms. Nijman,
14 are yours marked?

15 MS. NIJMAN: Yes. This is supposedly -- the
16 corrected version that Mr. Able provided was marked
17 with page numbers.

18 MR. RUSS: I think I saw them in that binder.

19 THE HEARING OFFICER: Page what?

20 MS. NIJMAN: 37. The last 37 pages that are
21 marked. I think that's how Mr. Abel put it.

22 THE HEARING OFFICER: Thank you.

23 BY MS. NIJMAN:

24 Q. Do you recall testifying about this table,

1 Table 3?

2 A. I do.

3 Q. Now, this table does not consider the
4 locations of the monitoring wells that you say are
5 above the Class 1 standard, correct?

6 A. Correct.

7 Q. And it doesn't tell us if a monitoring well
8 is upgradient or downgradient, correct?

9 A. Correct.

10 Q. The table does not distinguish whether the
11 constituents appear in one well or disbursed in
12 several wells, correct?

13 A. Correct.

14 Q. And it doesn't tell us when these alleged
15 levels were above the Class 1 standard, correct?

16 A. Correct.

17 Q. And, for instance, for Joliet 29, we know
18 that the only time boron appeared above Class 1
19 standard was in 2011, correct?

20 A. Correct, but the table says there were two.

21 Q. Yes, it appeared twice in 2011 and it has not
22 appeared since then, correct?

23 A. Correct.

24 Q. So you also testified in October that these

1 pages, Pages 1 through 35, the tables, the charts of
2 data, are from the Midwest Generation groundwater
3 monitoring reports, correct?

4 A. Correct.

5 Q. And this Page 1 through 35 you said was used
6 to tally the results that are appearing in the table
7 on Page 37, correct?

8 A. Correct.

9 Q. And you relied on Table 3 for your opinions,
10 correct?

11 A. Correct.

12 Q. Now, if you could turn to Page 6 of this
13 table of data, and I'm also going to pull out for you
14 Exhibit 2570 in this case.

15 THE HEARING OFFICER: Is that 2570?

16 MS. NIJMAN: You're correct, they went by
17 letters. Okay, O.

18 BY MS. NIJMAN:

19 Q. And for the record, Exhibit 2570 is the
20 Powerton second quarter 2015 groundwater results. Do
21 you see that?

22 A. Yes.

23 Q. And if you would turn to Bates Page 49857, so
24 we're going to spend some time doing a little

1 comparing because there were some anomalies, I would
2 say, in this table.

3 If you look at Line 260 on your table on
4 Page 6, Line 260 for Midwest Gen's well, monitoring
5 well 7, reports that sulfate, on your table, was
6 530 milligrams per liter, correct?

7 A. Yes.

8 Q. And you have the standard for sulfate there
9 listed as 400 milligrams per liter?

10 A. Yes.

11 Q. So that's why it appears on this table
12 because it was above the standard.

13 Now, I see you jumping ahead doing exactly
14 what I did, which is if you look at the monitoring
15 well report on Exhibit 2570, on Bates Page 49857, if
16 we look for that same date, May 29th of 2014, the
17 actual results is 52, correct, for sulfate?

18 A. Yes.

19 Q. So 530 on your table is wrong, correct?

20 A. Appears to be, yes.

21 Q. And 52 of course is well below the standard
22 of 400, correct?

23 A. Correct.

24 Q. If you turn to Page 31 of 37, on Line 1559 of

1 your chart, the sulfate results is 330 for Waukegan,
2 correct, monitoring well 7?

3 A. No.

4 Q. I'm sorry, you have it listed as 880,
5 correct?

6 A. Correct.

7 Q. So your chart, Page 31, list sulfate at MW 7
8 at Waukegan at 880?

9 A. Correct.

10 Q. So if you look at Exhibit 268-P, these -- for
11 the record, 268-P, as in Paul, are the fourth quarter
12 2015 groundwater monitoring results for Waukegan?

13 A. Which Bates number?

14 Q. 45344.

15 So if we look at the actual monitoring
16 results that are in Exhibit 268-P, monitoring well 7
17 for sulfate at Waukegan, on May 15th of 2014, the
18 actual result is 330, correct?

19 A. Correct.

20 Q. So, again, the table is wrong, correct?

21 A. Correct.

22 Q. If you can look at Page 32 of 37, that's the
23 page that begins with 1607 Will and I'd like to focus
24 on the lines 1611 through 1618.

1 Now, your chart on Page 32 of 37 says these
2 are sulfate readings for monitoring well 3 at
3 Will County, correct?

4 A. Correct.

5 Q. And looking just first at Line 1611, your
6 table says the sulfate level is 860, correct?

7 A. Correct.

8 Q. And if you turn to Exhibit 281-Q on
9 Page 62479, these are the results for the actual
10 monitoring well results for MW 3, and the second
11 column from the left are the results from May 1st of
12 2015. And according to the actual monitoring well
13 results, it should have been -- the number should have
14 been 250 milligrams per liter, correct?

15 A. Correct.

16 Q. So you have 860 and the actual number is 250,
17 correct?

18 A. Correct.

19 Q. And 250, again, is below the standard for
20 sulfate, correct?

21 A. Correct.

22 Q. I'm going to try to do the next ones together
23 because I think they all appear on this document.

24 So Lines 1613 in your table on Page 32, Line

1 1613, 1614, 1615, 1616, 1617, and 1618. You have them
2 all reporting sulfate above the Class 1 standard of
3 400 milligrams per liter, correct?

4 A. Correct.

5 Q. An if you look at the results for sulfate in
6 the exhibit in front of you for MW 3, none of them are
7 above the standard, are they?

8 A. No, they're not.

9 Q. So all of those are wrong?

10 A. Well, 5-11, 2017, 510 is above the standard.

11 Q. Which one are you referring to? The one
12 that's at 400?

13 A. No. I'm referring to -- am I on the right
14 line?

15 Q. Right, that's not one of the lines I
16 mentioned to you -- one of the dates I mentioned to
17 you.

18 A. Okay.

19 Q. So if you look at the dates from 5-1 of '15
20 through 2-1 of '17, all of those entries on your table
21 are wrong. Isn't that correct?

22 A. Correct.

23 Q. And, in fact, for several of them on Line 16,
24 17, you have Will County listed at 1,400 milligrams

1 per liter and the actual number is 240, correct?

2 A. Correct.

3 Q. And similarly for the next date of February
4 1st of 2017, you have listed 1,200 milligrams per
5 liter and the actual number is 310, correct?

6 A. Correct.

7 Q. Now, going back to your chart on Page 33, if
8 you look to Line 1704 on Page 33 of your chart?

9 A. The table, not the chart?

10 Q. Yes. Would you like to refer to it as the
11 table?

12 A. Yes.

13 Q. So the table on Page 33.

14 MR. RUSS: Can I just pause for a second?

15 Can you just remind us what exhibit he has in front of
16 him?

17 MS. NIJMAN: 411.

18 MR. RUSS: Thank you.

19 BY MS. NIJMAN:

20 Q. So if you look starting on Line 1704 on
21 Page 33, now your chart says the results for
22 monitoring well 6 for sulfate were 440, correct?

23 A. Correct.

24 Q. And that's why it's on this table is because

1 you're saying 440 is above the standard, correct?

2 A. Correct.

3 Q. And if you look at Exhibit 281-Q, again, and
4 you turn to Page 62482, that shows the actual
5 monitoring well results for MW 6, correct?

6 A. Correct.

7 Q. And if you look to the second column for
8 April 30th of 2015, the sulfate is 350, do you see
9 that?

10 A. Yes.

11 Q. So, again, the table on Page 33 is wrong.
12 Agreed?

13 A. Agreed.

14 Q. And again, I'll try to do these all together,
15 Lines 1705, 1706, 1707, 1708, 1709 and 1710, and 1711,
16 which is on the top of the next page, if you compare
17 those to Exhibit 281-Q, Table 2, Page 62482, you see
18 that all of those are wrong. Would you agree?

19 A. Yes.

20 Q. Still on Page 33 of your table, Line 1689, do
21 you see that?

22 A. Yes.

23 Q. Now, it says Midwest Gen 6th sample taken on
24 7-27 of '15, right?

1 A. Yes.

2 Q. That's what your table says.

3 Am if you turn to, again, Exhibit 281-Q for
4 MW 6, there was no such sample date or result for MW
5 6, was there?

6 A. It was one day different, 7-28.

7 Q. But you have the 7-28 listed right below on
8 Line 1690, so that's already accounted for.

9 A. Okay.

10 Q. So this is a duplicative sample?

11 A. I don't know that.

12 Q. Do you know what this is?

13 A. No, I don't know what it is.

14 Q. But there is no result from that date at a
15 level of allegedly 3.1 for boron, is there?

16 A. No.

17 Q. 1692 says Midwest Gen -- excuse me,
18 "Monitoring well 6 at Will County station, boron 3.8."
19 And the sample date is listed as 2-17-2016 on your
20 table. And if we look to Exhibit 281-Q, that does not
21 appear, does it?

22 A. No.

23 Q. So that's incorrect. Agreed?

24 A. Agreed.

1 Q. Line 1695, Will County monitoring well 6 for
2 boron, it says 2.8 on August 9th of 2016. That sample
3 does not exist, does it?

4 A. I don't know. It's not on the table.

5 Q. It's not on the monitoring well -- excuse me,
6 when you say "the table"?

7 A. It's not on Table 2, groundwater analytical
8 results for Will County MW 6.

9 Q. Which is Exhibit 281-Q, correct?

10 A. Yes.

11 Q. In fact, right below it is the date
12 August 11, 2016, so you have the date of August 9,
13 2016 on Line 1695 is not correct, is it?

14 A. No.

15 Q. Same on Line 1697 for Will County monitoring
16 well 6, your table shows a result of 3.2 on boron.
17 That sample does not exist, does it?

18 A. It's not on the table, no.

19 Q. The table on?

20 A. In the monitoring report of Exhibit 281-Q.

21 Q. And the same for Line 1699, monitoring well 6
22 boron, you report on your Table 3.7 for boron on
23 January 31st of 2017. That sample doesn't exist, does
24 it?

1 A. Not in this report, no.

2 Q. Do you think there's another report where it
3 exists?

4 A. I am not sure. These were block copied from
5 the data that was provided to us and there could have
6 been some errors in block copying.

7 Q. Do you have any knowledge of where these
8 sample results might be?

9 A. No.

10 Q. Line 1701 is for Will County, monitoring well
11 6 for boron, your table says 4.3 on the date of a
12 5-9-2017. That doesn't exist on Exhibit 281-Q either,
13 does it?

14 A. No.

15 Q. If you could turn to Page 32 of 37 on your
16 table, and the very first line, Line 607, we're
17 turning to manganese now -- Line 1607.

18 MR. RUSS: Line 1607?

19 MS. NIJMAN: Line 1607.

20 BY MS. NIJMAN:

21 Q. Now, your table says that manganese at
22 monitoring well 3 for Will County on May 11th, was .7.

23 Do you see that?

24 A. Yes.

1 Q. And, again, on Exhibit 281-Q, if we turn to
2 Page 62479, the results for monitoring well 3, the
3 actual manganese result is 0.033, correct?

4 A. Correct.

5 Q. That's below the standard, correct?

6 A. Correct. Yes.

7 Q. And on your demonstrative, if you turn to
8 Page 34 and you look at Line 1749, that's another
9 manganese result for Will County monitoring well 8,
10 and your table says .24, correct?

11 A. Correct.

12 Q. And on Exhibit 281-Q, Page 62484, the actual
13 result is 0.096 milligrams per liter, correct?

14 A. Correct.

15 Q. So, again, that's below the standard?

16 A. Correct.

17 Q. And, again, the table is incorrect. Agreed?

18 A. Agreed.

19 Q. If you'd look at Page 21 of your table and if
20 you look to Line 1071, this is showing results for
21 iron and monitoring well 9 at Joliet 29, correct?

22 A. Correct.

23 Q. And if you look to the next line, 1072, right
24 beneath it.

1 A. Correct.

2 Q. That's identical, isn't it?

3 A. Yes.

4 Q. That's a duplicate entry, isn't it?

5 A. Yes.

6 Q. So that's wrong, correct?

7 A. Yes.

8 Q. Agreed.

9 I'm sorry, it is wrong. Agreed?

10 A. Agreed.

11 Q. I want to make sure we're clear.

12 And the same if you look at Line 1079 for

13 Joliet 29 for manganese and Line 1080 for manganese,

14 those are duplicated, aren't they?

15 A. Yes, they are.

16 Q. So, again, the table is wrong. Agreed?

17 A. Agreed.

18 Q. One more on Page 22, Line 1096 and Line 1097

19 are duplicative, aren't they? Duplicated?

20 A. Yes, they are.

21 Q. They are duplicated. Thank you.

22 So again, the table is wrong. Agreed?

23 A. They have -- 96 and 97, yes, the table is

24 wrong.

1 Q. Now, when I did this, I did spot-checking.
2 Would you agree with me, then, it appears these tables
3 at Page 1 through 35 are not accurate, correct?

4 A. Correct.

5 Q. As a result your summary tables are not
6 accurate, correct?

7 A. Correct.

8 Q. And I have identified other errors, pages and
9 pages of errors.

10 MR. RUSS: I object.

11 THE HEARING OFFICER: I'm sorry. Mr. Russ?

12 MR. RUSS: I just object to testifying.

13 THE HEARING OFFICER: Sustained.

14 MS. NIJMAN: I'm trying to assess the best
15 way to put this in the record without wasting all our
16 time today.

17 Q. I am going to put in front of you what we
18 marked as Exhibit 419.

19 So what you have in front of you are pages
20 from your tables. Do you recognize the pages?

21 A. Yes.

22 Q. And you will see my handwritten notations on
23 those tables of where I identified errors in the
24 tables. Do you see those markings?

1 A. Yes.

2 Q. Now, would you agree with me that these are
3 errors in the tables or --

4 A. Yes, I agree they're errors in the tables.

5 Q. Thank you.

6 MS. NIJMAN: I move to admit Exhibit 419.

7 THE HEARING OFFICER: Mr. Russ?

8 MR. RUSS: No objection.

9 THE HEARING OFFICER: Thank you. Midwest
10 Exhibit 419 is admitted.

11 (Whereupon, Respondent Exhibit
12 No. 419 was received into
13 evidence as of 1-29-18.)

14 BY MS. NIJMAN:

15 Q. We discussed in October the fact that Midwest
16 Gen established groundwater management zones as part
17 of its corrective action agreements about Illinois
18 EPA, do you recall that?

19 A. Yes.

20 Q. You're aware that once a GMZ is established,
21 the Class 1 standards in Illinois do not apply within
22 the GMZ, correct?

23 A. Correct.

24 Q. Now, the GMZs were established in the summer

1 and fall of early 2013, would you agree?

2 A. I don't know exactly when they were
3 established, but I agree with you that that sounds
4 right.

5 Q. And yet, looking at Pages 1 through 37 of
6 your data in Exhibit 411, you include data from the
7 time period after the groundwater management zones
8 were put in place, correct?

9 A. Correct.

10 Q. Now, these tables you stated were provided to
11 you, I think you said, in the last --

12 A. Yes.

13 Q. -- hearing?

14 A. They were.

15 Q. And you assumed that the data was correct
16 when they were provided to you?

17 A. I did.

18 Q. You didn't independent check the data?

19 A. Not thoroughly, no.

20 Q. And as a general matter, is it fair to say
21 that your counsel provided you with this data?

22 A. Yes.

23 Q. And they provided you with all the
24 information you relied on for your opinions?

1 A. I don't understand all, all the information?

2 Q. Well, any document that you relied on for
3 this, for your opinions was --

4 A. No.

5 Q. -- provided to you by counsel?

6 A. No. Only this document.

7 Q. I'm now referring to reports, Midwest
8 Generation -- any Midwest Generation documents?

9 A. I don't understand the question. It was
10 provided by Midwest Generation.

11 Q. And your counsel presented it to you?

12 A. Yes.

13 Q. That's what I'm trying to get at.

14 A. Yeah.

15 Q. Now, in this Exhibit 411, you also compared
16 the levels of boron and sulfate to background. You
17 testified about that. Do you recall that?

18 A. Yes.

19 Q. And that background was based on communities
20 supply well data across the State of Illinois,
21 correct?

22 A. Not for every site. For every site except
23 Powerton.

24 Q. I'm sorry?

1 A. For every site except Powerton, which had its
2 own background well.

3 Q. I'm sorry. That's how you used the data.
4 You used this background data, you're saying, for
5 every site except Powerton?

6 A. I used the regional background data compiled
7 by the State of Illinois for boron and sulfate based
8 on, as you said, the well data as my background for
9 all sites except Powerton, which had its own
10 background well.

11 Q. And that's MW 16?

12 A. Yes.

13 Q. In fact, you did that -- in your report you
14 say you did that because there are no wells that can
15 be considered background at these other stations,
16 correct?

17 A. Correct.

18 Q. And in your testimony with Mr. Able -- excuse
19 me, Mr. Russ, you talked about the fact that you
20 reviewed locations of wells at Joliet?

21 A. I'm not sure. I don't understand.

22 Q. Well, you remember looking at a map with
23 Mr. Russ, a map of the Joliet site?

24 A. Yes.

1 Q. And you identified where the monitoring wells
2 were at Joliet?

3 A. Yes.

4 Q. And you identified that there was flow
5 towards the river at Joliet?

6 A. Yes.

7 Q. And when you had that map in front of you,
8 and it's in your exhibit if you want to look at it, I
9 believe you testified that monitoring wells 8, 10, and
10 11 were installed upgradient of the ponds, correct?

11 A. There is no easy answer because when the
12 stage in the Des Plaines River rises --

13 Q. I'd like to stop you here.

14 A. -- then the flow is in the other direction,
15 into the groundwater instead of out.

16 Q. If you would look at your map of Joliet in
17 your Exhibit 411. It's on the fourth page, I believe.
18 I'm simply trying to clarify the locations of these
19 monitoring wells 8, 10, and 11.

20 A. Yes.

21 Q. Isn't it true they are located upgradient of
22 ash ponds 1, 2, 3?

23 A. They're located I guess furthest away from
24 the Des Plaines River, and that's generally upgradient

1 but not necessarily upgradient all the time. We don't
2 know for sure. But because we don't have -- we only
3 have quarterly data. But yes, based on the quarterly
4 data, they could be considered somewhat upgradient but
5 they do not represent background.

6 Q. In your opinion?

7 A. In my opinion, no way do they represent
8 background.

9 Q. Those wells, monitoring wells 8, 10, and 11,
10 are right at the property boundary of Joliet 29,
11 correct?

12 A. I don't know that.

13 Q. Those wells are not screened in ash, are
14 they?

15 A. I don't recall that they were.

16 Q. If you'd like, you can check Exhibit 12-C
17 that's in front of you, the Patrick Hydrological
18 Assessment Report. Would you like to check?

19 A. No.

20 Q. They are not in ash, are they?

21 A. No.

22 Q. Now, for those community statewide background
23 levels that you used, you cite to a document at Tab
24 405 of your binder and that's the technical support

1 document for the Illinois proposed rules, correct?

2 A. Correct.

3 Q. Now, I think you already stated in October
4 that that is not based on wells specific to the
5 Midwest Generation facilities, correct?

6 A. Correct.

7 Q. And, in fact, IEPA's stated goal in this
8 document was to identify contamination levels in the
9 areas of those community wells, correct?

10 A. Correct.

11 Q. And on Page 7 of the document, that shows the
12 location of the community wells that were assessed by
13 Illinois IEPA, correct?

14 A. Correct.

15 Q. And can you identify --

16 A. For sandy gravel only.

17 Q. Yes.

18 And can you identify the counties on this
19 map?

20 A. No.

21 Q. You can't tell that whether Will County is
22 included, can you?

23 A. I can't, no.

24 Q. And you can't tell if Cook County is

1 included?

2 A. I can't tell, no.

3 Q. Now, the background you chose was the median
4 concentration of boron and sulfate, right, the median?

5 A. Yes.

6 Q. And median, for lay people, is effectively
7 the average?

8 A. No.

9 Q. You said that the median is from, again, this
10 same document at Tab 405, correct?

11 A. Correct.

12 Q. And it's represented on figure 4 that we were
13 just looking at, the median, on these little charts,
14 if you look back at Page 7 of Tab 405?

15 A. Well, it's shown on a table. It's the table
16 I relied on on Page 9 I guess it is.

17 Q. Right. I'd like you to look at Page 7.

18 Now, this box, what you said the tablet on
19 the left side of the page, that shows the
20 constituents, correct, the constituents analyzed on
21 the bottom --

22 A. Yes.

23 Q. -- access?

24 And there is a plot for boron, correct?

1 A. Correct.

2 Q. And that's called a whisker box, right?

3 A. Whisker box plot, yes.

4 Q. W-h-i-s-k-e-r.

5 A. Box-and-whisker plot.

6 Q. The box plot for boron shows a range, doesn't
7 it?

8 A. No. I just see a single number.

9 Q. Well, the single number is the median, the
10 box shows a range, correct?

11 A. The box and whisker show a range, yes.

12 Q. And the range is the range of background
13 boron levels that were identified in the Illinois
14 community well network, correct?

15 A. I assume so, yes. I'm not familiar with the
16 actual study. But that's what it implies.

17 Q. You relied on this study, correct?

18 A. Yeah, correct. But they didn't provide me
19 with the data. They just provided me with this
20 report, the State of Illinois.

21 Q. Well, the lower portion of this box
22 represents the lower 25th percentile of the background
23 range, correct?

24 A. Typically, yes.

1 Q. And that's at 0.04 milligrams per liter,
2 correct?

3 A. I can't tell that from the chart. Since the
4 chart goes from zero to a thousand micrograms and --
5 let's see. So .04 milligrams per liter maybe is the
6 lowest point.

7 Goes from 0 to 200 micrograms per liter,
8 which is 0 to .2 milligrams per liter. There is -- 1,
9 2, 3, 4 -- 5 increments so each increment is worth
10 40 micrograms per liter. So that's .04 milligrams per
11 liter.

12 Q. Perfect.

13 In the upper portion of that box represents
14 the 75th percentile, correct?

15 A. Yes.

16 Q. And that's at 0.3 milligrams per liter?

17 A. Yes, somewhere -- about that, yes.

18 Q. And at the tip of what you call the whisker
19 line is the 93rd percentile, right?

20 A. 93rd or 95th?

21 Q. 95th?

22 A. Yes.

23 Q. And that goes all the way up to .7 milligrams
24 per liter, correct?

1 A. I can't tell. Maybe 760 or 750 micrograms.

2 Q. Yes. Thank you.

3 So the range of background levels of boron
4 identified across the State of Illinois in community
5 wells supply was .07 to .07 or .75 micrograms per
6 liter, correct?

7 A. Yes.

8 Q. So if there is a result that is just above
9 the median but within that range, isn't that within
10 the background range?

11 A. Repeat that again. Just above the median --
12 I don't understand the question.

13 Q. So if a result is above the median but it's
14 within this range of .04 to .7, it's still within the
15 background range, correct?

16 A. It could be.

17 Q. Under what circumstances would it not be?

18 A. If it was an outlier or the State chose to
19 somehow sensor the data. I don't know what they did
20 here.

21 I relied on the table. That's all I relied
22 on was the median table. So I understand that median
23 means half the values are bigger and half the values
24 are smaller.

1 Q. So you relied on this table but you don't
2 know how Illinois EPA did it?

3 A. I know how they did it, but I don't have the
4 data they used to make it so.

5 Q. Now, if you look at Page 6 of your
6 Exhibit 411. It might be Page 7, there are no pages,
7 but it's marked, "Joliet 29 median boron and sulfate
8 concentrations compared to background." It's right
9 before your charts -- your --

10 MR. RUSS: Can I just clarify for the record
11 that you are not looking at the numbered pages at the
12 end of Exhibit 411 but Page 6 of 411.

13 THE HEARING OFFICER: I would like to ask,
14 Mr. Russ, if we number the pages as well.

15 MR. RUSS: Okay. Sure.

16 THE HEARING OFFICER: Thank you.

17 BY MS. NIJMAN:

18 Q. So you have it now.

19 So this is the sixth or seventh page starting
20 from the beginning of your Exhibit 411. It's titled,
21 "Joliet 29 median boron and sulfate concentrations
22 compared to background."

23 Do you have that?

24 A. Yes.

1 Q. If you look at the top wells, monitoring
2 wells 1 through monitoring wells 10 at Joliet for
3 boron, the average boron levels are within your
4 background range, correct?

5 A. The median. I don't understand average.
6 They're here. It's median. Median is not the same as
7 average.

8 Q. Median boron range are within the median
9 range background of Figure 4 of the Illinois EPA
10 community well data, correct?

11 A. Correct.

12 Q. The only well, monitoring well 11, that's the
13 monitoring well we spoke about earlier that's only had
14 boron in the year 2011 and never since, correct?

15 A. Correct.

16 Q. Now, turning away from this document for a
17 minute and looking at Tab 402 of your binder.

18 So Tab 402, you spoke about in October as an
19 e-mail that you had sent to one of the attorneys you
20 were working with, Jennifer Duggen?

21 Do you see that?

22 A. Yes.

23 Q. And in that you discussed the quote in your
24 testimony. In October you talked about the quote that

1 says:

2 "Able," which I assume is Mr. Russ, "has
3 charged me with writing a technical report which
4 presents a solid case showing that the groundwater
5 contamination at Midwest Gen's coal ash ponds were
6 sourced from those ponds."

7 Do you recall testifying about that?

8 A. Yes.

9 Q. Now, I'd like to show you another document
10 marked as Exhibit 418.

11 Do you recognize this document?

12 A. Yes.

13 Q. And this is a note from a telecon with Abel
14 Russ on 9-12-14. Correct?

15 A. Correct.

16 Q. This is your note, correct?

17 A. Correct.

18 Q. And just like the other e-mail at Tab 402,
19 Exhibit 402, this one, this document, states in the
20 fourth paragraph:

21 "My ultimate charge is to write a report to
22 IEP/ELPC which states that contamination at the four
23 power plant sites is due to the leaking ash ponds."

24 Do you see that sentence?

1 A. Yes.

2 Q. So in both of these documents you identified
3 exactly what you were asked to do, correct?

4 A. At that time, yes.

5 MS. NIJMAN: Move to admit 418.

6 THE HEARING OFFICER: Mr. Russ?

7 MR. RUSS: No objection.

8 THE HEARING OFFICER: By the way,
9 congratulation, your child is about, what, three and a
10 half years old now?

11 MR. RUSS: That was the first one. I have
12 had two kids since this case started. I hope I don't
13 have anymore.

14 THE HEARING OFFICER: I'm sorry. 418 is
15 admitted.

16 (Whereupon, Respondent Exhibit
17 No. 418 was received into
18 evidence as of 1-29-18.)

19 BY MS. NIJMAN:

20 Q. Now, back in October you testified that
21 hydrostatic uplift is very pond specific. Do you
22 recall that?

23 A. Yes.

24 Q. So it would be correct to say you can't make

1 generalizations about all of the ponds having
2 hydrostatic uplift.

3 A. Well, I think you can make some
4 generalizations, yes.

5 Q. Well, you just stated they're pond specific,
6 correct?

7 A. They're pond specific, yes.

8 Q. So you have to look at the data for each
9 pond?

10 A. Yes.

11 Q. We discussed, again, back in October that the
12 information you relied on initially in your report --
13 back up.

14 Initially in your July 2015 expert report you
15 stated that there was hydrostatic uplift at the
16 Waukegan ponds. Do you recall that?

17 A. Yes.

18 Q. We discussed back in October the fact that
19 you were relying in that report on data you received
20 from Patrick Engineering, correct?

21 A. Correct.

22 Q. And that data you said was incorrect, the
23 data was wrong?

24 A. Ultimately I found that out, yes, after I

1 wrote my report.

2 Q. And, in fact, in your deposition you and I
3 talked about this issue, didn't we?

4 A. Yes.

5 Q. And you told me, quote, well, again, that was
6 based on poor information I received from Patrick. I
7 apologize for that.

