Page 1 BEFORE THE ILLINOIS POLLUTION CONTROL BOARD SIERRA CLUB, NATURAL RESOURCES DEFENSE COUNCIL, PRAIRIE RIVERS NETWORK, and ENVIRONMENTAL LAW & POLICY ) No. 15-189 CENTER, ) Third-Party Petitioners, ) NPDES Permit ) Appeal-Water VS. ILLINOIS ENVIRONMENTAL PROTECTION AGENCY and MIDWEST GENERATION, LLC, Respondents. NOTICE OF HEARING A Hearing in the above-captioned matter is scheduled and will continue as necessary on the following date, time and place: October 5th, 2016 9:00 James R. Thompson Center Room 9-034 100 West Randolph Street Chicago, IL 60601 IT IS SO ORDERED.

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1	PRESENT:	
2		
3		MR. BRADLEY P. HALLORAN, Hearing Officer.
4		
5		ENVIRONMENTAL LAW & POLICY CENTER, by MS. JESSICA DEXTER 35 East Wacker
6		Suite 1600
7		Chicago, IL 60601
8		appeared on behalf of the Petitioners.
9		NIJMAN, FRANZETTI, LLP, by
10		MS. SUSAN M. FRANZETTI and
11		MR. VINCENT R. ANGERMEIER 10 South LaSalle Street Suite 3600
12		Chicago, IL 60603
13		appeared on behalf of the Respondents, Midwest Generation, LLC.
14		
15		OFFICE OF THE ATTORNEY GENERAL OF THE STATE OF ILLINOIS, by
16		MR. ROBERT PETTI and
17		MR. ANGAD NAGRA
18		69 West Washington Street 18th Floor
19		Chicago, IL 60602
20		appeared on behalf of the Respondents Illinois Environmental Protection
21		Agency.
22		
23		
24		

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Page 3 1 HEARING OFFICER HALLORAN: Good morning. My name 2 is Brad Halloran. I'm a Hearing Officer with the 3 Illinois Pollution Control Board. I'm also assigned to this matter entitled Sierra Club Natural Resources 4 5 Defense Council, Prairie Rivers Network Environmental 6 Law and Policy Center are the petitioners, versus 7 Illinois Environmental Protection Agency and Midwest 8 Generation, LLC, Respondents. It's docketed as PCB 15-189. It's a 9 10 third-party NPDES permit appeal. 11 Today is October 5th, 2016. It's 12 approximately 9:20. This case was noticed up properly 13 according to the Board Rules, and will be conducted pursuant to Sections 101 and 105, again, of the Board's 14 procedural Rules. 15 16 The parties had previously filed cross-17 motions for Summary Judgment which the Board granted in 18 part and denied in part. 19 Reading from the Board's Order, this 20 hearing is confined to the two remaining issues left 2.1 unresolved by the Board. And they are, first, did the 22 permit as issued comply with the applicable Ford 23 regulations on alternative thermal effluent 24 limitations; and second, do the permit's conditions

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Page 4
1
     require that the facility's cooling water intake
2
     structure use the interim Best Technology Available.
3
                  My job here is to rule on any evidentiary
4
     matters and hopefully make a clear record so the Board
5
     will take the transcript, the record, and the post-
     hearing Briefs and make their decision.
6
7
     With that said, I'm pleased to announce we have
8
     Chairman Keenan with us, and we have attorney/ advisor
9
     Jason James, technical unit, Anand Rao, and Lisa Liu
10
     with us, and they may or may not ask questions of the
11
     witnesses as we proceed.
12
                  With that said, Miss Dexter, would you
     like to introduce yourself?
13
          MS. DEXTER: Yes. My name is Jessica Dexter,
14
15
     D-e-x-t-e-r. And I am counsel for petitioners in this
16
              Anybody else you want to introduce at the
17
     table?
18
          MS. DEXTER: I think I will be the only one
19
     speaking on the transcript.
20
          HEARING OFFICER HALLORAN: Perfect. Mr. Petti?
2.1
          MR. PETTI: I'm Robert Petti, Assistant Attorney
22
     General representing IEPA.
23
          MR. NAGRA: Angad Nagra, also an Assistant
24
     Attorney General representing IEPA.
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Page 5
1
         MS. TERANOVA: I am Sarah Taranova, counsel for
2
    the Illinois EPA.
3
         MS. FRANZETTI: I'm Susan Franzetti. I am counsel
4
     for respondent Midwest Generation. And I would like to
5
    introduce as well Mr. Fred Veenbaas, who is the Senior
6
    Environment Specialist for Midwest Generation and
7
    representing the company today. He is not going to be
8
    a testifying witness.
          MR. ANGERMEIER: Vince Angermeier representing
9
    Midwest Generation.
10
          HEARING OFFICER HALLORAN: I want to know for the
11
12
    record, there are no members of the general public here
13
    as of yet. Miss Dexter, if you plan to make an
14
    opening?
15
         MS. DEXTER: I have not planned to. I'm ready to
16
    just --
17
          HEARING OFFICER HALLORAN: Okay. Mr. Petti?
18
         MR. PETTI:
                      No.
         HEARING OFFICER HALLORAN: Miss Franzetti?
19
20
         MS. FRANZETTI: No.
                               Ready to proceed.
2.1
         HEARING OFFICER HALLORAN: All right. Proceed
22
    with your case.
23
         MS. DEXTER: I would like to begin by calling the
24
     first witness, Jaime Rabins.
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Page 6
 1
          HEARING OFFICER HALLORAN: Please raise your right
 2
     hand and the court reporter will swear you in.
 3
          THE COURT REPORTER: Raise your right hand please.
 4
                          (The oath was thereupon duly
 5
                           administered to the witness
 6
                           by the Notary.)
 7
                       JATME
                                    RABINS,
 8
     Called as a witness by the Petitioner herein, having
 9
     been first duly sworn, was examined and testified as
     follows:
10
                  DIRECT EXAMINATION
11
12
                  By: Ms. Dexter
13
          Q
               Can you please state your name for the
14
     record?
15
               Jaime Rabins, J-a-i-m-e R-a-b-i-n-s.
          Α
16
               And do you work for Illinois EPA?
          0
17
          Α
               I do.
18
               And what is your title in Illinois EPA?
          Q
19
               I'm an Environmental Protection Engineer.
          Α
20
               How long have you worked for IEPA?
          Q
2.1
          Α
               Ten and-a-half years.
22
          Q
               Did you participate in developing or drafting
23
     the 2015 NPDES permit for the Midwest Generation
24
     Waukegan station?
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	Page 7
1	A Yes.
2	Q And I'm going to start by getting some
3	documents out and into circulation here.
4	Is the document which is labeled in the
5	administrative record IEPA Exhibit No. 70, beginning on
6	Page 685 of the administrative records that I'm handing
7	you right now, is that the final permit issued on
8	March 25th, 2015?
9	A Yes, it is.
10	Q And can you confirm that the document titled
11	IEPA Exhibit No. 67 in the administrative record that
12	begins on Page 656 is the Responsiveness Summary that
13	IEPA issued along with the permit?
14	A It is.
15	Q Thank you. Can you please explain what a
16	Responsiveness Summary is?
17	A We respond to questions that were raised
18	during a public hearing in the comment period regarding
19	the public notice permit.
20	Q I next call your attention to the thermal
21	variance that's at issue in this proceeding which is
22	labeled IEPA Exhibit No. 1. And begins on Page 1 of
23	the administrative record. Can you confirm that this

is the thermal variance granted by the Board in 1978?

24

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Page 8 1 It is. Α 2 All right. And can you identify who the 0 3 thermal variance was granted to at that time? 4 Let me help you out. Was Commonwealth 5 Edison the owner and operator at the time that that 6 thermal variance was granted? Α Yes, I believe they were. 8 And if you can, can you state what the terms Q 9 of the variance are; in other words, what limit on 10 thermal discharges does the variance establish? It's 5,301 million BTUs per hour, and 11 758,000 gallons per minute. 12 13 0 Well done doing the math on the fly there. 14 And is there a thermal aspect, other than 15 the limitation on the generation, is there a 16 temperature limit that the variance establishes for the 17 effluence that is discharged under the variance? Is it 18 your understanding that there is no temperature limit 19 established for the effluent limitations within the 20 thermal variance? MS. FRANZETTI: Objection to form, because heat 2.1 22 rejection rate can be viewed that way. Is what you're 23 getting at numeric temperature limits? 24 THE WITNESS: Yes.

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Page 9
1
                       Let me try to rephrase.
         MS. DEXTER:
2
          HEARING OFFICER HALLORAN: And I guess for the
3
     future, a formality. I'm not sure whose witness this
4
         And I don't know if Midwest Generation has any
     is.
5
    witnesses. You didn't disclose any.
6
         MS. FRANZETTI:
                          No.
7
         HEARING OFFICER HALLORAN: So usually Mr. Petti
8
    would object. Just to try to make it clean. You know,
9
    it's his witness, basically. I know it's adverse
10
    but --
         MS. FRANZETTI: Okay. Well, then I have to
11
    address that for the record, Mr. Hearing Officer.
12
13
          HEARING OFFICER HALLORAN: Okay.
14
         MS. FRANZETTI: We are a party to this proceeding.
15
    We are one of the respondent. Therefore, we have full
16
    participation rights in this hearing.
17
         HEARING OFFICER HALLORAN: Right. But you didn't
18
    disclose -- you said you weren't going to call any
19
    witnesses.
20
         MS. FRANZETTI: I understand. But that doesn't
2.1
    mean that as a party to this proceeding, I can't object
22
    to what is a vaque or otherwise improper question.
23
          HEARING OFFICER HALLORAN:
                                     Well, if it's not your
24
    witness, you can't object. But I will allow it, just
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Page 10
1
     to make the record clear so the Board --
2
                  Mr. Petti disclosed his witnesses.
3
     disclosed nothing.
          MS. FRANZETTI: I understand that. But I'm not
4
5
     aware of any Board hearing rule including an
     affirmative --
6
7
          HEARING OFFICER HALLORAN: It's the way trials
     work. I mean it's not a rule making. But we can
8
9
     proceed. You may state your objection.
10
          MS. FRANZETTI: Again, in State Court or in
     Federal Court, I would be able to object.
11
12
          HEARING OFFICER HALLORAN: State Court or Federal
13
     Court, it's not your witness. You can't object.
14
          MS. FRANZETTI: I disagree with that
15
     representation of what state rules are at trials or any
16
     other hearing.
17
          HEARING OFFICER HALLORAN: So noted, but
18
     incorrect. You may proceed.
19
          MS. DEXTER:
                       Thank you.
2.0
     BY MS. FRANZETTI:
2.1
               Is it correct that there is no numeric
          Q
22
     temperature limitation on the discharge itself
23
     established by this thermal variance?
24
          Α
               Correct.
```

	Page 11
1	Q Do you happen to know when that alternative
2	thermal effluent limit was first incorporated into the
3	NPDES for Waukegan station?
4	A It's in the record. I don't recall off the
5	top of my head.
6	Q Is it your understanding that the alternative
7	thermal effluent limit has been incorporated into each
8	permit renewal since the variance was established in
9	1978?
10	A Correct.
11	Q Would I be correct in saying that the
12	administrative record contains no studies of thermal
13	discharges based on Midwest Generation's actual
14	operation experience of the Waukegan Station since the
15	previous permit was issued in the year 2000?
16	A Can you repeat that?
17	Q Yes. I will repeat it as verbatim as I can.
18	Would I be correct in saying that the
19	administrative record contains no studies of the
20	thermal discharges based on Midwest Generation's actual
21	operation experience of the Waukegan Station since the
22	previous permit was issued in the year 2000?
23	MS. FRANZETTI: I'll object to mischaracterization

24

of the record evidence.

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Page 12
1
                     I'll join.
          MR. PETTI:
          MS. DEXTER: I did not mischaracterize the record
2
3
     evidence.
4
          MS. FRANZETTI: Yes, you have, in that question.
5
          HEARING OFFICER HALLORAN: Try to rephrase, Miss
6
     Dexter.
     BY MS. DEXTER:
8
          Q
               Are there in the administrative record any
9
     studies showing the current extent of the impact of the
10
     thermal discharges on Lake Michigan between the year
11
     2000, when the permit was previously issued, and the
12
     year 2015 when the final permit at issue here was
13
     finalized?
14
          Α
               There were studies of Lake Michigan of the
15
     receiving water.
16
               Can you point to those in the record?
          0
17
          Α
               I don't have the records.
18
               So let me make sure that I'm clear.
          Q
19
                  The studies of the thermal discharges
20
     themselves, for example, you might evaluate the
2.1
     temperature, the volume, the location, the extent of
22
     those discharges. Are there any such studies in the
23
              I will even broaden my question.
                                                 Since the
     thermal variance was issued in 1978?
24
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	Page 13
1	A Has there you're saying has the discharge
2	been studied since 1978?
3	Q Are there studies in the administrative
4	record showing studying the thermal discharges that
5	might include attributes like the temperature, the
6	location, the extent?
7	A There were studies cited in the record
8	concerning lake Michigan about the condition of the
9	lake.
10	Q Right. But I'm asking, are there any studies
11	with the discharges themselves and the discharges'
12	impact on the the discharges' influence on lake
13	Michigan?
14	MS. FRANZETTI: I'm going to object to form. It's
15	been asked and answered.
16	You're having trouble with him disagreeing
17	with you about studies of the aquatic life in Lake
18	Michigan.
19	MS. DEXTER: Right.
20	MS. FRANZETTI: Not dealing with thermal discharge
21	effects. But that's what he's testified to.
22	MS. DEXTER: There are two components here that
23	I'm
24	HEARING OFFICER HALLORAN: Okay. Overruled.

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Page 14
1
     Please ask the question. The witness may answer.
2
          MS. DEXTER:
                       Thank you.
     BY MS. DEXTER:
3
4
               So there are two pieces -- I'm saying this to
          0
5
     explain, not to testify. But there are two pieces of
6
     the puzzle here.
                       There's the thermal discharges
7
     themselves, and there's the impact of those thermal
8
     discharges on aquatic life. And I'm specifically
9
     talking about the attributes of the thermal discharges
10
     themselves. Is it true that there are no studies in
11
     the record about those thermal discharges since the
     variance was issued in 1978?
12
               There is data going back to the original
13
          Α
14
              They have temperature data and flow data which
15
     is data about the thermal discharges to Lake Michigan.
16
               So there is raw data, but there's no analysis
17
     of that data and what kind of -- how much that changes
18
     the temperature in the receiving water and in what
19
     areas?
20
          MS. FRANZETTI:
                          Objection, form.
2.1
          MR. PETTI: Objection.
22
          HEARING OFFICER HALLORAN: Sustained.
23
     BY MS. DEXTER:
24
               What type of data are you talking about in
          Q
```

,	Page 15
1	terms of are you talking about discharge monitoring
2	reports data in the record?
3	A There is discharge monitoring reports for
4	this facility, yes.
5	Q Have those discharge monitoring reports been
6	analyzed in has that raw data that's in the record
7	been analyzed in any way to show the location or extent
8	of the influence on the receiving waters?
9	A No. There was a thermal plume study, though.
10	Q Was there a thermal plume study that was
11	conducted since the thermal variance was issued in
12	1978? Let me rephrase that.
13	Isn't it true that the thermal plume study
14	that is in the record was in support of the original
15	thermal variance in 1978?
16	A That is the study I'm aware of, yes.
17	Q Thank you. Is it true that Unit 6 at
18	Waukegan Station was retired in the time since the
19	variance was granted in 1978?
20	A Yes.
21	Q And how did that change the nature of the
22	discharge?
23	A By decreasing heat load associated with the
24	unit coming off-line.