8 A. Yes.

9 Q. Then you went on to tell me that you were,
10 quote, completely blown away when I saw Seymour's
11 report."

12 Do you recall saying that?

13 A. Yes.

14 Q. That was because Mr. Seymour had the correct
15 data. Is that right?

16 A. The correct pond bottom elevations, yes.

17 Q. And I just want to point out if you look at
18 Tab 1 of your report -- I'm sorry, Tab 1 of your
19 binder is your July 15 expert report.

20 THE HEARING OFFICER: Tab 401, 401.

21 MS. NIJMAN: I'm sorry. Tab 401, which has
22 now been marked as Exhibit 401.

23 THE HEARING OFFICER: Correct, thank you.

24 MS. NIJMAN: Thank you.

1 BY MS. NIJMAN:

2 Q. And if you look at Figure 17 of that report.

3 A. Yes.

4 Q. So that figure is wrong; agreed?

5 A. No, the whole figure -- the only thing that's
6 wrong in this figure is the ash ponds bottom

7 elevations. The rest of the figure is perfectly
8 correct, Figure 17 in Exhibit 401 or -- Exhibit 401.

9 Q. But because the ash pond bottom elevation is
10 wrong in this figure, the conclusions you drew in your
11 report are also wrong?

12 A. Not all the conclusions.

13 Q. The conclusions about this issue of the --

14 A. Hydrostatic uplift.

15 Q. -- Waukegan due to this pond elevation are
16 wrong in your report, agreed?

17 A. My conclusions of hydrostatic uplift in my
18 report based on the pond bottom elevations that are
19 shown on Figure 17 are incorrect, yes.

20 Q. Thank you.

21 I want to clear something up that we talked
22 about again in October: I showed you -- I'm going to
23 give this to you again.

24 MS. NIJMAN: Abel, do you have the documents

1 that were provided to Mr. Kunkel in October?

2 MR. RUSS: The documents that were
3 provided -- that you provided?

4 MS. NIJMAN: Yes, on cross-examination.

5 MR. RUSS: No, I don't.

6 MS. BUGEL: Were they exhibits?

7 MS. NIJMAN: No, they were used on
8 cross-examination.

9 MR. RUSS: No.

10 THE HEARING OFFICER: We can go off the
11 record for a minute.

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

14 THE HEARING OFFICER: Back on the record.

15 BY MS. NIJMAN:

16 Q. So I am showing a document we talked about in
17 October and it is dated September 4, 2012, and it is
18 Midwest Generation's response to a violation notice
19 for the Waukegan station.

20 Do you see that?

21 A. Yes.

22 Q. And you and I talked about an article
23 attached to that response, and it is Bates Page 51281
24 of this document. Do you recall this article?

1 A. Yes.

2 Q. And this is an article written by the task
3 force on Waukegan neighbors. Do you see that?

4 A. Yes.

5 Q. And it's dated at the bottom 8-29 of 2012?

6 A. Yes.

7 Q. Now, when we spoke about this document --
8 well, let me just begin at the beginning.

9 If you look at the first line, it says:

10 "To the north along the lakefront is the site
11 of the former general boiler company, a 19-acre parcel
12 on Dahringer Road between the Midwest Generation power
13 plant and the North Shore Sanitary District facility?

14 Do you see that?

15 A. Yes.

16 Q. So this paragraph is talking about the
17 general boiler company, correct?

18 A. Yes.

19 Q. And then if you go onto the second paragraph,
20 it's still talking about the general boiler property,
21 correct?

22 A. Yes.

23 Q. In fact, it says:

24 "In 1998 and 1999, further environmental

1 analyses were performed on portions of this property."

2 Do you see that?

3 A. Yes.

4 Q. And it goes on to say:

5 "And it was confirmed that the northern
6 section contains arsenic above remediation benchmarks
7 in a fly ash fill area."

8 Do you see that?

9 A. Yes.

10 Q. And when you and I spoke in October, I may
11 have misread this and I said the fly ash fill area was
12 related to the Tannery property?

13 A. That's what you said, yes.

14 Q. But, in fact, it's the general boiler
15 property, there is a fly ash fill area, correct?

16 A. That's what this says, yes. I have no idea
17 where that is.

18 Q. You have no idea where the general boiler
19 property is?

20 A. No, I have no idea where the fly ash fill
21 area is on the general boiler property. It's
22 important because of the groundwater floater actions.

23 Q. But it's somewhere on that property, correct,
24 based on this article?

1 A. North section. Northern section of the
2 boiler property, yes.

3 Q. I just wanted to clarify that we're talking
4 about the general boiler property because you and I
5 had it wrong in October. Okay?

6 Now, you also testified, back in October you
7 told me that at Waukegan, you believed the ponds were
8 an additional source of groundwater impact. Right?
9 Do you remember that?

10 A. Yes.

11 Q. And are you aware that Illinois EPA has
12 stated that it does not believe the ponds are a
13 source?

14 A. Yes, I'm aware of that.

15 Q. And you disregarded that opinion?

16 A. No, I didn't disregard it. It's that the
17 data don't support their conclusion.

18 Q. So EPA is wrong?

19 A. Yes.

20 Q. Do you know Mr. Lynn Dunaway from the
21 Illinois EPA?

22 A. No.

23 Q. Do you know that he is an environmental
24 specialist for the Illinois EPA in their water

1 division?

2 A. I know that, yes.

3 Q. And Mr. Dunaway specifically states,
4 "Currently we don't believe active ash ponds are the
5 source of contamination." So you disagree with that
6 statement?

7 A. Yes. Well, "currently." What do you mean
8 currently? When was this?

9 Q. 2015.

10 A. Well, you know, that's his opinion. I can't
11 say for sure at any of the sites whether the
12 contamination we see in the groundwater comes from the
13 ponds or comes from ash that was used for
14 construction. So he may be correct, but since the
15 dikes of the ponds are part of the ponds, the general
16 statement of the ponds aren't causing contamination is
17 just that, a very general statement.

18 Q. So you --

19 A. Leaky ponds possibly. But the ponds
20 themselves probably are causing contamination, the
21 dikes of the ponds.

22 Q. So you disagree with Mr. Dunaway?

23 A. His general statement, yes, his generality.

24 Q. Now, in October you also took the position

1 that ash removal or dredging practices could cause
2 liner tears. Do you recall that?

3 A. Yes.

4 Q. And for your opinion to be accurate, you're
5 assuming a pond actually has ash removed from it,
6 correct?

7 A. Correct.

8 Q. So the frequency of ash removal is relevant
9 to your opinions?

10 A. It is, but I had no data on frequency of ash
11 removal for any of the ponds, Midwest ponds.

12 Q. Um.

13 In your report you cite to various deposition
14 transcripts?

15 A. Deposition transcripts.

16 Q. You don't recall that?

17 A. Yeah, but it doesn't say what the frequency
18 was necessarily, if I remember -- I mean, I don't
19 remember reading --

20 Q. So you don't know the frequency?

21 A. In those depositions there was mention of
22 this pond was dredged twice or something like that,
23 but there was nothing ever written down, no
24 documentation of dates or anything like that that I

1 could rely on.

2 Q. Well, let's talk about a couple of them,
3 because you've made a broad statement about ash
4 removal.

5 So you're aware that the Powerton, at the
6 Powerton station, you're aware that ash surge basin
7 was relined in 2013; you testified to that?

8 A. Yes.

9 Q. And that basin, since 2013, has not needed
10 any ash removal. Are you aware of that?

11 A. No.

12 Q. So that would not have any damage to the
13 liner, correct?

14 A. Not from ash removal, no.

15 Q. And the ash bypass basin at Powerton, you're
16 aware it was relined in 2010?

17 A. Correct.

18 Q. And are you aware that it's only had ash
19 removed from it on one occasion based on the --

20 A. I can't recall. I'm not aware, no.

21 Q. You don't know the equipment used for ash
22 removal for that basin, do you?

23 A. No, I have asked and no one has provided that
24 information.

1 Q. You don't recall that from the depositions in
2 this case?

3 A. No.

4 Q. The Powerton ash settling basin, that was
5 relined in 2013, correct?

6 A. Yes.

7 Q. And that was a finishing pond. We talked
8 about finishing ponds last time, didn't we?

9 A. Yes.

10 Q. And so that pond also has not needed any ash
11 removal because it's de minimis ash, correct?

12 A. Correct.

13 Q. So that would have no damage to the liner
14 from ash removal, would it?

15 A. No.

16 Q. Now, Joliet 29, you're aware it no longer
17 produces ash, correct?

18 A. Correct.

19 Q. And ash pond 3 was relined in 2013?

20 A. Yes.

21 Q. It was also a finishing pond, isn't it?

22 A. I don't know for sure.

23 After it was relined?

24 Q. Yes.

1 A. Yeah. I don't know how they operated it.

2 Q. You're not aware it was a finishing pond?

3 A. No.

4 Q. But as a finishing pond, it has not needed
5 any ash removal. Are you aware of that?

6 A. Yes, by definition, yes.

7 Q. And, in fact, Joliet ash pond 1 is empty of
8 ash. Are you aware of that?

9 A. No.

10 Q. You are aware, aren't you, that about
11 95 percent -- when Joliet 29 was actually operating
12 with coal ash, about 95 percent of its ash went
13 directly off-site and not to the pond. You're aware
14 of that?

15 A. Yes.

16 Q. For Will County, pond 2-S was relined in
17 2013, correct?

18 A. Right.

19 Q. And you're aware that it gets ash removal
20 about every two or three years?

21 A. That's -- yes, it's my understanding, yes.

22 Q. And at Waukegan, are you aware that only the
23 intake area of the ponds has ash removal?

24 A. I'm not sure. No, I am not aware exactly

1 what parts of those ponds.

2 Q. You didn't speak to anyone about the
3 procedures that were used for ash removal from the
4 ponds, did you?

5 A. I spoke to -- not anyone in Midwest Gen, no.

6 Q. You didn't talk to contractors about it?

7 A. Of course not, no.

8 Q. You didn't review the contracts?

9 A. I did. Some of the contracts, which I had.
10 I didn't have all the contracts.

11 Q. And the contracts contain specifications of
12 exactly how the removals are to occur, correct?

13 A. That isn't what I saw. The contracts I saw
14 had to do with recuse of fly ash and bottom ash.

15 Q. So you didn't see any contracts for the
16 removal of the ash process?

17 A. I don't recall seeing any, no.

18 Q. You didn't go to the sites, correct?

19 A. No.

20 Q. Now, you might remember in your deposition in
21 this case we talked about the term "beneficial use" as
22 it relates to coal ash, right?

23 A. Yes.

24 Q. And we had some agreements at that time,

1 right?

2 A. Some what? Pardon?

3 Q. Agreements. You and I agreed on a couple
4 points regarding beneficial use?

5 A. I don't remember what we agreed on.

6 Q. I am going to remind you. You agreed that
7 beneficial use would be for a long-term use, could be
8 for a long-term use? Like a roadway --

9 A. It could be could he.

10 Q. Like a roadway, for instance, would be an
11 example.

12 A. Yes.

13 Q. And you agreed during your deposition that
14 beneficial use has been an accepted practice for a
15 long time, correct?

16 A. Correct.

17 Q. And you testified about the test -- let me
18 back up.

19 You are aware that Midwest Gen has test data
20 from the ash in its pond?

21 A. Yes.

22 Q. You're aware that Midwest Gen has test data
23 from three different historic ash areas outside its
24 ponds?

1 A. Yes.

2 Q. And you testified about the test methods that
3 Midwest Generation used --

4 A. Yes.

5 Q. -- for -- excuse me, I have just got to
6 finish.

7 You testified about the test method Midwest
8 Gen used for CCB materials at its sites, correct?

9 A. Yes.

10 Q. And you opined that you didn't think that was
11 the correct test method, right?

12 A. That's correct. It's a test method designed
13 to assess whether or not the waste is hazardous.

14 Q. Let's back up. I just need to take it one
15 step at a time.

16 The test that was used was called ASTM-D3987,
17 correct?

18 A. Yes.

19 Q. And you defined what that meant on your
20 direct testimony, correct?

21 A. Yes.

22 Q. And that's called the standard test method
23 for shake extraction of solid waste with water?

24 A. Yes.

1 Q. Now, that standard, it appears in your
2 binder, abstracts in your binder at 4-9 and 4-10, if
3 you'd like to refer to it.

4 The section 1 of that standard says:

5 "It is a 'procedure for leaching of solid
6 waste to obtain an acquiesce solution to be use to
7 determine the materials leached under the specified
8 conditions.'"

9 Is that -- do you agree with that statement?

10 A. Yes.

11 Q. That's in Section 1.1 of the standard.

12 And Section 4.1 of the standard, it says it
13 is intended as a rapid means of obtaining an extract
14 of solid waste. The extract may be used to estimate
15 the release of certain constituents of the solid waste
16 under the laboratory conditions described. Correct?

17 A. Correct.

18 Q. And you're aware that several states have
19 designated this test D3987 as the method required to
20 be used to assess whether coal combustion by-products
21 maybe beneficially reused, right?

22 A. Yes.

23 Q. You're aware, in fact, that that test is
24 specifically required by the Illinois to be used for

1 the beneficial use of CCB, correct?

2 A. Correct.

3 Q. And that statute is at 415 Illinois combined
4 statutes 5/3.135. Would you agree?

5 A. I have no idea. If you say so, I'll agree,
6 yes.

7 Q. In the statute Illinois EPA in the Illinois
8 legislature, it specifically says:

9 "CCB shall not exceed Class 1 groundwater
10 standards for metals when tested using test method
11 ASTM D3837-85."

12 Correct?

13 A. Correct.

14 Q. You are not aware of any other test
15 prescribed by Illinois EPA for CCB use, are you?

16 A. No, I am not.

17 Q. Are you also aware that in Wisconsin, the
18 Wisconsin DNR requires the use of D3987?

19 A. Yes, many states do.

20 Q. Now, you've never assisted in writing an ASTM
21 standard, have you?

22 A. I'm trying to remember. Not for water
23 quality I don't think, no.

24 Q. Now, in October you told me that the last

1 time you had actually designed a coal ash ponds was in
2 the late '70s, right?

3 A. That's correct. But I have designed many
4 ponds since then for other coal ash.

5 Q. Understood. I was talking about coal ash
6 ponds.

7 A. That's correct.

8 Q. That's why I was specific.

9 And, in fact, when you designed the coal ash
10 pond in the late '70s, that was a compacted soil
11 liner, correct?

12 A. That one particular one was, yes.

13 Q. And you've never designed a coal ash liner
14 that's plastic or HDPE, correct?

15 A. I have designed many liners that are --

16 Q. That's not whey asked you, sir.

17 A. For coal ash specifically? No.

18 Q. Now, one of the terms you used throughout
19 your testimony and in your expert reports is the word
20 "likely." And in your deposition we had a discussion
21 about this and you told me that, "likely is greater
22 than zero."

23 Do you recall that?

24 A. Yes.

1 Q. And when your counsel, Ms. Bugel, asked you
2 in deposition to clarify that further, you said:

3 "You can't tell" -- "I can't tell you what
4 the actual probability is, but it's greater than
5 zero."

6 Do you recall that?

7 A. Yes.

8 Q. Now, you testified that you wrote your expert
9 reports in this case without having considered any of
10 the permits to be relying upon. Right? Those weren't
11 available to you?

12 A. I do remember seeing the permits, but much of
13 the information in those permits also carried over to
14 the design.

15 Q. So --

16 A. So the permits were essentially -- I guess
17 what I remember is that they were essentially a
18 preliminary design of some kind that was submitted
19 along -- it was attached to the forms for the permits.
20 That's what I remember.

21 Q. Okay.

22 So in October you said you didn't remember
23 seeing the permits. Now you remember seeing them?

24 A. I do remember -- I think that the permits

1 were the things up front and that the design was --
2 were the documents in the back.

3 Q. Well, you testified in October that you wrote
4 your opinions in this case and testified in this case
5 without having looked at the construction documents
6 for the ponds, correct?

7 A. No, I didn't have the as-builts. I did look
8 at construction documents. I think I made that clear.

9 Q. No, you did not make that clear, sir.
10 Are you now saying did you look at
11 construction documents for the ponds?

12 A. Well, of course. I had those, yes.

13 Q. I showed you, you may recall, a stack of
14 construction documents and you specifically stated to
15 me that you had not seen them before. You don't
16 remember that testimony?

17 A. Those were the little sketches that showed
18 the drains?

19 Q. No, sir, the entire inch of construction
20 documents for a pond. Do you not recall this
21 testimony?

22 A. Well, I recall testifying about construction
23 documents.

24 Q. Do you recall telling me that you had never

1 seen the construction documents for the ponds?

2 A. Well, that's a general. There are how many
3 ponds? I mean, I certainly some saw ponds -- some
4 construction documents.

5 Q. You are changing your testimony, sir?

6 A. I don't know. You know, it may have been an
7 ill-posed question or I may have answered incorrectly.
8 I didn't understand the question. But I certainly saw
9 construction documents. I saw plans and
10 specifications for the ponds.

11 Q. Well, plans and specifications are a little
12 bit different. The construction documents are the
13 package of documents prepared after the pond is
14 relined to identify all of the documents concerning
15 the relining.

16 A. No, I don't agree with that.

17 MR. RUSS: I object.

18 THE HEARING OFFICER: Do you have an
19 objection, Mr. Russ?

20 MR. RUSS: She is testifying.

21 THE HEARING OFFICER: I agree. But
22 Dr. Kunkel is having a hard time. Maybe on redirect
23 you can flesh it out.

24 You may proceed, Ms. Nijman.

1 MS. NIJMAN: Thank you.

2 THE WITNESS: I guess my answer is that what
3 you stated, in my opinion, is not correct. They are
4 not after construction. Those are as-builts.

5 I did not see as-builts; I saw construction
6 drawings that says this is what we're going to build.

7 BY MS. NIJMAN:

8 Q. So you saw documents that were before
9 construction of the ponds, correct?

10 A. Correct.

11 Q. You did not see as-builts?

12 A. I did not.

13 Q. And you then did not see the document, the
14 package of documents created for each pond after the
15 relining that contains those as-builts?

16 A. I did not. As far as I remember, I did not.

17 Q. Now, your report was done in 2015, and we've
18 identified some of the changes to it already. And
19 you've made, to be fair, many factual statements in
20 your report that you have since updated, correct?

21 MR. RUSS: I object again. That misstates
22 his testimony.

23 THE WITNESS: I don't know, I don't
24 understand --

1 THE HEARING OFFICER: I'm sorry, there is an
2 objection. When there is an objection, you have to
3 stop.

4 MR. RUSS: It misstates his testimony.

5 THE HEARING OFFICER: Overruled. You can
6 flesh it out on redirect. Thank you.

7 You may proceed, Ms. Nijman.

8 BY MS. NIJMAN:

9 Q. I am trying to give you some benefit of the
10 doubt that you have made many factual statements in
11 your reports that you have now had to update, correct?

12 A. That's a real general statement. I don't
13 know about many. I have information that's come to me
14 since I did my report in 2015. I received documents
15 up until this year as a matter of fact.

16 Q. Including things like the construction
17 packages for the ponds?

18 A. No.

19 Q. You still have not seen those?

20 A. The as-builts, no, I still have not seen
21 those.

22 But additional water quality data, primarily.

23 Q. Well, lets look at a couple examples then.

24 If you turn to Tab 401 in your binder, on

1 Page 14, the first full paragraph. So here you have
2 the sentence, the second sentence states:

3 "Historically MW 11 has had boron
4 concentrations equal to or higher than the IEPA
5 Class 1 groundwater standard of 2.0 micrograms per
6 liter during the monitoring period from December 2010
7 to present."

8 Do you see that?

9 A. Yes.

10 Q. Well, in fact, as we just talked about
11 earlier, there was only one time period that the boron
12 at MW 11 was above 2.0 and that was in 2011, correct?

13 A. Correct.

14 Q. And, in fact, it's never been above two since
15 then, has it?

16 A. No.

17 Q. So this sentence where it says: That it was
18 found above two from December 2010 to present, that's
19 not accurate, is it?

20 A. It's accurate twice. It occurred twice.
21 Equal to or greater than. It's not incorrect in my
22 opinion.

23 Q. Okay. Now, you would agree that you can't
24 make a conclusion at a site based on a one-time

1 finding, correct? He we talked about this in your
2 deposition.

3 A. Correct.

4 Q. And that you can't make a conclusion based on
5 findings in one well, correct?

6 A. I don't understand, conclusion regarding?

7 Q. An overall site conclusion based on only one
8 well.

9 A. Probably not. It would be difficult, yes.

10 Q. Now, still on Joliet, in your expert report
11 you talked about the locations of ash in various
12 borings, correct?

13 A. Yes.

14 Q. And you referred to a report, a phase 2
15 report, done by ENSR, E-N-S-R, to support that you had
16 ash and borings at Joliet, correct?

17 A. Correct.

18 Q. And that's been marked as Exhibit 20-D.

19 So on Exhibit 20-D, if you refer to Page
20 Bates No. MW-G23345. For the record, Exhibit 20-D is
21 the Phase 2 environmental site assessment for Joliet
22 29 generating station.

23 Now you see those boring logs?

24 A. Yes.

1 Q. Those are not for Joliet 289, are they?

2 A. Yes, they are -- oh, Joliet 9 it says.

3 Q. They're actually Joliet 9 boring logs, aren't
4 they?

5 A. Yes.

6 Q. So you can't rely on these logs for Joliet
7 29, correct?

8 A. It could be a typo. I don't think -- I was
9 looking at 29. I don't know where Joliet 9 is.

10 Q. So you have never seen the boring logs for
11 Joliet 29?

12 A. What I did was compared the boring number to
13 what was on the map, B1, and I assumed that B1 as
14 shown on this map is this log. And the fact that it
15 says nine is a typo by ENSR.

16 Q. You think that's a typo?

17 A. Yes.

18 Q. So you've never seen, again, the boring logs
19 for Joliet 29 provided to you?

20 A. Yes, these are the ones I would -- I would
21 judge -- my opinion is is that what's on this map or
22 what's in these borings logs are the same B-1, B-2,
23 B-3.

24 Q. Again, you have never seen Joliet 29 -- a

1 document that states on the top Joliet 29 boring logs
2 done by ENSR?

3 A. No, they all say 9.

4 Q. Correct.

5 A. But there is no Joliet 9 that I'm aware of.

6 Q. So if you look at Bates Page 23349.

7 A. Yes.

8 Q. That's a log of bore hole B23. Do you see
9 that?

10 A. Yes.

11 Q. Where is that on the map that you referred
12 to?

13 A. It's really hard to see on the map. Figure 5
14 maybe.

15 Q. You said you matched the boring logs up to
16 this map. So I'm asking you where it is.

17 A. And I don't see it quickly on the map, but
18 I'd have to be able to magnify the map. I see 1514,
19 15, 18, 7, 3, 5, 12.

20 Q. I'm sorry, you may have already answered this
21 but you have not seen boring logs that have the title
22 on them, Joliet 29?

23 A. Not in this report, no.

24 Q. I agree they are not in this report.

1 Have you ever seen them?

2 A. In other reports probably. I think KPRG's
3 reports talk about Joliet 29.

4 Q. The ENSR, the ENSR data from this time
5 period.

6 A. No.

7 Q. Now, on Page 15 of your 2015 expert report,
8 you said that you were discussing coal ash management
9 at Powerton.

10 A. Pardon? Which page?

11 Q. Page 15.

12 A. Okay.

13 Yes.

14 Q. You talked about the fact in the second
15 paragraph that the site has five ash ponds. Do you
16 see that?

17 A. No. Oh, five ash ponds, yes.

18 Q. In fact, you are aware that the ECR basis
19 does not receive ash, correct?

20 A. Yes.

21 Q. You are aware that the limestone basis does
22 not receive ash, correct?

23 A. It may have at one time, however.

24 Q. You're aware it's not been used for many

1 years, correct?

2 A. Correct.

3 Q. Also on Page 16 you state that in your first
4 sentence, "The ponds appear to have leaked
5 contaminants into the groundwater between the '70s and
6 when they were relined. Do you see that statement?

7 A. On page -- which page?

8 Q. 16. Under liner damage.

9 A. The first paragraph? No.

10 I see it. Okay. Right.

11 Q. Now, your citation is to the Patrick
12 Hydrogeologic Assessment Report, Patrick Engineering?

13 A. Yes.

14 Q. That's from 2011-B, right?

15 A. Yes.

16 Q. That report was dated 2011, correct?

17 A. Yes.

18 Q. And it was based on one round of groundwater
19 data, do you recall that?

20 A. Yes.

21 Q. And, in fact, Patrick, in that report,
22 specifically cautioned against using the report to
23 make any conclusions about the ponds. Do you recall
24 that?

1 A. Yes.

2 Q. Now, you also refer in that paragraph to the
3 liners being in "reportedly poor condition." Do you
4 see that?

5 A. Yes.

6 Q. A that was based in your citation on the NRT
7 pond assessment report, right?

8 A. Yes.

9 Q. And that was from 2005?

10 A. Yes.

11 Q. That NRT assessment was done prior to the
12 relining of the those ponds, correct?

13 A. Yes.

14 Q. And they made assumptions about what they
15 thought the liners were going to look like, correct?

16 A. I have no idea.

17 Q. And you're aware that there is later evidence
18 of the actual condition of the pond liners, correct?

19 Maybe not, because you didn't see the
20 construction packages.

21 A. Yeah -- well, I didn't see the as-builts.

22 I don't understand construction packages.

23 They had an existing conditions construction packages
24 or something like that?

1 THE HEARING OFFICER: My inclination is to
2 take a break in about 5, 10 minutes, if that's okay
3 with everyone.

4 THE WITNESS: Well, you can continue.

5 BY MS. NIJMAN:

6 Q. Because I am confused because we went through
7 a construction package back in October during the
8 hearing, and I showed it to you, and you said you had
9 never seen it before, the whole package?

10 A. Then I hadn't seen it before, yes.

11 Q. Now, during your deposition --

12 MS. NIJMAN: I'm sorry, to respond to
13 Mr. Halloran.

14 I'm actually close to being finished.

15 THE HEARING OFFICER: Thank you.

16 BY MS. NIJMAN:

17 Q. At Will County, during your deposition, you
18 asked -- I asked you about the Will County ponds,
19 right? We talked about the Will County ponds.

20 A. Yes.

21 Q. And you -- for Will County you talked about
22 the fact that you had an opinion that there was
23 hydrostatic uplift at those ponds?

24 A. Yes.

1 Q. And during your deposition you told me that
2 you did not conduct any calculations of the
3 groundwater pressure on the Poz-o-Pack, correct?

4 A. Correct.

5 Q. You still haven't, correct?

6 A. Correct, because I --

7 Q. Just answer the question, sir.

8 A. It's a qualified correct.

9 Q. You haven't calculated the groundwater
10 pressure on the Poz-o-Pac at any of the Midwest Gen
11 ponds, correct?

12 A. Correct.

13 Q. You haven't compared the weight of the
14 Poz-o-Pac to the groundwater pressure at any of the
15 Midwest Gen ponds, correct?

16 A. Correct.

17 Q. And you haven't considered the additional
18 weight of the warning layers and the cushion layers at
19 any of the Midwest Gen ponds, correct?

20 A. It's qualified, correct.

21 Q. In your deposition, you specifically stated
22 to me that you did not consider the additional weight
23 of the warning layers and the cushion layers. Do you
24 recall that?

1 A. I do recall that.

2 Q. And, in fact, you had never seen the core
3 sample testing that was done of Poz-o-Pac from Will
4 County, had you?

5 A. No, I had not.

6 Q. And just so I'm clear, when you identified
7 for all the Midwest Gen stations, the four Midwest Gen
8 stations at issue here, when you identified possible
9 sources of coal ash and groundwater, you testified
10 that you cannot determine which of the possible
11 sources might be contributing, correct?

12 A. Correct.

13 Q. And you told me it could be any or all at the
14 same time or individually?

15 A. Correct.

16 Q. And that we had no way to determine?

17 A. That's correct.

18 MS. NIJMAN: That's all I have.

19 THE HEARING OFFICER: Thank you. Is it okay
20 if we take a break now and come back at 5 to 11?

21 MR. RUSS: Yes.

22 THE HEARING OFFICER: Thank you. We're off
23 the record.

24

1 (Whereupon, a break was taken,
2 after which the following
3 proceedings were had:)

4 THE HEARING OFFICER: We are back on the
5 record. I think I forget to mention today is
6 January 29, 2018. It's a Monday. We started
7 approximately 9:15 p.m.

8 Ms. Nijman, are you finished with cross with
9 Dr. Kunkel?

10 MS. NIJMAN: I am. At the end I will have
11 some exhibits to enter from the October
12 cross-examination.

13 THE HEARING OFFICER: Okay. Good.

14 Mr. Russ, Dr. Kunkel is yours. You're still
15 under oath. Thank you.

16 THE WITNESS: Yes.

17 REDIRECT EXAMINATION

18 BY MR. RUSS:

19 Q. So, Dr. Kunkel, earlier this morning
20 Ms. Nijman was going over some of the errors in
21 Exhibit 411 and she handed out this list that
22 identified some of those errors that's marked
23 Exhibit 419.

24 Now, to what extent did you rely on that

1 table of data in your report?

2 A. In my contamination report?

3 Q. Yes.

4 A. I didn't.

5 Q. To what extent did you rely on that table of
6 data in your testimony here?

7 A. I didn't.

8 Q. Did you discuss the table that was at the end
9 of Exhibit 411 that summarized --

10 A. The counting table?

11 Q. Uh-huh.

12 A. Yes, I did.

13 Q. Can you explain what -- how your opinions
14 were influenced by that table?

15 A. They really weren't. That was just a
16 counting table that said how many times there were
17 excursions above the IEPA Class 1 groundwater quality
18 standard. It really didn't change my opinion that
19 contamination had occurred in the past and was
20 continuing to occur.

21 Q. Exhibit 411 also includes a series of tables
22 that you put together yourself?

23 A. Yes.

24 Q. Did you use the data in Exhibit 419 for those

1 tables?

2 A. No, I did not.

3 MS. NIJMAN: Objection, vague. I don't know
4 what tables we're referring to.

5 THE HEARING OFFICER: Tables on your
6 Exhibit 419, correct?

7 MR. RUSS: Yes.

8 THE HEARING OFFICER: Is that what you're
9 referring to?

10 MR. RUSS: That's what I am referring to.
11 I can try to clarify.

12 THE HEARING OFFICER: Okay. Yeah, thanks.
13 The table is in 411.

14 BY MR. RUSS:

15 Q. Exhibit 411 includes a series of tables that
16 you put together.

17 A. Yes.

18 Q. At the end a series of -- a table of data
19 that you did not put together?

20 A. Correct.

21 Q. Did the table of data that you did not put
22 together influence your table -- the tables of data
23 that you put together?

24 MS. NIJMAN: Same objection.

1 THE HEARING OFFICER: Yeah. Let's try one
2 more time, because I think I understood it better last
3 time, but go ahead.

4 BY MR. RUSS:

5 Q. Did the data we were discussing -- did you
6 use the data that we were discussing this morning when
7 you put your tables together?

8 A. I did not, no.

9 Q. Where did you get the data for your tables?

10 A. They were from a spreadsheet of data that I
11 took -- that I used for my contamination report and I
12 took directly from the Midwest Gen quarterly reports.

13 Q. Can we look at -- I am not going to go
14 through everything that we did this morning, but I
15 wanted to look at a couple.

16 Can we look at Page 6 on Exhibit 419 and
17 row -- Line 260, I think is the first one that
18 Ms. Nijman asked you about.

19 Can you tell me what site and what well that
20 is?

21 A. This is MW 7 and sulfate concentration.

22 Q. At which site?

23 A. At Powerton. I'm sorry.

24 Q. Can you find that date in your report -- I'm

1 sorry, in Exhibit 411, the tables that you put
2 together?

3 A. I am at Powerton MW 7.

4 Q. Could we also look at Exhibit 257-0, which
5 should be on your table from this morning. I believe
6 it's one of these.

7 A. It is. There it is.

8 Q. And the same thing, I believe it was
9 Page 49857, Bates Page 49857.

10 A. Yes. That's MW 7.

11 Q. MW 7.

12 A. Right.

13 Q. Can you compare the data in Exhibit 257-0 to
14 the data point that you have in your table?

15 A. For?

16 Q. For MW 7, the sulfate on May 29th, I believe
17 it is.

18 MS. NIJMAN: What year?

19 THE WITNESS: 5-29-14?

20 BY MR. RUSS:

21 Q. '14, yes.

22 A. 52 milligrams per liter sulfate. And there's
23 no 5-29 here.

24 Q. I don't have a copy of that exhibit, so I

1 can't --

2 A. Oh, here it is. Yeah, I found it.

3 Q. Great. Thank you.

4 A. 5-29-14, 52, I have 52.

5 Q. Thank you.

6 So the data that you used were correct, that
7 data point was correct?

8 A. Yes. Sure. Absolutely.

9 Q. Let's just do one more. I won't go through
10 them all, but I just want to do one more.

11 So let's take Exhibit 268-P. Should be on
12 the table from this morning. It's one of these here.

13 A. I'm sorry.

14 Q. It's okay. 268. I don't know where it is
15 anymore. It might be right here. I think it's this
16 one.

17 A. It is.

18 Q. And we were looking at, I believe -- I don't
19 have the line number. It's Page 31 of Exhibit 419.
20 It was Line 1559.

21 A. You have Waukegan, MW 7, 5-15-2014, sulfate.

22 Q. Yes. What does it say on Exhibit 419 for a
23 result?

24 A. I think it says 330. Is that the one? Yes

1 330, 330 milligrams per liter for sulfate.

2 Q. Can you clarify for the record which
3 documents says 330 and which says something else?

4 A. The -- Exhibit 268-P says 330.

5 Q. Okay.

6 A. And this Exhibit 419, the original was 880
7 corrected to 330.

8 Q. Hopefully some day.

9 But can you look at your data tables and tell
10 us what value you had for that date and that well?

11 A. Waukegan MW 7, sulfate, 5-15-2014, I had 330.

12 Q. So did the data point you used reflect the
13 correct value?

14 A. It's correct. Yeah, it's from these
15 quarterly reports.

16 Q. Okay. Thank you.

17 Exhibit 419 had some dates crossed out and I
18 believe that indicates that the data points are from a
19 time and a place where a groundwater management zone
20 was in place.

21 Do you consider those to be errors?

22 MS. NIJMAN: Objection. Vague. He's
23 testifying.

24 THE HEARING OFFICER: If he can answer and

1 he's able, overruled.

2 THE WITNESS: The dates that are crossed out
3 because they were taken after the groundwater
4 management zone was in place, are not errors. They're
5 used in my time series in Exhibit 411 to show that the
6 changes with time of boron and sulfate and generally
7 show that contamination is continuing even after the
8 groundwater management zone was there.

9 BY MR. RUSS:

10 Q. Do the groundwater management zones affect
11 your conclusions about contamination?

12 A. No, they don't.

13 Q. Ms. Nijman was asking you some questions
14 about the groundwater wells at Joliet that are, as you
15 said, furthest away from the Des Plaines River.

16 A. Yes.

17 Q. I believe you said they are upgradient most
18 of the time.

19 A. Yes.

20 Q. And you also said they're not reliable
21 background wells, if I remember correctly.

22 A. Clearly they are not reliable background
23 wells.

24 Q. Can you explain why not?

1 A. Because they're too close to the ponds and
2 they're also -- could be completed in areas where the
3 screened interval or the areas around the well already
4 had ash from the construction of the ponds from the
5 dikes.

6 Q. Can you explain what you mean by "too close
7 to the ponds"?

8 A. Well, too close to the ponds in the sense
9 that if the ponds leaked, the groundwater just doesn't
10 go straight down or the leak doesn't just go straight
11 down to the water table. It actually spreads out in
12 the unsaturated zone between the water table and the
13 bottom of the pond, and those wells are so close to
14 the ponds that they could see influence of a leak.

15 Plus the fact that when the Des Plaines River
16 rises, the groundwater table rises as well and the
17 gradients may actually reverse or at least get really
18 flat and so any leaks from the ponds or just leachate
19 coming down from leaching of ash that surrounds the
20 ponds could be seen by those wells.

21 They are clearing not upgradient wells. I
22 think everybody agrees with that.

23 MS. NIJMAN: Objection.

24 THE HEARING OFFICER: Sustained.

1 BY MR. RUSS:

2 Q. Can you clarify are they upgradient, are they
3 not upgradient or are they not background?

4 A. They are not background, but during certain
5 times, maybe the majority of the time, they are
6 upgradient but they're clearly not background.

7 Q. Thank you.

8 Ms. Nijman was asking you again this morning
9 about the technical support document that the Illinois
10 EPA coal ash rule making. And you were looking at a
11 map of the state that showed where the statewide
12 background data were taken and you were asked about
13 whether the counties that have the plants at issue in
14 this case had monitoring points.

15 Does -- let me back it up.

16 If the database of background wells,
17 background monitoring points, did not include the
18 counties with the clients at issue in this case, would
19 that affect your conclusion about the use of those
20 background data?

21 A. No. The background data are -- we had to
22 have something for background. And strangely enough
23 when we look at Powerton where we have an actual
24 background well, the median boron and median sulfate

1 values are very, very similar, very close, within few
2 milligrams per liter of those regional background
3 data. So it gave me confidence that those median
4 regional background data could be used as background
5 in other sites in terms of both sand and gravel
6 aquifers and bedrock aquifers.

7 So I felt comfortable using the median
8 valuables, regional median.

9 Q. Does the fact that there was a range of
10 values in the Illinois EPA technical support document
11 affect your judgement about comparing medians to
12 medians?

13 A. No.

14 Q. Now, again, this morning there's a new
15 exhibit, Exhibit 418, was notes from telecom that was
16 similar in nature to Tab 402 in your binder, which is
17 an e-mail to Jen Duggen.

18 Can you explain the development of your
19 conclusions over time relative to these two
20 correspondences or notes?

21 A. Before I wrote the e-mail on September 17th
22 to Jennifer Duggen and before the -- as a result of
23 our telecom on September 12, 2014, just five days
24 prior, I had already reviewed a lot of data, including

1 previous consultants' reports, and the idea was to, I
2 guess, just restate what I thought my charge was at
3 that time in terms of what I needed to do in regard to
4 the ponds and their potential to contaminate the
5 groundwater.

6 Q. Were those your final conclusions?

7 A. No. They are part of my final conclusions
8 but not complete final conclusions.

9 Q. Did you arrive at those conclusions yourself?

10 A. Yes.

11 Q. How have your conclusions changed over time?

12 A. Well, from the leaky ponds, I think that my
13 conclusions have always been based on the data I saw
14 prior to these two documents, writing this e-mail and
15 the telecom, have been consistent and also are
16 consistent with other consultants and I EPA's
17 conclusions regarding the ponds as a contributor to
18 groundwater contamination.

19 MS. NIJMAN: Objection. Misstates testimony.
20 Not in the record.

21 THE HEARING OFFICER: Overruled.

22 THE WITNESS: But as time went on, I also
23 realized that based on borings that I had, historical
24 borings, it was obvious -- and every other engineers'

1 reports, it was obvious at all the sites that there
2 was coal ash used as part of the construction of the
3 dikes or used as fill material and that that was also
4 a potential contributing factor to the groundwater
5 contamination that I was seeing from the well data.

6 BY MR. RUSS:

7 Q. We were also this morning talking about
8 hydrostatic uplift and you mentioned something about
9 general conclusions. What kind of general conclusions
10 about hydrostatic uplifts have you made?

11 A. Well, I think that the general conclusion is
12 that any time that the bottoms of the ponds are
13 inundated by groundwater, that there's a potential for
14 hydrostatic uplift.

15 That uplift is dependent on what the water
16 level is in the pond. And what's really important in
17 these ponds is that the weight of the Poz-o-Pac could
18 certainly offset hydrostatic uplift because it's
19 fairly weighty, 150 pounds per cubic foot or something
20 like that.

21 The material on top of the liner, for
22 example, the sand and the gravel, that's
23 inconsequential to the weight. It's probably not very
24 heavy. When we have plastic liners, it's also subject

1 to that uplift. The reason that the -- in my opinion,
2 the reason that the Poz-o-Pac wasn't hydrostatically
3 uplifted is because it's not very competent, in other
4 words, it had cracks in it. We know from the
5 permeability test of the core.

6 MS. NIJMAN: I am going to object to the
7 narrative answer.

8 THE HEARING OFFICER: Okay. Sustained. But
9 just remember we have Dr. Seymour coming up. So if
10 Sierra Club objects to their narrative or summary.

11 MS. NIJMAN: It's just gone way beyond the
12 question.

13 THE HEARING OFFICER: Well, I'm sure there
14 will be situations -- sustained. You may proceed.

15 BY MR. RUSS:

16 Q. I want to shift gears then to -- let me just
17 ask you one more question. Do those general
18 conclusions about hydrostatic uplift apply equally to
19 every pond?

20 A. Yes, generally, it does. It does. If
21 there's potential for uplift -- there is hydrostatic
22 uplift, it just doesn't necessarily cause failure.

23 Q. Is there hydrostatic uplift at every pond at
24 the four sites?

1 A. Pardon? At the four sites?

2 Q. Yes.

3 A. No.

4 Q. Thank you.

5 Now, I want to shift gears. This is Bates
6 page -- I don't think this has an exhibit number, it's
7 a demonstrative. But it's something that Ms. Nijman
8 handed you this morning. I am showing you Bates
9 Page 51281. It's this task force on Waukegan
10 neighborhoods newsletter it appears to be.

11 In developing your professional opinions, how
12 much weight would you give a document like this?

13 A. Well, it's, I guess, what I would call
14 anecdotal data, anecdotal information.

15 Q. Have you seen any other information in the
16 record to suggest that there's an ash -- I can't
17 remember what it says there actually, I don't have a
18 copy -- the ash area that it discusses at the general
19 boiler site?

20 A. No.

21 Q. Regarding the ash ponds at Waukegan, you were
22 talking this morning about how the dikes of the ash
23 ponds could be a source of groundwater contamination.
24 You could you explain how that would be?

1 A. At which site now.

2 Q. Waukegan?

3 A. Waukegan? Because we know from the previous
4 engineering reports the document that ash was used as
5 part of construction of the dikes.

6 Q. How would that cause contamination?

7 A. Well, because precipitation, snow melt or
8 rainfall, snow melt, percolating through the dikes,
9 which it does, we know that at Waukegan in particular
10 there's a wetland at the tow of the dikes on one side,
11 on the east side, and so that constant wetting and
12 drying and leaching of ash in the dikes can certainly
13 release contaminants that would then get into the
14 groundwater.

15 Q. Still in Waukegan, especially about leach
16 test, have you seen any leach test data from Waukegan
17 other than the coal ash from inside the ash ponds?

18 A. I don't believe so, no.

19 Q. Regarding the ASTM leach test that you were
20 talking about this morning⁰, how does the fact that
21 states use that test for purposes of evaluating
22 beneficial use affect your conclusion about the
23 caveats that those tests have as we discussed in
24 October?

1 A. Well, that ASTM test is for a specific
2 purpose. It's a quick and dirty way to estimate if
3 there is high concentrations of constituents in a
4 shake test from waste and it didn't specify what waste
5 but it's used for all different kinds, mostly
6 hazardous wastes or things that would not be
7 acceptable in the environment.

8 But that test does not represent what's going
9 on in the physical environment at our sites. Our
10 sites are -- cannot be duplicated by that test. So.

11 The answer to your question is that those
12 tests did not influence me at all in terms of what I
13 see as the sources of contamination.

14 Q. Thank you.

15 I'm sort of circling back here, I'm sorry to
16 do this. But just back on the Waukegan leaching, are
17 you aware of any of the coal ash outside of the ash
18 ponds at Waukegan being assessed for beneficial use?

19 A. Outside the ash ponds? Now, I don't remember
20 that it was.

21 Q. Ash ponds?

22 Now I want to ask you about a question about
23 the word "likely," which also came up this morning. I
24 can't remember how it was phrased exactly, but I think

1 something greater than a zero percent chance could be
2 likely?

3 I am misremembering what you were talking
4 about this morning, I guess.

5 Can you explain, is everything equally likely
6 or does -- can you explain how you use the word
7 "likely," and how specific it is to you?

8 A. To me, likely is probably -- it's greater
9 than zero, but it may also be greater than 50 percent
10 likelihood. It could be 90 percent; it could be
11 80 percent. Usually I would use highly likely if it
12 was up around 90 percent or -- not certainty but close
13 to it. It likely would be maybe somewhere a little
14 bit lower.

15 Q. Does likely have a specific number attached
16 to it?

17 A. No, it's very qualitative.

18 Q. Do you agree with the idea that there were
19 many factual errors in your report?

20 A. No, I really disagree with that. I think I
21 made that clear in my testimony.

22 Q. And you said there was a question about
23 whether you can make a conclusion based on one well.

24 Are there any of these four sites here that

1 have only one well's worth of data?

2 A. No.

3 Q. I want to turn to Page 16 of your report,
4 Exhibit 401. I'm sorry.

5 We were talking about the first paragraph
6 under the heading "liner damage." So it's the second
7 paragraph on Page 16. And there's a sentence there
8 and then there's a citation in parenthesis.

9 Do you see that?

10 A. Patrick Engineering.

11 Q. What part of that statement does the citation
12 support?

13 A. The appearance of -- of -- relined in 2010.

14 I'd have to know which of these Powerton
15 ponds -- Patrick, I think, did their analyses in late
16 2010. So their 2011-B was maybe a February report, an
17 early 2011 report. And so there would have to be some
18 kind of indication of liner leaks, I guess, prior to
19 relining. That would be my assessment there of
20 Patrick.

21 Q. Did you intend for that citation to support
22 the entire sentence?

23 A. No.

24 Q. I don't have any more redirect about this

1 morning. Now I want to go back to what we were
2 talking about in October.

3 Now, this is like the word "likely" we were
4 just talking about. In October, Ms. Nijman was asking
5 you about the word "high" and what you mean when you
6 use the word "high."

7 Do you remember that?

8 A. Yes, I do.

9 Q. Does "high" have a specific number attached
10 to it in your mind?

11 A. No.

12 Well, as I said, "high" to me means either
13 concentrations greater than background, that could be
14 high. Or concentrations greater than the Illinois
15 Class 1 groundwater quality standard.

16 Q. Can you explain how your history in the
17 mining industry is relevant to this case which deals
18 with coal ash?

19 A. Well, groundwater contamination doesn't
20 necessarily have to be from coal. Okay. And in the
21 mining industry, we deal with all kinds of trace
22 metals and organics that are used in both mining and
23 the processes, mostly the processes that are
24 associated with mining.

1 And so my later experience in my later career
2 was exclusively with plastic line ponds and covers for
3 waste rock and things like that, which involved a lot
4 of plastic and a lot of monitoring since we had to do
5 a monitoring plan for every single thing we touched.

6 And so we had, as we do with coal ash,
7 certain indicator variables, water quality
8 constituents that we monitor. It's very similar.
9 It's identical -- in terms of the construction of line
10 facilities, it's identical to coal ash. It's just
11 that it didn't have coal in it.

12 It had mine tailings or it had lixiviant from
13 heat bleaching or something like that.

14 So it was much more detailed and much more
15 important that we get it right in terms of
16 construction.

17 Q. Over the course of your professional career,
18 where have you been licensed as a professional
19 engineer?

20 A. Well, currently I am licensed in two states.
21 Washington state, my home state, and Colorado. I have
22 been licensed for 30 years in Colorado.

23 And previously, because I was signing
24 documents, I was licensed in -- and drawings, I was

1 licensed in Wyoming, New Mexico and Arizona.

2 Q. Do you recall in October Ms. Nijman was
3 asking you about the coal strip plant in Montana, the
4 work you have done on the coal strip plant?

5 A. Yes, I recall.

6 Q. You were talking about your report in your
7 deposition in that case?

8 A. I recall.

9 Q. And in the October hearing, Ms. Nijman said:
10 "What we have in front of us is the report
11 that you filed for coal strip. And we have the
12 deposition. And in the deposition you said you found
13 no document other than the fact that the groundwater
14 elevation was higher there."

15 Your answer:

16 "That isn't what I remember of the documents.
17 I remember that there was a failure and that the pond
18 was taken out of service, and that is part of the
19 transcript of Holland & Hart somewhere in there."

20 Question:

21 "I look forward to hearing from that -- about
22 that from you because it's not in the transcript, sir.
23 What's in the transcript is what I read to you, so it
24 appears your memory may be confused on that point."

1 Do you recall that exchange?

2 A. I do.

3 Q. Here is a package -- I don't know if -- this
4 is just a page from the coal strip deposition.
5 There's a cover page, so that this is just a
6 demonstrative so that you know what we're looking at.
7 This isn't something we'll be introducing.

8 THE HEARING OFFICER: Okay.

9 BY MR. RUSS:

10 Q. Then on the reverse there's a couple of pages
11 of testimony.

12 Can you show us here what you were talking
13 about when you said you remember something from the
14 transcript?

15 A. Well, I remember it vividly from the
16 transcript because I was asked by the Holland and
17 heart attorney, Mr. Coleman, about hydrostatic uplift
18 liner failures at coal strip. And I guess I've gone
19 back and reviewed since I did this.

20 And, in fact, this transcript was sent to
21 Ms. Nijman so she knew what was in it and also my
22 report.

23 And during the deposition with Mr. Coleman,
24 he says to me, he says, "Dr. Kunkel, just before we

1 went" --

2 Q. I'm sorry to interrupt you. Can you show us
3 where you are reading from?

4 A. I'm reading from Page 78 in my transcript,
5 which is -- yeah, Page 78.

6 And he says, "Dr. Kunkel, before we went back
7 on record at the break you said you wanted to clarify
8 something. What is that?"

9 And that was when I said that the hydrostatic
10 uplift caused a liner tear and was actually in my --
11 going package re-reviewing it, it was two ponds that
12 had a problem. It was pond C and then this tray pond
13 that both failed as a result of hydrostatic uplift
14 either from the side slope or from beneath.

15 And that's well-documented, and even though I
16 only talked about the tray pond in my report, there
17 was another pond, too, which also failed by
18 hydrostatic uplift.

19 Q. And here is another demonstrative. This is
20 the relevant page from your report again. The front
21 of this is just the cover of the report and the page I
22 want to talk about is on the reverse.

23 Can you show us where in your report you talk
24 about this issue?

1 A. Yeah. It's on Page 9 of 14, and it's the --
2 one, two, third complete paragraph.

3 Q. I'm sorry, I may have made a mistake here. I
4 guess I don't have that.

5 A. No.

6 Q. This looks like it was copied wrong.

7 A. Yeah, it's copied wrong. I could never find
8 it either. But it's clearly in the report because I
9 did a search and found it.

10 Q. Did you site anything in your report to
11 support that assertion?

12 A. Yes. I sited a series of Bates numbers which
13 are correct.

14 Q. Going back to the exchange you had in
15 October, was your memory confused on that point?

16 A. No.

17 Q. Thank you.

18 Now, in October you and Ms. Nijman were
19 discussing the features of the new liner at the
20 secondary ash settling basin at Powerton and you were
21 looking at some construction drawings. Do you
22 remember we talked about it again this morning?
23 Including an underdrain and rip rap and gravel and
24 things like that?

1 A. Yes.

2 Q. When was the secondary settle ash basin
3 relined?

4 A. I don't recall exact. 2013 I think.

5 Q. That's what I have too.

6 A. In that area.

7 Q. All of the liner characteristics that
8 Ms. Nijman asked you about, were they there prior to
9 2013?

10 A. No.

11 Q. So was hydrostatic uplift at the secondary
12 settling basin more likely before the relining?

13 A. Much more likely because there was no way to
14 drain water away from underneath the liner as there
15 was in the redesign, in the relining.

16 Q. Now, can you explain how the relining affects
17 your opinion about the risks of groundwater
18 contamination from secondary ash settling basin?

19 A. I'm not sure I understand the risk of
20 contamination.

21 Q. Did it change when the pond was relined?

22 A. I would hope so. If they did a good job with
23 the liner, then the risk of contamination would go
24 down after relining.

1 Q. Does the new liner and drain system eliminate
2 the risk of hydrostatic uplift?

3 A. You know, not in my opinion. We have some
4 testimony by Ms. Race about the elevation, I think, of
5 the Illinois River, which may or may not be correct.
6 But we know that when the Illinois River rises, the
7 groundwater at the site rises, as does the surface
8 water in the nearby canals that are used for cooling.

9 And so if that rise in the Illinois River
10 causes that underdrain to become overtaxed, so to
11 speak, and it can no longer drain the water away, then
12 there's a risk of hydrostatic uplift.

13 Q. Okay. Thank you.

14 Moving on to a different topic. Do you
15 recall when -- slightly different topic -- when
16 Ms. Nijman was asking you questions about the average
17 groundwater elevations at Powerton?

18 A. Yes.

19 Q. I believe you said:

20 "I certainly as an engineer wouldn't be
21 interested in the average."

22 Can you explain why not?

23 A. Well, because if we're designing liners for
24 ponds, plastic liners or soy liners or any kind of

1 liner, we want it to be well above the maximum
2 groundwater level that we think could occur. So
3 maximum is what we would look at.

4

5 Q. To the best of your recollection, how does
6 the federal coal ash rule deal with groundwater
7 elevations?

8 A. The federal coal ash rule also states that
9 the bottoms of the liners should be five feet above
10 the -- I'm not sure they use the word "maximum," but I
11 think it's the maximum possible groundwater elevation.
12 Five feet above.

13 Q. Does the federal coal ash rule use average
14 groundwater elevations?

15 A. No, it does not.

16 Q. Now, over to Joliet 29 for a minute.
17 Ms. Nijman in October was asking you about the
18 relationship between the USGS gauging station upstream
19 from Joliet 29 and the level of the Des Plaines River
20 adjacent to Joliet 29.

21 Do you recall that exchange?

22 A. Yes, I do.

23 Q. Ms. Nijman said:

24 "So let me ask you again, because your answer

1 had an 'if' in it. You used the word 'if,' if this
2 happens, if the river levels go up. So don't know,
3 correct"? Then Ms. Nijman asked again: "You don't
4 know, correct?"

5 At which point I objected, and the objection
6 was sustained. You stopped that, but you never had a
7 chance to answer the question. For the record, I want
8 to make sure you do.

9 So let me ask you, when the flow at the
10 gauging station increases, what happens to the level
11 of the Des Plaines River?

12 A. It goes up. It has to increase by
13 conservation of mass.

14 Q. Are you assuming that?

15 A. No. That's a physical law called
16 conservation of mass, that if we have more flow
17 through a known cross section, in order to get that
18 flow through the cross-section, the water level has to
19 go up, has to rise.

20 Q. So how does that relate to the groundwater
21 elevation at Joliet 29?

22 A. As we said before, at all the sites, since
23 they are adjacent to streams, typically when the
24 elevation -- the water level in the stream goes up,

1 that starts to put water back into the banks of the
2 stream where the ponds are, and so the water level
3 beneath the ponds, the groundwater level, also rises.

4 And that is a cause for concern because we
5 only have quarterly data. My USGS data, and I showed
6 in my report, that the groundwater levels do follow
7 the stream elevations very closely and the Lake, Lake
8 Michigan elevations as well.

9 Q. So you can explain is there a relationship
10 between the USGS gauging station and groundwater
11 levels?

12 A. Yes, absolutely.

13 Q. Can you clarify how that relationship works?

14 A. Well, the gauging station, while it's not at
15 the site so I have no stage data to show, I know that
16 if the flow rates at the gauging station go up from a
17 few thousand cubic feet per second to say 10,000 cubic
18 feet per second, than down at -- Joliet just
19 downstream, the water level has to rise in the Des
20 Plaines River. And that went down and in turn caused
21 the groundwater elevations beneath the ash ponds at
22 Joliet to rise as well.

23 Q. Okay. Thank you.

24 I want to ask you about dredging practices.

1 Did you assume that Midwest Generation's contractors
2 were using poor dredging practices?

3 A. I guess my interpretation of poor dredging
4 practices is different than anybody else's in this
5 room, but to me the poor dredging practices, first of
6 all, in my opinion, in my experience, is you don't put
7 heavy equipment on a liner, on a plastic liner.

8 And in the case of Midwest, my opinion is
9 they don't have enough material on top of that liner
10 to prevent a piece of heavy equipment which is turning
11 or rotating its tracks or its wheels, stopping and
12 starting, to withstand potentially pressures that
13 might tear the seams, and that is a poor practice.