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Page 16

Q Okay. I am going to hand you what is marked in the administrative record IEPA Exhibit No. 28 that begins on Page 239 of the administrative record.

This document is an email exchange between

I will say generally IEPA staff and representatives of

Midwest Generation?

A You handed me two emails. Which one are you talking about?

Q I'm talking about the conversation that is represented here. This is how this was presented in the administrative record. I'm really just trying to confirm what this document is.

We're looking at an email exchange from
Midwest Generation. For simplicity sake, let's look at
just the email that begins about halfway down on the
first page that is from Susan Franzetti to Deborah
Williams as an IEPA staff member. It's true that
Deborah Williams was at the time a staff member of
Illinois EPA?

A Correct.

2.1

Q And on Page 240 of the record, the second page of this document, it states that the heat rejection rate is 39 percent lower. Can you explain what the heat rejection rate is?

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	Page 17
1	A That's the quantity of heat per unit time.
2	Q And did retiring Unit 6 also reduce the
3	amount of flow discharged by the permitee?
4	A Yes. There was a quantity flow was
5	reduced.
6	Q So it says here water flow rate is 37 percent
7	lower. Is that a speed or an amount, in your
8	understanding?
9	A A rate is the volume per unit time.
10	Q Okay. I guess both.
11	Is there anything in the record analyzing
12	whether the velocity of the flow has changed?
13	A The velocity of what?
14	Q Of the flow as it is discharged?
15	A The velocity would decrease. It's probably
16	not discussed in the record, but the velocity would
17	decrease because the flow decreased.
18	Q Okay. And there's nothing in the record that
19	analyses the interaction between lake current and these
20	changed flow characteristics; is that correct?
21	A There were studies on the record. I don't
22	recall seeing that specific topic discussed.
23	Q I'm specifically asking whether there have
24	been any studies, since Unit 6 was retired, analyzing

```
Page 18
     how that flow change reacts with lake current?
1
2
               No, I don't recall seeing that specific
3
     study.
4
          0
               Thank you.
5
                  So this document that I'm about to hand
6
     out is -- it is within the IEPA hearing exhibit within
7
     the administrative record. I can get the number of
8
     that in just a moment before I get this into your
9
             So this document is one of those listed hearing
10
     exhibits that begins on page 983 of the record.
11
          MS. DEXTER: Do you want me to track down that
12
     number of the hearing exhibits, or do we think we
13
     have --
14
          HEARING OFFICER HALLORAN: That would be great.
                                                            Ι
15
     mean it's not marked on the top.
16
          MS. DEXTER: I can do it.
17
          HEARING OFFICER HALLORAN: Do you think this is a
18
     document within the exhibit?
19
          MS. DEXTER: Yes, it's a document within the
     exhibit, and I know that the exhibit in the IEPA index
20
2.1
     was --
22
          MR. PETTI: Petti. Just tell us the Bates number.
23
          MS. DEXTER: It's 983. So this is labeled as IEPA
24
     Exhibit No. 72 within the administrative record. And
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Page 19 1 this appears to be part of Exhibit No. 9 within that. 2 I think that's enough to track down this document. That's what I have. 3 HEARING OFFICER HALLORAN: I'm looking at Mr. Petti's. 4 5 MS. DEXTER: Yes. BY MS. DEXTER: 6 7 So within this letter from Midwest Q 8 Generation that's been identified, there is on page 9 988, I call your attention to the third paragraph on 10 page 988 where Midwest Generation admits that the 11 original 1971 variance -- or I'm sorry. Original 1971 12 study of the thermal plume, "Would not accurately 13 represent the current delineation of the thermal plume 14 from the outfall 001 discharge." 15 And to confirm a conversation that we had 16 a few minutes ago, there is nothing in the record that 17 does provide a current delineation of the thermal 18 plume, is there? 19 The thermal plume is in the record. we referenced the original Board Order which discusses 20 2.1 a thermal plume. 22 I don't believe that answers my question. Q 23 I'm going to try to walk through this. 24 So we know that there's that original

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Page 20 1 thermal plume study in the record; you just referenced 2 that? 3 Α Yes. 4 Here I just showed you language that Midwest 5 Generation submitted to IEPA stating that it did not believe that that thermal plume was accurate any 6 7 longer. And I'm asking, is there a more current 8 thermal plume study in the record? 9 MS. FRANZETTI: I'm going to object to form, 10 because you're misquoting the full statement in that document which is prefaced with, "Due to the fact that 11 those studies were performed when all four units were 12 operating at the Waukegan Station and only two units 13 are still operating today, the results of those studies 14 15 would not accurately represent the current delineation 16 of the thermal plume from Outfall 001 discharge." 17 MS. DEXTER: Thank you, Susan. I think that more 18 clearly makes my point. 19 MS. FRANZETTI: I disagree, counsel, that it makes 20 your point. 2.1 MS. DEXTER: We can disagree. The record is what 22 it is. 23 24 BY MS. DEXTER:

Page 21

	1 dgC 21
1	Q Had there been a more current thermal plume
2	study conducted and included in the administrative
3	record?
4	A No. The situation appears to have changed
5	for the better; less heat, less flow.
6	Q I'm going to change gears a little bit to
7	that second part of the inquiry that we discussed. Is
8	it true that the record also contains no studies of
9	aquatic life based on Midwest Generation's actual
10	operations experience of the Waukegan Station since the
11	previous permit was issued in 2000?
12	And if you'd like me to stay clarified
13	here, I am talking about an actual study of the
14	receiving waters.
15	A There were studies of Lake Michigan
16	referenced in the record, and we provided responses in
17	the Responsiveness Summary about changes in the lake.
18	Q Would I be correct in stating that there are
19	no site-specific studies in the record that describe
20	the aquatic life in the vicinity of the receiving
21	waters?
22	MS. FRANZETTI: Objection to form, site specific.
23	I'm not sure how you're defining what that includes and
24	what it excludes.

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Page 22 1 MS. DEXTER: I will go back to my previous 2 question. 3 BY MS. DEXTER: 4 I think the key part of the question here, 0 5 the question that I'm asking, and we'll get to the part 6 about the general Lake Michigan studies, but the key 7 part about what I'm asking is, the studies based on 8 Midwest Generation's actual operation experience of the 9 Waukegan Station since the previous permit was issued 10 in 2000. MR. PETTI: Same objection. I don't know what 11 you're asking. I don't know what operating experience. 12 HEARING OFFICER HALLORAN: Overruled. 13 If the 14 witness can answer, you may do so. 15 THE WITNESS: I don't know what she's asking. BY MS. DEXTER: 16 17 I am going to read a segment of the Board's 18 Rule at 35 Illinois Administrative Code 19 Section 106.1180. This is subsection B. 20 "Any application for renewal should include sufficient 2.1 information for the agency to compare the nature of the 22 permitee's thermal discharge and balanced indigenous 23 population of shellfish, fish and wildlife at the time 24 the Board granted the alternative thermal effluent

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Page 23 1 limitations, and the current nature of the petitioner's 2 thermal discharge, and the balanced indigenous 3 population of shellfish, fish and wildlife. 4 "The permitee should be prepared to 5 support this comparison with documentation based on the 6 discharge's actual operation experience during the 7 previous permit term." 8 My question is very precisely tailored to 9 that requirement, and I'm asking whether there are 10 aquatic life studies that are based on the discharge's 11 actual operation experience during the previous permit 12 term? 13 MS. FRANZETTI: Objection to form. It's a misstatement of what the regulation states as --14 15 HEARING OFFICER HALLORAN: You know, I'm going to 16 overrule it and let you answer if you are able. 17 Proceed, Mr. Witness. 18 THE WITNESS: There is -- we had information in 19 the record that meets sub-part K requirements. BY MS. DEXTER: 20 2.1 That's what we're here to decide here. Q 22 Okay. Α 23 I am asking you to point to that record, 24 point to where in the record, or confirm that there is

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Page 24 1 no information in the record about aquatic life impacts 2 during the discharge's actual operation experience during the previous permit term? 3 4 I'm going to object to this question MR. PETTI: 5 on the grounds that the record in this case is over 6 1,200 pages. He does not have a copy in front of him. 7 He doesn't have the exhibits in front of him to point 8 what he might be referring to. 9 HEARING OFFICER HALLORAN: You can provide him the 10 exhibits or the record. If he can answer from memory, 11 he may do so. 12 I mean I can give you a copy of a MR. PETTI: portion of the record if we want to take the time for 13 14 him to go through that portion of the record when the 15 question is pending and point out what may or may not 16 be responsive, or we can have him answer. 17 HEARING OFFICER HALLORAN: You've looked through 18 the record, right, numerous times, Mr. Rabins? 19 THE WITNESS: Yes. 20 HEARING OFFICER HALLORAN: So if you can answer, 2.1 answer. 22 MR. PETTI: Okay. 23 HEARING OFFICER HALLORAN: You can finish up on

cross or redirect or whatever.

24

```
Page 25
 1
                      Okay, that's fine.
          MR. PETTI:
 2
          HEARING OFFICER HALLORAN:
                                      Thank you.
 3
     Mr. Rabins, do you need something to take a look at?
 4
     Do you have to look at the whole record right now?
 5
          THE WITNESS: Well, I have an idea where to go.
 6
                  If you look at 203 of the record, there
 7
     are several major studies cited. We had that; that
 8
     data was in the record.
     BY MS. DEXTER:
 9
10
               Just to be sure, these studies that are cited
11
     here, were those studies conducted during the previous
12
     permit term?
               I'm not able to answer that.
13
          Α
14
          0
               Okay. We'll get to it.
               There is a 2003 to 2005 field data that was
15
     collected by Midwest Generation, if you look at Page 2
16
17
     of 4 of the record, the second from the last paragraph,
     that would have been collected during the last permit.
18
19
               All right. You said that was on Page 2 of 4
20
     of the record, correct?
2.1
          Α
               Yes.
22
               Where is the data that you're referencing on
          Q
23
     Page 2 of 4 coming from?
24
               It was collected by Midwest Generation.
                                                          Ι
          Α
```

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Page 26

don't understand beyond that what you're asking.

Q Let's see if we can bring out what we are referring to. I will hand you this right away.

MS. DEXTER: I'm trying to find the exhibit number from the administrative record. So the document that I just handed to the witness begins on Page 1204 of the Administrative Record. It's not marked at the top as the other exhibits are, but it does stand alone on the index that the agency provided. So this is listed as --

HEARING OFFICER HALLORAN: It's Bates stamped 1204.

MS. DEXTER: Is that good enough for now?

MR. PETTI: I'm sorry. Mr. Hearing Officer, we're fine with proceeding with just the Bates numbers. I'm fine with that.

MS. DEXTER: That will be easier than trying to track them down.

BY MS. DEXTER:

2.1

Q So a moment ago you referred to some data that Midwest Generation submitted to the agency. Are you referring to the preliminary data from the 2005 proposal for information collection for the Waukegan Station that I just handed you, beginning on Page 1204?

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Page 27 1 I'm referring to their statement on 204 which 2 doesn't say that it was obtained from the PIC. 3 doesn't say that word specifically; it doesn't mention 4 the PIC in that response. 5 Now that we found this document, I think 6 we're going to set it aside for later. 7 Α Okay. 8 So you were in the process of answering the Q 9 question of whether or not there is any new data in the 10 You identified the statements in the letter 11 from Midwest Generation, but at this point we don't 12 know where those statements came from, the data that 13 you're referring to. 14 MS. FRANZETTI: Objection. That's not what the 15 witness said. 16 MR. PETTI: I'll join. 17 HEARING OFFICER HALLORAN: Do you want to 18 rephrase? 19 BY MS. DEXTER: 20 I just want to make sure that you were 2.1 finished answering the question that we're working on 22 here. 23 MS. FRANZETTI: Well, I don't know what the 24 question is that we're working on.