14 The whole idea of putting equipment in the
15 bottom of a pond is poor practice in my opinion.

16 Q. Were you assuming that they used heavy
17 equipment in the pond?

18 A. Well, yeah -- yes.

19 Q. Did you see any documentation that supported
20 that assumption?

21 A. Well, you know, I've worked with LaFarge
22 before and I know what kind of equipment they use.

23 MS. NIJMAN: Objection. Going outside the
24 scope.

1 THE HEARING OFFICER: That was yes-or-no
2 answer.

3 THE WITNESS: Qualified -- what was the
4 question again?

5 BY MR. RUSS:

6 Q. Well, let me rephrase.

7 A. Do I know that they put heavy equipment in?
8 Qualified, yes.

9 Q. Have you reviewed some of the depositions in
10 this case?

11 A. I have.

12 Q. It's another demonstrative.

13 This is from the deposition of Rebecca
14 Maddox. Is this something you cite in your report to
15 the best of your recollection?

16 A. Yes.

17 Q. Can you turn to Page 92, please. Can you
18 read what it says between Lines 9 and -- well, read
19 the question -- I'm sorry. Let me just say.

20 Read the answer between Lines 9 and 12.

21

22 A. Answer:

23 "You have heavy equipment in the ponds and in
24 order to remove bottom ash from the ponds, one has to

1 be extremely careful and diligent on how they're
2 removing the material."

3 Q. The next three lines?

4 A. "And plus the equipment that's in the pond,
5 you have heavy equipment as well as trucks that are
6 entering and leaving the pond."

7 Q. Okay. Thanks.

8 Do you recall reading this?

9 A. Yeah, I do. Yes, I do.

10 Q. Another one here, this is the deposition of
11 Mark Kelly.

12 Have you seen this before?

13 A. Yes.

14 Q. Could we look at Page 40.

15 THE HEARING OFFICER: I'm sorry, what page?

16 MR. RUSS: Page 40 of the deposition.

17 THE HEARING OFFICER: Thank you.

18 BY MR. RUSS:

19 Q. I started on Page 40 just so you can see the
20 line of questioning. But I am actually most
21 interested in the answer on Page 41. So if you turn
22 to Page 41, can you read the answer between Lines 9
23 and 15?

24 A. The answer:

1 "We would dewater the basin, take all the
2 water out, and then we would put large end loaders to
3 push the material to one side and let more water drain
4 out to try to pump it off. And then -- to dry it and
5 pump that off. And then once that was sufficiently
6 dry enough, we would load up trucks and they would
7 take it off offsite removal.

8 Q. Do you know what site is being discussed
9 here?

10 A. Not really.

11 Q. If you go back to Page 39, it might clarify.

12 A. Oh, it's Powerton I guess.

13 Q. Do you recall seeing this before?

14 A. You know, vaguely I do. I did read it one
15 time.

16 Q. One more. This is the deposition of
17 Frederick Veenbaas. Have you seen this before?

18 A. Yes.

19 Q. And turning to page -- well, turning to
20 Page 100, what site is being discussed in this section
21 of the deposition transcript?

22 A. Do I see a name? No. But I assume it's
23 Waukegan. Oh, here it is, Waukegan, yeah.

24 Q. Waukegan.

1 And now turning to Page 100 -- oh, you are
2 already on Page 100, I'm sorry. Can you read the
3 answer from lines 10 to 18?

4 A. Answer: "

5 Yes, like Will County, LaFarge uses heavy
6 equipment, usually hydraulic excavator or front-end
7 loader. They load the ash on the trucks, the trucks
8 take the ash off the property. And during the course
9 of the -- during the course of the removal, we use
10 those pumps I spoke of before to dewater various
11 areas. A lot of the time when you remove ash, the
12 water will fill in, you need to pump that water away
13 so you can remove a drier product."

14 Q. Reading this, what does this tell you? Do
15 you believe -- I take that back.

16 What does this tell you about the dredging
17 practices at Waukegan?

18 A. That they use either a track hoe or they use
19 a front-end loader, a rubber tied --

20 MS. NIJMAN: I'm sorry. I have to object.
21 You mentioned Waukegan.

22 How does this relate to Waukegan?

23 BY MR. RUSS:

24 Q. You can go back and read the questions Lines

1 8 and 9 if you'd like. Dr. Kunkel, if you could read
2 those into the record, that would be helpful.

3 A. Question on Line 8:

4 "Are you familiar with current -- can you
5 tell me about current dredging practices at Waukegan?

6 "Yes, like Will County. So both track hoes
7 and front-end loaders are used at both Waukegan and
8 Will County."

9 Q. Do you understand those to be inside the pond
10 or outside the pond?

11 A. Oh, they're inside the pond.

12 MS. NIJMAN: Objection. Misstates testimony
13 that was just read.

14 THE HEARING OFFICER: Mr. Regal -- I'm sorry,
15 Mr. Russ?

16 MR. RUSS: That's okay. That's the story of
17 my life.

18 I am asking Dr. Kunkel in his professional
19 experience what this would mean.

20 THE HEARING OFFICER: That might be a better
21 question.

22 BY MR. RUSS:

23 Q. In your professional experience, if you were
24 to read something like this, what would you conclude?

1 A. Well, it's impossible for a front-end loader
2 to excavate ash from these ponds without being inside
3 the ponds because it can't reach down.

4 Track hoes? Maybe 30 feet is their arm
5 length unless they have some kind of really special
6 equipment, but they would also have to be in the pond
7 in order to extract the ash.

8 Q. No more questions on this particular
9 demonstrative.

10 Were you assuming that there were liner tears
11 at these sites?

12 A. I was assuming that there were liner leaks.

13 Q. Were you aware of specific liner tears?

14 A. Yes, based on depositional testimony and also
15 reports from Midwest, we know that there were tears in
16 the liner on the side slopes, for example, that were
17 almost certainly caused by the bucket of a track hoe
18 or a front-end loader hitting the plastic.

19 Q. Are you assuming that the liner tears were
20 caused by the heavy equipment?

21 A. Well, I'm relying on testimony by the Midwest
22 personnel that saw the tear and there was no way that
23 that tear could have been caused by anything other
24 than the equipment.

1 Q. I'm going to move onto a different issue
2 here.

3 Do you recall when Ms. Nijman was asking
4 about your supplemental rebuttal report?

5 A. Yes.

6 Q. Here's a copy of that. I only have one copy
7 with me. This is something that you handed out
8 earlier.

9 I think it's actually in the packet that you
10 handed me earlier today, Ms. Nijman, so I don't know
11 if the Hearing Officer has a copy yet.

12 THE HEARING OFFICER: It's somewhere over
13 there, if I need it, thanks.

14 MR. RUSS: You haven't moved to admit it yet,
15 but just for the record, so it's clear, if it's
16 admitted, it will be Exhibit 412.

17 BY MR. RUSS:

18 Q. Can you identified all of the changes that
19 you made to the original in the supplemental report?

20 The original was introduced as Exhibit 407 in
21 October, for the record.

22 MS. NIJMAN: For the record, I'm only
23 requesting that it get admitted because of the fact
24 that he referenced it, that particular document, in

1 his early testimony.

2 MR. RUSS: Okay.

3 THE HEARING OFFICER: The record will so
4 reflect.

5 THE WITNESS: I believe that the changes I
6 made are in red. They're red type.

7 BY MR. RUSS:

8 Q. So what changes did you make from the
9 originals to the --

10 A. They appear to be some editorial changes and
11 Bates numbers.

12 Q. How many edits?

13 A. Let's see. Editorial changes, I see some
14 hyphens and some spacing and maybe I see one here
15 that's got some red quotes, which is just editorial
16 things.

17 Q. Okay.

18 A. Then the Bates numbers are in red.

19 Q. So how many Bates numbers changes did you
20 make?

21 A. I count two. Only two.

22 Q. Did those changes affect the conclusions in
23 the rebuttal report?

24 A. No.

1 Q. Did you change any language in the rebuttal
2 report?

3 A. No.

4 Q. I'm going to hand you Exhibit -- this is
5 something that Ms. Nijman showed you in October. It's
6 complainant's Bates Page 51722. I think this might be
7 in the package of exhibits. This is just a
8 demonstrative for right now.

9 It looks like it might become Exhibit 413,
10 for the record.

11 Ms. Nijman asked if you took that citation
12 out of a supplemental report, to which you responded
13 apparently yes. Do you remember that exchange?

14 A. Yes.

15 Q. Does Exhibit 407 in your binder, the original
16 rebuttal report, cite the Bates page shown in the
17 e-mail?

18 A. I don't know. I'd have to look. I don't
19 have -- there it is.

20 Q. I guess you wouldn't know from looking at it.

21 A. I wouldn't know just from looking at.

22 Q. I will submit to you that it's not in there
23 and we can check that later.

24 When did you remove that Bates page reference

1 to the best of your recollection?

2 A. Apparently around March 9th when I did the
3 supplemental report. I'm not sure.

4 Q. Does that page number, is that something that
5 differs between the original and the supplemental?

6 A. The Bates number?

7 Q. Yes.

8 A. I don't know because --

9 Q. It's not in the supplemental; is that
10 correct?

11 MS. NIJMAN: Objection. Leading.

12 THE WITNESS: I'm not sure it's in the
13 supplemental.

14 MR. RUSS: Okay.

15 BY MR. RUSS:

16 Q. I think we can just compare them.

17 A. I'd have to do an electronic search.

18 Q. This line of questioning is actually not that
19 important, because we didn't know if this was going to
20 be in the record and that looks like it might be. So
21 we can just compare later.

22 Did you make any material changes to the
23 rebuttal report?

24 A. No, none.

1 Q. In your opinion, is there any meaningful
2 difference between the version of the report we
3 introduced as Exhibit 407 and the supplemental
4 version?

5 A. No.

6 Q. Now, I want to turn to some of the citations
7 that were changed or amended in your Exhibit 401, your
8 main report.

9 In October, Ms. Nijman said something about
10 many different errors in that report. Do you recall
11 that?

12 A. Yes, I do.

13 Q. Were there many different errors in that
14 report, in your opinion?

15 A. Not in my opinion. I had a, what, 40-some
16 page report that maybe had half dozen errors or
17 something like that.

18 Q. You asked to provide an example of the kinds
19 of errors you corrected, so I'd like to turn to --

20 You know, actually, Ms. Nijman, if you don't
21 mind, we can just use the versions you provided with
22 exhibit numbers, except that Dr. Kunkel might not have
23 one. I'll just refer to them by exhibit number.

24 The first one I'd like to look at is

1 Exhibit 415, which I just handed you one that doesn't
2 have an exhibit number on it. But this is Citizens
3 group response to Midwest Generation, LLC, third
4 request to produce documents?

5 Let's see here. My apologies. I gave you
6 the wrong one to start with.

7 Exhibit 416 is -- no. That's not the one
8 either.

9 Yeah, I'm sorry, it is Exhibit 416 although
10 this exhibit appears to show them attached to each
11 other and I don't believe that they were. But in any
12 case, I am going to show you the request -- something
13 that's headlined "The Requested Citations from the
14 March 17th Deposition," that starts on the third page
15 of Exhibit 416.

16 Let's see what I can find.

17 It would be in here. Flip through a couple
18 pages, you'll find requested citations.

19 A. Yes.

20 THE HEARING OFFICER: Mr. Russ, I'm confused.
21 We have Exhibit 416, and you said Page 3. 416 is a
22 certification.

23 MR. RUSS: They are not marked as pages.
24 It's the third piece of paper.

1 So after the certification is the list of
2 requested citations. And I am referring to the list
3 of requested citations that we actually mailed in
4 March of that year.

5 Hearing Officer, do you see the list of
6 citations?

7 THE HEARING OFFICER: Yeah, on Page 2?

8 MR. RUSS: Well, no, this is -- I'm sorry.
9 This is the way --

10 THE HEARING OFFICER: On Page 1 and 2?

11 MR. RUSS: It starts on Page 1 and goes to
12 Page 2, yeah.

13 THE HEARING OFFICER: I'm with you.

14 BY MR. RUSS:

15 Q. Anyway, looking at this list of requested
16 citations, how many citations are listed here that
17 pertain to your report, your main report?

18 A. Nine.

19 Q. And can you explain what happened with what's
20 listed here as No. 3, the boring logs we were talking
21 about this morning?

22 A. You know, I have, I guess, since discovered
23 that there was an error in the ENSR report for Joliet
24 29 when they switched boring logs from one report to

1 another. And I may have been using incorrect data.

2 Q. Okay.

3 So is that an error that you made or is that
4 an error in the original report?

5 A. It's an error in the ENSR report.

6 Q. Could you turn to Exhibit 401, which is your
7 main report, and Table 4 in that report, it says,
8 "Summary of Joliet 29 ash deposit."

9 A. Yes.

10 Q. How many sources of information are shown
11 here?

12 A. Just two -- or three. Patrick Engineering,
13 ENSR, their Phase 1 and Phase 2 reports, and KPRG's
14 series of reports on Joliet.

15 Q. Which of these sources -- do you believe that
16 there is ash outside of the ponds at Joliet 29?

17 A. Yes, I do.

18 Q. Which of these sources support that?

19 A. The KPRG borings that were done in 2005 show
20 ash in some of the borings.

21 Q. Does the mistake in the document cited in No.
22 3 on the requested citations affect your conclusion at
23 all?

24 A. No. And I only show three ENSR -- or four

1 ENSR borings, and they are all unknown or N/A, not
2 applicable or not available.

3 Q. Is this correction material to your report?

4 A. No, not at all.

5 Q. Can we look at No. 6 in the list of requested
6 citations.

7 A. Yes.

8 Q. Take a second to review that, if you'd like.
9 And then I'm wondering, do you remember the source of
10 the confusion here.

11 A. Yeah, no, I remember this whole thing with
12 the Waukegan ash ponds.

13 Q. Can you explain briefly what happened?

14 A. Well, I had available to me reports that said
15 that the Waukegan ash ponds were lined in 2002
16 Hypalon, H-Y-P-A-L-O-N. It's a kind of plastic that's
17 not used anymore much. And then relined in 2003 and
18 2005 with HDPE.

19 Q. When were those ponds relined?

20 A. 2003 and 2005.

21 Q. Do you believe that they were also relined in
22 2002?

23 A. Well, I have been told that they weren't,
24 they were not relined in 2002.

1 Q. Is this error material to your conclusions?

2 A. No, not really, no.

3 Q. Can you explain why not?

4 A. Well, because we have -- well, we have
5 groundwater data that show that there's contamination
6 around the Waukegan ponds, ash ponds. And if the
7 ponds were lined in 2002 or 2003 or 2005, that
8 contamination has continued to occur after relining.

9 Q. Now, can you turn to No. 8 on the list of
10 requested citations. Just take a look at that for a
11 second, if you'd like. And then turn to Page 30 of
12 your report, that Exhibit 401, to compare the Bates
13 numbers that were cited.

14 A. This is the second full paragraph on Page 30.

15 Q. Okay.

16 A. Where it says:

17 "Pond 3-S was relined with 60 mill, that's a
18 thickness, HDPE plastic on the bottom and slide slopes
19 during 2009. However, during a routine inspection of
20 the pond after coal ash dredging in 2012," and then it
21 cites the Bates number 14177 to 14269. It's a pretty
22 long range of Bates numbers.

23 Q. With a did you cite in the requested
24 citations?

1 A. 14177, just the first one.

2 Q. So is the original citation wrong?

3 A. Well, it included more than it had to
4 include. If I remember right, that range included
5 some other information which may or may not have been
6 important but was listed.

7 Q. Does this change in the citation affect your
8 conclusion?

9 A. No, of course not.

10 Q. Is it material to the report?

11 A. No.

12 Q. Then Ms. Nijman asked you about No. 7. Sorry
13 to flip back and forth. It's Page 1 of the requested
14 citations about written documentation. Take a look at
15 that for a minute, if you'd like.

16 What did you cite in your report to support
17 that statement, Page 30 of your report again?

18 A. Yeah, I'm not sure exactly where it is.

19 Q. It's at the very top of the page.

20 A. Liner damage. There we go. Again, I cite
21 that quote that's in here. And then after the quote,
22 after the construction of maintenance, I have a series
23 of Bates numbers listed, 28849 to 28851 and 48612 to
24 48617. And we clarified that to say that the most the

1 applicable Bates number is 48612, which was already
2 listed.

3 Q. Do you -- the Bates numbers you originally
4 cited, do you believe they also support this
5 statement?

6 A. I don't know because I don't know --

7 Q. You don't know what they are?

8 A. -- what they refer to.

9 Q. Let's take a look at Exhibit 302. That's the
10 first one.

11 Can you just briefly explain the relationship
12 between this document that you cited and the statement
13 that you cited in connection with it?

14 A. The Becky Maddox document here, 28849
15 through 28851, are field change requests that Becky
16 Maddox made to Brieser Construction regarding the
17 liner at one of the ponds at Will County. And it
18 isn't clear exactly which one, but what it did say is
19 it had to cut holes in the liner to pump out
20 groundwater, and we don't -- I am not sure just from
21 reading this exactly where those holes were cut but
22 the fact that there was groundwater behind the liner
23 at Will County is not surprising since those ponds
24 essentially sit in the water table, for the most part.

1 An unknown water source is trapped in the liner is
2 what she says.

3 Q. What's the relationship between that and the
4 statement that you made on --

5 A. Well, what I'm saying is that -- is that
6 these liners could easily be leaking. If there's
7 water behind the liner, that is a hydrostatic uplift
8 problem or a bulge problem and it could tear the seams
9 in the liner.

10 Q. Just to be clear, what's the date of this
11 field change?

12 A. 2009, October 30, 2009, and 11-10-2009,
13 November 10.

14 Q. I'd like to also look at Exhibit 306. That's
15 the second one you cited on Page 30 of your report?

16 A. Yes. 48612. Yes.

17 Q. This is just part of it. This is the first
18 page.

19 Can you briefly explain how this relates to
20 the statement that you cited at in relationship to --

21 A. Yeah. This relates on the likely problem
22 that maintenance might have on liners leaked. And I
23 did state that Becky was certainly concerned that
24 there were compromises to the new pond liner that had

1 been installed and that was causing leaks. This is
2 dated 2008.

3 Q. So these were dated 2008 and 2009.

4 Do they provide complete support for the
5 statement you made?

6 A. Maybe not complete support except that it's a
7 pattern, like many other patterns we see, where the
8 same people or the same construction companies did
9 something and there was a problem and then they came
10 back later and re-did it, and there's no reason for me
11 to believe that the same issues wouldn't arise with
12 relining.

13 Q. So are these the document you intended to
14 cite?

15 A. Yes.

16 Q. Do you believe that they were in error?

17 A. No.

18 Q. Okay. Thank you. I'm sorry, one more on
19 that.

20 Does the amended citation that you made and
21 the requested citation -- let's just be clear about
22 what that amended citation was.

23 What did you cite?

24 A. I cited the memo from Becky Maddox to Maria

1 Race-Richmond.

2 Q. What's the Bates page that you cited in the
3 requested citation?

4 A. 46612.

5 Q. Is that a page that you cited in your
6 original report?

7 A. It is. One of the pages, yes.

8 Q. Was this a material error?

9 A. No.

10 Q. Did it affect your conclusions?

11 A. No.

12 MR. RUSS: It's after 12. I have some more.
13 Probably more than enough to carry us.

14 THE HEARING OFFICER: I was thinking no later
15 than 12:30 to take a lunch.

16 MR. RUSS: I will try to get through by then.
17 Or we can just take a break now.

18 THE HEARING OFFICER: Let's go off the record
19 a minute.

20 (Whereupon, a discussion was had
21 off the record.)

22 THE HEARING OFFICER: Back on the record.

23 BY MR. RUSS:

24 Q. Now, looking over the rest of Page 30 of your

1 report, Exhibit 401.

2 Can you just very briefly skim that and tell
3 us what you are talking about on that page?

4 A. Page 30 talks about -- this is Will County,
5 correct? I am talking about the liner damage and then
6 when the ponds were relined and what they were relined
7 with.

8 And then after the relining, there was a leak
9 detection performed by leak location services and
10 sometimes the leak detection was done with the
11 protective layer -- with the cushion layer, the sand
12 and the protected layer in place. Sometimes it was
13 done prior to the placement of that. But most of the
14 time it was done the other way around.

15 And then there are e-mails that I cite
16 indicating that the original Poz-o-Pac liner was
17 partially removed from two of the ponds, which meant
18 that in order to do that, they had to use some kind of
19 jackhammer-type device and that would have left a very
20 rough surface and then the plastic was placed over
21 that removed Poz-o-Pac.

22 Then it goes on to talk about groundwater
23 levels being an intimate connection with the ash ponds
24 and the liner.

1 Q. Any of the things you cite on the rest of the
2 Page 30 provide or support the statement that you made
3 at the very beginning on Page 30?

4 A. Certainly.

5 Q. Did any of the things -- do the documents you
6 cite in the rest of Page 30 provide further support
7 for the statement you made at the top of Page 30?

8 A. Yeah, at the top of the Page 30, I said that
9 the ash ponds leaked until 2013 and continue to leak
10 due to poor liner construction and maintenance.

11 Then further down, the documentation is that
12 there's certainly potential for hydrostatic uplift and
13 that the bottoms of the liners and there are cracks in
14 the Poz-o-Pac which allow water to rise to beneath the
15 liner, even in the plastic liner, because it was
16 placed over the top of the Poz-o-Pac and that that's a
17 compromising issue for that liner.

18 Q. Okay.

19 Turning back to the requested citations,
20 there are some that are not related to your main
21 report, correct?

22 Leading question, I'm sorry.

23 A. Yeah, there are four that are related to the
24 rebuttal report and to my deposition in October or --

1 Q. Looking at those last four statements that
2 you just mentioned regarding the supplemental rebuttal
3 report and your deposition, are those statements
4 accurate?

5 A. No. 1 under the rebuttal report is accurate.
6 And No. 2 is accurate. Then under the March
7 deposition, that's accurate. So is Item No. 2 in the
8 March 17 deposition.

9 Q. Starting with the last one first, No. 2, do
10 you recall what you were talking about in your
11 deposition that led to this requested citation?

12 A. Yes. I was talking about the fact that when
13 the -- after the plastic was laid, the 12 inches of
14 sand cushioning layer had to be placed.

15 Then on top of that was a 6-inch gravel white
16 limestone crushed rock layer, which is a layer that
17 tells the guys that are in there excavating the ash
18 that they can't go deeper than that. So that's one
19 and a half feet of material over the top of the
20 plastic.

21 The rule of thumb, for me, for us, is 2 feet,
22 although maybe one and a half feet would be okay. One
23 foot is definitely off limits.

24 And so since they didn't, as far as I could

1 tell, place the sand cushion layer and the warning
2 layer, the six-inch warning layer, together, they
3 placed all the sand at one time and then came back and
4 put on the warning layer, they didn't have enough
5 protection for the liner.

6 Q. Just to clarify, I was asking about No. 2
7 under citation supporting.

8 A. The 18-wheeler, so we had photos of the
9 18-wheeler sitting on the sand.

10 Q. I'd like to hand out another demonstrative.
11 These are the pages you cited there in your
12 request-for-citation follow-up. Can you explain what
13 these pictures show?

14 A. They show exactly what the assertion was,
15 that there were 18-wheelers on the impoundments and
16 they're placing sand layer, I assume, over the
17 plastic. It's hard to tell. These are unannotated.
18 These are in 2003.

19 MS. NIJMAN: I am just going to raise the
20 objection again that these were unauthenticated and no
21 evidence what pond they are, where they are.

22 Mr. Lux -- nobody was able to identify them.
23 We don't know what these are. And you agreed and kept
24 them out of the record.

1 THE HEARING OFFICER: I did keep it out of
2 the record?

3 MS. NIJMAN: Yes.

4 MR. RUSS: Can I respond? I'm not using
5 these as an admitted exhibit; I'm using these to
6 rehabilitate the witness on the question of whether he
7 recalls seeing photographs of 18-wheelers on the
8 impoundments in the record.

9 THE HEARING OFFICER: But we still don't know
10 where these were taken. I mean, it could have been on
11 Mars. I don't want to be facetious, but I don't know.

12 MR. RUSS: Right.

13 The point I'm trying to make is that he did
14 remember seeing photographs of 18-wheelers on
15 impoundments in the record. That's all.

16 THE HEARING OFFICER: Okay. I'll allow it.
17 Just wrap it up, though.

18 BY MR. RUSS:

19 Q. So was your memory faulty on this point?

20 A. No. These were provided to me by Midwest.
21 And I assume it's one some of their ponds. One of
22 their ponds, I assume that the construction proceeded
23 the same on all of their ponds. What else could I
24 assume? They have a pattern of the way these things

1 were constructed relined.

2 Q. Thank you.

3 I'd like to look at No. 1 under "Citations
4 from Deposition Exhibit 5."

5 So that's -- do you see the one I'm talking
6 about?

7 A. Yes.

8 Q. You got Citations to document supporting the
9 assertion MWG has photographs and other documentation.

10 A. Yes.

11 THE HEARING OFFICER: You're slip-sliding
12 away, Mr. Russ.

13 MR. RUSS: I'll try to speak up.

14 THE COURT: I could barely hear you.

15 BY MR. RUSS:

16 Q. I'd like to -- do you remember what you were
17 talking about -- well, it's quoted there so you can
18 see the statement.

19 A. Right.

20 Q. Bates numbers are impossible to read. Again,
21 it's just a demonstrative. But if you looked closely,
22 you would see Bates Pages 31492, 31493, 31501. You
23 cited two of these. I don't think you cited all three
24 of these, but you cited two of these figures.

1 Can you describe what these show?

2 A. Well, again, these show equipment on the
3 1-foot protected layer, is what I see on top of the
4 plastic.

5 Q. Would you consider this to be heavy
6 equipment?

7 A. Oh, yeah, absolutely. There's a roller
8 there. It could be a vibratory roller. I am not
9 sure, rubber tired. Then a front-end loader on -- I
10 can't see the Bates number, but it's on the third
11 photo.

12 Q. Was your memory faulty on this point?

13 A. No.

14 Q. Moving on from that, the next thing I'd like
15 to hand out is Exhibit 415 that hasn't been introduced
16 yet.

17 But, Hearing Officer, I believe you have a
18 copy.

19 THE HEARING OFFICER: Is this your exhibit?

20 MR. RUSS: No, this is something that
21 Respondent's marked. I have an unmarked copy, but I
22 am happy to use the marked copies.

23 BY MR. RUSS:

24 Q. Could you just briefly review response to

1 request No. 1?

2 A. On Page 2.

3 Q. Starts on Page 4.

4 A. Yes.

5 Q. Do you recall?

6 A. Yes.

7 Q. Was there an error in your citation in this
8 case?

9 A. No, of course not.

10 Q. Can you look at No. 2?

11 A. Request No.2 on Page 6?

12 Q. Yes. Do you recall what happened here?

13 A. Yes. I was given that spreadsheet and I
14 guess told it was from the Kosson or at least
15 referenced by Kosson.

16 Q. Who was the --

17 A. EPA.

18 Q. You said "EPA"?

19 A. EPA, US EPA.

20 Q. Was EPA the author of the Kosson report or
21 the spreadsheet?

22 A. Both was my understanding.

23 Q. Was this a material error on your part?

24 A. No.

1 Q. Did it change your conclusion at all to add
2 this?

3 A. No.

4 Q. No. 3, do you remember?

5 A. Yes, I remember.

6 Q. We provided a citation. Was your original
7 statement accurate?

8 A. I think I actually took that statement from
9 Patrick's report on the undeveloped land north of the
10 Waukegan plant, but it doesn't make any difference
11 because any contaminants up there would never have
12 reached down to where the monitoring wells were. It
13 would have to go through Lake Michigan to get there.

14 Q. But do you believe your original statement
15 was accurate?

16 A. Yes, I do believe it was accurate.

17 Q. No. 4, do you believe that statement is
18 accurate?

19 A. Yeah, I do. Yes, I do.

20 Q. In October there was some back and forth
21 about whether Seymour was saying that all of the
22 contamination was coming from off-site or some of the
23 contamination was coming from off-site, is that a
24 material distinction to you?

1 A. No.

2 Q. Related to that statement I guess.

3 A. No. Whether it's from off-site or
4 upgradient, that's -- I understood that was his
5 statement.

6 Q. Okay. So these responses and additional
7 citations, did they change your conclusions at all?

8 A. No.

9 Q. Did they change your report at all?

10 A. No.

11 Q. Okay. Now, in October, Ms. Nijman stated,
12 referring to Page 9 of your report, Exhibit 401,
13 that -- this is quoting Ms. Nijman. So in the middle
14 paragraph on coal ash management, there's a bold
15 stated heading there as you can see.

16 You have the sentence:

17 "When all three Joliet 29 ash ponds were
18 relined with HDPE, the plastic was placed on top of
19 the existing Poz-o-Pac liner. After its partial
20 removal plastic was placed directly on the side slope
21 Poz-o-Pac and attached to the ash pond concrete
22 discharge structures. And you see then there is a
23 parenthesis and a Bates number of a document. Do you
24 see that?"

1 A. Yes.

2 Q. And then your answer was: "Yes."

3 Ms. Nijman's follow-up was:

4 "In the deposition we went to that document,
5 that had nothing to do with Poz-o-Pac lining,
6 correct?"

7 Your answer was: "You know, I don't know."

8 So I'd like to look at that document that you
9 cited and I have it here as a demonstrative because I
10 don't believe it's in the record. I only have two
11 copies of this. This was one that you handed out in
12 October, Bates Page 18132. I'm sorry, I do have one
13 more copy. I have two more copies.

14 This is just the first three pages, which is
15 the letter without the attachment for the rest of the
16 Bates range.

17 Can you turn to Page 2 of the letter marked
18 Page 2 in the upper left corner. Just read that first
19 bullet.

20 A. Does it --

21 Q. It says Page 2 in the upper left.

22 A. -- have a Bates number?

23 Q. Oh, Bates number 18134.

24 A. Okay. Under "project description."

1 Q. Yes.

2 A. "Liner placement activities will include
3 subgrade preparation for HDPE geomembrane liner, (over
4 existing Poz-o-Pac liner)."

5 Q. So is it true that this quote had nothing to
6 do with the Poz-o-pac liner?

7 A. Of course not. They reference it
8 specifically.

9 Q. Okay. Thank you.

10 Now, in October, again, Ms. Nijman asked you,
11 quote, "So as I tried to understand and go through all
12 this, in order to determine if a statement made in
13 your report is supported, I have to look at all the
14 various documents that we've just gone through this
15 morning, correct?"

16 Answer: "Yes."

17 Question: "And we would also have to review
18 your deposition because of the number of things we
19 went through in the deposition as to citations,
20 correct?"

21 Answer: "Yes."

22 How many citations did you add for your
23 deposition in response to their request for follow-up?

24 A. Two.

1 Q. And how many citations did you provide in
2 response to the supplemental rebuttal report?

3 A. Two.

4 Q. Were any of these corrections material to
5 your report?

6 A. No, they were -- no, they weren't.

7 Q. To understand your methods and conclusions,
8 is it necessary to have all the various documents that
9 Ms. Nijman referred to with the corrected citations?

10 A. Well, it would be helpful if you didn't
11 believe the report, but it isn't absolutely necessary.

12 Q. Hopefully we will have them in the record
13 just in case, but I just wanted to clarify that?

14 Also, in October, Ms. Nijman asked you
15 whether you could determine when groundwater
16 contamination occurred. Do you remember that
17 exchange?

18 A. Yes, I do.

19 Q. Can you explain what you do and do not know
20 about when groundwater contamination occurred at these
21 cites?

22 A. Well, what I know is that the ponds that were
23 unlined when this whole process started of relining
24 the Midwest Gen ponds, and even the Poz-o-Pac, ones

1 that were lined with Poz-o-Pac, we know that the
2 hydraulic conductivity of the Poz-o-Pac is not the
3 same as what the coal rigs would require. The
4 Poz-o-Pac was cracked. And then the unlined ponds
5 that were just sitting without a liner obviously
6 leaked, they had to have leaked, because there was
7 nothing to prevent leakage downward to the water
8 table.

9 So contamination occurred possibly close to
10 the time that the ponds were constructed. Maybe a
11 little later. But definitely prior to 2010 when the
12 documentation of the contamination first started by
13 Patrick.

14 Q. When you say "the documentation," what are
15 you referring to?

16 A. I'm referring to the installation of
17 monitoring wells and the collection of groundwater
18 quality samples and the testing of those samples.

19 Q. What's your conclusion about the timing of
20 contamination from 2010 forward?

21 A. From 2010 forward, what we see from the data,
22 the groundwater quality data, is that there's been
23 continued, I guess, contamination reaching the water
24 table. And fits in spurts and starts. And my

1 professional opinion was that is caused by the rising
2 and falling of the groundwater table leaching ash
3 that's already in place or possibly tears or breaches
4 in the liner due to poor maintenance and recovery of
5 ash from the liners.

6 Q. Do you believe contamination occurred between
7 2010 and 20?

8 A. Now?

9 Q. Yes.

10 A. 20 now? Yes, I do.

11 Q. For the record, can you explain what you
12 mean?

13 A. Well, if you go back to my demonstrative that
14 we looked at in October, it shows that there's spikes
15 in boron and sulfate for sure and probably other
16 contaminants, and those have to be caused by something
17 because they are related to coal ash. They're not
18 related to some fictitious source. They're either
19 coming from the ponds or they're coming from coal ash
20 that's existing on the site outside the ponds.

21 Q. Had the contamination stopped?

22 A. No, not in my opinion. Not everywhere. In
23 some places it's decreased. And in some places it
24 increased.

1 Q. Is it true that, quoting Ms. Nijman's quote,
2 you could not determine when impact to groundwater
3 occurred, end quote?

4 A. Not -- when it occurred? I don't quite
5 understand. Yes, it occurs now and it occurred prior
6 to 2010. I know that from the data.

7 Q. Okay. Thank you.

8 MR. RUSS: I see that it's 12:30. I have a
9 few more questions. They might take ten minutes,
10 though, would you like to break?

11 THE HEARING OFFICER: Let's go. Keep going.

12 BY MR. RUSS:

13 Q. I want to clarify a couple things about
14 indicator pollutants. What pollutants did you focus
15 on in your report?

16 A. In my report I focused on boron, sulfate and
17 manganese.

18 Q. And setting aside manganese for now, what
19 would the combination of elevated boron and elevated
20 sulfate tell you about the possibility of coal ash
21 contamination?

22 A. Well, as I said in my report, the idea that
23 we find high concentrations of boron sulfate and
24 manganese together or just boron and sulfate together,

1 is a clear indicator of coal ash. That's demonstrated
2 by EPRI, EPA, IEPA.

3 Q. And you just had boron and sulfate together?

4 A. I think if they're together in high
5 concentrations, that's also an indicator of coal ash
6 contamination.

7 Q. Does that opinion apply when there are also
8 simultaneous manganese data that are not elevated?

9 A. Yes, clearly.

10 Q. Can you explain why -- how that could happen?

11 A. Well, because manganese is a metal which
12 tends to react geochemically with the groundwater and
13 under certain pHs the manganese tends to precipitate
14 out and then is -- doesn't come back into solution, so
15 the dissolved manganese is not detected by the testing
16 that we're doing or that Midwest is doing.

17 Q. So if you had elevated concentrations of
18 boron and sulfate and elevated concentrations of
19 manganese, how would that affect your conclusion about
20 the possibility of coal ash contamination?

21 A. Well, it clearly demonstrates that coal ash
22 is the source of the contamination.

23 Q. Now, Ms. Nijman was asking you about a
24 specific page in the final EPA coal ash rule, which is

1 Exhibit 406 in your binder, and it was page -- this is
2 federal register Page 21404.

3 A. Yes.

4 Q. Ms. Nijman was specifically asking you about
5 the language about midway down in the third column.
6 It starts, quote, "Aluminum copper, iron, manganese."

7 Do you see that line?

8 A. Yes.

9 Q. I believe it says, "Aluminum, copper, iron,
10 manganese, and sulfide have been removed because they
11 lack maximum contaminant levels, MPLs, and were not
12 shown to be constituent of concern," is that what it
13 says?

14 A. Based on the risk assessment, yes.

15 Q. What section of the rule is this in, looking
16 at the page as a whole? The preamble rule?

17 A. I have no idea.

18 Q. I think if you look --

19 A. I don't think there is anything on this page.
20 It's 5.

21 Q. Look in the first column of that page.

22 A. That's it. The first column, yes. Well,
23 it's 5-point assessment monitoring.

24 Q. Okay.

1 A. And that's important.

2 Q. Why is that important?

3 A. Because assessment monitoring is something
4 that you would do at a coal ash site to assess whether
5 or not coal ash is causing contamination.

6 Q. Does this discussion have anything to do with
7 the value of manganese as an indicator?

8 A. No.

9 Q. Can you explain why not?

10 A. Well, because they've already said that it's
11 not a contaminant of concern. A contaminants of
12 concern, I guess, the way I understand EPA's
13 definition, is that they are an environmental or
14 health risk due to their concentrations. That's bases
15 on maximum contaminant levels, MCLs.

16 Since there are no MCLs, it's hard for EPA to
17 say well, this is a COC, a contaminant of concern. So
18 they left them out.

19 Q. Is it possible something could be an
20 indicator pollutant without being a contaminant of
21 concern?

22 A. Absolutely. In fact, as I think we know, for
23 example, well, sulfate is a secondary drinking water
24 standard. That's not superfixed in law either.

1 AFTERNOON SESSION

2 THE HEARING OFFICER: We're back on the
3 record. It's approximately 1:37 in the afternoon,
4 January 29, 2018.

5 Dr. Kunkel is still on the stand, still under
6 oath. And we have Ms. Nijman from Midwest starting
7 the recross. Thank you.

8 Ms. Nijman?

9 MS. NIJMAN: Thank you.

10 RECROSS-EXAMINATION

11 BY MS. NIJMAN:

12 Q. You discussed with Mr. Russ the CCR rule
13 requirement of 5 feet between pond bottom and
14 groundwater, correct?

15 A. Yes.

16 Q. That was enacted in 2015, correct?

17 A. Yes.

18 Q. And that did not apply in Illinois prior to
19 2015, did it?

20 A. I don't know exactly.

21 Q. And Illinois didn't have a standard prior to
22 -- for distance between a pond bottom and groundwater,
23 does it?

24 A. Prior to 2015.

1 Q. Or now?

2 A. I'm not sure about now. I'm not sure about
3 now.

4 Q. What about prior to 2015, didn't have one
5 then, correct?

6 A. If you say so. I don't know.

7 Q. You don't know? That's fine.

8 And Joliet 29, when you were mentioning the
9 USGS data, that USGS data is taken I think you said
10 quite upstream from the Joliet 29 plant, correct?

11 A. I don't know about quite upstream. It's in
12 the vicinity of -- above the locks.

13 Q. Right. That's what I was getting at. They
14 are actually taken near Romeoville, correct?

15 A. No. The description of the US geological
16 survey gauging station I think is in the vicinity of
17 the locks rather than at Romeoville. I use
18 Romeoville.

19 Q. Let me put it this way. The station, the
20 Joliet 29 station, which no longer produces coal ash,
21 exists, then there's a lock, then there's the USGS
22 information that you relied on, correct?

23 A. Correct.

24 Q. When you were speaking with Mr. Russ about

1 one of the citations you referenced in your report,
2 Mr. Russ gave you a document, a June 27, 2007,
3 application for permit or construction approval at
4 Bates number 18133.

5 Do you recall talking about that?

6 A. I recall talking about it.

7 Q. Well, that document is dated 2007, June
8 of 2007, correct?

9 A. Yes.

10 Q. You can look at this one if you need to.

11 And that's a preconstruction document,
12 pre- -- it was written before the relining of the
13 pond, correct?

14 A. Correct.

15 Q. And you didn't rely on any of the
16 documentation that was prepared after the relining of
17 the pond, correct?

18 A. It wasn't available to me.

19 Q. You also discussed a Complainant's
20 Exhibit 302. And Complainant's Exhibit 302 you said
21 helped support your opinion regarding an unknown water
22 source; is that right?

23 A. No. I used it to show that at Will County,
24 there was water under the liner that had to be

1 removed, hydrostatic uplift.

2 Q. And hydrostatic uplift is from groundwater,
3 correct?

4 A. Typically, yes.

5 Q. I'd like to show you what's been marked as
6 Midwest Gen Exhibit 507.

7 So Exhibit Midwest Gen 507, do you see that?

8 A. Yes.

9 Q. That's field notes?

10 And if you turn to page -- and these are
11 field notes from October -- beginning on the first
12 page as October 13, 2009, for south ash pond 3. Do
13 you see that?

14 A. Yes.

15 Q. If you turn to Bates number 8250, the second
16 bullet, the second sentence, states:

17 "Notice that a pocket of water existed below
18 the liner along several inches -- edges of the tote
19 pond. This was runoff that was pushed to these areas
20 when placing the warning layer."

21 Do you see that?

22 A. Second bullet is --

23 Q. I'm sorry, the third bullet.

24 A. Third bullet.

1 Q. Second sentence in the third bullet. Do you
2 see the sentence?

3 A. Yes, yes.

4 Q. Now, you did not have the opportunity, you
5 said, to review these post-construction, post-liner
6 documents when you were wrote your report, correct?

7 A. I reviewed some of these field notes.

8 Q. But this packet, do you recall this one?

9 A. No, I don't recall it. It doesn't mean I
10 didn't read it. It's just that I don't recall reading
11 it.

12 Q. You mentioned several times the ASTM D3987
13 test, and I think you stated that you would use it for
14 hazardous material.

15 A. Well, it's been used to characterize waste in
16 a quick and dirty way to see if that has -- or if that
17 waste was hazardous, that means did the waste produce
18 contaminants above some level. Usually a COC level.

19 Q. So you never stated you would use this test
20 for hazardous waste?

21 A. I said it is used for hazardous waist.
22 Whether I would use it or not -- it's definitely not
23 applicable for what I was -- what I am looking at
24 here.

1 Q. That's not what I asked you.

2 Who would use it for hazardous waste?

3 A. Everybody.

4 Q. Everybody uses that D3987 --

5 A. It is a commonly used method to assess waste.

6 Q. Hazardous waste?

7 A. Sure. Absolutely.

8 Q. Thank you.

9 You looked at a couple of photos with
10 Mr. Russ dated 2003, correct?

11 A. Yes.

12 Q. And there were a lot of photos in this case,
13 right?

14 A. There were a lot of photos, yes.

15 Q. And, in fact, what would you think? 500
16 photos in this case?

17 A. I have no idea.

18 Q. A lot of photos?

19 A. For the most part unedited.

20 Q. In fact, the construction documentation
21 reports, that I understand you never saw, all
22 contained a series of photos that are annotated.

23 So you're not aware of that?

24 A. You know, I did see some -- well,

1 construction reports. I saw these kinds of one-sheet
2 inspection reports during construction, during the
3 inspection of the liner. But I didn't see any
4 as-built reports.

5 Q. The reports that were prepared after the
6 liner?

7 A. After the liner.

8 Q. And out of all of the photographs you
9 reviewed, the two that you cited were the only two you
10 found with trucks on the sand, correct?

11 A. Not necessarily. There may have been others.

12 Q. Well, that's what I asked you.

13 A. These are just examples.

14 Q. Sir, that's what I asked you during your
15 deposition, to tell me exactly with a photos you were
16 referencing. And in your certified response, those
17 are the two that were cited. So those were the only
18 two that you came up with, correct?

19 A. No. Those were the two that I gave you as an
20 example. I didn't understand that you wanted all the
21 photos that may have had equipment on the water.

22 Q. Okay.

23 Are you aware of any other photographs with
24 equipment on the liner?

1 Exhibits 412 through 417 of Midwest is
2 admitted. Thank you.

3 (Whereupon, Respondent Exhibit
4 Nos. 412-417 were received into
5 evidence as of 1-29-18.)

6 HEARING OFFICER: If I haven't already 418
7 and 419 respondent's are also admitted.

8 (Whereupon, Respondent Exhibit
9 Nos. 418 & 419 were received into
10 evidence as of 1-29-18.)

11 MS. NIJMAN: I have one other matter before
12 we move on to the next witness.

13 THE COURT: Yeah. I see the claimants have
14 another witness.

15 MS. BUGEL: Complainants would renew our
16 motion to recall Marie Race based on the PCB's order.
17 We maintain our position that we were not on notice
18 that questions were being -- exhibits were being
19 limited in their use to just the questions asked.

20 Earlier you did ask about our briefing in
21 that matter, and this is an issue we did raise an
22 objection to Respondent's request for those to be
23 limited to questions asked. We responded that we were
24 opposed. We raised the notice issue in our briefing.

1 On that basis, we would move to recall
2 Maria Race.

3 THE COURT: And that was on record, and you
4 objected, or you made me aware earlier. I can't do
5 anything about it.

6 Motion for reconsideration expedited is all I
7 can suggest because I can't go against the Board. I'm
8 just a lonely hearing officer, so. But your objection
9 is so noted, and it's denied at this point.

10 MS. BUGEL: Understood.

11 THE HEARING OFFICER: Thank you.

12 So does Sierra Club, do you rest your
13 case-in-chief?

14 MS. BUGEL: We rest our case-in-chief.

15 THE HEARING OFFICER: Okay. Thank you.

16 Ms. Nijman?

17 MS. NIJMAN: On that basis, we would move for
18 a directed finding based on 735 Illinois Combined
19 Statutes 5/2-1110, providing for evaluating a motion
20 of directed finding when a need to determine if the
21 plaintiff has presented a prima facie case, and if
22 not, grant the motion.

23 We specifically move for directed verdict as
24 to Joliet 29 as the Complainants have not established

1 a prima facie case that Midwest Generation has caused
2 or allowed groundwater pollution, which is the only
3 claim made in the Joliet 29 situation.

4 We recognize, without going into detail,
5 which I'm happy to do on the record as to the basis
6 for the motion, we recognize your prior statements to
7 us that this is not a decision or a motion that you
8 would decide, and the inconvenience to the parties, if
9 we were to request a stay to have it decided, and in
10 that sense, we -- because we still do not believe that
11 the Claimants have presented a prima facie case, we
12 would request the right to include that argument for
13 directed verdict as part of our post-hearing briefs.

14 THE HEARING OFFICER: Yes, you may.

15 MS. NIJMAN: Thank you.

16 And I don't want to suggest that the motion
17 would be limited to Joliet 29 for the purpose of that
18 motion.

19 THE HEARING OFFICER: And obviously the
20 Complainant would have a chance to respond in the
21 post-hearing briefs.

22 MR. RUSS: Okay.

23 MS. BUGEL: And just to be clear for the
24 record, Plaintiffs would ask that any clock ticking,

1 any deadline for response that normally would be two
2 weeks in response to the motion is deferred to
3 post-hearing briefing. I want to make sure that we
4 are not required to respond to this motion two weeks
5 from today.

6 THE HEARING OFFICER: My understanding is no.
7 It's going to be addressed in Midwest's post-hearing
8 brief, and depending on whether we do it simultaneous
9 or what, but you're going to have to respond to it
10 probably in your reply because you're second up.

11 MS. NIJMAN: Or we can do it simultaneously
12 as you said.

13 THE HEARING OFFICER: Obviously if you do it
14 that way, you could do simultaneous replies so you
15 both have a shot at it.

16 MS. BUGEL: Thank you.

17 THE HEARING OFFICER: All right. Anything
18 else?

19 MS. NIJMAN: That's all. We are moving to
20 begin our case-in-chief and call our first witness.

21 THE HEARING OFFICER: All right. Thank you.

22 Ms. Franzetti has joined the group.

23 MS. FRANZETTI: Thank you, Mr. Hearing
24 Officer. Recall Maria Race.

1 MS. BUGEL: Mr. Hearing Officer, could we
2 take a minute?

3 THE COURT: Off the record.

4 (Whereupon, a discussion was had
5 off the record.)

6 THE HEARING OFFICER: Let's go back on the
7 record. Thank you.

8 Can you raise your right hand.

9 (Witness duly sworn.)

10 MARIA RACE,
11 having been first duly sworn, called as a witness
12 herein, was examined and testified as follows:

13 DIRECT EXAMINATION

14 BY MS. FRANZETTI:

15 Q. Good afternoon, Ms. Race.

16 A. Good afternoon.

17 Q. Let's start with your educational background.
18 Would you please describe your educational background
19 for us?

20 A. Sure. I have a Bachelor's of Science in
21 Physics from University of Illinois in Urbana. And I
22 have a master's degree in Environmental Technology
23 from New York Institute of Technology.

24 Q. What did your studies for that master's

1 degree include?

2 A. Well, they included a broad variety of
3 exposure to various things like groundwater
4 monitoring, landfill design and development, surface
5 impoundment, development and design, air emissions
6 type work. So a broad variety.

7 And I did my thesis work on hazardous
8 materials management and the Department of
9 Transportation and put together an expert system on
10 that.

11 Q. Now, back in October's hearing, you already
12 testified about the positions you held at Midwest Gen
13 after the sale of Midwest Gen to NRG, namely, Director
14 of Asset Management and Director of Federal
15 Environmental Programs?

16 A. Yeah.

17 Q. Would you please describe the job
18 responsibilities that you had from the time you joined
19 Midwest Gen up to the sale to NRG?

20 A. Sure. In 2001 I started as the NDPS
21 permitting person, compliance person, and the landfill
22 management person, toxic release inventory, and
23 several other items along those lines. That involved
24 doing renewal permits and/or construction permits for

1 stations, going to stations, and understanding their
2 water flow system, answering questions about them from
3 time to time, and generally ensuring that we are in
4 compliance with the regulations.

5 Q. In your answer when you referred to
6 "stations," are you referring to all of the Illinois
7 stations that were -- that are involved in this
8 matter?

9 A. Yes.

10 Q. And any additional stations as well?

11 A. Yes. We had responsibility in our department
12 for Grant Town station in West Virginia, for Homer
13 City station in Pennsylvania, and for another Joliet
14 station, Joliet 9.

15 Q. Would it be accurate to describe your job
16 responsibilities during this period up to the sale to
17 NRG as generally involving environmental compliance?

18 A. Yes.

19 Q. Now, did that include any responsibilities
20 with regard to communications with regulatory
21 agencies?

22 A. Yes. I -- from the time that I started, I
23 was communicating with the various permitting people,
24 the permitting engineers at Illinois EPA, on a regular

1 basis for NPDS. If I ever had a question, I would
2 call and ask. So, for example, if I was unclear about
3 whether a construction permit might be required, I
4 would give them a call and ask that question.

5 And I really relied on them to help me make
6 the right decisions.

7 Q. Would your responsibilities at times include
8 maintenance issues to the extent that they were
9 relevant to environmental compliance?

10 A. Definitely. Part of my responsibility was to
11 give advice to the stations about what they would need
12 to do in the future to stay in compliance or be in
13 compliance. And sometimes we would look at preventive
14 maintenance together. The stations didn't want to
15 work in a vacuum, and they would try to understand
16 what standards needed to be applied, if they were
17 going to do preventive maintenance on impoundments,
18 for example.

19 Q. With respect to your environmental compliance
20 responsibilities, did they at times include the ash
21 ponds at the stations?

22 A. Yes, they did, along with the other
23 impoundments that existed at the stations.

24 Q. With respect to the ash ponds that are at

1 issue in this case, what types of responsibilities did
2 you have?

3 A. My responsibilities regarding the ash
4 impoundments were similar to any other of the
5 impoundments that are all regulated by the NPDS
6 permitting process. I would look at what was needed
7 in construction space, if they were going through
8 dredging process, and were considering relining, then
9 we would discuss what types of liners needed to go in.
10 And then eventually I helped them develop a
11 preventative maintenance program that I wanted to have
12 based in some kind of scientific understanding, plus
13 an idea of the schedule of what was going to happen at
14 the stations. Because I was assuming that the
15 impoundments were in good condition and that we needed
16 to do things in an orderly manner.

17 Q. Did the things that you looked at doing
18 include liner replacement?

19 A. Yes, they did.

20 Q. And did you have a managerial role with
21 regard to the liner replacement projects Midwest Gen
22 undertook?

23 A. I had a managerial role as someone that was
24 advising and hoping to initiate the process. So, for

1 example, what I did was I worked with our engineers
2 and came up with a system, and then we actually worked
3 with a consultant to help us put all this together.

4 So we started looking at what are the soil
5 types, because one of the things that I learned in my
6 coursework is about hydraulic conductivity and
7 permeability. And I wanted to know if the soil types
8 that were around the impoundments put them at a higher
9 risk of leakage if they were leaks or if there was an
10 impairment in the impoundments, which we were assuming
11 was not there, but we were looking at preventative
12 maintenance.

13 So, for example, we looked at soil types. We
14 looked at the permeability of the various types of
15 impoundment liners that could be used. We looked at
16 what was being put in each type of impoundment. So
17 everything from storm water from parking lots to ash
18 goes into those impoundments. And so we looked at
19 each one of those and also looked at where -- what
20 they were located close to.

21 So we were looking to do sort of a risk
22 assessment in a scientific way.

23 Q. With regard to those projects, were you also
24 responsible for certain of the outreach to the

1 Illinois EPA?

2 A. Oh, absolutely. They were very aware that we
3 were doing this type of work and they gave us advice,
4 you know. They were -- when we were going through
5 lining process with construction permits, we didn't
6 just come in there with a design that we had come up
7 with out of nowhere. We actually talked with them on
8 the phone. We communicated very well with Jamie
9 Rabins, who was our permit writer, and Darrin LeCrone,
10 who was his boss, about those things. And, you know,
11 what -- and what they expressed to us were always, you
12 know, if you're replacing like for like in the early
13 2000s, then construction permit was not needed. And
14 then if you're replacing the liner with something
15 differently, then you would need a construction
16 permit.

17 So those were the types of dialogues that we
18 had with them. And I went and met with them
19 frequently. And especially later in time, because we
20 were negotiating some Title 5 permits, so I was down
21 there often for that. So whenever I was down there, I
22 would drop by. We had a very cordial relationship.

23 Q. Let me step back to environmental compliance
24 generally. That was part of your responsibilities.

1 Was there an environmental compliance policy at
2 Midwest Gen --

3 A. Yes, there was.

4 Q. -- during the time that you were responsible
5 for environmental compliance?

6 A. Yes, there was.

7 Q. Would you describe that policy?

8 A. In short -- I don't remember all the
9 verbiage. But, in short, it was environment over
10 production, which means that you want 100 percent
11 environmental compliance just like you want
12 100 percent safety compliance. And environmental
13 compliance was taken just as seriously.

14 Q. And was that part of your responsibility to
15 ensure that the policy was implemented?

16 A. Absolutely.

17 Q. Now, you are generally familiar with the
18 stations that are involved in this matter, correct?

19 A. Correct.

20 Q. We're going to talk a little bit about their
21 operating capacity. When I use the term "operating
22 capacity," what's your understanding of that term?

23 A. I think what you mean is capacity factor.

24 Q. How do you define that?

1 A. How often a station is operating in a given
2 year.

3 Q. And what is your general understanding of
4 what the capacity factor of these plants that are
5 involved here has been in the recent past?

6 A. The capacity factor is much less than it once
7 was.

8 Q. Do you know why that is, generally?

9 A. I think that the general reasons are
10 economic.

11 Q. Now, are you also familiar with the term
12 "capacity market"?

13 A. Yes.

14 Q. What is your understanding of that term?

15 A. Well, there are two ways that power companies
16 make money. One is directly selling energy and the
17 other one is through a capacity market, if that exists
18 in your given area. And in Midwest Gen's area, the
19 capacity market is run by PJM.

20 Q. And can you explain a little further how does
21 the concept of capacity market that PJM runs in the
22 area of these stations differs from just generally the
23 electric production market?

24 MS. BUGEL: I'm going to pose an objection

1 here to this line of questions and the relevance of
2 the electricity markets and capacity and PJM.

3 THE HEARING OFFICER: Ms. Franzetti?

4 MS. FRANZETTI: Mr. Hearing Officer, we
5 believe this line of testimony is relevant to the
6 Section 33(c) factors under the Illinois Environmental
7 Protection Act which we will be referencing to the
8 Board and are relevant here for deciding the alleged
9 liability issues contained in Complainant's complaint.