```
Page 28
1
          HEARING OFFICER HALLORAN:
                                     Excuse me.
                                                  Is that an
2
     objection, Miss Franzetti?
3
          MS. FRANZETTI: Well, it is an objection. Counsel
     is just making these speeches.
4
5
          HEARING OFFICER HALLORAN: Okay. Sustained.
                                                         Ι
6
     asked Miss Dexter to rephrase. Thank you.
7
     BY MS. DEXTER:
8
          Q
               You just referred to some information on
9
     Page 2 of 4 of the administrative record that you
10
     stated is your response to my question about whether
11
     there are studies of aquatic life based on Midwest
12
     Generation's actual operation experience of the
     Waukegan Station since the previous permit was issued.
13
14
     Is there anything else in the record that you would
15
     like to point to that qualifies as an answer for that
16
     question?
17
               I would have to go through it more. There's
18
     responses in the Responsiveness Summary addressing this
19
     topic of what we found.
20
               Other than -- actually, let me strike that.
          Q
2.1
                  Has Midwest Generation submitted any
22
     studies that it conducted about aquatic life based on
23
     its actual operation experience?
24
          MS. FRANZETTI: Objection. Asked and answered.
```

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Page 29 1 He cited to the statement in the Midwest Generation 2 comments about collecting data. 3 HEARING OFFICER HALLORAN: I believe that has been asked and answered. 4 5 MS. DEXTER: We'll leave that there then. 6 BY MS. DEXTER: 7 I am now going to take us back to that 8 variance that we referred to at the beginning, the 9 thermal variance beginning on Page 1 of the 10 Administrative Record. 11 So going all the way back to the variance 12 in 1978, the Board Order states that there was an 13 objection due to "The absence of opinions of recognized 14 independent experts on Lake Michigan." 15 In allowing the variance, the Board then 16 noted that, "Edison has promised to continue studying 17 the possible damaging effects on the lake in the 18 future." 19 Does the administrative record contain any 20 promised follow-up study of thermal effects on aquatic 2.1 life from Commonwealth Edison? 22 MS. FRANZETTI: I will just make the objection 23 that I think this does go beyond the permit record in 24 terms of asking about something that probably occurred

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Page 30
1
     back in the 1980's and was never raised below in any
2
     comments or requests for this information to be
3
     included in the record.
          HEARING OFFICER HALLORAN: So noted and overruled.
4
5
     You may answer if you're able.
6
          THE WITNESS: Can you repeat the question?
7
     BY MS. DEXTER:
8
          Q
               Does the administrative record contain any
9
     promised follow-up study of thermal effects on aquatic
10
     life from Commonwealth Edison?
               Not to my knowledge.
11
12
               Did Illinois EPA ask the permitees to submit
          Q
13
     any of this information on the actual -- on the
14
     discharge's actual operation experience?
15
          MS. FRANZETTI: Objection to form.
          MR. PETTI: This information isn't clear.
16
                                                      T']]
17
     join the objection.
18
          HEARING OFFICER HALLORAN: Do you want to
19
     rephrase, Miss Dexter?
20
          MS. DEXTER: Yes.
     BY MS. DEXTER:
2.1
22
          Q
               Did Illinois EPA require the discharger,
23
     prior to issuing the permit, to submit documentation
24
    based on the discharge's actual operation experience
```

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Page 31

during the previous permit term regarding the nature of the thermal discharge or the balanced indigenous population of shellfish, fish and wildlife?

A Yes.

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2

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4

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6

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2.1

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23

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#### O And what information is that?

MS. FRANZETTI: I'm just going to object. I do think a big part of this has been asked and answered.

MR. NAGRA: I also agree with that objection.

HEARING OFFICER HALLORAN: Yes, Miss Dexter, I think it has been asked and answered.

MS. DEXTER: I think we've covered it. I think that we've established what needs to be established here.

BY MS. DEXTER:

Q One more question in this sphere here.

So special condition 4 of the 2015 permit that we were looking at, that's on Page 665 of the Administrative Record -- it is one of the exhibits that I handed you -- requires certain activities and studies in order to ensure that the nature of the thermal discharge has not changed and the alternative thermal effluent limitation granted by the Board has not caused appreciable harm to a balanced, indigenous population of shellfish, fish and wildlife in and on the body of

```
Page 32
1
     water into which the discharge is made.
                                               Those studies
2
     were not available at the time the permit was issued in
3
     2015; is that correct?
4
               Can you repeat what page number you're
5
     referring to of the record?
6
          HEARING OFFICER HALLORAN:
                                     665.
7
          THE WITNESS: That's not what I show.
     BY MS. DEXTER:
8
9
          0
               So what I was referring to actually is a
10
     discussion of special condition 4 in -- let me simplify
11
     this a little bit. We are looking at Special Condition
12
         It's on Page 695 of the Administrative Record.
13
          MR. PETTI:
                      Jessica, if I may, are you restarting
14
     the question, restating the question? Where are we at
15
     on this question?
16
          HEARING OFFICER HALLORAN: You can direct that to
17
     me, Mr. Petti.
18
          MR. PETTI:
                      Sorry.
19
          HEARING OFFICER HALLORAN: What's your objection
20
     or just your observation?
2.1
          MR. PETTI:
                     I'm sorry, Mr. Hearing Officer.
22
     clarification, I'd like to know if we're restarting the
23
     question, or if this is a continuation of the last
24
     question pending. There was a question pending.
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Page 33 1 just like the record to be clear what we're doing. 2 MS. DEXTER: I can restart the question and then 3 reclarify what I was asking. 4 MR. PETTI: Thank you. 5 BY MS. DEXTER: So Special Condition 4 which is stated on 6 7 Page 695 of the Administrative Record requires certain 8 studies and activities that are related to the thermal 9 discharges and their effect on aquatic life; is that 10 correct? Special Condition 4 is to support 11 Α continuation of the thermal variance; is asking for 12 13 information in support of the thermal variance. 14 Right. And my question is, is that 15 information that the agency is requiring in Special 16 Condition 4, was that available to the agency prior to 17 the permit issuance in 2015? 18 Α No. 19 0 Thank you. 20 So let's turn now to the evidence the 2.1 agency cites to support the renewal of the thermal 22 variance in 2015. The Responsiveness Summary on 23 Page 666 of the Administrative Record states that, "The 24 Illinois EPA has reviewed the thermal studies from 1975

Page 34

and 1976 conducted in accordance with 316(a) of the Clean Water Act."

Isn't it true that neither Midwest

Generation, Illinois EPA, nor USEPA can locate copies

of those studies and that they are not in the record?

A Correct. The original studies are not in the record.

Q So let's see what evidence might actually be in the record.

There have been references to a summary of the evidence that supported the thermal variance. So let's take a look at that next.

I'm going to hand you a letter now. So we're looking at Page 241 of the Administrative Record. This is an attachment to the exhibit that starts on Page 239 that I handed you a few minutes ago, the emails. And if you could turn to page -- so there's an attachment letter here dated June 14th, 1974. If you can look on Page 242 and also 243? Do you see a list of citations to studies dated 1972 to 1974?

- A No, I don't see that.
- Q On Page 242?
- 23 A Yes.

1

2

3

4

5

6

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2.1

22

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Q Under the sentence stating, "The information

Page 35

	Tage 33
1	and data offered in support of the facts presented in
2	the summary as listed below are submitted as part of
3	this demonstration." And below there, you're stating
4	that there are not a list of citations for the next two
5	pages?
6	A Yes, there are a list of citations on the
7	next two pages.
8	Q And was your quibble that I had referred to
9	the studies as ranging from 1972 to 1974?
10	A That wasn't what you asked.
11	Q But you do see a list of studies here on
12	Pages 242 and 243?
13	A I see a list of citations, yes.
14	Q Are any of those studies contained in this
15	Administrative Record?
16	A They are referenced in the record.
17	Q But isn't it true that none of these studies
18	are included in the Administrative Record?
19	A What's your definition of included?
20	Q Is it included within the pages of the
21	Administrative Record? Do we have the full studies of
22	any of these do we have the full documents that are
23	cited here anywhere in the record?
24	A The full studies, to my knowledge, are not in

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	Page 36
1	the record.
2	Q And here where there is a list of studies, do
3	you see any substantive summary of the findings of any
4	of those studies?
5	A No, there does not appear to be a summary on
6	this 1974 letter, June 14th, 1974, letter.
7	Q Are you aware of a substantive summary of the
8	findings of these studies anywhere in the
9	administrative record?
10	A No.
11	Q Thank you.
12	Now let's look at the information that we
13	have about the state of aquatic life in receiving
14	waters. So the only information in the record we have
15	regarding aquatic life is generally to trends in Lake
16	Michigan; is that correct?
17	MS. FRANZETTI: Objection. That's contrary to the
18	witness's prior testimony.
19	HEARING OFFICER HALLORAN: I'm sorry, Miss
20	Franzetti?
21	MS. FRANZETTI: I think the statement is a
22	mischaracterization of what the witness has testified
23	to in terms of what's in the record.
24	HEARING OFFICER HALLORAN: Miss Dexter?

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Page 37
          MS. DEXTER: I don't know that we -- I will ask
1
2
     this.
3
     BY MS. DEXTER:
4
               Other than the data that was referenced on
          0
5
     Page 204 that we discussed earlier?
6
          HEARING OFFICER HALLORAN:
7
          MS. DEXTER: Well, wait a minute.
8
          HEARING OFFICER HALLORAN: Let's take a break.
9
                               (There was a break taken,
10
                               after which the hearing
11
                               was resumed as follows:)
12
          HEARING OFFICER HALLORAN: All right. We're back
     on the record. I'm not sure where we are.
13
14
          MS. DEXTER: Let me start over once again.
15
     BY MS. DEXTER:
16
               Other than the information that you
          0
17
     identified a few minutes ago, the other information in
18
     the record regarding aquatic life speaks generally to
19
     trends in Lake Michigan; is that correct?
20
          Α
               No.
2.1
          Q
               We're just going to move on.
22
                  Are you familiar with the finding by the
23
     United States geological survey in its status and
24
     trends of prey fish population in Lake Michigan that,
```

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Page 38 1 "Total prey fish biomass in 2012 was the lowest since 2 our bottom trawl survey began in 1973, and follows five 3 years of sustained, record low biomass estimates?" 4 Did you ask if I was familiar with that? Is Α 5 that your question? 6 Is that information that you reviewed in the 7 context of this permit? I'm not familiar with that. 8 Α 9 MS. FRANZETTI: Counsel, I'm sorry. What page of 10 the record are you referring to? MS. DEXTER: It's Page 1053 is the specific 11 12 Citation. I'll hand you the document. 13 BY MS. DEXTER: 14 So we have the document I've just handed you 15 which states on USGS letterhead that it is status and 16 trends of prey fish population in Lake Michigan 2012. 17 And I'm having you turn specifically to Page 1053, the 18 conclusion. The first sentence reading, "Total prey 19 fish biomass in 2012 was the lowest since our bottom 20 trawl survey began in 1973, and follows five years of 2.1 sustained, record low biomass estimates?" 22 Does this refresh your memory? 23 This may be in the record, but no, this isn't 24 refreshing my memory.

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Q Okay. We'll set that aside and look at something else.

So I'm looking now at Page 618 of the Administrative Record. Is this an email exchange between yourself and Scott Twait at the bottom?

A Yes.

2.1

Q And Scott Twait is another IEPA staff member; is that correct?

A Correct.

Q So I call your attention to the paragraph in bold at the bottom of the page which reads, "There have been significant changes in the aquatic community over the past three decades. Most of the large-scale changes are the result of changes in lake productivity. As productivity declines, there is less available nutrients/energy to move through the food web. Declines in productivity are likely the contributing factor to declines in the yellow perch and alewife populations. Declines in alewife abundance consequently affect salmon and trout populations. These changes in productivity and lower trophic level species composition (i.e., zooplankton and benthic invertebrates) have been largely attributed to effects of invasive species, (e.g., zebra and quagga mussels,

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Page 40 1 and spiny and fish hook water fleas.)" 2 The source of this information as stated 3 in here was the Illinois Department of Natural 4 Resources? 5 Correct. Α And in light of this description, where, if 6 7 anywhere, in the records does the Agency explain how a 8 balanced, indigenous population of shellfish, fish and 9 wildlife exists in the receiving waters of Lake 10 Michigan? MS. FRANZETTI: Objection. Argumentative. 11 I think it's a yes or 12 HEARING OFFICER HALLORAN: 13 You can answer if you are able. Overruled. THE WITNESS: I'm not able to recall exactly in 14 15 the record where that's stated. BY MS. DEXTER: 16 17 Are you aware of anywhere in the record where 0 18 the agency explains what constitutes a balanced, 19 indigenous population of shellfish, fish and wildlife 20 for the receiving waters in Lake Michigan? 2.1 Α No, I'm not. 22 Okay. Now we will move from the thermal Q 23 discharges to discuss the impacts associated with the 24 cooling water intake system.

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	Page 41
1	Can you please explain what impingement
2	is?
3	A Without having an exact definition in front
4	of me, it's when a fish gets stuck on say the intake
5	screen and gets impinged.
6	Q And entrainment, how would you describe
7	entrainment?
8	A Again, without having the exact definition, I
9	think it's when something gets stuck in the cooling
10	system.
11	Q And would you say in general I'm trying to
12	help you out here. In general, does impingement and
13	entrainment affect aquatic life by injuring, harming or
14	killing the aquatic life?
15	A Yes. They would have an effect on aquatic
16	life.
17	Q Is it your understanding that Clean Water Act
18	regulations required Illinois EPA to establish in the
19	permit an interim Best Technology Available limit for
20	the cooling water intake structures that minimizes
21	adverse environmental impact from impingement and
22	entrainment?
23	A No.

That's not your understanding of what IEPA

24

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,	Page 42
1	was meant to do?
2	A No, that's not my understanding.
3	Q Let me try in smaller pieces that question.
4	Is it your understanding that IEPA was
5	required to establish an interim Best Technology
6	Available limit for the cooling water intake structure?
7	MS. FRANZETTI: Objection. Asked and answered.
8	HEARING OFFICER HALLORAN: Overruled. You may
9	answer.
10	THE WITNESS: It may be similar. I'm not for sure
11	the exact wording of the requirement, but there was a
12	new cooling water intake structure rule passed in 2014.
13	BY MS. DEXTER:
14	Q I just want to make sure that we know what
15	we're talking about here.
16	I think that I will go to the fourth Order
17	in this proceeding. All right. This is from the
18	April 7th, 2016, Opinion and Order of the Board. I'm
19	going down to Page 13. I think I'm actually on a
20	different page. It states it here on Page 2 of the
21	Order.
22	It is probably elsewhere in here, but just
23	to make sure that we're talking about the same thing

to make sure that we're talking about the same thing here, the Board's Order, the third full paragraph, it

24

2.1

Page 43

says, "This Order makes findings on three legal issues." And I'll skip the first two and just focus on it says last, "The permit must contain conditions that require the facility's cooling water intake structure to use the interim Best Technology Available."

Does that make enough sense to you that we can proceed with talking about that requirement?

A Can I see the document you're referring to?

Q I have it only on my computer here.

HEARING OFFICER HALLORAN: Here you go.

MS. FRANZETTI: I'm just going to have a standing objection to this line of questioning. This witness is not a lawyer. You haven't even established that he's reviewed this Board Opinion. It is not -- he's not competent to give legal opinions as to what the 316(b) regulations do or don't require.