10 THE HEARING OFFICER: Ms. Bugel, any
11 response?

12 MS. BUGEL: I don't think it's clear from
13 either the line of questions, the witness's answers,
14 or Ms. Franzetti's explanation.

15 MS. FRANZETTI: Mr. Hearing Officer, the role
16 of these plants and the role they serve in the
17 electricity market --

18 THE HEARING OFFICER: You know, I don't know
19 if you were here before. I really don't want any
20 speaking objections or explanations unless I ask.

21 How much longer do you have to go on this?

22 MS. FRANZETTI: Two more questions.

23 THE HEARING OFFICER: Okay. That's great.

24 Thank you.

1 Overruled. You may proceed.

2 MS. FRANZETTI: Thank you.

3 I will rephrase it.

4 BY MS. FRANZETTI:

5 Q. Can you explain a little further what the
6 difference is between the capacity market that PJM
7 operates and the electrical generation market
8 generally?

9 A. Well, basically, PJM wants to ensure that
10 there's a certain amount of capacity available during
11 times when it's really hot out or really cold out,
12 when there are times when you need a lot of energy,
13 where the energy demand is high. And so they want to
14 ensure that that is going to be there so that there
15 aren't blackouts, so people aren't in the cold and
16 have no electricity.

17 Q. So what does that mean in terms of the role
18 played by the electrical generating stations involved
19 in this case?

20 A. That even though they may not operate at a
21 base load like they used to operate where they were
22 load following up and down day in, day out, even
23 though they're not doing that, they are critical for
24 the points in time where there are peak needs for

1 energy.

2 Q. And PJM, they are obligated to be able to
3 operate when PJM identifies those peak needs?

4 A. Yes, they are obligated to meet those needs.
5 And it's important that they do meet those needs
6 because the penalties are huge if they don't. So they
7 do everything in terms of preventive maintenance and
8 outage scheduling to ensure that they'll be there when
9 they need to be there.

10 Q. Turning to the number of employees at each of
11 the stations, do you have a general idea of how many
12 employees are employed at each station, and then we'll
13 take them one at a time?

14 MS. BUGEL: I'm going to object again to the
15 relevance of the number of employees at the station.
16 I think this is really far afield of whether or not
17 the ash ponds and ash on sites caused groundwater
18 violations.

19 THE HEARING OFFICER: To me, this is kind of
20 attenuated, Ms. Franzetti. I'm not sure -- I don't
21 have 33(c) in front of me. But didn't you reference
22 33(c)?

23 MS. FRANZETTI: Yes. And among the factors
24 that the Board can consider under 33(c) in deciding a

1 liability issue is: Are these stations important to
2 the community? Are they important to the economics of
3 the community? That involves how many jobs do they
4 provide. As well as are they important, more broadly,
5 to the electrical generating market and stability in
6 that market?

7 So I just want to get in the record
8 approximately how many jobs at the station does
9 Midwest Gen provide. That's all.

10 THE HEARING OFFICER: How much longer is this
11 line of questioning as far as 33(c) is going?

12 MS. FRANZETTI: This is it. Just asking for
13 each of the four stations involved here.

14 THE HEARING OFFICER: Okay. You may
15 continue. Overruled. Thank you.

16 THE WITNESS: It varies.

17 BY MS. FRANZETTI:

18 Q. But you have some general familiarity with
19 it?

20 A. Yes, I do.

21 Q. With respect to Joliet 29, approximately how
22 many employees?

23 A. I would guess there are probably somewhere
24 between 60 and 80, a hundred, somewhere in there.

1 Q. Approximately how many employees at Will
2 County station?

3 A. About the same.

4 Q. Approximately how many at Powerton?

5 A. Probably closer to the 100 number I would
6 guess.

7 Q. And with respect to Waukegan, approximately
8 how many employees?

9 A. Probably 60.

10 Q. Now let's turn to your work with regard to
11 removal of ash from the station ash ponds. That was
12 something that was part of your job responsibilities
13 to oversee?

14 A. Part of my responsibilities was compliance,
15 ensuring that during the time that the ash was in the
16 impoundment, that we were in compliance with all the
17 rules. Just like -- because I was focused on the
18 NPDES piece of it.

19 Q. So would you have some involvement with
20 respect to managing the company hired to remove the
21 ash and where the ash was going?

22 A. I worked with our fuels group which actually
23 managed those contracts, but I certainly was part of
24 the compliance piece of that.

1 Q. Now I'm going to ask you to turn to what has
2 been marked as Exhibit 600.

3 A. All right.

4 Q. Do you recognize that document?

5 A. Yes, I do.

6 Q. What is it?

7 A. It is a document regarding Joliet 29,
8 Waukegan, and Will County, ash totals that were
9 marketed to LaFarge that was put together by our fuels
10 department.

11 Q. And what's the nature of the information that
12 is shown or contained in this document?

13 A. It is -- it basically shows from month to
14 month how much ash was being marketed for different
15 uses across all ash types. So bottom ash and fly ash.
16 So how much was marketed for cement replacement or
17 structural fill or whatnot from each of these
18 stations.

19 Q. Would it be correct to say that this is
20 showing the types of beneficial uses that the ash
21 removed from Joliet, Waukegan, and Will County was put
22 to?

23 A. Yes.

24 Q. I think you mentioned LaFarge. Is that the

1 company that handled the ash removal from Joliet 29,
2 Waukegan, and Will County stations?

3 A. Yes.

4 Q. Did they handle all of the ash removed from
5 those stations?

6 A. Let me think. Yes, I believe they did.

7 Q. Now, with respect to -- let me see. Give me
8 just a second here.

9 With respect to the years that are shown in
10 this document, can you tell us what time period
11 approximately is covered or how it's shown on the
12 document?

13 A. Sure. It is shown on the document each year
14 by month from 2009 to 2013, it looks like, with 2008
15 in the back perhaps.

16 Q. On the last page?

17 A. Yes, yes.

18 So two-thousand -- so actually 2008
19 through 2012 -- let me double-check this here -- '13.
20 Yes.

21 Q. Now, with respect to -- and I'm going to
22 direct your attention just to the very first top page
23 of the document, it's Bates number ending in 47.

24 A. Uh-huh.

1 Q. It says January 2009. And then in the next
2 column it says cement replacement,
3 stabilization/geotechnical. Next line, mine
4 stabilization. Next line, structural fill.

5 What is that part referring to?

6 A. Well, that's referring to the types of uses
7 that -- the beneficial uses that LaFarge was taking
8 the material for. So, for example, cement replacement
9 literally means Portland cement replacement for
10 concrete. So you would take that fly ash and instead
11 of using a new raw material, Portland cement, you
12 would use the fly ash for that.

13 So that, for example, where it says Joliet 7
14 and 8, in the column where it says 10,448, that amount
15 of tonnage was used for cement replacement.

16 And then stabilization, geotechnical, or
17 structural fill probably are similar types of
18 projects. Those can be roadbed, you know. I know
19 that there was one case where there was an airport
20 runway where material was being used. Just various
21 structural uses like that.

22 And then mine stabilization is putting ash
23 into a mine in order to keep it from subsiding. So
24 it's another beneficial use recognized by the State of

1 Illinois.

2 Q. And finally, structural fill?

3 A. Structural fill is very similar to what I was
4 describing before as stabilization geotechnical. And
5 I think the distinction here between those two things
6 is because they had a particular project in mind for
7 stabilization geotechnical and it's not as relevant
8 from my privilege in tallying things up as it was to
9 them.

10 Q. So for the month of January 2009, does this
11 document tell us that all of the ash beneficially
12 reused fell into one of these categories, and it shows
13 how much within each category from each plant of ash
14 was put to that particular type of beneficial use,
15 correct?

16 A. Correct.

17 Q. And then the last column with these
18 percentages, do you know what those percentages
19 represent?

20 A. That's the total percentage of ash so that
21 you could say, okay, 42 percent of our ash is being
22 used for cement replacement and that type of thing.

23 Q. By month?

24 A. By month.

1 And that was important to us also because, as
2 a part of Edison International Companies, we were
3 looking at sustainability numbers as well. So they
4 would want to know how we were beneficially using our
5 materials so they could document that for the
6 sustainability reporting.

7 Q. Now, with respect to the years shown in this
8 document, 2008 through 2013, is it your understanding
9 that bottom ash from Waukegan, Joliet 29, and Will
10 County stations ash ponds was used for some type of
11 beneficial use?

12 A. Yes.

13 Q. It was not disposed of?

14 A. No.

15 Q. Now, since this document has a date in the
16 upper right, August 12, 2014, do you know whether the
17 uses of ash from the stations, these stations, is
18 generally the same since that time, since 2013?

19 A. No, it's changed in that Joliet is now
20 converted to gas and so it no longer produces any ash.
21 So that's one big change.

22 Also, the stations themselves, like we were
23 talking about a few minutes ago, with capacity factor,
24 the stations aren't running as much anymore. So

1 there's significantly less ash.

2 Q. With respect to the amount of ash that
3 remains that is removed from the ponds, is it still
4 all sent for beneficial reuse rather than disposed of?

5 A. Yes. However -- it may be that what's in
6 structural fill or mine stabilization, those numbers
7 can shift, but it's all beneficially used under
8 Illinois regulations.

9 Q. Now, I don't see Powerton listed in this
10 document, and I think you've testified it's not.

11 Why isn't Powerton included in this
12 Exhibit 600?

13 A. Harsco/Reed Minerals were the vendors that
14 managed that ash. It was -- Powerton is downstate,
15 and I believe Fuels had a separate contract for that
16 reason.

17 Q. So Exhibit 600 is just listing the LaFarge --

18 A. Yes.

19 Q. -- bottom ash activity?

20 I'm sorry. Yes?

21 A. Yes. Sorry.

22 Q. With respect to the Powerton bottom ash,
23 where did it go when it was removed from the Powerton
24 ash ponds?

1 Midwest Gen has operated the Joliet 29 station since
2 1999; and stipulation number four, Midwest Gen leases
3 the Joliet 29 station.

4 With that background, Ms. Race, back to you,
5 are you familiar with the area in the vicinity of
6 Joliet 29 station?

7 A. Yes, I am.

8 MS. FRANZETTI: Can you call up the Joliet 29
9 map on the screen.

10 BY MS. FRANZETTI:

11 Q. Ms. Race, what does the map that you're
12 seeing up on the screen depict?

13 A. That shows a map of the Joliet 29 generating
14 station and some of the vicinity surrounding it.

15 Q. Now, speaking of the vicinity or surrounding
16 it that you see there, can you please describe that
17 area surrounding the Joliet 29 station, basically in
18 terms of the type of use?

19 A. The use is primarily industrial. I know that
20 to the west of the station Caterpillar owned land, and
21 I think Center Point Properties may have purchased it.
22 But anyway, it was very industrial in that area.

23 Q. To the north generally, what are we seeing to
24 the north of the station there on the map?

1 A. There are some old industrial sites there.

2 Q. Is there also some undeveloped land in that
3 area?

4 A. I believe so. And then further to the north
5 of that we can just barely see the beginnings of some
6 of a neighborhood area that's also included.

7 Q. I'm going to direct your attention to
8 Exhibit 601.

9 A. Okay. I'm not sure I have it the right
10 direction. Okay.

11 Q. Do you recognize that document?

12 A. Yes, I do.

13 Q. What is it?

14 A. It's a survey, a land title survey, of Joliet
15 Generating Station Number 29.

16 Q. So what generally does that Exhibit 601 show?

17 A. It shows the areas -- basically this is a
18 sale trap. So it shows you the areas that Midwest Gen
19 purchased and then the -- where it says retained
20 tract, that's where Commonwealth Edison still owns
21 part of the property.

22 MS. FRANZETTI: Can we bring that up on the
23 screen? It would be easier to see.

24 Thank you.

1 BY MS. FRANZETTI:

2 Q. Looking at the screen, is that showing a
3 portion of Exhibit 601 that includes the caption
4 "Retained Tract"?

5 A. Yes, it does.

6 Q. What is that retained tract referring to?

7 A. Well, at each of the sites that Midwest Gen
8 operates, we maintain the operations within the plant,
9 but we don't manage the transmission lines or that
10 type of thing. So the retained tracts that ComEd kept
11 were largely to have switch yards and things for the
12 wires that came out of the building.

13 Q. Is that generally the purpose of this
14 retained tract?

15 A. Yes.

16 Q. So ComEd continued to own that portion of
17 property that is designated "Retained Tract"?

18 A. Yes, they did.

19 Q. Who controls that area?

20 A. Commonwealth Edison.

21 Q. Does Midwest Gen have any right to operate or
22 control that area?

23 A. No.

24 Q. Does Midwest Gen have, to your knowledge, any

1 information on soil or groundwater conditions on the
2 ComEd-retained tract?

3 A. As I sit here, I don't remember seeing
4 anything like that. The only interconnection there is
5 is with storm water, and that's largely, if there was
6 storm water run-off from these sites, our storm water
7 management system, our site waste water treatment
8 plants would manage it.

9 Q. Now, let's turn to a bit of the history of
10 Joliet 29. Do you have an understanding of
11 approximately how long Joliet 29 station has been
12 operating?

13 A. Yes. I believe it was built in the mid '60s,
14 somewhere in there. I know on the other side of the
15 river it was in the '20s. But most of the plants in
16 the units that we're discussing today were in the
17 '60s, early '70s.

18 Q. Now, I'm going to ask that the map of Joliet
19 be brought up on the screen.

20 Can we highlight the historical areas on
21 that.

22 Ms. Race, can you read what's in red font on
23 the screen?

24 You have a screen in front of you.

1 A. Thank you. This is much easier for my old
2 eyes.

3 It says -- do you mean the area to the north
4 and the east?

5 Q. Yes, the two areas that have red font.

6 A. Oh, okay. Alleged former ash placement area.

7 Q. Okay. Do you have some general familiarity
8 with those areas at the Joliet 29 plant?

9 A. Yes, I do.

10 Q. What do those two areas refer to?

11 A. Well, in the ENSR surveys that were done at
12 the time of the sale to Midwest Generation, those were
13 the labels that were put on those two areas or
14 something along those lines.

15 Q. And what do they generally refer to as having
16 occurred in those areas, do you know?

17 A. Well, I know that for the northern area, the
18 northeastern area, that there is ash placed there, and
19 the reason I know that is because it was in the NPDS
20 permit that we need to, as part of our storm water
21 plan, ensure that that area stays covered.

22 Q. Do you know anything about the other area?

23 A. No, I don't.

24 Q. Did Midwest Gen put any ash into either of

1 those two areas?

2 A. No.

3 Q. Turning to the northeast former ash placement
4 area, the one you mentioned you have some involvement
5 in with respect to storm water control, has Midwest
6 Gen ever taken any samples from that former ash
7 placement area?

8 A. No.

9 Q. Do you recall with respect to the northwest
10 area, that is the former ash placement area, did
11 Midwest Gen ever take some samples of that area?

12 A. Do you mean southwest?

13 Q. No. I meant --

14 A. Northeast?

15 Q. -- northwest?

16 A. Oh, okay. Northwest. Okay. That wasn't on
17 there yet.

18 But, yes, we did do some sampling there.

19 Q. Do you recall approximately when that was?

20 A. I think it was around the mid 2000s. It says
21 on here 2005.

22 Q. Does that fresh your recollection?

23 A. That seems right, yeah.

24 Q. Are you familiar with the sampling results

1 from that 2005 sampling?

2 A. Yes, I am.

3 Q. Do you recall what those results indicate?

4 A. Yes. What we wanted to do with this material
5 was to qualify it hopefully to be beneficially used,
6 and we found that almost all of it could be.

7 So we did the testing that's required under
8 the Illinois Environmental Protection Act and
9 qualified it for use beneficially.

10 Q. Now, with respect to the storm water
11 inspections you were referring to, where did those
12 generally occur?

13 A. Up along the river area and like starting up
14 in the northeastern region and stretching down across
15 that area towards where the current ash impoundments
16 are.

17 Q. And, generally, have those results showed
18 compliance with storm water requirements?

19 A. Yes.

20 Q. With respect to these two alleged former ash
21 placement areas, has either the Illinois EPA or U.S.
22 EPA ever asked Midwest Gen to investigate either of
23 those areas?

24 A. No, they have not.

1 Q. You're familiar with the CCR rules generally?

2 A. Yes.

3 Q. Do the CCR rules require any investigation or
4 other activities to be conducted in either of these
5 areas?

6 A. No, they do not.

7 Q. It's already been stipulated, for the record
8 stipulations 13 and 14, that on March 18, 2016, Joliet
9 29 station ceased burning coal for the generation of
10 electricity; and that on May 26, 2016, the Joliet 29
11 station began generating electricity with natural gas.

12 So my question is to you, Ms. Race, since May
13 of 2016, when Joliet 29 was converted to natural gas,
14 does it generate any coal ash?

15 A. No, it does not.

16 Q. Now, if we can refer to the screen, bring up
17 the ponds, the ash ponds.

18 Do you see the two blue areas on the screen?

19 A. Yes.

20 Q. Whichever is easier for you. Feel free to
21 look at your monitor.

22 A. Yes, I do.

23 Q. Do you know what those two blue areas depict?

24 A. Yes. Those are ash pond one and ash pond

1 two.

2 Q. Now we have a stipulation as well that ponds
3 one and 2 as well as three were constructed in 1978
4 with Poz-o-Pac liner.

5 Now, with respect to pond three, is pond
6 three shown up there?

7 A. Yes, it is shown up there.

8 Q. Where is it in relation to the two blue ponds
9 that you've identified as pond one and two, where is
10 pond three?

11 A. It's to the east. It's that little
12 irregularly shaped pond.

13 Q. With the, looks like, gray and green outline?

14 A. With green, yes.

15 Q. So that pond also had a Poz-o-Pac liner,
16 correct?

17 A. Correct.

18 Q. Referring you back in time to when you were
19 involved in responding to IEPA's inquiries with
20 respect to the ash pond, you testified a bit about
21 this in October with respect to the hydrogeological
22 assessment, the commencement of groundwater
23 monitoring.

24 My question is: In the course of that work,

1 did you learn about how other ash ponds in Illinois
2 were constructed with respect to use of liners or lack
3 of liners?

4 A. Yes, I did. And actually that information is
5 available online. And there are a number of -- I
6 believe there were 83 impoundments that they found in
7 the state.

8 Q. Who is "they"?

9 A. IEPA, that they found to exist within the
10 State that were still, I believe, all active, if I
11 remember correctly. And of those, only 31 were lined,
12 and ours comprised, you know, many of those 31.

13 Q. So would you say it was unusual, particularly
14 in Illinois, for ash ponds to have already been lined
15 with Poz-o-Pack?

16 A. I think it was unusual, and I think that
17 Commonwealth Edison went the extra yard to put
18 together waste water treatment system that actually
19 included liners.

20 Q. Now, we have a stipulation as well --
21 stipulation ten, Counsel -- that pond three at the
22 Joliet 29 station was used as a finishing pond. Are
23 you familiar with the term "finishing pond"?

24 A. Yes, I am.

1 Q. What is a finishing pond?

2 A. A finishing pond is the last stop before
3 discharge for the water that's been clarified already
4 in pond one or pond two. And, generally, for any
5 waste water treatment system, you have an impoundment
6 at the end that's your last impoundment to catch, if
7 there is any sediment that comes into -- gets -- that
8 leaves your ash ponds one or two, that it would be the
9 place where you would settle that before discharge.

10 Q. Did Midwest Gen ever test that effluent
11 that's coming from ponds one or two into finishing
12 pond pond number three?

13 A. Yes. Yes, we did.

14 Q. Were you involved in looking at the results
15 of that testing?

16 A. Yes, I did see the results.

17 Q. Would you turn to Exhibit 602?

18 A. Okay.

19 MS. FRANZETTI: And while you're doing that,
20 I would move to admit Exhibit 601 into evidence, the
21 survey map.

22 THE HEARING OFFICER: Ms. Bugel?

23 MS. BUGEL: No objection.

24 THE HEARING OFFICER: Thank you. Exhibit 601

1 Midwest is admitted.

2 (Whereupon, Respondent Exhibit
3 No. 601 was received into
4 evidence as of 1-29-18.)

5 BY MS. FRANZETTI:

6 Q. Do you have Exhibit 602 in front of you?

7 A. Yes, I do.

8 Q. Do you recognize that document?

9 A. Yes, I do.

10 Q. What is it?

11 A. It is the analytical report from TestAmerica
12 Laboratories for Joliet 29 station for the effluent
13 from pond -- let's see -- pond two.

14 Q. Can you give me the Bates number of the page
15 you're looking at to determine it was a sample of the
16 effluent from Joliet 29 pond two?

17 A. 49747.

18 Q. So that is the effluent -- the effluent from
19 pond two goes to finishing pond three, correct?

20 A. Correct.

21 Q. Now, it was sampled for what constituent or
22 parameter?

23 A. Total suspended solids.

24 Q. And why was it sampled for total suspended

1 solids?

2 A. Well, that would give you an idea of how much
3 solids were actually going into pond three from pond
4 two.

5 Q. Why did you want to know that?

6 A. Because that would tell you what kind of
7 sediment you would expect to see occurring in pond
8 three.

9 Q. And by "sediment" for that, would that
10 include whether you would see ash in pond three?

11 A. Correct.

12 Q. So what is the sampling result here for total
13 suspended solids?

14 A. 20.

15 Q. 20 what?

16 A. 20 milligrams per liter.

17 Q. Now, do you understand conceptually what
18 20 milligrams per liter of suspended solids means?

19 A. It's a very small number. I mean, it's parts
20 per million basically, and it would look like clear
21 water.

22 Q. We also have A stipulation, stipulation 11,
23 that in 2013, Midwest Gen relined pond three with a
24 60 mil HDPE liner; and stipulation 15, that coal ash

1 was removed from pond three at the Joliet 29
2 generating station in 2013.

3 Ms. Race, was pond three ever dredged before
4 it was relined in 2013?

5 A. My understanding is that it didn't need to
6 be.

7 Q. Why not?

8 A. Because there weren't any solids in the
9 bottom.

10 Q. So nothing needed to be dredged because it
11 wasn't there?

12 A. Correct.

13 Q. Was there ever any dredging of pond three
14 after it was relined in 2013?

15 A. No.

16 Q. Now, turning back to ponds one and two, how
17 frequently were they used by the station?

18 A. Very infrequently. Very rarely. They were
19 only used when the landfill was not operating. So
20 when the sluice lines that would go across the river
21 to our existing landfill at that site where the sluice
22 lines were not operating, taken out of service for
23 maintenance, for example, then the water would be
24 sluiced to either ash pond one or ash pond two.

1 Q. So would I be correct, when you refer to the
2 sluice lines, is that a form of, like, conveyance
3 system that carries the ash sluice water from
4 Joliet 29 across the river and to what you referred to
5 as a landfill?

6 A. Correct. You can look at it as an either-or
7 switch. You know, like if the switch is flipped one
8 way, the water sluices over the landfill. If the
9 switch is flipped the other way, it sluices over to
10 ash pond one or ash pond two.

11 Q. And the switch was rarely switched; is that
12 correct?

13 A. Correct. Probably --

14 MS. BUGEL: I'm going to object to the
15 leading nature of the question.

16 THE HEARING OFFICER: Ms. Franzetti --

17 MS. FRANZETTI: I'm more so trying to move it
18 along. Thank you.

19 THE HEARING OFFICER: I appreciate it. Thank
20 you.

21 BY MS. FRANZETTI:

22 Q. And the landfill that you're referring to,
23 does that have a name?

24 A. Lincoln Stone Quarry.

1 Q. Does Midwest Gen have a permit to operate it?

2 A. Yes. It's a landfill permit.

3 Q. So that's typically where the ash went?

4 A. Correct.

5 Q. Now, we have a stipulation, stipulation
6 eight, only one pond, pond one or pond two, was in
7 service at the time -- at a time. Is that also your
8 understanding, Ms. Race?

9 A. Correct.

10 Q. And we have stipulation nine, ponds one or
11 two were dredged approximately every one to two years.

12 So now regarding ponds one and two, are you
13 familiar with the process of the ponds being dredged?

14 A. Yes, I am.

15 Q. So what happened to the ash that was dredged
16 out of ponds one and two?

17 A. The ash that was dredged out of ponds one and
18 two was trucked over to Lincoln Stone Quarry to the
19 landfill.

20 MS. FRANZETTI: Mr. Hearing Officer, I would
21 move to admit Midwest Gen Exhibit 602.

22 THE HEARING OFFICER: Ms. Bugel -- 602?

23 MS. FRANZETTI: Yes.

24 THE HEARING OFFICER: Ms. Bugel?

1 MS. BUGEL: No objection.

2 THE HEARING OFFICER: Thank you.

3 Midwest 602 is admitted.

4 (Whereupon, Respondent Exhibit
5 No. 602 was received into
6 evidence as of 1-29-18.)

7 BY MS. FRANZETTI:

8 Q. Ms. Race, I would now ask you to turn in your
9 book to Exhibit 603. It's what appears to be the
10 Joliet 29 NPDS permit issued September 30, 2014,
11 effective date November 1, 2014, and expiration date
12 October 31, 2019.

13 Are you familiar with this document?

14 A. Yes, I am.

15 Q. And is it the current Joliet 29 NPDS permit?

16 A. Yes.

17 Q. Was this permit issued before the conversion
18 of Joliet 29 to natural gas?

19 A. Yes, it was.

20 Q. So it does not address, in that regard, the
21 current operating mode of Joliet 29, correct?

22 A. It represents the impoundments, but it
23 doesn't represent that there -- I mean, it doesn't
24 take into account that there's no longer ash there

1 anymore. They're still in compliance with the permit.
2 They just aren't operating ash impoundments the way
3 that they once did.

4 Q. So to the extent that it describes waste
5 streams, prior to 2016 when the conversion to natural
6 gas took place, not all those waste streams might
7 exist today post-conversion, correct?

8 A. Correct.

9 Q. So let's look at Page 7 of the permit, which
10 is -- I don't know the Bates number.

11 A. No, there's not a Bates number.

12 Q. It's Page 7 of Exhibit 603.

13 On this page do you see references to bottom
14 ash?

15 A. Yes.

16 Q. What is the reference to bottom ash on this
17 page?

18 A. Well, this page has outfall G01, so in this
19 NPDS permit, Joliet station is allowed to discharge
20 water through outfall G01, which is called local field
21 ash pond F1, and that consists of bottom ash and
22 economizer ash sluice water along with other things.

23 Q. Would that encompass ash -- bottom ash
24 discharged from the Joliet ash pond at those times

1 when the ponds were used in lieu of sluicing the ash
2 water over to the landfill?

3 A. Yes, it does.

4 Q. And what do the asterisks refer to on the
5 reference to bottom ash and economizer ash sluice
6 water?

7 A. The asterisks refers to Lincoln Stone Quarry
8 landfill that, just like I was saying a few minutes
9 ago, you flip the switch and it goes to the landfill.
10 Well, this is when the switch is flipped and the
11 subway streams can be routed over there.

12 Q. But during the times when, as you've
13 testified, there was maintenance on the conveyance
14 system, then this part of the permit did allow the
15 discharge of the ash sluice water from the ponds?

16 A. Correct.

17 MS. FRANZETTI: I'd move to admit
18 Exhibit 603, Mr. Hearing Officer.

19 THE HEARING OFFICER: Ms. Bugel?

20 MS. BUGEL: I am going to object to the
21 relevance. I don't think the discharge from the pond
22 is related at all to whether the ponds are leaking and
23 causing contamination.

24 THE HEARING OFFICER: Briefly, Ms. Franzetti?

1 MS. FRANZETTI: It is relevant to the fact
2 that the ponds served as a permitted part of the NPDS
3 treatment system of these plants and was not a
4 disposal location.

5 THE HEARING OFFICER: Yeah, I think there's
6 some relevance. So I'm going to overrule your
7 objection and allow Midwest Exhibit 603 into evidence.
8 Thank you.

9 (Whereupon, Respondent Exhibit
10 No. 603 was received into
11 evidence as of 1-29-18.)

12 BY MS. FRANZETTI:

13 Q. Stipulation number 12, it's stipulated that
14 by October 12, 2015, Midwest Gen removed all coal ash
15 from pond one and removed pond one from service for
16 coal ash.