MR. PETTI: Further, this is a document outside of the record. It's an Order of this Board that was contained in this record as part of this review. It may be outside the scope of his knowledge.

HEARING OFFICER HALLORAN: Well, I'm taking administrative notice that is an Order. You can answer if you're able. Overruled.

THE WITNESS: I'm looking at page 13. Can you

```
Page 44
1
     tell me exactly what you're referring to?
     BY MS. DEXTER:
3
          0
               It's the third full paragraph, the last
     sentence. I'm sorry.
4
                            Yes.
5
               Okay. I see that statement. What's your
          Α
6
     question?
7
               I am trying to establish that if I use the
8
     term interim Best Technology Available in further
9
     questions that you understand what I'm talking about.
10
     I just want to make sure that you're familiar with it.
11
                  You haven't been able to answer my
12
     questions that the Agency --
13
               That I know what you're talking about?
          Α
14
               The Board has established that the Agency
15
     must, or that the permit must contain conditions that
16
     require the facility's cooling water intake structure
17
     to use the interim Best Technology Available.
18
                  I'm about to ask you questions about what
19
     the Agency did in that quest, and so far you haven't
20
     been able to acknowledge that you understand what I'm
2.1
     talking about.
22
          MR. PETTI: I'm going to object to that statement.
23
     I believe he's answered the questions that were asked.
24
          HEARING OFFICER HALLORAN:
                                     I don't think he
```

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Page 45 1 answered the question. 2 THE WITNESS: What is the question? 3 BY MS. DEXTER: 4 I asked whether it's your understanding that 0 5 the Agency is required to establish the interim Best 6 Technology Available for the cooling water intake 7 structure. Your answer was no. 8 MR. PETTI: Objection. That was not the question. 9 HEARING OFFICER HALLORAN: Miss Dexter? 10 BY MS. DEXTER: 11 Is it your understanding -- I'm asking this 12 again to try and see; if that was not the right 13 question, I will ask the question again. Is it your 14 understanding that the Agency was required to establish 15 the interim Best Technology Available for the 16 facility's cooling water intake structure? 17 Α It seems something along those lines. 18 I'm not for sure the exact wording of the requirement, 19 but we're required to follow the new 316(b) rule that 20 was adopted in 2014. 2.1 Okay. But if I refer to the interim Best Q 22 Technology Available requirement or the interim BTA 23 requirement, we can -- you understand what I mean when 24 I say that? I won't ask you to make any legal

	Page 46
1	conclusions, but I need to establish this term so that
2	we can continue to talk about it.
3	A Yes, we were required to make an interim BTA
4	determination.
5	Q And is the interim BTA requirement that
6	Illinois EPA established for Waukegan Station contained
7	in Special Condition 7 of the permit?
8	MS. FRANZETTI: Again, objection to form.
9	The witness testified that it's his
10	understanding that the Agency was required to make an
11	interim BTA determination. You're now asking him where
12	are the BTA requirements in the permit. It's not
13	consistent with the answer that he gave you.
14	MS. DEXTER: Let me back up.
15	BY MS. DEXTER:
16	Q Are there interim BTA requirements in this
17	permit?
18	A No.
19	Q There are not?
20	A No.
21	HEARING OFFICER HALLORAN: We'll take a break in
22	about eight minutes.
23	MS. DEXTER: It may be better to take a break now,
24	if that's okay with you?

```
Page 47
1
          HEARING OFFICER HALLORAN:
                                      That's fine.
                                                    Let's
2
     take a break now. Be back in ten, please.
3
                          (There was a break taken, after
4
                          which the hearing was resumed
5
                          as follows:)
6
          HEARING OFFICER HALLORAN: We're back on the
7
     record.
8
                  Mr. Rabins, you're still under oath.
                                                         Miss
9
     Dexter, you may proceed.
10
     BY MS. DEXTER:
11
                           I'd like to call your attention
          Q
               All right.
12
     to the document that starts on 1204, the Proposal for
13
     Information Collection for Waukegan Station prepared
14
     for Midwest Generation in June, 2005.
                                             This is a
15
     proposal for a study, not the study itself, correct?
16
          Α
               Correct.
17
               And the completed study is not in the record,
          0
18
     correct?
19
          Α
               Correct.
20
               Now, I would like to call your attention to
2.1
     the section that starts on Page 1215, Section 4.1, the
22
     Waukegan Station Impingement Characterization Study
23
     Sampling Plan. Does this sampling plan propose a
24
     two-year study of impingement?
```

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	Page 48
1	A Do you have a specific line?
2	Q If I can find it.
3	MS. FRANZETTI: Try the bottom of the page,
4	counsel.
5	BY HEARING OFFICER HALLORAN:
6	Q Yes, that will work. The first sentence
7	under Overview.
8	A Yes.
9	Q All right. And at the top of Page 1216, do
10	you see that there are some preliminary results that
11	are included in this proposed sampling plan?
12	A Yes.
13	Q Do these look like the data that you referred
14	to earlier in the comment letter from Midwest
15	Generation about studies that were conducted?
16	A As I said earlier, it did not specify exactly
17	the source of that data.
18	Q We'll move on anyway.
19	This sampling proposes procedures to
20	analyze the data in the final study; is that correct?
21	A I guess I'm not sure.
22	Q Have you reviewed this study as part of
23	your
24	A As far as my knowledge, the study was never

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conducted.

2.1

Q And so rather than make you look for it, there was a -- within here there are some procedures that are proposed to analyze the data. If the study was never completed, would it be your understanding that that final analysis of the data was also not completed, at least not available in the record?

A The data that was supposed to be collected under the PIC, you're asking if that's available?

Q So we just referenced some preliminary data in this proposal for sampling, and at this stage what we have in this document, there's been no final analysis of that data, correct, the analysis that was proposed in the plan?

A As far as I know, the study described in the PIC was not carried out.

Q And similarly, the quality assurance plan that was proposed here is not reflected in any final study? Let me rephrase that.

The study proposes to develop a Quality
Assurance Plan. Having no final study, we not only
don't have that Quality Assurance Plan, we also don't
have the verification of accuracy that the Quality
Assurance Plan would bring; is that correct?

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MS. FRANZETTI: Objection. This calls for speculation, and it's a mischaracterization of the contents of the document.

2.1

They had a QAP plan. They started the study. They did a year of it. And it's a mischaracterization of this document to say that they didn't have an adequate QAP plan.

HEARING OFFICER HALLORAN: I'll sustain on mischaracterization and speculative. Do you want to rephrase the question?

MS. DEXTER: Yes, I'll rephrase.
BY MS. DEXTER:

Q All right. On Page 1224, under the heading Quality Assurance/Quality Control, it says, "A Quality Assurance Plan will provide the guidance with respect to overall QA/QC for this study. In accordance with the QAP, a Standard Operating Procedure will be prepared for this study. The Standard Opening Procedure will integrate the general methodologies and guidance given in the various items described above." That was a paraphrase at that point.

Below there is a list of topics, and then below that there are some bullets that say specific QC activities to be performed will include these. There

```
Page 51
     are one, two, three, four, five, six bullets.
1
2
                  At this point in this proposal, they have
     proposed a procedure for a Quality Assurance Plan, but
3
4
     we don't, without the final study, have the actual
5
     confirmation that that Quality Assurance Plan was
6
     carried out; is that correct?
7
          MS. FRANZETTI: Objection. Calls for speculation
8
     by this witness.
9
          HEARING OFFICER HALLORAN: Overruled. He may
     answer if he's able.
10
11
          THE WITNESS: I haven't seen the Quality
     Assurance -- I haven't seen that these were carried
12
13
     out.
14
          MS. DEXTER:
                       Okay. I have no further questions
15
     for this witness.
16
          HEARING OFFICER HALLORAN: Thank you Miss Dexter.
17
     Mr. Petti?
18
          MR. PETTI: Mr. Nagra is going to be doing the
19
     questioning.
20
          HEARING OFFICER HALLORAN: Mr. Nagra?
2.1
          MR. NAGRA: One clarification, Officer. Would
22
     this be our direct, or would this just be a cross?
23
          HEARING OFFICER HALLORAN: Well, it's basically a
24
     direct, but it's a cross because he's an adverse
```

```
Page 52
1
     witness.
2
          MR. PETTI: I think so the question being do we
3
     want to just call the witness one time instead of --
          HEARING OFFICER HALLORAN: We've done that before.
4
5
     That's entirely up to you as far as going outside
6
     direct.
7
          MR. PETTI: I would be in agreement, if everybody
8
     else is, with just having one witness and we can do our
9
     round robin back and forth for a couple rounds.
10
          HEARING OFFICER HALLORAN: Miss Franzetti, Miss
11
     Dexter, do you agree with that?
12
          MS. FRANZETTI: No objection.
13
          MS. DEXTER: I'm fine too.
          MR. PETTI: I just wanted to be sure that we're
14
15
     all on the same page.
16
          HEARING OFFICER HALLORAN: So no objection to the
17
     scope.
18
                    DIRECT EXAMINATION
19
                    By: Mr. Nagra
20
               Officer Rabins, can you state your
          Q
2.1
     educational background, please?
22
               I have Bachelor's in Science in Electrical
          Α
23
     Engineering from Southern Illinois University in
24
     Carbondale, and then a Master's in Business
```

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,	
	Page 53
1	Administration from the University of Illinois in
2	Springfield.
3	Q What are your job responsibilities at
4	Illinois EPA?
5	A I review and draft applications for NPDES
6	permits, prepare tax certifications, review and draft
7	state construction permits and state operating permits.
8	Q And what was your role in drafting and/or
9	approving the permit at issue in this proceeding?
10	A I reviewed the application and drafted a
11	permit and responded to comments and worked on
12	preparing the final permit. I think the permit
13	pre-dates my employment, so it may have been started
14	before I got there with the Agency.
15	Q Okay. Well, let's talk about some of the
16	things that you and the Agency looked at in preparing
17	this permit.
18	When the subject permit was up for
19	renewal, did the Agency, Illinois EPA, consider the
20	nature of the Waukegan facility's thermal discharge in
21	1978 when the Board originally granted the alternative
22	thermal effluent limitation?
23	A Yes.

24

And did the agency's consideration of the

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	Page 54
1	nature of the Waukegan facility's thermal discharge in
2	1978 include consideration of the findings of studies
3	that formed the basis for the Board's 1978 Order
4	granting the original alternative thermal effluent
5	limitation?
6	A Yes.
7	Q Did the studies that formed the basis for
8	that Board's 1978 Order include thermal plume studies?
9	A Yes.
10	Q Did those thermal plume studies include
11	modeling of thermal levels in Lake Michigan?
12	A I'm not certain.
13	Q Okay. Can I refer you to Respondent's
14	Exhibit A on Page 203 of the record?
15	A Okay.
16	Q Mr. Rabins, do you recognize this document?
17	A Yes, I do.
18	Q What is it?
19	A It's the January 12th, 2012, comments to the
20	public notice draft permit.
21	Q Can I refer you to Bates number 203 of this
22	document? Does this to the best of your knowledge,
23	is the list that is produced on this page of major
24	studies performed and submitted in support of the

	Page 55
1	316(a) variance, the original 316(a) variance,
2	accurate?
3	A Can you repeat the question?
4	Q Yes. Does this look like an accurate list of
5	information that was submitted in support of the
6	original thermal variance in the 1970's?
7	A I'm not certain of the exact list or what was
8	submitted in support of the
9	Q Does this page reflect that thermal plume
10	studies were submitted in support of the original
11	thermal variance?
12	A Yes.
13	Q During the most recent permit renewal
14	process, did the agency's consideration of the nature
15	of the Waukegan facility's thermal discharge in 1978
16	include consideration of the findings of various
17	studies of Lake Michigan currents that also formed the
18	basis for the Board's Order in 1978 granting the
19	original alternative thermal effluent limitation?
20	A Yes.
21	MS. DEXTER: I would object. The findings of
22	these studies are not contained in the Administrative
23	Record.
24	MR. NAGRA: That's wrong.

```
Page 56
1
                  I'm wording my questions in a very
2
     specific way. My question asks, did the Agency's
3
     consideration include consideration of the findings of
4
     various studies that formed the basis for the Board's
     1978 Order?
5
6
          HEARING OFFICER HALLORAN: Overruled. You can
7
     answer if you're able.
8
          MR. NAGRA: Mr. Rabins, let's switch gears and
     talk about --
9
          HEARING OFFICER HALLORAN: Mr. Petti.
10
                      There's a pending question.
11
          MR. PETTI:
                                                    Can we
12
     direct the witness to answer the question?
13
          THE WITNESS: Yes.
14
     BY MR. NAGRA:
15
               Let's switch gears to the present day.
          Q
16
                  When the subject permit was up for
17
     renewal, did Illinois EPA consider the nature of the
18
     subject facility's current thermal discharge relative
19
     to the nature of its 1978 thermal discharge?
20
          Α
               Yes.
2.1
          Q
               Can you explain what a heat rejection rate
22
     is?
23
               It's the quantity of heat rejected per unit
          Α
24
     time.
```

	Page 57
1	Q Okay. And did the Agency's comparison
2	between the nature of the 1978 thermal discharge and
3	the nature of the present day thermal discharge include
4	consideration of the Waukegan facility's heat rejection
5	rate over time?
6	A Yes.
7	Q What did that comparison reveal with respect
8	to the Waukegan facility's heat rejection rate over
9	time?
10	A There was a decrease.
11	Q And Mr. Rabins, can you explain what a
12	cooling water discharge rate is?
13	A It's the volume of cooling water discharged
14	per unit time.
15	Q And did the Agency's comparison between the
16	nature of the 1978 thermal discharge and the nature of
17	the present day thermal discharge also include
18	consideration of the Waukegan facility's cooling water
19	discharge rate over time?
20	A Yes.
21	Q What did that comparison reveal with respect
22	to the Waukegan facility's cooling water discharge rate
23	over time?
24	A That there was a decrease.

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Page 58

Q Okay. And now I'd like to ask you a few questions about the balanced, indigenous population. And first I'm going to start off with the balanced, indigenous population as it existed in 1978.

During the permit renewal process, did the Agency consider the balanced, indigenous population of shellfish, fish and wildlife at the time the Board granted the original alternative thermal effluent limitation in 1978?

A Yes.

2.1

Q Did the Agency's consideration of the balanced, indigenous population of shellfish, fish and wildlife at the time the Board granted the alternative thermal effluent limitation in 1978 include consideration of the field study data and study findings concerning Lake Michigan organisms that formed the basis for the Board's Order granting the original thermal relief?

A Yes.

Q Okay. And now I'd like to change gears to the present day.

During the permit renewal process, did the Agency consider the present day balanced, indigenous population of shellfish, fish and wildlife in Lake

```
Page 59
 1
     Michigan?
 2
          Α
               Yes.
 3
          MS. DEXTER: Objection. That is contrary to the
 4
     response I got when I asked him.
 5
          HEARING OFFICER HALLORAN: Well, the record will
 6
     so note.
 7
          MS. DEXTER:
                       All right.
 8
          HEARING OFFICER HALLORAN: You can ask again on
 9
     your redirect. Overruled.
     BY MR. NAGRA:
10
11
               Did the Agency's comparison between the
12
     balanced, indigenous population of shellfish, fish and
13
     wildlife at the time the Board granted the alternative
14
     thermal effluent limitation in 1978 and the balanced,
15
     indigenous population of shellfish, fish and wildlife
16
     today reveal any changes in Lake Michigan's aquatic
17
     community?
18
          Α
               Yes.
19
               Okay. And are those changes noted in the
20
     record?
2.1
          Α
               Yes.
22
               Okay. Mr. Rabins, can I please refer you to
          Q
23
     Page 673 of the record, Respondent's Exhibit E?
24
     Mr. Rabins, do you recognize this document?
```

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Page 60 1 Yes. Α 2 What is it? 0 3 Α It's a page of the Responsiveness Summary. 4 Okay. And can I please refer you to Item 0 5 Number 43 on Page 673? 6 Α Yes. 7 Is this an accurate summary of the changes in 8 Lake Michigan's aquatic community that the Agency 9 considered during the permit renewal process? 10 Α Yes. 11 Okay. And can you read to me what those Q 12 changes were? 13 "There have been significant changes in the Α 14 aquatic community over the past three decades. Most of 15 the large-scale changes are the result of changes in 16 lake productivity. As productivity declines, there is 17 less available nutrients/energy to move through the 18 food web. Declines in productivity are likely the 19 contributing factors in declines in yellow perch and 20 alewife populations. Declines in alewife abundance 2.1 consequently affect salmon and trout populations. 22 These changes in productivity and lower trophic level 23 species composition (i.e., zooplankton and benthic invertebrates) have been largely attributed to effects 24

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	Page 61
1	of invasive species (e.g., zebra and quagga mussels,
2	and spiny and fish hook water fleas.)"
3	Q Thank you.
4	Is there any basis in the record on which
5	to conclude that the changes identified in Item
6	Number 43 on Page 673 were related to the Waukegan
7	facility's thermal discharge?
8	A No.
9	Q To what causes can those changes be
10	attributed, based on the information that's been
11	presented on Page 673 of the record?
12	A "To the effects of invasive species, (e.g.,
13	zebra and quagga mussels, and spiny and fish hook water
14	fleas.)"
15	Q Thank you.
16	What years did the previous permit cycle
17	for this facility encompass?
18	A I'm not certain of the exact dates. I think
19	it's approximately 2000, 2005.
20	Q Can I please refer you to Page 1216 of the
21	record? This, just to refresh your recollection, I
22	believe is a document that petitioners also presented
23	to you during their direct examination.
24	MS. FRANZETTI: Counsel, just for the record,

```
Page 62
 1
     what's the title of the document?
 2
          MR. NAGRA: It's Proposal For Information
 3
     Collection.
 4
          MS. FRANZETTI:
                          Thank you.
          THE WITNESS: Okay.
 5
 6
     BY MR. NAGRA:
 7
               Do you recognize this document, Mr. Rabins?
          Q
 8
          Α
               Yes.
 9
          Q
               And did the Agency's consideration of the
10
     present-day balanced, indigenous population of
     shellfish, fish and wildlife in Lake Michigan include
11
     consideration of the data contained in this document
12
     that Midwest Generation collected between 2003 to 2005
13
14
     during that two-year impingement study?
15
               Can you say that again?
          Α
16
          0
               Sure.
17
                  Did the Illinois EPA's consideration of
18
     the present-day balanced, indigenous population of
19
     shellfish, fish and wildlife in Lake Michigan include
20
     consideration of the data on Page 1216 that Midwest
2.1
     Generation collected from 2003 to 2005 during a
22
     two-year impingement study?
23
          Α
               Yes.
24
               Okay. Would it be fair to say that the data
          Q
```

Page 63

collected by Midwest Generation from 2003 to 2005 during that two-year impingement study indicate that the fish community near the Waukegan Station did not fundamentally change relative to the fish community that existed in the late 1970's when the original alternative thermal effluent limitation was granted?

A Yes.

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Q And Mr. Rabins, can I please refer you back to Page 204 of the record, Respondent's Exhibit A? And may I please refer you to the second to the last paragraph beginning with the 2003 to 2005 field data?

A Okay.

Q I'll give you a second to review that paragraph before I proceed with my questioning.

A Okay.

Q Did the data collected by Midwest Generation from 2003 to 2005 during a two-year impingement study indicate that most Lake Michigan open water or deepwater species like salmonids, sculpins, and coregonids are impinged in low numbers?

A Yes.

Q What do the low impingement rates of these open water or deepwater species indicate?

A According to Midwest Generation, they

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,	Page 64
1	indicate these species will not be exposed to the
2	Station's thermal plume, and therefore, at minimal
3	rest.
4	Q And may I please refer you to Page 206 of the
5	same document, Bates number 206; and specifically, of
6	the second to the last paragraph?
7	A Okay.
8	Q Did the Agency's consideration of the
9	present-day balanced, indigenous population of
10	shellfish, fish and wildlife in Lake Michigan include
11	consideration of the summary of data collected by the
12	Illinois Department of Natural Resources during
13	electrofishing studies in the Waukegan harbor that
14	appears on this page?
15	A Yes.
16	Q And may I please refer you back to Page 204?
17	Did the Agency's consideration I'm
18	sorry. Specifically, I'm referring you to the third to
19	the last paragraph that begins with one of the that
20	and the paragraph above it.
21	"Midwest Generation acknowledges that the
22	field study data." And then that paragraph into the
23	paragraph below that is what I'm going to be referring

I'll give you a second to review those two

24

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	Page 65
1	paragraphs.
2	A Okay.
3	Q Did the Illinois EPA's consideration of the
4	present-day balanced, indigenous population of
5	shellfish, fish and wildlife in Lake Michigan include
6	consideration of the data collected by USGS in 2009 and
7	summarized on Page 204 as part of a trawling program?
8	A Yes.
9	Q Mr. Rabins, following your review of the
10	information we've discussed, did you believe you had
11	sufficient information to determine that there was no
12	material change that would cause appreciable harm to
13	the balanced, indigenous population of shellfish, fish
14	and wildlife in Lake Michigan?
15	A Yes.
16	Q Did the absence of a recent thermal plume
17	model deprive you of necessary information to make that
18	determination?
19	A No.
20	Q Okay. Mr. Rabins, I'm going to shift my
21	questioning to the Waukegan facility's cooling water
22	intake structure.
23	During the permit renewal process, was

Illinois EPA generally aware of the mechanics of the

24

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	Page 66
1	Waukegan facility's cooling water intake structure?
2	A Can you clarify what do you mean by
3	mechanics?
4	Q The manner in which it operates?
5	A Yes.
6	Q Okay. Mr. Rabins, I'd like to refer you to
7	Page 666 of the record. Do you recognize this
8	document?
9	A Yes.
10	Q What is it?
11	A It's Page 11 of the Responsiveness Summary.
12	Q And can I please refer you to Item Number 15
13	on Page 666 of the record?
14	A Yes.
15	Q Is this an accurate summary of the mechanics
16	of the Waukegan facility's cooling water intake
17	structure?
18	A Yes.
19	Q And can you please summarize for me the
20	operation of that system?
21	A "The cooling system for each unit is designed
22	as a one-through system. Cooling water from the lake
23	is withdrawn from an on-shore location, and passes
24	through the intake canal into a constructed embayment

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prior to entering the plant through two intakes, one for Unit 7 and one for Unit 8. Bar racks are located in front of the traveling screens at each intake. Each screenhouse is equipped with fixed trash bars, through-flow traveling screens, and a high-pressure wash-water system. All screens are made with number #12 gauge wire and 3/8-inch openings. The traveling screens are oriented parallel to the face of the screenhouse. The intake withdraws water from the entire water column.

"Two pumps provide cooling water to Unit 8, whereas four pumps provide cooling water to Unit 7, for a total of six pumps. Unit 7 has one traveling screen and pump bay for each pump, whereas, Unit 8 has two bays each containing one pump and protected by two traveling screens. Screen wash-water from the traveling screens for each unit flows into separate trash baskets. The design through screen velocity at critical low water level is 2.0 and 1.8 feet per second for Units 7 and 8, respectively."

#### Q Thank you.

2.1

When the subject permit was up for renewal, or during the permit renewal process for the subject permit, did the Illinois EPA make an interim

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Page 68 1 Best Technology Available determination with respect to 2 the Waukegan facility's cooling water intake structure 3 that was based on the Illinois EPA's best professional 4 judgment? 5 Α Yes. 6 MS. DEXTER: Objection. Also inconsistent with 7 the witness's previous testimony. 8 HEARING OFFICER HALLORAN: The record will so 9 reflect, and you can ask him on redirect. 10 MS. DEXTER: I will do so. BY MR. NAGRA: 11 12 Mr. Rabins, can I please refer you to the Q 13 document that begins on Page 687 of the record that is 14 Respondent's Exhibit H? 15 Α Yes. 16 Do you recognize this document? 0 17 Α Yes. 18 What is it? Q 19 It's reissued permit issued on March 25th, 20 2015 to Midwest Generation to operate the Waukegan Generating Station. 2.1 22 And can I please specifically refer you to Q 23 Page 696 of this document, and more specifically, to 24 Special Condition 7 on the bottom half of that page?

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	Page 69
1	A Okay.
2	Q You stated that the Agency made an interim
3	Best Technology Available determination with respect to
4	the subject facility's cooling water intake structure
5	that was based on the Illinois EPA's best professional
6	judgment.
7	My question is, is that determination
8	reflected in Special Condition 7 that appears on
9	Page 696 of the Waukegan facility's permit?
10	A Yes.
11	Q Okay. Was the Illinois EPA's interim Best
12	Technology Available determination based on the results
13	of any impingement and entrainment studies conducted at
14	the subject facilities?
15	A It was based on impingement data that we
16	have. I don't know if it was a study.
17	Q Okay. And was some of that data collected in
18	the 1970's?
19	A Yes.
20	Q And was some of that data collected from 2003
21	to 2005?
22	A Yes.
23	Q Okay. Is there any basis in the record on
24	which to conclude that the cooling water intake

Page 70 structure at the Waukegan facility does not meet the interim Best Technology Available standard? Α No. Mr. Rabins, can you explain what closed cycle cooling is? Closed cycle cooling is where the cooling water is withdrawn from source water and returned to the source water and the source water is not waters of the U.S. Okay. What if anything did Illinois EPA determine with respect to closed cycle cooling as a possible interim Best Technology Available? Α It was considered. It's one of the options under the new, the 2014 cooling water intake structure rule.

Q Okay. Mr. Rabins, can I refer you back to Respondent's Exhibit H, and specifically Page 695 of the record?

A Okay.

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2.1

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Q I'm going to jump back to 316(a) for a second. You were asked earlier about some information collection that Midwest Generation will be required to do going forward.

My question for you is, is the information

Page 71

that Midwest Generation is required to collect going forward that's reflected in Special Condition 4 on Page 695 of the record, was that information necessary for you to make your determination during this most recent permit cycle that there was no material change that would cause an appreciable harm to the balanced, indigenous population of shellfish, fish and wildlife in Lake Michigan?

A No.

2.1

MR. NAGRA: Thank you, Mr. Rabins. No further questions at this time.

HEARING OFFICER HALLORAN: All right. Miss Franzetti?

CROSS EXAMINATION

By: Ms. Franzetti

Q Good morning, Mr. Rabins. My name is Susan Franzetti. I am one of the attorneys for Midwest Generation, who is a respondent in this proceeding.

I wanted to ask you a little bit about

Mr. Twait's role with respect to the information that

was gathered by the Agency from the IDNR. And if you

give me a minute, I'll try and find what exhibit number

that is. You have in front of you a book of the

respondent's exhibits, and you want to look at Exhibit

	Page 72
1	D.
2	A Okay.
3	Q You've been asked some questions previously
4	by both Miss Dexter and the Agency counsel on this
5	document, but I want to focus on the email that's above
6	the information you were asked about with regard to the
7	response to comment number 43, and that's the email
8	from Scott Twait to you dated September 23rd, 2014.
9	And it appears Mr. Twait is saying who he got the
10	information from and citing a Mr. Steve Robillard,
11	project specialist of the IDNR.
12	Can you explain to me how Mr. Twait became
13	involved here and what he did with respect to obtaining
14	this information?
15	A The comment, this response was forwarded to
16	me by Twait, by Scott Twait. What he did to get the
17	answer, I'm not I don't have any knowledge of that.
18	Q Right. Other than what he's telling you he
19	did, correct, in this email?
20	A Right. He says he got the information from
21	here, but that's all I know.
22	Q Right. But that's my point.
23	But how did Mr. Twait become involved?
24	Did you ask Mr. Twait to follow up and gather

	Page 73
1	information with respect to the question as to whether
2	the aquatic community in Lake Michigan as a whole had
3	experienced any changes?
4	A We have personnel at the Agency that prepare
5	a list of questions that need to be answered for the
6	Responsiveness Summary. Question 43 was forwarded to
7	Scott Twait, and that is the response he provided.
8	Q Okay. And who decides who the questions that
9	arise out of the public hearing are forwarded to?
10	A There is no designated decider at the Agency.
11	Q Okay. Do you have any role in that?
12	A Yes, I have a role in that.
13	Q Okay. Did you think it was appropriate that
14	question 43 be directed to Mr. Twait?
15	A It may have been I may have forwarded the
16	question. I just don't recall.
17	Q No, that's okay. My question is a little
18	different.
19	Since you are involved in it, do you think
20	it was appropriate for this type of question to go to
21	Mr. Twait?
22	A Yes, I do think it was appropriate to go to
23	Mr. Twait.
24	Q Okay. Can you explain to us why a question

about changes in the aquatic community was appropriately directed to Mr. Twait, as compared, for example, why didn't you just deal with it?