17 Ms. Race, what's the current status of pond
18 two?

19 A. Pond two is also closed and is in the process
20 of having its ash removed to Lincoln Stone Quarry
21 landfill.

22 Q. And when is that ash removal scheduled to be
23 completed?

24 A. Sometime later this year after the weather

1 is -- you know, inclement weather is over with.

2 Q. Now I'm going to ask you to find
3 Complainant's Exhibit 20-D. It's the ENSR Phase 1
4 report.

5 A. There it is, right on top.

6 MS. BUGEL: Can you please repeat?

7 MS. FRANZETTI: 20-D as in dog. It's the
8 ENSR Phase 2 report for Joliet 29.

9 BY MS. FRANZETTI:

10 Q. Ms. Race, referring to Complainant's
11 Exhibit 20-D, the ENSR Phase 2 report for Joliet 29,
12 do you recall your testimony back during the October
13 hearings in this matter regarding the mistaken
14 inclusion of Joliet 9 station's boring logs in this
15 ENSR report for Joliet 29?

16 A. Yes, I remember that.

17 Q. Now, referring in Exhibit 20-D back to the
18 boring logs --

19 A. Can you give me a Bates page, please?

20 Q. Keep going.

21 A. Got it.

22 Q. And you've seen these boring logs before as
23 part of this exhibit, correct?

24 A. Correct.

1 Q. Can you tell from the boring logs whether
2 coal ash was present below the ground at Joliet 29?

3 A. Well, no, because these are the Joliet 9
4 boring logs.

5 Q. Okay.

6 So if somebody only looked at those boring
7 logs, they wouldn't be able to answer that question,
8 would they?

9 A. Correct.

10 Q. Because those are the boring logs for
11 Joliet 9, correct?

12 A. Correct.

13 Q. I'm going to ask you to look at Exhibit 604.

14 A. Okay.

15 Q. Do you recognize Exhibit 604?

16 A. This says that it is the ENSR Joliet 29 power
17 station. They're the boring logs for 29.

18 Q. So these are the boring logs that should have
19 been in ENSR Phase 2 report for Joliet 29 that we were
20 just looking at, Complainants's Exhibit 20-D?

21 A. Correct.

22 Q. Now, have you seen these before?

23 A. I have probably seen them in the Joliet 9
24 report I would assume.

1 Q. But you have seen them before?

2 A. Yes.

3 Q. Now, would you take a look at them and tell
4 us whether you can tell from these boring logs which
5 are for Joliet 29 station whether coal ash was present
6 below ground at Joliet 29?

7 MS. BUGEL: I'm going to object to the form
8 of the question which assumes facts not in evidence
9 and assumes that these boring logs are representative
10 of all of the station as opposed to just certain
11 locations of the station.

12 THE HEARING OFFICER: So noted.

13 You can try to flesh whatever bothers you out
14 on cross. So overruled.

15 Thank you Ms. Bugel.

16 You may answer if you're able.

17 THE WITNESS: I see no ash in any of these
18 boring logs.

19 BY MS. FRANZETTI:

20 Q. And the boring logs do identify typically if
21 ash is in -- found in the boring, you would see, in
22 these descriptions that are for each of these boring
23 locations, a reference to ash or slab, correct?

24 A. Correct.

1 MS. BUGEL: I'm going to object to the
2 leading nature of the question.

3 THE HEARING OFFICER: Ms. Franzetti, I know
4 you're trying to speed things up, but I agree with
5 Ms. Bugel.

6 MS. FRANZETTI: All right.

7 THE HEARING OFFICER: Thank you.

8 BY MS. FRANZETTI:

9 Q. You testified previously that you looked at
10 the ENSR Phase 2 reports as part of your work. What
11 was your purpose for reviewing them?

12 A. Well, I probably looked at them -- I probably
13 didn't even know where they were for the first couple
14 of years that I worked there. And so I would -- once
15 I found out that they existed, I looked at them just
16 to get an idea of what their picture was.

17 At that point in time, when they did the
18 study of what was going on at the site, if I had, you
19 know, a question or something unusual came up or
20 somebody asked me a question perhaps, I would take a
21 look at it. But like I said then, I didn't take it as
22 gospel truth.

23 Q. I'm going to direct your attention back to
24 Exhibit 20-D, the ENSR Phase 2 report for Joliet 29.

1 A. Okay.

2 Q. I'm going to ask you to go to Bates number
3 page 23308, specifically on that page, Section 1.4
4 entitled Limitations.

5 A. Okay.

6 Q. Where it states in that first and second
7 sentence: "This report, including all attachments
8 thereto, describes the results of ENSR's Phase 2 ESA
9 conducted at the Joliet 29 generating station which
10 took place between October 7 and 27, 1998."

11 It says: "Many of the facts and conditions
12 pertaining to this Phase 2 are subject to change over
13 time. Accordingly, the evaluations and conclusions
14 must be viewed within this context."

15 How did that inform your understanding of
16 these reports?

17 A. Well, like I was saying a second ago, it is a
18 snapshot of a point in time, and as more information
19 is developed, you find out more about the site or, you
20 know, as sampling gets done, as any number of things
21 happen at a site, as the right person happens to come
22 along and knows a little bit more about the history
23 than the people that they interviewed here, for
24 example, you might find out more about the site or

1 conditions change.

2 Like, for example, since we have Joliet 29
3 now converted to gas, the conditions that they would
4 find now would be different, and the way that the
5 report would describe it would be different now.

6 Q. Turning to the last paragraph of that section
7 on page Bates 23309, it's the paragraph that begins:
8 "This report and all field data"?

9 A. Yes.

10 Q. Could you read that to yourself briefly?

11 A. Sure. Okay.

12 Q. Do you recall reading that part of the report
13 in the past when you made reference to it?

14 A. Yes, I do.

15 Q. So this isn't the first time you're reading
16 it, correct?

17 A. No.

18 Q. With respect to that paragraph that speaks to
19 the report being prepared by ENSR solely for the
20 benefit of the prior owner, and that others may rely
21 upon it at their own discretion, what was your
22 understanding of that paragraph?

23 A. That we shouldn't rely upon it. I mean, we
24 were essentially the third party, so we shouldn't rely

1 on it. We should develop our own information. We
2 weren't bound by this agreement that was put together
3 by ENSR and ComEd.

4 Q. Would you now turn to -- there's a site plan
5 on page Bates number 23339.

6 A. 233 --

7 Q. 23339?

8 A. 23339.

9 Okay. I'm there.

10 Q. Now, can you make out -- can you see the area
11 described as, quote, "Ash Landfill" on the site plan?

12 A. Yes, I do.

13 Q. Now, directing you back to the screen, does
14 that have -- can you see where that area is generally
15 depicted on the screen or map of Joliet 29?

16 A. Yes. It is labeled in the same areas as the
17 alleged former ash placement area.

18 Q. And do you know from reviewing the report,
19 did any of the ENSR soil sampling locations occur in
20 the former ash placement areas?

21 A. Not that I'm aware of.

22 Q. Turn back to Bates 23324, and specifically
23 I'm directing your attention to the last sentence
24 there that states: "There is no requirement under

1 Illinois environmental law to further investigate or
2 remediate this property."

3 Do you see where I'm referring to?

4 A. Yes, I do.

5 Q. What was your understanding as to whether
6 that conclusion applied to the former ash placement
7 areas? Did it or didn't it?

8 MS. BUGEL: Objection. Calls for a legal
9 conclusion. This specifically references Illinois
10 law.

11 MS. FRANZETTI: Just what her understanding
12 is as to what the scope of that statement applied to
13 in this report.

14 MS. BUGEL: I maintain my objection. Calls
15 for a legal conclusion.

16 THE HEARING OFFICER: That's fine. We're
17 allowed to do it if it assists the Board, and it is, I
18 think -- it's one of my orders recently.

19 So you may answer if you're able. Overruled.

20 THE WITNESS: Well, this is within the
21 section of potential contaminant exposure pathways,
22 and my belief is that there was no requirement to
23 further investigate or remediate the property.

24 BY MS. FRANZETTI:

1 Q. And that included these former ash areas,
2 correct?

3 A. Correct. And it's not just from this report.
4 This is also advice that I had gotten from others.

5 Q. Did that information in this report and the
6 advice you got from others, did that influence Midwest
7 Gen's decision about whether any further investigation
8 of the former ash placement areas at Joliet 29 was
9 necessary?

10 A. Definitely.

11 Q. And what conclusion did Midwest Gen reach?

12 A. We concluded that we didn't need to do any
13 further investigation or remediation in those areas.

14 Q. Was there anything in regards to the Federal
15 CCR rules that was relevant to that conclusion Midwest
16 Gen reached?

17 A. No. Those areas not part of the CCR rule
18 they are left out.

19 Q. Was it your belief that that lent support to
20 Midwest Gen's decision not to further investigate in
21 those areas?

22 A. Yes.

23 Q. I'm going to turn to the Joliet 29 ash pond
24 liners assessment by Midwest Gen. And I want to take

1 you back to when you started working for Midwest Gen
2 in 2001. What was your understanding then as to
3 whether there were any risks from coal ash placed in
4 or on the ground?

5 A. Well, my understanding was that we needed to
6 use lined impoundments or lined areas for any coal
7 ash, that coal ash wasn't going to just be placed on
8 the ground.

9 Q. And what was your understanding of the degree
10 of risk presented by the bottom ash in those ponds?

11 A. The bottom ash in those ponds, because it
12 could be beneficially used, it made sense to me that
13 it really isn't something -- it's not -- it wasn't
14 considered to be hazardous and indeed was not part of
15 the CCR rules. When they considered whether or not
16 ash would be hazardous, it was considered to be
17 nonhazardous.

18 Should I go on?

19 Q. No. That's fine. That's fine.

20 MS. FRANZETTI: Mr. Hearing Officer, I forgot
21 to move to admit Exhibit 604 and I would like to do so
22 now.

23 THE HEARING OFFICER: Ms. Bugel?

24 MS. BUGEL: No objection.

1 THE HEARING OFFICER: Thank you. Midwest
2 Exhibit 604 is admitted without objection.

3 (Whereupon, Respondent Exhibit
4 No. 604 was received into
5 evidence as of 1-29-18.)

6 THE HEARING OFFICER: Just for the record, I
7 think we'll be taking a break in about ten minutes,
8 come back at 3:30, and then I still kind of want to
9 wrap up around 4:30. Thank you.

10 MS. FRANZETTI: I'll keep plugging.

11 BY MS. FRANZETTI:

12 Q. Referring to Complainant's Exhibit 293, so
13 that's not in your binder; it's one of the
14 freestanding exhibits.

15 A. Okay. Here it is.

16 Q. Do you recognize that document?

17 A. Yes, I do.

18 Q. What is that document?

19 A. This is Coal Combustion Byproduct
20 Determination Support that was put together by KPRG.

21 Q. Who requested KPRG do this assessment?

22 A. I did.

23 Q. Why?

24 A. Because I wanted to see if there was -- if

1 the ash that was in this area that is circled in green
2 on here called the Former Ash Placement Area could be
3 beneficially used.

4 Q. And when you're referring to "on here,"
5 you're referring to the aerial demonstrative exhibit
6 of Joliet 29, correct?

7 A. Correct.

8 Q. Now, if you would turn to, it's Page 7 of
9 Complainant's Exhibit 293, the KPRG report and that's
10 at Bates number 19582, it has a section entitled
11 "Conclusions," if you could take a moment to look at
12 that briefly, I have a couple of questions on that
13 section of the document.

14 A. Okay. I'm ready.

15 Q. What is your understanding of the conclusions
16 KPRG reached based on the sampling it conducted in
17 this area of the Joliet 29 station?

18 A. Well, they did the test for beneficial use
19 determination that is part of the Environmental
20 Protection Act's definition of coal combustion
21 byproducts, and what they're saying here is that there
22 are 16 sample locations where the metals data meets
23 the CCB requirements, and that there is only one area
24 that did not meet the requirements for potential

1 beneficial reuse.

2 Q. Now, the test you were referring to is in the
3 document. Do they call it the capitals NLET Metals
4 Data?

5 A. Yes.

6 Q. With respect to the metals results more
7 specifically, is it your understanding -- what is your
8 understanding with respect to whether the metals, for
9 the most part, were in compliance with the standards
10 for beneficial reuse?

11 A. Well, it states here, and it is my
12 understanding, that these 16 sample locations
13 indicated that -- and with a high degree of
14 statistical certainty -- that the criteria established
15 for CCB are met and the material can be used as CCB.

16 Q. Is it also your understanding that the
17 levels -- I'm going to get more specific -- of boron,
18 manganese, and barium were detected at levels below
19 the Class 1 groundwater standard?

20 MS. BUGEL: Objection. Calls for
21 speculation.

22 THE HEARING OFFICER: Could you read the
23 question back, please?

24

1 (Whereupon, the record was
2 read as requested.)

3 THE COURT: She can answer if she's able.
4 Overruled.

5 Ms. Race?

6 THE WITNESS: Correct.

7 BY MS. FRANZETTI:

8 Q. Ms. Race, what were you referring to to
9 answer that question?

10 A. I just took a quick look back at the data in
11 the laboratory test data.

12 Q. So this report contains the actual metals
13 results for those three constituents I refer to in my
14 question, boron, manganese, barium, with test result
15 numbers that you can compare to the Class 1
16 groundwater standards, correct?

17 A. Correct.

18 Q. So you're not speculating on whether or not
19 those metals levels were below the Class 1 standards,
20 correct?

21 A. That's correct. As a matter of fact, this
22 includes all the quality control data. We have very
23 high standards about how we expect a report to be put
24 together.

1 Q. And this report was put together in
2 accordance with those high standards, correct?

3 A. Correct.

4 THE HEARING OFFICER: We're venturing off
5 into leading again.

6 MS. FRANZETTI: Sorry.

7 I'm going to leave the exhibit.

8 BY MS. FRANZETTI:

9 Q. Let's turn to Complainant's Exhibit 201.

10 A. Okay.

11 MS. FRANZETTI: Mr. Hearing Officer, just cut
12 me off for your break. I'm not paying as much
13 attention to my watch, but it's not like there's -- I
14 can pick up at any time.

15 THE HEARING OFFICER: Understood.

16 BY MS. FRANZETTI:

17 Q. You have Exhibit 201, Complainant's
18 Exhibit 201, in front of you, Ms. Race?

19 A. Correct.

20 Q. Do you recognize that document?

21 A. Yes, I do.

22 Q. What is it?

23 A. This is geotechnical testing that we
24 requested from KPRG.

1 Q. Were you involved in overseeing this work?

2 A. Yes, I was.

3 Q. What was the purpose of this assessment?

4 A. This was part of the assessment that we were
5 doing for preventative maintenance of liners -- all
6 kinds of liners, not just ash impoundments -- to come
7 up with a scientific way to assess their risks and
8 assign a number that would be -- a relative scale
9 number to them that would allow us to decide which
10 ones to replace first.

11 Q. So why were you interested in doing this
12 assessment?

13 A. This is something that Midwest Generation
14 decided to do as part of its preventative maintenance
15 program to -- so this was part of it, this
16 geotechnical analysis of the soils, because that was
17 one piece of information that we needed in order to
18 assess which liners to replace first.

19 Q. How does this piece of information help you
20 assess what liners to replace first? What's it
21 telling you?

22 A. What it tells you is what the soil
23 surrounding the impoundment is made of, so whether
24 it's more clay or whether it's silty or sandy, and

1 that would tell you what the permeability of that
2 material is.

3 And so that would tell you if there was a
4 leak, how fast would that leak go somewhere else.

5 Q. Does this assessment that's contained in
6 Complainant's Exhibit 201, does this cover the four
7 stations involved in this case?

8 A. Yes, it does.

9 Q. Did this information tell you anything about
10 understanding the condition of the ash ponds?

11 A. No. It told us what was surrounding the ash
12 impoundments.

13 Q. Did Midwest Gen ever proceed to assess the
14 condition of the ash ponds, particularly the liners?

15 A. We did the best that we could to assess the
16 condition of the liners, and we put together, with
17 natural resources technology, we put together a report
18 that included a relative scale, but there were some
19 impoundments that we never could see the bottom of
20 because there were ash in them, and we knew that there
21 was Poz-o-Pac, for example, at Joliet, but we weren't
22 scraping down to the bottom. So there were some
23 impoundments that we didn't see the bottom of.

24 Q. So about when -- and I'm asking generally for

1 a year -- did Midwest Gen start this assessment of the
2 condition of the liners in the ash ponds?

3 A. Somewhere around this 2005 time frame.

4 Q. And generally why did Midwest Gen start to do
5 that assessment?

6 A. Well, I decided it would be a good idea
7 because we were going through landfill renewal
8 permitting. I was starting to go through NPDS
9 permitting renewals. And so it made sense to me to --
10 and we had also just gone through replacement of the
11 Waukegan ash impoundment liners. So it made sense to
12 me to think about what order we should do the rest of
13 the impoundments in.

14 Q. I'm going to ask you to look for
15 Complainant's Exhibit 34.

16 THE HEARING OFFICER: Let's take a break
17 before -- we can be back at 3:30.

18 And before I forget, it's my pleasure to
19 announce to the world that we have Chairperson Katie
20 Papadimitriou and we have Attorney Advisor Jason James
21 in the back and they've been listening and watching
22 your every move.

23 See you at 3:30.

24

1 (Whereupon, a break was taken,
2 after which the following
3 proceedings were had:)

4 THE HEARING OFFICER: We're back on the
5 record.

6 Ms. Franzetti is directing Ms. Race. You may
7 proceed. Thank you.

8 BY MS. FRANZETTI:

9 Q. Ms. Race, I've placed before you
10 Complainant's Exhibit 34. It appears to be NRT's Tech
11 Memo Number 1 on impoundment ranking and replacement
12 liner recommendations. Do you recognize that
13 document?

14 A. Yes, I do.

15 Q. And is it the NRT work to rank the ash ponds
16 and their liners that you were referring to earlier in
17 your testimony?

18 A. Yes, it is.

19 Q. Why did you ask them for that ranking?

20 A. Well, we wanted to have some type of a
21 scientific way of deciding which order to reline any
22 of our impoundments in and what made the most sense.
23 Instead of just seeing which station had extra money
24 in a given year or which station had knowledge, we

1 wanted to put it all together and have a fleet-wide
2 program.

3 Q. Did any regulatory agency ask Midwest Gen to
4 evaluate the ash pond liners?

5 A. No.

6 Q. Did you have any understanding as to whether
7 Midwest Gen -- strike that.

8 To your knowledge, was Midwest Gen required
9 by law to conduct this pond liner evaluation?

10 A. No.

11 Q. And at the time that you're working with NRT
12 on this impoundment ranking and replacement liner
13 recommendations, to your knowledge, were there any
14 Illinois or federal regulations related to the storage
15 and use of coal ash?

16 A. No, there were not.

17 Q. Turning to Page 5 of this exhibit where NRT
18 discusses the ash settling basins under categories 3
19 and 4 at the bottom of the page, do you see where I'm
20 referring you to?

21 A. Yes, I do.

22 Q. What were NRT's recommendations for the type
23 of liner for a bottom ash impoundment?

24 A. Well, at the time -- and we discussed this at

1 the time -- since there weren't regulations that
2 governed coal combustion residuals, so there wasn't a
3 standard for a liner for that type of waste material
4 or beneficial use material, they decided that one
5 thing that we could refer to were the Illinois
6 regulations about sewage and livestock impoundments
7 which are listed here with their Illinois
8 administrative code numbers. And what these
9 regulations specified is a permeability of one times
10 ten to the negative seven centimeters per second. So
11 using a two-foot thick clay liner or a geosynthetic
12 material.

13 Q. Is a HDPE liner a geosynthetic material?

14 A. Yes, it is. So is Hypalon.

15 Q. So they also go on to reference the, quote,
16 relatively low concentration waters managed in these
17 basins, paren, suggesting less stringent permeability
18 requirements.

19 Do you understand what that statement meant?

20 A. Yes. What I wanted was to have something
21 that the stations could manage that would be low
22 maintenance. So that was one of my requirements for
23 relining the impoundments.

24 And also what he means -- and I'm thinking

1 Bruce Hensel or Lori when they were writing this
2 report -- they're looking at our waste streams as
3 being very low in concentration of things like the
4 total suspended solids that have, you know, the metals
5 in them. Very low concentration compared to other
6 industries perhaps.

7 Q. Now, the recommendations that they were
8 giving here with respect to the appropriate type of
9 liner to consider for the Midwest Gen bottom ash
10 basins, did this recommendation apply to all of the
11 stations involved in this case?

12 A. It applied to any of -- what they did was
13 they have these categories. But, yes, they applied to
14 all of the stations.

15 Q. We're done with that exhibit.

16 I would move to admit exhibit -- I'm sorry.
17 That one already has been admitted. Never mind.

18 I'm going to move to Exhibit 605 in your
19 binder. This appears to be another NRT technical
20 memorandum, Memorandum Number 3, dated October 13,
21 2006, Subject: Impoundment Liner Upgrade Priority and
22 Liner System Options and Costs.

23 Have you seen this document before?

24 A. Yes, I have.

1 Q. What is it?

2 A. It is basically what they did was they took
3 that first technical memorandum and then updated it
4 with more information. So things like when the outage
5 schedule would be and what the cost would be for
6 replacing the liners.

7 MS. FRANZETTI: I would move to admit
8 Exhibit 605.

9 THE HEARING OFFICER: Ms. Bugel?

10 MS. BUGEL: No objection.

11 THE HEARING OFFICER: Thank you. Midwest
12 6015 is admitted.

13 (Whereupon, Respondent Exhibit
14 No. 605 was received into
15 evidence as of 1-29-18.)

16 BY MS. FRANZETTI:

17 Q. Would you turn to Exhibit 606 in your binder.
18 This appears to be another technical memorandum,
19 again, Number 3, by NRT. This is dated, though,
20 November 22, 2006. And the subject is, again,
21 Impoundment Liner Upgrade Priority and Liner System
22 Options and Cost.

23 Do you recognize the document?

24 A. Yes, I do.

1 Q. So how does this document differ from the
2 last two NRT technical memorandums we've just been
3 discussing?

4 A. Well, this is the final basically is the way
5 I would put it. The other one was like a draft.
6 Number 3 was a draft. And these were all kind of
7 considered living documents and were meant to be
8 looked at over a period of time. Sort of like what we
9 were describing with the Phase 2s is that you look at
10 something as a snapshot in time knowing what you know
11 then, and then you would update it as you went.

12 Q. So this is the final version. Would you look
13 at Page 8 of the document. It's Bates number 23637.

14 My question is, you see the table with Year,
15 Impoundment, and Total columns that's on that page?

16 A. Yes, I do.

17 Q. What type of information is being presented
18 in that table?

19 A. This is presenting a potential schedule for
20 what order to replace the impoundments in, what year
21 that would be done, and what the cost would be.

22 Q. And what was the range of potential costs or
23 projected costs, I'm sorry, for lining each of the
24 ponds?

1 A. The range, as you can see here, is everything
2 from around 500,000 to \$2.5 million.

3 Q. And why are those costs presented by year in
4 this table?

5 A. Because that would be the expenditure that
6 year because there happened to be an outage, for
7 example, and the outage schedule was such that Joliet
8 ash impoundment -- Joliet 29 ash impoundment number
9 two would have been out of service in the year 2007.

10 And so this just gives us a budget to work
11 with so that when we're projecting how much money we
12 need to put in the budget for the following year at
13 Joliet Number 29, we can use that.

14 Now, one of the things that you'll note when
15 you look at this document, though, is that when
16 several of these impoundments are ranked, it's
17 ranked -- it's a relative scale compared to each
18 other. So it's not an absolute in time. It's a
19 relative scale. And there are several of these
20 impoundments that will have the same relative scale
21 number.

22 So the reason it's a living document is you
23 could flip that. Like let's say that Will County
24 south ash impoundment two had the same ranking as the

1 Powerton bypass basin. Then if the Powerton bypass --
2 Powerton had an outage in a given year, you could flip
3 that. So that's why this is a living document.

4 Q. Turn to Page 9, the next page of the
5 document, there's another table on that page. What
6 information is being shown in that table?

7 A. This table shows NRT's recommended
8 permeability and materials for liner upgrades for fly
9 ash settling, disposal impoundments, or bottom ash and
10 slag settling impoundments.

11 Q. Referring just to the bottom ash slag
12 settling basins that's towards the bottom half of this
13 table, what did NRT recommend for the bottom ash or
14 slag settling basin liners permeability?

15 A. Compacted clay or four to six inches of
16 asphalt or concrete.

17 Q. And was that also its recommendation for
18 basically all the bottom ash ponds at all the stations
19 involved here?

20 A. Yes, it was.

21 Q. Did Midwest Gen select one of those types of
22 liners to reline their ponds?

23 A. No, we did not. We decided to use HDPE.

24 Q. Why?

1 A. I think we wanted the most conservative
2 option, and we also were comfortable with using it at
3 Waukegan, and so we decided to use it at our other
4 stations as well using Waukegan as kind of the model.

5 Q. When you say the most conservative option,
6 can you explain a little more what you mean by that?

7 A. Sure. It's the one that's the least
8 permeable able.

9 Q. That --

10 A. So it won't allow liquids to flow through it.

11 Q. Did Midwest Gen think HDPE would make for a
12 better liner for its ash ponds?

13 MS. BUGEL: Objection, leading.

14 THE HEARING OFFICER: Sustained. Rephrase,
15 please.

16 BY MS. FRANZETTI:

17 Q. How did Midwest Gen feel about the benefits
18 of an HDPE liner versus the type of liners NRT
19 mentions in this table?

20 A. We wanted the less permeable liner. To us,
21 that made a difference. And we were replacing the
22 liners that were already existing out in our system.
23 And it made sense to us to use something we were
24 comfortable with with a lower permeability.

1 Q. In Midwest Gen's opinion, did it make it a
2 more or less protective liner to choose HDPE?

3 A. Oh, it was more protective.

4 Q. Was HDPE cheaper or more expensive than what
5 NRT recommended?

6 A. More expensive.

7 Q. Was an HDPE liner used for all the ponds that
8 Midwest Gen relined?

9 A. Yes.

10 Q. And at this time was there any recommended
11 criteria for liners in the industry or any regulatory
12 standard for them at that time?

13 A. No. That's why we -- NRT suggested using
14 sewage regulations or animal waste regulations as a
15 potential standard for it.

16 MS. FRANZETTI: I would move to admit
17 Exhibit 606 into evidence.

18 MS. BUGEL: No objection.

19 THE HEARING OFFICER: Thank you.
20 Respondent's 606 is admitted.

21 (Whereupon, Respondent Exhibit
22 No. 606 was received into
23 evidence as of 1-29-18.)

24 BY MS. FRANZETTI:

1 Q. Ms. Race, would you please turn to
2 Exhibit 607 in your binder?

3 A. Okay.

4 Q. Do you recognize that document?

5 A. Yes, I do.

6 Q. What is it?

7 A. This is a document that has notes in it that
8 I believe I had an intern type up.

9 Q. Whose notes?

10 A. They're my notes.

11 Q. When you refer to notes, are you referring to
12 the column in the table that's headed Comments?

13 A. Correct.

14 What I wanted to do is have everything in one
15 spot where I could look at it and see, you know, what
16 the ranking of the various impoundments were, the
17 years that they would be relined, you know, all of
18 this stuff. And this was a moment in time, too, where
19 I had comments and questions that hadn't been answered
20 yet. So I want -- this was my thinking out loud
21 essentially.

22 Q. Did any of the comments or questions also
23 come from anyone else besides you?

24 A. Yes. Part of it came from our construction

1 folks who we call our project management folks.

2 Q. Could you look at the row for Joliet 29 pond
3 three or ash impoundment three on this document?

4 A. Sure.

5 Q. Did you have a comment there?

6 A. My comment was: "How do we know the liner
7 condition is poor? Should testing be done to verify
8 need? What is the water quality after equalization?"

9 Q. And why were you raising those comments?

10 A. Well, one of the questions that I had, based
11 on knowing that it was a polishing pond, is whether or
12 not the water that was actually entering that
13 impoundment was going to have a lot of solids in it to
14 begin with, which I didn't believe it did. And so we
15 needed to do testing to see, as we discussed earlier,
16 with that total suspended solids, we needed to do
17 testing to see what kind of suspended solids were
18 actually exiting pond two to go into pond three.

19 And then the other thing that we struggled
20 with when we were looking at this is how do we know
21 the liner condition is poor, and, you know, if you
22 have a Poz-o-Pac liner, you could bore a hole in it to
23 see what the condition is, but that's risky. And so
24 we struggled with whether or not to do something like

1 that, and ended up deciding not to do that.

2 But this is us thinking about that, what kind
3 of testing should we do, or should we even do it
4 because we don't want to take a chance on rupturing
5 something that's already intact and whole there.

6 So this was our thinking out loud about it.

7 MS. FRANZETTI: I would move to admit
8 Exhibit 607 into evidence.

9 THE HEARING OFFICER: Ms. Bugel?

10 MS. BUGEL: No objection.

11 THE HEARING OFFICER: Thank you.

12 BY MS. FRANZETTI:

13 Q. Did Midwest Gen at some point start to
14 implement the plan for relining the ponds?

15 A. Yes.

16 THE HEARING OFFICER: Exhibit 607 is admitted
17 into evidence. Thank you.

18 (Whereupon, Respondent Exhibit
19 No. 607 was received into
20 evidence as of 1-29-18.)

21 THE WITNESS: Yes, we did.

22 BY MS. FRANZETTI:

23 Q. About when was that, do you recall?

24 A. Around 2007, somewhere in there, '8.

1 MS. FRANZETTI: Would you bring up the
2 timeline for 2007, 2008? Thank you.

3 BY MS. FRANZETTI:

4 Q. What was -- briefly, what was your
5 involvement in executing the plan to reline the ponds?

6 A. Well, my involvement was, first of all, we
7 had put together this plan, and so I had to socialize
8 that throughout our fleet and with our executives to
9 insure that the budget was there to do this, and
10 everyone was in agreement it was a good idea. And
11 then I had to -- I talked to Illinois EPA and asked
12 them about putting together a construction permit
13 for -- because my question to them was, if we're
14 actually improving a liner from Poz-o-Pac to an HDPE
15 liner, do we need to do a construction permit
16 application, and they said yes, because it isn't like
17 for life. So we put together a construction permit
18 application.

19 And we decided, because ponds one and two are
20 pretty much the same, we decided to submit it for both
21 impoundments at the same time.

22 Q. With respect to the level of effort that's
23 involved in relining a pond, how would you generally
24 describe that level of effort?

1 A. It's a huge level of effort because you have
2 to hire a consultant that will help you figure out
3 what type of liner to use and what the layers -- how
4 to engineer the liner so that it's appropriate for
5 your use. You have to have your engineering staff
6 on-site involved because they have to figure out if
7 there need to be any changes to the equipment coming
8 in to or going out of the impoundment. You have to
9 worry about whether or not, when the outage will be
10 that allows you to take this pond out of service. And
11 then you have to have a backup in case you're
12 operating during the period of time that this
13 impoundment is out of service because you can't put it
14 back into service without a liner.

15 Q. Are there any seasonal restrictions on it as
16 well?

17 A. Yes. The seasonal restrictions are generally
18 that it's -- as you know in the wintertime, soils
19 harden and so does ash, so the ash is a lot harder to
20 remove. So you wouldn't do work in the wintertime
21 that, generally speaking, unless you have a mild
22 winter, it's very difficult to do that kind of work in
23 the wintertime. So it's seasonal in that you're going
24 to do the ash removal during spring outage, for

1 example, would be the ideal time and the ash -- you
2 would remove the line -- the ash and then install a
3 liner during an outage.

4 And you have to hope it doesn't rain too
5 because if it rains, then you'll end up with water in
6 your impoundment that you have to wait to dry out
7 before you could do anything.

8 Q. Do you recall that you started with Joliet
9 29, the reliner project?

10 A. Yes. I believe we did number one and then
11 number two.

12 Q. I'm going to refer you to Exhibit 608 in your
13 binder.

14 A. Okay.

15 Q. Do you recognize this document?

16 A. Yes, I do.

17 Q. What is it?

18 A. This is our application for construction
19 approval for ash impoundments 1 and 2.

20 Q. At Joliet 29?

21 A. At Joliet 29.

22 Q. And you were involved in submitting this
23 application for the liner relining project for ponds
24 one and two at Joliet 29, correct?

1 A. Correct.

2 MS. FRANZETTI: I would move to admit
3 Exhibit 608.

4 THE HEARING OFFICER: Ms. Bugel?

5 MS. BUGEL: No objection.

6 THE HEARING OFFICER: Thank you, Ms. Bugel.
7 608 is admitted.

8 (Whereupon, Respondent Exhibit
9 No. 608 was received into
10 evidence as of 1-29-18.)

11 BY MS. FRANZETTI:

12 Q. Ms. Race, please turn to Exhibit 609 in your
13 binder.

14 A. Okay.

15 Q. This appears to be a permit dated July 20,
16 2007, Subject: Midwest Generation Joliet 29, Liner
17 Replacement for Ash Ponds 1 and 2. Do you recognize
18 the document?

19 A. Yes, I do.

20 Q. What is it?

21 A. This is our permit that we received so that
22 we could do the construction based upon the design
23 that we submitted in our application.

24 MS. FRANZETTI: I would move to admit

1 Exhibit 609 into evidence.

2 THE HEARING OFFICER: Ms. Bugel?

3 MS. BUGEL: No objection.

4 THE HEARING OFFICER: Thank you. 609 is
5 admitted.

6 (Whereupon, Respondent Exhibit
7 No. 609 was received into
8 evidence as of 1-29-18.)

9 MS. FRANZETTI: Pursuant to stipulation 6
10 and 7, in 2007, Midwest Gen relined pond one with a 60
11 mil HDPE liner; and stipulation seven, in 2008 Midwest
12 Gen relined pond two with a 60 mil HDPE liner.

13 BY MS. FRANZETTI:

14 Q. I'm going to ask you to look at Exhibit 610
15 in your binder.

16 So after these two ponds were relined, with
17 respect to Exhibit 610, what information does this
18 document contain?

19 A. This is the construction record that shows
20 what occurred. It's basically like the history
21 document of what occurs during this -- the ash
22 impoundments one and two from the perspective of our
23 consultant on the job, natural resource technology.

24 Q. Does this contain the information showing how

1 the liners were actually installed for ponds one and
2 two?

3 A. Yes, it does.

4 Q. Would some people refer to that information
5 as as-built information?

6 A. Yes, you can call it that.

7 MS. FRANZETTI: I would move to admit
8 Exhibit 610.

9 MS. BUGEL: We have one concern about this
10 exhibit, and if you flip to the second to last page
11 and last page, the Bates numbering, you see it go from
12 49505 and then there is the plastic pocket which
13 appears to contain 49507. So we're concerned that
14 this could be missing Bates page 49506.

15 MS. NIJMAN: It's a blank page.

16 MS. FRANZETTI: Do you want to go off the
17 record?

18 THE HEARING OFFICER: Let's go off the record
19 for a minute. Thank you.

20 (Whereupon, a discussion was had
21 off the record.)

22 THE HEARING OFFICER: We are back on the
23 record.

24 We were discussing Midwest Exhibit 610, and

1 Ms. Bugel had a concern. If you turn to Bates
2 Stamp 49505, it's missing Bates Stamp 49506. We took
3 a look at it off the record, and basically it's a page
4 with a black box and it just says "Sheet" on it. So
5 it's blank. It's not included in the exhibits. And
6 it goes right to the map that details the section of
7 the ash impoundment.

8 So we have 49505. We're missing 49506. I
9 just told you what that was.

10 Ms. Bugel, any objection if we just stated
11 that on the record and so be it?

12 MS. BUGEL: No objection.

13 THE COURT: Thank you. The record will so
14 note, so will the Board. Thank you.

15 Exhibit 610 is admitted.

16 (Whereupon, Respondent Exhibit
17 No. 610 was received into
18 evidence as of 1-29-18.)

19 BY MS. FRANZETTI:

20 Q. Ms. Race, you previously testified that when
21 Midwest Gen began relining the ponds under this
22 program, it found the Poz-o-Pac liners to be in good
23 condition in the ponds. Do you recall that?

24 A. Yes, I do.

1 Q. My question is: In that prior testimony in
2 October, were you referring to all of the ponds that
3 had the Poz-o-Pac liner or just some of them?

4 A. All of the ponds.

5 Q. Referring you in Exhibit 610 to page that
6 ends in Bates number 49458 and also 59.

7 A. Okay.

8 Q. On these two pages of the construction
9 documents for the pond one and two new liners, what
10 type of information is presented?

11 A. This is a certificate of acceptance of
12 subgrade surface preparation for geomembrane
13 installation.

14 So it's essentially saying that the surface
15 has been prepared properly and is ready for
16 installation of the HDPE.

17 Q. Another way to say that is that this surface
18 was suitable for the installation of the new liner?

19 A. Correct.

20 Q. I'm going to ask you to turn to 49461 and
21 also let's take 62, the next page, Page 62, at the
22 same time. These are, respectively, a November 17,
23 2008, and a July 10, 2008, letters with respect to,
24 respectively, ash pond one and ash pond two from

1 Brian McGowan, Clean Air & Water Systems, LLC. Can
2 you tell us what type of information is in these two
3 documents?

4 A. These are certifications stating that the
5 HDPE was installed in accordance with its design.

6 Q. So they were built the way they were designed
7 in the design documents, correct?

8 A. Yes.

9 Q. Let's go to Page 49471. This appears to be a
10 letter to Brieser Construction Company, B-r-i-e-s-e-r.

11 A. It's Brieser, just so you know.

12 Q. Thank you.

13 From Brieser Construction Company to Leak
14 Location Services, Inc., dated October 23, 2008. Do
15 you know what type of information is included in this
16 portion of the construction documents?

17 A. Yes. This is a company that checks for leaks
18 after installation of the HDPE liner.

19 Q. Are we talking about pond one here in terms
20 of the leak location survey presented here?

21 A. Let me see. Yes.

22 Q. That was the first one relined, correct?

23 A. Yes.

24 Q. What did the leak location survey find?

1 A. That there were no leaks.

2 Q. And this is for the new liner, correct?

3 A. Correct.

4 Q. Turning to Page 49474, this is also from
5 Leak Location Services to Brieser Construction Company
6 dated -- this is dated, however, June 2, 2008. What
7 type of information is being presented in this
8 document?

9 A. This is also a Leak Locations survey, but
10 it's for ash impoundment two and there was a leak
11 found, but it was before ash was put into the
12 impoundment.

13 Q. And what was done about the leak that was
14 found?

15 A. It was fixed.

16 Q. Turning to Bates Number 49493 of this
17 document, does that contain any information --

18 A. 49493?

19 Q. Yes.

20 A. Hang on.

21 Q. -- confirming that the leak was fixed?

22 A. Yes, it does confirm that the leak was fixed
23 on ash impoundment two.

24 Q. And which part of this page of the document

1 are you referring to to confirm that?

2 A. Where it says 5-23, the date, leak repairs.
3 I arrived on-site around 9:00. Oh, it says -- just
4 skipping down, it says "Clean Air & Water placed a
5 patch on each location."

6 Q. So was there, in fact, more than one location
7 that had to be patched?

8 A. Yes.

9 Q. How many were there?

10 A. Two.

11 Q. And both of them were fixed?

12 A. Yes, they were.

13 Q. Now, stepping away from that exhibit, I want
14 to ask you about, in December 2008, do you recall
15 hearing about -- in the press -- about an ash pond
16 failure?

17 A. Yes.

18 Q. What do you recall?

19 A. I recall that TVA had a large ash impoundment
20 dam failure at Kingston, and it was pretty devastating
21 that their -- they had a dam that physically ruptured
22 and released fly ash material, you know, to a great
23 area.

24 Q. How did the characteristics that you reviewed

1 on the TVA ash pond incident, how did that ash pond
2 compare to the Midwest Gen ash ponds?

3 MS. BUGEL: I'm going to object to this
4 question as being -- first of all, you know, the
5 witness doesn't have all the information about the TVA
6 pond failure; she's not here as an expert to opine
7 about ash ponds generally.

8 THE HEARING OFFICER: I'm going to sustain
9 your objection.

10 MS. FRANZETTI: Mr. Hearing Officer, may I
11 simply inquire as to differences in the size, general
12 size, of the Midwest Gen ash ponds versus the TVA ash
13 pond, just something that was reported?

14 THE HEARING OFFICER: Yeah, very briefly.

15 MS. FRANZETTI: Yes.

16 THE HEARING OFFICER: But the question before
17 was a little involved.

18 So you may.

19 MS. FRANZETTI: Okay.

20 BY MS. FRANZETTI:

21 Q. Ms. Race, can you please describe the extent
22 to which there was a difference between size of the
23 TVA ash pond that failed and the Midwest Gen ash ponds
24 that are at issue in this case?

1 A. Sure. The Midwest Generation ash
2 impoundments are very small in comparison to the TVA
3 ash impoundment.

4 Q. Um --

5 A. The TVA ash impoundment probably wasn't
6 considered an impoundment that you would actually
7 remove the ash from regularly for beneficial use. It
8 was more of like a --

9 MS. BUGEL: I'm going to object, Hearing
10 Officer. We just said it was just about the size.

11 THE COURT: Yes. I totally agree.
12 Sustained.

13 BY MS. FRANZETTI:

14 Q. I would like to ask one question on the
15 dredging. Did the news reports identify whether TVA
16 had a program of dredging ash from this pond?

17 MS. BUGEL: Objection. This is what we just
18 said.

19 THE HEARING OFFICER: If she can answer, she
20 may. Overruled.

21 THE WITNESS: It was basically a landfill.
22 It was a final resting place for ash.

23 BY MS. FRANZETTI:

24 Q. Do the Midwest Gen ponds have any dikes like

1 the TVA pond dike that failed?

2 MS. BUGEL: Objection, Hearing Officer. We
3 just said we weren't going to go beyond size and now
4 we're going beyond size.

5 THE HEARING OFFICER: Could you read the
6 question back, please.

7 (Whereupon, the record was read as
8 requested.)

9 THE HEARING OFFICER: I agree. Sustained.

10 BY MS. FRANZETTI:

11 Q. Are there any dikes in the Midwest Gen ponds?

12 A. There are no dikes in the Midwest Gen ash
13 impoundments.

14 Q. Now, after the reported December 20, 2008,
15 TVA ash pond failure, was that about when the IEPA
16 contacted Midwest Gen about its ash ponds?

17 MS. BUGEL: Hearing Officer, I have to object
18 to even referencing TVA in the question. We're still
19 inserting TVA into the record on questions that have
20 nothing to do with TVA.

21 THE HEARING OFFICER: Overruled.

22 You can answer if you're able.

23 THE WITNESS: I was contacted by Jamie Rabins
24 of the Illinois EPA in January because he said that,

1 due to TVA, USEPA was interested in whether or not
2 there were any other dammed-out impoundments anywhere
3 in the state that could fail.

4 And so they were doing a survey of all of the
5 impoundments in the state of Illinois and trying to
6 get a handle on whether there were dams, what the
7 risks were around them.

8 BY MS. FRANZETTI:

9 Q. So with respect to the content from the
10 Illinois EPA, did that include not just ash ponds that
11 had dams, but also all ash ponds in the state?

12 A. As they -- I know that Illinois EPA was
13 looking at all ash impoundments in the state.

14 Q. What did Illinois EPA want Midwest General to
15 do concerning an evaluation of its ash ponds?

16 A. Well, over a period of time which stretched
17 from 2009 all the way to probably 2010, Midwest
18 Generation and Illinois EPA, primarily me and my boss
19 and Bill Buscher and Lynn Dunaway and Rick Cobb, had a
20 lot of discussions about what information they needed
21 to do, how to develop information that would allow
22 them to assess risk, because they were at a point
23 where they needed to also assess risk of impoundments.

24 So they wanted to know things like are there

1 portable wells nearby, are they downgradient from you.
2 They wanted to know things like -- some of the things
3 that we had actually looked at. What were the soil
4 constituents like, and what is your ash like, and
5 things along those lines.

6 And so they had also requested for us to put
7 in wells exactly right by the ash impoundments
8 upgradient and downgradient so that we could establish
9 whether or not the ash impoundments could be leaking.

10 Q. What was Midwest Gen's initial reaction to
11 the IEPA's request?

12 A. Well, we disagreed for a couple of different
13 reasons. We agreed and went ahead and provided them
14 with the portable well information in 2009, other
15 information that they asked for.

16 But we didn't agree that installing the well,
17 monitoring wells, would establish whether or not those
18 ponds were leaking.

19 Q. And briefly why was that?

20 A. We believe that we're -- these plants are in
21 old industrial areas; we're surrounded by super fun
22 sites, at least one; and we know that we have
23 environmental land use control agreements in two of
24 the plants.

1 So we were looking at it as there's probably
2 some historical contamination that will show up. And
3 it won't establish whether or not upgradient of the
4 impoundment you have better values or downgradient you
5 have better values. We didn't think it would
6 establish anything about the impoundments because we
7 didn't believe they were leaking.

8 Q. So after that initial reaction, did
9 ultimately Midwest Gen go along with IEPA's request?

10 A. Yes, we did.

11 Q. Was the plan prepared for doing the work IEPA
12 requested?

13 A. Yes. They requested a Hydrogeologic
14 Assessment Plan which would spell out exactly what we
15 were going to do. They agreed to it. And then we
16 proceeded to install the wells and put together our
17 first quarterly sampling. And then we did a report
18 after that first sample.

19 Q. I'm going to ask you to flip to -- it's going
20 to be a couple exhibits ahead; we'll go out of order a
21 little bit -- Exhibits 613.

22 A. Okay.

23 MS. FRANZETTI: In the interest of time,
24 Mr. Hearing Officer and Counsel, what I would like to

1 do is, if you look in your books, 613, 14, 15, and 16
2 are the Hydrogeologic Assessment Plans for each of the
3 four stations. I would like to, therefore, have her
4 just look at all four and then ask a compound question
5 of really -- I'll take each one, but to go quickly,
6 that each of these are the respective Hydrogeologic
7 Assessment Plans.

8 Is that okay?

9 THE HEARING OFFICER: Ms. Bugel?

10 MS. BUGEL: I have no objection to what
11 Ms. Franzetti just proposed, but obviously if there
12 are still objectionable questions that come up, I'm
13 still going to object.

14 THE HEARING OFFICER: I totally agree. You
15 may proceed.

16 BY MS. FRANZETTI:

17 Q. Ms. Race, would you look at the documents
18 that are marked 613, 614, 615, and 616, and my
19 question is going to be: Are those four documents the
20 Hydrogeologic Assessment Plans for Joliet 29,
21 Powerton, Waukegan, and Will County, respectively?

22 A. Yes, they are.

23 MS. FRANZETTI: I would move to admit all
24 four documents, Exhibit 613, 614, 615, and 616.

1 MS. BUGEL: No objection.

2 THE HEARING OFFICER: Thank you.

3 Midwest Exhibit 613, 614, 615, and 616 are
4 admitted. Thank you.

5 (Whereupon, Respondent Exhibit
6 Nos. 613-616 were received into
7 evidence as of 1-29-18.)

8 BY MS. FRANZETTI:

9 Q. Ms. Race, did the basic components of each of
10 these four Hydrogeologic Assessment Plans differ in
11 terms of the type of work that was going to be
12 performed?

13 A. No.

14 Q. What were the basic components of each of
15 these four plans?

16 A. Well, the basic components are putting in a
17 well monitoring system and the wells that were -- we
18 already had talked to IEPA. They specified where they
19 wanted to see wells for the most part. So we had
20 already -- in our drawings, we have that information
21 in there for them.

22 It also -- we needed to document portable
23 well use in the area, which we had actually already
24 submitted at this point, but then it codified that

1 they wanted us to submit it, so we essentially
2 submitted it again.

3 Evaluation of contamination and migration
4 potential. So installing the monitoring wells and
5 groundwater sampling and analytical testing. And then
6 characterization of the subsurface hydrogeology
7 through topographic and water elevation surveys and
8 the hydraulic testing of certain wells.

9 So very similar to the program that we had
10 put together with the exception of the monitoring
11 wells.

12 MS. FRANZETTI: Mr. Hearing Officer,
13 Exhibit 617 through 620 are the respective IEPA
14 approvals of each of these plans. I would like to
15 approach the identification and introduction of these
16 exhibits in the same way that I did the plans, if that
17 is acceptable to counsel for Complainants.

18 MS. BUGEL: That is acceptable.

19 THE HEARING OFFICER: Okay. Thank you.

20 Yes. Proceed.

21 BY MS. FRANZETTI:

22 Q. Ms. Race, would you please take a moment to
23 look the Exhibit 617, which appears to be Illinois
24 EPA's approval for Joliet 29; Exhibit 618, Powerton

1 approval by IEPA; Exhibit 619, Waukegan approval by
2 IEPA; and 620, Will County approval by IEPA, and
3 please confirm that I have accurately described each
4 of those exhibits?

5 A. Yes, you have.

6 MS. FRANZETTI: I would move to admit
7 Exhibit 617 through 620.

8 THE HEARING OFFICER: Ms. Bugel?

9 MS. BUGEL: No objection.

10 THE HEARING OFFICER: Thank you. Respondent
11 Exhibits 617 through 620 are admitted.

12 (Whereupon, Respondent Exhibit
13 Nos. 617-620 were received into
14 evidence as of 1-29-18.)

15 BY MS. FRANZETTI:

16 Q. Ms. Race, I'm now going to ask you to refer
17 to Exhibit 621. It appears to be a July 15, 2009
18 letter from Midwest Generation to Illinois EPA,
19 specifically, Alan Keller, Manager of Permits section
20 in the Bureau of Water.

21 Have you seen this document before?

22 A. Yes, I have.

23 Q. And were you involved in its preparation?

24 A. Yes, I was.

1 Q. What is the information that is being
2 presented to Illinois EPA by Midwest Gen in this
3 July 15th, 2009, letter?

4 A. Well, in this letter, what we're stating is
5 that we have performed the work necessary to evaluate
6 the ash impoundments already; that we object and -- we
7 object to the EPA -- IEPA's authority to request us to
8 put in the wells, but that, nonetheless, we would do
9 that.

10 Q. So are you providing the results of the
11 Hydrogeologic Assessment Plans that were approved by
12 Illinois EPA in this letter and its attachment?

13 A. Yes, I am -- we are.

14 Q. Would you turn to the top of Page, ends in
15 Bates number, 296?

16 A. Okay.

17 Q. And I don't mean "top" literally, it's really
18 more the bottom, but section C that is Joliet 29
19 station. And then it says ash pond one, ash pond two,
20 ash pond three.

21 What did you tell IEPA about the liners in
22 ponds one, two, and three at Joliet 29 in this part of
23 the document?

24 A. Well, this part of the document explains a

1 little bit of the history of the Joliet 29 ash
2 impoundments. And Illinois EPA probably didn't have
3 some of these files at the ready at their fingertips
4 because the design for the Poz-o-Pack pavement was
5 submitted to them in the late '70s. So we are
6 describing here that the 12 inches of Poz-o-Pac there
7 in the previous incarnation of the impoundment was
8 lined with 12 inches of Poz-o-Pac pavement that was
9 constructed in six-inch lifts.

10 And what that means is a lift is a layer.
11 And so there would be a six-inch layer followed by
12 another six-inch layer of Poz-o-Pac, which is
13 essentially concrete material.

14 Q. And what did you tell IEPA about the relining
15 of ponds one and two at least?

16 A. Well, we told them that they had been
17 performed in the previous year and that -- well,
18 obviously they had seen the design for it, the people
19 that are looking at this, because they had approved
20 the construction permit to be issued.

21 Q. They were just confirming it was completed?

22 A. Correct.

23 Q. Turning to the top of the next page, what did
24 you tell IEPA about the geology at Joliet 29 or under

1 Joliet 29?

2 A. Well, that the geology included 5 to 30 feet
3 of fine sandy loam underlain by Silurian,
4 S-i-l-u-r-i-a-n, dolemite, d-o-l-e-m-i-t-e, and then
5 Maquoketa shale -- that's M-a-q-u-o-k-e-t-a shale --
6 below ground surface.

7 So the shale is basically a -- it's like a --
8 it says here it's a confining layer. I'm trying to
9 think of a nicer way of putting it. But basically it
10 doesn't allow any aquifer water to travel to a lower
11 aquifer than that.

12 Q. Why is that important?

13 A. Because it just characterizes the geology of
14 the area.

15 Q. So does the Ma --

16 A. Maquoketa.

17 Q. Thank you -- shale effectively separate
18 what's an upper groundwater aquifer from a lower one?

19 A. Yes, it does.

20 MS. BUGEL: I'm going to object to these
21 questions. Again, this is getting way into
22 hydrogeology, and the witness is not here as a
23 hydrogeology expert. These are opinions about whether
24 aquifers are connected or not.

1 MS. FRANZETTI: I'm going to move on anyway.

2 THE HEARING OFFICER: Okay. Thank you.

3 Sustained.

4 BY MS. FRANZETTI:

5 Q. What did you tell IEPA about the portable
6 well survey it requested you conduct?

7 A. Well, just in the case of Joliet or in others
8 as well?

9 Q. Just we're staying with Joliet 29.

10 A. That there were no portable wells that were
11 downgradient of the area of the ash impoundments.

12 Q. Were there any wells that were present but
13 were screened well below the upper aquifer?

14 A. Yes, there were. The station has some wells,
15 deep wells, that it uses that are weighed into the
16 St. Peter sandstone I believe.

17 Q. About how deep, roughly, is that?

18 A. I think around 2,000 feet below ground
19 surface, 2200, something like that.

20 Q. And were those the only two wells found
21 downgradient of the ash ponds area?

22 A. Yes.

23 Q. And both of them belong to Midwest Gen?

24 A. Correct.

1 Q. Used for the station's purposes?

2 A. Correct.

3 Q. Referring to page ending in Bates number 299,
4 does this part of the document provide the conclusions
5 Midwest Gen reached based on the preliminary
6 hydrogeological assessment?

7 A. Yes, it does.

8 Q. What was your understanding about what those
9 conclusions were?

10 A. Well, the conclusions were that the materials
11 were in the ash impoundments were being managed
12 properly. They were lined with impermeable materials,
13 including concrete, HDPE, and Poz-o-Pac to prevent the
14 release of waste water to the environment.

15 And also this report says that any existing
16 water wells that were identified as part of the
17 portable well survey conducted within 2500 feet
18 radius, which was what IEPA wanted us to do, were not
19 downgradient of the ash impoundments.

20 As a matter of fact, there were a couple
21 of -- a couple of places where portable well water
22 couldn't even be used because there are already
23 environmental land use controls there.

24 Q. And did those conclusions apply to all of the

1 stations that are discussed in this document?

2 A. Yes.

3 MS. FRANZETTI: Mr. Hearing Officer, I would
4 move to admit Exhibit 621 into evidence.

5 MS. BUGEL: No objection.

6 THE COURT: Thank you.

7 Respondent's 621, Exhibit 621 is admitted.

8 (Whereupon, Respondent Exhibit
9 No. 621 was received into
10 evidence as of 1-29-18.)

11 MS. FRANZETTI: Mr. Hearing Officer, I am
12 looking it the time. This might be a good breaking
13 point. I'm going to move on to a different subject
14 area.

15 THE HEARING OFFICER: Ms. Bugel?

16 MS. BUGEL: That's fine.

17 THE HEARING OFFICER: Let's meet back here
18 tomorrow at 9:00 a.m. And thank you. And everybody
19 stay healthy.

20 (The above-entitled cause was
21 adjourned to Tuesday, January 30,
22 2018, at 9:00 a.m.)

23

24

1 STATE OF ILLINOIS)
) SS:
2 COUNTY OF C O O K)

3
4 I, PAMELA L. COSENTINO, being first duly
5 sworn on oath says that she is a court reporter doing
6 business in the City of Chicago; that she reported in
7 shorthand the proceedings given at the taking of said
8 trial and that the foregoing is a true and correct
9 transcript of her shorthand notes so taken as
10 aforesaid and contains all the proceedings given at
11 said trial.

12 IN TESTIMONY WHEREOF: I have hereunto set my
13 verified digital signature this 5th day of February,
14 2018.

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PAMELA L. COSENTINO, CSR

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