A Scott Twait works in the water quality standards unit and was in a better position to answer a question about Lake Michigan; whereas, the permitting staff, we deal with specifics about the plant and the discharges.

Q Okay. Based on just your experience with Mr. Twait -- let me back up. Have you worked with Mr. Twait before on other permit matters?

A Yes.

2.1

Q Based on that experience, do you think
Mr. Twait is more knowledgeable than you are about
aquatic life, aquatic biology issues?

A Yes.

Q And when this question was directed to Mr. Twait, he was aware, wasn't he, that this question related to the Midwest Generation Waukegan Station and questions arising in regard to the renewal of its thermal alternative effluent limit?

A I would have no knowledge of what Scott Twait is aware of.

Q But he was directed the questions arising out

of the Waukegan public hearing, right? Or do you just send him a question out of the blue like this?

A The question may have been forwarded to him. I may have forwarded the question to him. Does that answer your question?

Q Well, I guess what I'm trying to understand is, wouldn't Scott Twait be told what the context was of this question he was being asked to answer, or no, he's just told here's the question, you don't get any other information?

A I mean you seem to be asking generality, would he, in any case. I don't know what he would be in any case.

In this case. I don't recall specifically if I just forwarded him the question, or if we had a discussion about it. You know, there's 60 or 70 questions in this. I just don't remember exactly the discussion behind each and every one of those.

Q Okay. I understand. I understand. But you may have had a discussion with Mr. Twait about this matter?

MS. DEXTER: I'm going to object.

HEARING OFFICER HALLORAN: I'm going to sustain

24 it.

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2.1

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Page 76
1
                  Mr. Rabins is doing a good job objecting
2
     in his own way. But Miss Franzetti, I'm not sure these
3
     questions are good questions for him. He's
4
     speculating. He says he doesn't know.
5
                  Are you laughing at my question, or what
6
     are you laughing at?
7
          MS. FRANZETTI: I'm laughing at your
8
     characterization of my questions as to whether they are
9
     good or not good or fair.
10
          HEARING OFFICER HALLORAN: Okay. Could you
11
     rephrase?
12
          MS. FRANZETTI:
                          Yes.
13
          HEARING OFFICER HALLORAN: I sustained her
14
     objection, but please don't laugh or roll your eyes.
15
          MS. DEXTER: Can I clarify my objection?
          HEARING OFFICER HALLORAN: Sure.
16
17
          MS. DEXTER: My objection is further that she's
18
     asking the witness to testify about facts that are not
19
     in the record, that we are sort of building back into
20
     something that I think we can go a certain amount to
2.1
     establish what we're looking at here, but I think
22
     she's --
23
          HEARING OFFICER HALLORAN: I gave a little
24
     latitude.
```

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	Page 77
1	MS. FRANZETTI: I don't understand what's going
2	beyond the record.
3	HEARING OFFICER HALLORAN: Well, as far as
4	Sustained. Do you want to rephrase?
5	BY MS. FRANZETTI:
6	Q Mr. Rabins, do you recall having any
7	conversations with Scott Twait about this permit; just
8	any conversations, not yet about
9	A Yes, I do.
10	Q And what do you recall, generally, what the
11	topic of those discussions would have been with
12	Mr. Twait?
13	MS. DEXTER: Again, I'm going to object. She's
14	asking the witness to testify about conversations that
15	are not included in the record.
16	HEARING OFFICER HALLORAN: If the witness can
17	answer, overruled, he may. But we've already gone down
18	this avenue, but you may proceed, Miss Franzetti.
19	BY MS. FRANZETTI:
20	Q I'm sorry. Do you recall the question,
21	Mr. Rabins? It's just do you recall anything about the
22	topics you would have discussed with Mr. Twait about
23	this permit?
24	A Yes. Me and Scott Twait would have discussed

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out what

is

this permit.

2.1

Q And do you recall anything further about what you would have discussed with Mr. Twait about this permit?

A We would have discussed issues regarding water quality standards, whether they apply or not; issues about Lake Michigan.

Q Mr. Rabins, you were asked some questions earlier with respect to the Board's Order and with respect to requirements being included in the permit regarding interim BTA. Am I understanding your testimony correctly that, as you understood the applicable 316(b) regulation, the regulation was not requiring the Agency to put into the permit interim BTA requirements?

A Can you repeat that one more time? That was pretty long.

Q Okay. I'm handing you a page of the federal 316(b) regulation adopted in 2014 and direct your attention, it's actually highlighted, to the section entitled interim BTA requirements. Could you read that out loud for the record?

A The highlighted portion?

Q Yes.

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	Page 79
1	A "(H interim BTA requirements.) An owner or
2	operator of a facility may be subject to an interim BTA
3	requirement established by the director in the permit
4	on a site specific basis."
5	Q Is your understanding of what the Agency was
6	supposed to do with regard to interim BTA consistent
7	with what you've just read in the regulation itself?
8	A I'd like to see the rest of it. It's just
9	hard to get context when I'm only seeing the back half
10	of it. If I saw the rest of it
11	Q Let me rephrase the question.
12	Is there anything you disagree with in
13	that section of the regulations?
14	A Do I disagree with the regulation? How would
15	you agree or disagree with a regulation? I guess I'm
16	confused.
17	Q Well, you could. You could say I don't agree
18	that that's what the regulation provides.
19	My question is just simply as you read
20	that, is it consistent with your understanding of
21	interim BTA?
22	A Yes, that's interim BTA.
23	Q Okay. That's all I was asking for.
24	Mr. Rabins, there's also several documents

in the record. The first one is marked as Agency
Exhibit A. That's the January 12th, 2012, Midwest
Generation comment letter. And you've been asked some
questions about this letter. I'm going to not repeat
those. But I do want to make sure it's clear, you did
review the information that was submitted in this
letter relating to the renewal of the 316(a) thermal
variance, correct?

A Correct.

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Q Okay. And then with respect to there was a public hearing held, and then Midwest Generation also submitted additional information to the Agency in comments that are contained in Exhibit G in your exhibit book. These are the July 22nd, 2013, Midwest Generation comments that were submitted to the Agency. Did you also consider the information contained in this letter with respect to the issues relating to renewal of the 316(a) alternative thermal variance?

A Yes.

Q Mr. Rabins, you were asked some questions earlier today by Miss Dexter about changes at the facility generally. With respect to changes at the facility that would have had an impact on the thermal discharge, things like changing the condensers,

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changing things that would influence the temperature particularly increasing in the effluent, wouldn't Midwest Generation have been obligated to disclose those types of changes under the applicable Agency regulations with respect to NPDES permits? Yes. And to your knowledge, there were no such

- disclosures made by Midwest Generation, correct?
- Changes were made at the facility which affected the thermal discharge.
- Yes, but not increasing the temperature of the thermal discharge, correct?
  - Α Correct.

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- Now, again earlier you were asked questions about operations at the plant, and you made reference to temperature-monitoring data that existed. Were you referring to the fact that in the permit that's been issued, there was a requirement to monitor and report daily maximum temperatures?
  - Yes, I was referring to that requirement. Α
- And was there a similar requirement in the Q prior permit?
  - Α Which permit? Like can you say the date?
  - The NPDES permit that expired in or about Q

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	Page 82
1	2005.
2	A Okay. So in that permit
3	Q But was administratively continued until this
4	permit was issued in 2015.
5	A Okay.
6	Q Was there thermal data that was submitted to
7	the Agency under the prior permit?
8	A Yes.
9	Q Okay. Was there also thermal data and
10	when I'm saying thermal data, I mean thermal effluent
11	data that was included in the initial permit renewal
12	application submitted by Midwest Generation to the
13	Agency?
14	A Yes.
15	Q And was all of that considered as part of the
16	Agency's decision as to whether or not to renew the
17	thermal alternate effluent limitation?
18	A Yes.
19	Q Is it your understanding that that kind of
20	thermal effluent data that we've just been covering in
21	these questions is included within the meaning of
22	actual operating experience?
23	A Yes.
24	Q Mr. Rabins, you were asked some questions

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	Page 83
1	about closed cycle cooling. Do you have any
2	understanding as to whether closed cycle cooling, the
3	changed to closed cycle cooling, would fall within the
4	intended meaning of interim BTA versus BTA?
5	A Yes, it would fall within the meaning of
6	interim BTA.
7	Q And can you explain what the basis of your
8	understanding is?
9	A If a facility changed to closed cycle
10	cooling, that would meet the requirement for Best
11	Technology Available.
12	Q Right. Do you understand I'm drawing a
13	distinction between interim BTA versus the BTA
14	requirements?
15	A It would meet interim BTA, it would meet BTA.
16	Q Oh, okay. I understand. You're viewing
17	let me state it as a question.
18	BTA is a more stringent standard than
19	interim BTA?
20	A No.
21	Q Can you explain the difference to me, what
22	your understanding is of the difference?
23	A Interim BTA is a requirement under the new
24	2014 b) rule. And it's based on best professional

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Page 84 1 judgment. BTA has specific requirements under the new 2 rule. 3 0 Okay. Thank you. 4 That's all the questions I have. MS. FRANZETTI: 5 HEARING OFFICER HALLORAN: Miss Dexter, your 6 redirect of your adverse, please. 7 MS. DEXTER: Yes. 8 REDIRECT EXAMINATION 9 By: Ms. Dexter 10 Okay. I'd like to start with a question 11 about we were just talking about the thermal discharge 12 monitoring report data that's contained in the record 13 that you testified the Agency considered. Within the 14 confines of the record, can you explain what the Agency 15 did to consider that data? The data was reviewed and the results were 16 Α 17 used as part of the basis for reissuing the alternative thermal effluent. 18 19 But there was nothing along the lines of 20 modeling or any way of evaluating analyzing that 2.1 effluent data compared to the receiving waters, 22 correct? 23 Objection to form. I think it's MS. FRANZETTI: 24 vague and confusing what you're --

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	Page 85
1	HEARING OFFICER HALLORAN: Overruled. You can
2	answer if you are able.
3	THE WITNESS: Can you re-ask the question?
4	BY MS. DEXTER:
5	Q Yes. Did the Agency do any modeling of the
6	effluent data or any other way to evaluate the impact
7	of those thermal values that you have on the receiving
8	water?
9	A No, not to my knowledge.
10	Q Now we'll go back to the interim BTA
11	question.
12	We've heard some inconsistent things about
13	whether or not there is an interim BTA determination in
14	the permit.
15	MS. FRANZETTI: Objection to counsel's
16	characterization of the testimony.
17	MR. PETTI: Objection.
18	THE COURT: Sustained.
19	BY MS. DEXTER:
20	Q Is there or isn't there an interim BTA
21	determination in the permit?
22	A There is.
23	Q There is. And is that contained in Special
24	Condition 7 of the permit? That's on Page 696 of the

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Page 86
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     Administrative Record.
 2
          MR. PETTI: For the record, I'll object.
                                                     It was
 3
     asked and answered earlier.
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          HEARING OFFICER HALLORAN: Overruled.
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          THE WITNESS: Yes.
     BY MS. DEXTER:
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                      Isn't it true that Special Condition 7
          Q
 8
     doesn't contain any language that's provides what
 9
     characteristics of the cooling water intake structure
10
     represent Best Technology Available to minimize adverse
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     environmental impact from impingement and entrainment?
          MS. FRANZETTI: Objection, form.
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13
     referencing BTA and not the applicable standard the
14
     Board found to apply in its Summary Judgment opinion of
15
     interim BTA.
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          HEARING OFFICER HALLORAN: He can answer if he's
17
     able. Overruled.
18
          THE WITNESS: Repeat the question.
19
          MS. DEXTER: I can read it back. I'll even add
     the word interim to be clear.
20
     BY MS. DEXTER:
2.1
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               Isn't it true that Special Condition 7 does
          Q
23
     not contain any language specifying what
24
     characteristics of the cooling water intake structure
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Page 87 1 represent the interim Best Technology Available to 2 minimize adverse environmental impact from impingement 3 and entrainment? 4 Special Condition 7 states that we've Α 5 determined that the operation of cooling water intake 6 structure meets the equivalent of Best Technology 7 Available. 8 Q Okay. That's not exactly what I asked. 9 Is there anywhere in Special Condition 7 10 where that cooling water -- the attributes of that 11 cooling water intake structure or the specific 12 operation qualities of the cooling water intake structure are defined? 13 14 What's an operational quality? Α 15 You responded that the agencies have 16 determined that the operation of the cooling water 17 intake structure meets the Best Technology Available. 18 Objection. Misstates the record. MR. PETTI: 19 HEARING OFFICER HALLORAN: Correct. I'll sustain 2.0 it. 2.1 MS. DEXTER: Can I just clarify what your 22 objection is? Do you want me to read the rest of the 23 sentence?

MR. PETTI: You said BTA again; you didn't say

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Page 88 1 interim BTA. I'm reading out of Special Condition 2 MS. DEXTER: 3 Here, I'll put quotes around it. 4 HEARING OFFICER HALLORAN: Where in the record? 5 It goes on to Page 696. MS. DEXTER: 6 BY MS. DEXTER: 7 Special Condition 7, it states, "Based on Q 8 available information, the Agency has determined that 9 the operation of the cooling water intake structure 10 meets the equivalent of Best Technology Available, BTA, 11 in accordance with the best professional judgment provisions of 40 CFR 125.3 and 40 CFR 125.90(b) based 12 13 on information available at the time of permit 14 reissuance." 15 And I'm asking if there's anything in 16 Special Condition 7 that actually defines what that 17 operation of the cooling water intake structure is? 18 What are the attributes that make it BTA? 19 Α No, that is not specified in Special Condition 7. 20 2.1 Q Thank you. 22 So when you answered Mr. Nagra's question 23 about stating there is no evidence that the existing 24 technology does not meet interim BTA requirements, and

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I will admit I don't have the record in front of me, so
I'm doing my best to characterize what you said. What
was the legal standard you were measuring that against?
How did you decide that there is no evidence in the
record that the existing technology does not meet the
interim BTA requirements?

A If you're asking what did I look at in the record to determine if the cooling water intake structure, like what did I look at to see that it does meet interim?

Q No. I'm asking for the basis of the statement that you made that there is no evidence in the record that the existing technology does not meet the interim BTA requirements.

A We reviewed the record and did not find any evidence to support that.

Q But what did you compare it against? What's the yardstick that made you decide whether or not interim BTA requirements were met?

A It's an interim BTA determination based on best professional judgment because there is no yardstick compared to a Best Technology Available determination where the, using your words, yardstick is defined in the new rule.

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Page 90 1 So did we have any information in the 2 record that shows that the operation of the cooling 3 water intake structure is causing excessive impingement or entrainment, and we did not find that in the record. 4 5 Okay. Under that description you just gave where it's based on best professional judgment, is 6 7 there any circumstance under which there could be 8 evidence that existing technology doesn't meet interim 9 BTA? 10 Objection. Calls for speculation. MR. NAGRA: HEARING OFFICER HALLORAN: He can answer if he 11 12 can. Can you? 13 THE WITNESS: I can't possibly speak to any scenario. I mean you could plug any scenario out. 14 Ι 15 can't speak of any and all scenarios. BY MS. DEXTER: 16 17 We'll move on. 0 18 Would I be correct in observing that the 19 record contains no analysis-comparing technologies that 20 were considered as potential interim BTA requirements 2.1 for Waukegan Station? 22 No, there was not a comparison of Α 23 technologies for the interim Best Technology Available 24 determination.

Q Now, we'll look a little bit at some examples that are in the record.

So isn't it true that in general, intakes located in nearshore areas will have greater ecological impact than intakes located offshore because nearshore areas are more biologically productive and have higher concentration of organisms?

A I'm not knowledgeable about the generalities about cooling water intake structures.

Q I am going to refer you to a document on Page 1058 of the Administrative Record. Do you recognize this as a document from USEPA regarding Clean Water Act 316(b) which deals with cooling water intake structure?

A That's what it says. I mean I'm not familiar with it.

Q Okay. Can you turn to Page 1059?

A Yes.

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MS. FRANZETTI: Just a standing objection, because this document is entitled a document that applies to new facilities. The Waukegan facility is not a new facility. I don't think this line of questioning is relevant.

HEARING OFFICER HALLORAN: So noted. You can

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1	proceed.
2	BY MS. DEXTER:
3	Q So Section 11.1 on Page 1059 is titled
4	cooling water intake structure characteristics that
5	includes the magnitude of impingement and entrainment.
6	And I will note that I did just read out those acronyms
7	for the sake of everyone here.
8	So can you please read the second sentence
9	in the fourth paragraph below 11.1? I'm sorry, fifth
10	paragraph.
11	A "In general, intakes located in nearshore
12	areas (riparian or littoral zones) will have greater
13	ecological impact than intakes located offshore,
14	because nearshore areas are more biologically
15	productive and have higher concentrations of
16	organisms."
17	Q Can you identify any record of evidence that
18	contradicts that statement?
19	A Not off the top of my head, no.
20	Q Turning to back to the Responsiveness Summary
21	on Page 666, we have a description of the cooling water
22	intake structure at Waukegan Station.
23	Is it fair to say that the onshore
24	location of the intake structure is not a feature that

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1	minimizes adverse environmental impact?
2	A I disagree with that. I don't know whether
3	it is exactly onshore. It's located in a constructed
4	Q I'm reading the sentence that says cooling
5	water from the lake is withdrawn from an onshore
6	location. Are you saying that's incorrect?
7	A Yes, I see that statement.
8	Q Okay. And is it fair to say that given the
9	onshore location of the intake structure or sorry.
10	Let me start over again. Is it fair to
11	say that the onshore location intake structure is not a
12	feature that minimizes adverse environmental impact?
13	A I'm just not in a position to say whether it
14	would minimize adverse environmental impact.
15	Q Is that one of the qualities that made you
16	decide this was interim BTA?
17	A It was part of the consideration that the
18	Agency used to determine if it was interim BTA.
19	Q But you don't have any evidence that the
20	onshore location is better or worse than any other
21	option?
22	A Better or worse than any other option?
23	Q The fact that the cooling water intake
24	structure is located onshore as compared to offshore,

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Page 94 you weren't weighing those two options to say this 1 2 should be interim BTA, correct? 3 No, I don't recall weighing that option. 4 At the bottom of that paragraph on page 666 0 5 it states, "The intake withdraws water from the entire 6 water column. "Does that help to minimize 7 environmental impact? I don't recall. I'm not for sure. 8 Α 9 Q The next paragraph states that, "The design 10 through screen velocity at critical low water level is 11 2.0, and 1.8 feet per second for Units 7 and 8, 12 respectively." 13 Isn't it true that the new Phase II 14 regulations that we've talked about establish that the 15 Best Technology Available for existing facilities is a 16 0.5 feet per second through screen velocity? 17 MR. NAGRA: Objection. MS. FRANZETTI: Objection to form. 18 19 Mischaracterizes both the existing rule, and the Board has found that portion not applicable at the time this 20 permit was issued; that instead, it's interim BTA. 2.1 22 HEARING OFFICER HALLORAN: Sustained. 23 BY MS. DEXTER: 24 When you were discussing closed cycle cooling Q

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a few minutes ago, you said that one of the reasons that the Phase II rules had established some -- let me start over.

Do you agree that the list of seven technologies included in the Phase II rule are potential technologies to minimize adverse impact on aquatic life?

MR. NAGRA: Objection. Same objection as last time.

HEARING OFFICER HALLORAN: Could you read back the question, please?

(The question was so read by the court reporter.)

HEARING OFFICER HALLORAN: Miss Dexter?

MS. DEXTER: The witness previously testified that the same lists where closed cycle cooling came from was something that the Agency looked at in order to establish what the Best Technology Available could be.

I'm not asking him to state that the Phase II rules apply as such. I am merely asking, are these technologies that are established by the rule potential technologies that minimize adverse environmental impact to aquatic life? Is this a list where we can get some information about what technologies are out there?

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MS. FRANZETTI: But again, relevancy. That's a list that is in the part of the rule when the full BTA requirements apply, which were not applicable to this permit.

MS. DEXTER: I'm not arguing that they are applicable. I'm merely pointing to the 0.5 feet per second outtake benchmark that the EPA established to minimize the --

HEARING OFFICER HALLORAN: Yes. I'm going to sustain both the Agency's and Midwest Generation's objection.

MS. DEXTER: Okay. Luckily, we have this elsewhere as well.

BY MS. DEXTER:

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Q In the document that I handed you, the cooling water intake structure document from the EPA, on Page 1059 of the Administrative Record, the last paragraph states, "Design intake velocity has a significant influence on the potential for impingement. The biological significance of design intake velocity depends on the species-specific characteristics such as fish swimming ability and endurance. These characteristics are a function of the size of the organism and the temperature and oxygen levels of water

in the area of the intake. The maximum velocity protecting most small fish is 0.5 feet per second, but lower velocities will still impinge some fish and /EPB train he goes and larvae and other small organisms."

Is it fair to say that these intake velocities of 1.8 or 2.0 feet per second at the Waukegan Station are three to four times greater than the velocities that protect most small fish?

- A Yes, I would say that's a fair statement.
- Q Thank you.

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Back to Page 666 of the record, the
Responsiveness Summary. It also states that, "All
screens are made with #12 gauge wire with 3/8's-inch
openings." Would it be correct to say that IEPA has
not included in the record any evaluation of this size
and type of screens compared to other options in an
attempt to identify the Best Technology Available?

MS. FRANZETTI: Objection again to form. Best Technology Available is not the applicable legal standard.

MR. NAGRA: Objection.

HEARING OFFICER HALLORAN: Objection sustained.

23 BY MS. DEXTER:

Q I will restate it with the word interim in

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Page 98 1 it. 2 Would I be correct to state that Illinois 3 EPA has not included in the record any evaluation of 4 this size and type of screens compared to other options 5 in an attempt to identify the interim Best Technology 6 Available? Α That's correct. 8 Q And what about the traveling screen system? Isn't it also correct that IEPA has not included in the 9 10 record any comparison of the existing traveling screen 11 system with other available traveling screen 12 technologies to evaluate the Best Technology Available 13 to minimize adverse environmental impact? That is correct. 14 Α 15 MS. FRANZETTI: Same objection. 16 MR. PETTI: Join. 17 HEARING OFFICER HALLORAN: He answered. Overruled. 18 BY MS. DEXTER: 19 20 All right. Now I'd like to turn back to the 2.1 proposal for information collection that we've 22 discussed several times today. Please turn to Page 23 1209 under the heading 1.1 Existing Control 24 Technologies.

Isn't it true that this study prepared on behalf of Midwest Generation states that, "The Waukegan Station cooling water intake system does not appear to include any control technologies specifically designed to reduce impingement mortality or entrainment below the calculation baselines?"

A You're asking about --

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- Q I'm asking if it's true that that is as I said it was?
  - A Yes, that statement is in the PIC.
- Q And isn't it true that the next section states that Waukegan Station does not appear to use any operational measures specifically designed to reduce impingement mortality or entrainment?
  - A Yes, that's what the PIC says.
- Q In the last paragraph on Page 1210, the author is proposed to evaluate whether the station has implemented any operational controls, including flow or velocity reductions, that reduce impingement mortality and entrainment. Am I correct in stating that the results of such a study are not found in the Administrative Record?
- A I'm not aware they did the study. But what you're --

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	Page 100
1	Q Okay. On the next page the author state that
2	the
3	MS. FRANZETTI: Was the witness finished with his
4	answer?
5	HEARING OFFICER HALLORAN: Were you finished with
6	your answer, Mr. Rabins?
7	THE WITNESS: No.
8	This PIC pre-dates Unit 6 coming offline.
9	There were flow reductions and heat rejection rate
10	reductions that took place after this document.
11	BY MS. DEXTER:
12	Q Can you explain how the flow reductions and
13	heat rejection rate, is that what you said?
14	A Yes.
15	Q Relate to the cooling water intake
16	structures?
17	A Okay. If you pump less volume of water per
18	unit time and you don't change the size or shape of
19	your
20	Q I'm just simply asking whether the study was
21	ever completed?
22	A No, not to my knowledge, the study was not
23	completed.
24	Q On the next page, 1211(a), the author states

that, "A two-tiered approach will be used to evaluate the feasibility of using impingement control technologies at Waukegan Station? Did.

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IEPA ever require that study to be completed and submitted in order to evaluate the interim Best Technology Available to minimize adverse environmental impact?

A Where does it talk about that study?

Q It's the third paragraph under Section 1.5.

Are you on Page 1211?

A No. Okay. No, I'm not aware that that study was completed.

Q The record also states on the same page,
1211, that "Midwest Generation reviewed information
available from USEPA technical consultants and
equipment vendors to identify possible impingement and
entrainment control technologies. Based on this
review, a list of impingement control technologies was
compiled. A summary of the potentially available
control technologies, including a brief description of
each technology, is provided in Table 1."

Turning to Table 1 on Page 1228 of the

Administrative Record, we have a table labeled Summary

of Potentially Available Control Technologies. The

left-hand column is labeled Control Technology. Do you see that?

A Yes, I see that.

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Q And under it there is a subcategory labeled Behavioral Barriers and then under that subcategory title there is A through E listed here that include sound barriers, strobe light, air bubble curtains, velocity caps and other behavioral barriers which indented underneath that list are electrical barriers, chemicals barriers, magnetic fields, chains and cables.

Am I correct in stating that IEPA did not evaluate any of these behavioral barriers as a potential Best Technology Available to minimize adverse environmental impact?

MS. FRANZETTI: Object to form. Assumes facts not in evidence that these would qualify as interim BTA.

HEARING OFFICER HALLORAN: Miss Dexter?

MS. DEXTER: I am merely trying to understand what the Agency did or did not evaluate to establish interim BTA. And we have here a list of potential control technologies that were presented by Midwest Generation, and I'm asking whether the Agency considered these control technologies.

HEARING OFFICER HALLORAN: I'll allow it.

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Page 103 1 Mr. Rabins? THE WITNESS: Yes, this information was available. 2 3 BY MS. DEXTER: 4 That's not my question. 0 5 My question is, is there any analysis that 6 the Agency has of whether or not these control 7 technologies, specifically the behavioral barriers 8 listed here, could be used as interim Best Technology 9 Available? 10 Α No. 11 Q Thank you. 12 The next subsection is labeled Physical 13 Barriers. Hear the list of potentially available 14 control technologies include vertical traveling 15 screens, modified vertical traveling screen, and in 16 parenthesis I believe it's pronounced Ristroph. 17 spelled R-i-s-t-o-f-p-h. Rotary drum screens, 18 center-flow/dual-flow screen, fine mesh screens mounted 19 on traveling screens, stationary screens (vertical

Am I correct in stating the IEPA did not

fixed-plate screens), velocity gradient, (angled or

louvered screens), fish barrier net, aquatic filter

barrier, (Gunderboom), porous dikes/leaky dams, and

cylindrical wedge-wire screen.

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analyze any of these physical barriers as potential interim Best Technology Available to minimize adverse environmental impact?

- A Correct. They were not analyzed.
- Q Thank you.

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Okay. So we've talked about technologies available to minimize adverse environmental impact.

Now let's look at the information about those impacts to aquatic life that the Agency relied on in making its best professional judgment determination.

HEARING OFFICER HALLORAN: I'm sorry, Miss Dexter.

How much longer do you think we have?

MS. DEXTER: Just a few more minutes, like three.

HEARING OFFICER HALLORAN: Okay.

BY MS. DEXTER:

Q Please turn to Page 666 again of the Responsiveness Summary. At the bottom of the page the question is posed, "What current and historical data did IEPA have regarding impingement and/or entrainment at this facility?" Can you please read the response the Agency provided to that question?

A Number 16, "The Illinois EPA used the data provided in the 1975/1976 study conducted in accordance with Section 316(b) of the Clean Water Act 33 U.S.C.

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1326(b). Specifically the study provides:

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"Twenty-four hour impingement samples were collected every fourth day from May 12th, 1975, through April, 1976 at the Waukegan Station. An estimated 898,457 fish comprised of 30 species were impinged during the study.

"Weekly entrainment samples were collected from April 2nd, 1975, through March 1976. An estimated 19.8 million identifiable fish larvae were collected. Comprised of only three species common come. An estimated 855.2 million identifiable fish eggs were collected during this study. Consistent with the fish larvae, only three species were identified among the fish eggs; alewife, rainbow smelt and common carp."

Q Okay. I want to start by asking a question about the entrainment information first.

Now, entrainment impacts occur when organisms are sucked past the cooling water intake screens into the cooling water structure itself, right?

A I would have to read the definition.

Q But basically, that's your understanding that entrainment includes those organisms that make it through the screens of the cooling water intake structure?

1 A That sounds correct.

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Q And if we're talking about entrainment impacts on fish, do you expect it would be mostly eggs and larvae that get the through that screen because they are small?

A I don't have any expectations.

Q You don't have any expectations. Okay.

The Responsiveness Summary here notes that only three species were "identifiable" from the hundreds of millions of organisms that were collected.

So let's say I have a question about study methods, for example, whether only three species were identifiable because only three species were present, or whether only three species were identifiable because it's difficult or even impossible to identify fish larvae or fish eggs down to the species level. Isn't it true that the reference studies from 1975 and 1976 are not located in the Administrative Record?

MS. FRANZETTI: Objection to form.

HEARING OFFICER HALLORAN: Could you be more specific, please?

MS. FRANZETTI: Well, just the characterization of counsel testifying at the beginning of the question. I have no objection if counsel is simply asking are those

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	Page 107
1	studies in the record.
2	HEARING OFFICER HALLORAN: Sustained. Miss
3	Dexter?
4	BY MS. DEXTER:
5	Q All right.
6	Are the referenced studies from 1975 and
7	1976 located in the Administrative Record?
8	A From my memory, I thought they were. They
9	should have been in there.
10	Q Can you point to those studies in the record?
11	A First of all, I don't have the whole record
12	in front of me; so no, I don't have the record.
13	Q What is your recollection of what those
14	studies are in the record? What am I looking for?
15	A The 1975/1976 study conducted in accordance
16	with Section 316(b) of the Clean Water Act, 33 U.S.C.
17	1326(b).
18	Q I understand that.
19	A Okay.
20	Q Do you know the names of those studies?
21	A I don't recall off the top of my head, no.
22	Q If I give you time with the Administrative
23	Record, can you confirm whether or not the studies are
24	included in the Administrative Record?

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```
Page 108
1
                     If you gave me time, I could confirm
          Α
               Yes.
2
     that.
3
          Q
               Why don't you attempt to do that?
4
               Do you have --
          Α
5
          MR. PETTI:
                     Objection.
          HEARING OFFICER HALLORAN: Well, let's hold on a
6
7
    minute.
8
          MS. DEXTER:
                       There's an ambiguity here that I
9
     think needs to be resolved. I can't testify that the
     studies are not in the record.
10
          HEARING OFFICER HALLORAN: Do you have the whole
11
     record with you? And how long do you think it will
12
13
     take?
          MS. DEXTER: I have it electronically.
14
15
                     Can we agree that the record speaks
          MR. PETTI:
                 The documents are what the documents are.
16
     for itself?
17
                  I mean I don't understand what we're doing
18
     here, to be honest with you, in going over confirming
19
     what a document says. This isn't an evidentiary
20
     hearing in the matter of a Trial Court where the
2.1
     documents are coming in out of a universe we don't
22
     know.
                  We have the universe of documents we're
23
24
     discussing. They say what they say, and they are what
```

```
Page 109
1
     they are. And I guess I don't understand what we're
2
     trying to get at with confirming or not confirming
     whether a document exists in the record. Either it's
3
4
     there, or it's not.
5
          MS. DEXTER: Well, I've heard inconsistent things
     about whether there's actually the basis for the
6
7
     Agency's decision in the record.
          HEARING OFFICER HALLORAN: Well, I think he can
8
9
     probably address that in a post-hearing Brief. It's on
10
     the transcript, and if there is inconsistent
     statements, he would bring that out in the post-
11
12
     hearing Brief.
13
          MS. DEXTER: I realize that I'm, this is sort of a
14
     negative contention I'm trying to prove. But I can't
15
     reference the 1,200 page record to say look, it's not
16
     here.
17
          HEARING OFFICER HALLORAN: Well, you could allege
18
     that in your opening and then respond in your reply.
19
          MS. DEXTER: Okay. We will take care of that.
20
          HEARING OFFICER HALLORAN: Depending on what the
2.1
     Agency -- Thank you.
22
     BY MS. DEXTER:
23
               And isn't it true that Midwest Generation
24
     itself has stated in the record that the 30-year old
```

```
Page 110
1
     data may no longer be representative of current
2
     conditions?
3
          MS. FRANZETTI: Objection to the form, and it's
4
     asked and answered. And I think you should direct him
5
     to where you're --
6
          MS. DEXTER: I didn't ask that question.
7
          MS. FRANZETTI: Well, he has answered that
8
     question. You asked him about --
9
          MS. DEXTER: That was about a different topic all
10
     together.
          HEARING OFFICER HALLORAN: Counsel, sustained.
11
12
     BY MS. DEXTER:
13
               All right. I am handing you a document from
          0
14
     the record beginning on Page 4 of the record, which
15
     appears to be a letter. What is the date of this
16
     letter?
17
          Α
               October 18th, 2004.
18
               And who is this letter from?
          Q
19
               Midwest Generation EME, LLC.
          Α
20
               And who is the letter addressed to?
          Q
2.1
          Α
               Mr. Blaine Kinsley.
22
               Can you please read for us the subject of the
          Q
23
     letter identified just below the address?
24
          Α
               "Request for extension to submit information
```

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Page 111 1 required by 316(b) Phase II Rule." 2 And can you please read the second sentence 3 of the second paragraph in this letter? 4 "Waukegan Station is our only affected Α 5 facility that has ever had to do any intake-related 6 monitoring, but that data is now 30 years old and may 7 no longer be entirely representative of current conditions." 8 9 MS. DEXTER: I have no further questions. 10 HEARING OFFICER HALLORAN: Okay. Do you want to 11 take a lunch break now? Mr. Nagra, do you have a lot 12 of questions to ask? 13 MR. NAGRA: No, I don't have a lot. Are you 14 talking about for the next witness or for Mr. --15 HEARING OFFICER HALLORAN: For this witness here. 16 MR. NAGRA: If I have questions, it will probably 17 be a handful, like maybe five, maybe none. I'll have 18 to just reassess. HEARING OFFICER HALLORAN: You know what? 19 2.0 take a lunch. It's 12:20. Be back here at 1:15. 2.1 Thank you. Off the record. 22 (There was a break taken, 23 after which the hearing was 24 resumed as follows:)

```
Page 112
1
          HEARING OFFICER HALLORAN: All right.
                                                  Ιs
2
     everybody ready?
3
                  All right. We're back on the record.
     It's 1:21. We are back from lunch. I believe Miss
4
     Dexter was on her redirect.
5
6
          MS. DEXTER: I believe I had concluded my
7
     redirect.
8
          HEARING OFFICER HALLORAN: Okay. So I think
9
     Mr. Nagra has a few questions to ask. And Mr. Rabins,
10
     you're still under oath.
          MR. NAGRA: Mr. Hearing Officer, we have no
11
12
     further questions.
13
          HEARING OFFICER HALLORAN: You have no further
14
     questions? Okay. Miss Franzetti?
15
          MS. FRANZETTI: No further questions.
16
          HEARING OFFICER HALLORAN: Let's go off the record
17
     for a second. We may have some questions.
                         (There was a discussion held off
18
19
                          the record, after which the
2.0
                          hearing resumed as follows:)
2.1
          HEARING OFFICER HALLORAN: You may step down,
22
     Mr. Rabins.
                  Thank you.
23
                  All right. Miss Dexter?
24
          MS. DEXTER: I do not intend to call the next
```

```
Page 113
1
     witness at this point, but I would like to reserve the
2
     ability to redirect or cross, or whatever you would
3
     call that if --
4
          HEARING OFFICER HALLORAN: Okay. So you rest your
5
     case in chief, and then we'll move to the respondents.
6
          MS. DEXTER:
                       Yes.
7
          HEARING OFFICER HALLORAN: Agency Midwest?
8
          MS. FRANZETTI: I'm sorry?
9
          HEARING OFFICER HALLORAN: Miss Dexter rested
     their case in chief. Now we turn it over to the
10
     respondents, if you so choose to call any witnesses.
11
12
                     Yes. The Agency wishes to call
          MR. NAGRA:
     Mr. Darin LeCrone as a witness.
13
          HEARING OFFICER HALLORAN: Okay. You may do so.
14
15
          THE COURT REPORTER: Raise your right hand please.
16
                          (The oath was thereupon duly
17
                          administered to the witness
18
                          by the Notary.)
19
2.0
2.1
22
23
24
```

	Page 114
1	DARIN LE CRONE,
2	Called as a witness by the Respondent herein, having
3	been first duly sworn, was examined and testified as
4	follows:
5	DIRECT EXAMINATION
6	By: Mr. Nagra
7	Q Mr. LeCrone, can you please state your
8	position with the Illinois Environmental Protection
9	Agency?
10	A Yes. I am the Manager of the industrial unit
11	in the pollution water controls permit section.
12	Q And can you just describe your educational
13	background, please?
14	A I have a Bachelor of Science in mechanical
15	engineering from Southern Illinois University
16	Carbondale, and I'm a Licensed Professional Engineer in
17	Illinois.
18	Q How long have you worked at IEPA?
19	A It was 24 years in May.
20	Q Okay. And in your current position, what are
21	your job responsibilities?
22	A I supervise the permit engineers in the
23	industrial unit and review their draft permits for
24	completion and all that, sign the letters necessary to

	Page 115
1	go out for the notices during the issuance process.
2	Q So Mr. Rabins who testified here earlier
3	today would have reported to you?
4	A Correct, yes.
5	Q And are you familiar with the Waukegan
6	facility?
7	A Yes.
8	Q Okay. And that facility holds a permit
9	issued by your division, correct?
10	A Correct.
11	Q And what is that permit?
12	A It's an NPDES permit for discharge of
13	wastewaters to waters of the U.S.
14	Q And does that permit include an alternative
15	thermal effluent limitation?
16	A Yes.
17	Q And can you describe what an alternative
18	thermal effluent limitation is?
19	A It is a standard that is other than what
20	would normally be prescribed by the regulations.
21	In this case, it's for temperature, and it
22	is a standard that is in some way different from the
23	water quality standard for temperature that would
24	normally apply to Lake Michigan.

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Q And have you worked with alternative thermal effluent limitations at other facilities in addition to the Waukegan facility?

A Yes.

2.1

Q What was your role in drafting and/or approving the permit that is the subject of this proceeding?

A I was responsible for approving the drafts that were released for notice. I am trying to remember. This application was pending before I became the unit manager, so like Mr. Rabins, I kind of came in after the application was filed. And I was not the permit reviewer prior to this in years previous. So from 2009-ish on, I was either the acting, or the full-time unit manager.

Q Okay. So let's talk a little bit about what the Agency considered in making its determinations under 316(a) of the Clean Water Act. And I'd like to start with the nature of the thermal discharge as it existed in 1978.

When the subject permit was up for renewal, did the Agency consider the nature of the Waukegan facility's thermal discharge in 1978 when the Board originally granted the alternative thermal

	Page 117
1	effluent limitation?
2	A Do you mean the nature of it as it existed in
3	1978?
4	Q Yes.
5	A Yes.
6	Q And did the Agency's consideration of the
7	nature of the Waukegan facility's thermal discharge in
8	1978 include consideration of the findings of various
9	studies that formed the basis of the Board's Order
10	granting that original alternative thermal effluent
11	limitation?
12	A The findings, yes; the studies themselves,
13	not necessarily.
14	Q Okay. And did those studies that had been
15	submitted in support of the original alternative
16	thermal effluent limitations, and on the basis of which
17	the Board originally granted that relief, include
18	thermal plume studies?
19	A To my understanding, yes, they did.
20	Q And did those thermal plume studies include
21	modeling of thermal levels in Lake Michigan?
22	A Yes.
23	Q And during the most recent permit renewal
24	process, did the Agency's consideration of the nature

Page 118

of the subject facility's thermal discharge, the Waukegan facility's thermal discharge in 1978, include consideration of the findings of various studies of Lake Michigan currents that also formed the basis of the Board's Order in 1978?

A That's my understanding, yes.

Q Okay. And moving forward to the present time, when the Waukegan facility's permit was up for renewal, did Illinois EPA consider the nature of the Waukegan facility's current thermal discharge relative to the nature of its 1978 thermal discharge?

A Yes.

2.1

Q And Mr. LeCrone, can you explain what a heat rejection rate is?

A The heat rejection rate is the amount of heat, and usually in BTUs, that is rejected by, usually through the condensers, and that BTU per hour typically is how it's expressed.

Q And did the Agency's comparison between the nature of the 1978 thermal discharge and the nature of the present day thermal discharge include consideration of the Waukegan facility's heat rejection rate over time?

A Yes.

	Page 119
1	Q And what did that comparison reveal with
2	respect to the Waukegan facility's heat rejection rate
3	over time?
4	A The information in the record indicated that
5	there was a 30-some odd percent reduction in the heat
6	rejection rate over the 78 conditions, due to the
7	shutdown of two units.
8	Q Okay. And can you also explain what a
9	cooling water discharge rate is?
10	A It's typically in either gallons per minute,
11	or million gallons per day of cooling waters circulated
12	through the plant's condensers.
13	Q Did the Illinois EPA's comparison between the
14	nature of the 1978 thermal discharge and the nature of
L 5	the Waukegan facility's present day thermal discharge
L 6	also include consideration for Waukegan facility's
17	cooling water discharge rate over time?
18	A Yes.
19	Q What did that comparison reveal with respect
20	to the Waukegan facility's cooling water discharge rate
21	over time?
22	A There was a similar percent reduction in flow
2.3	rate for the same reason as the rejection rate

reductions, due to the shutdown of the two units.

24

	Page 120
1	Q Can the location of a thermal plume in Lake
2	Michigan be affected by variations in lake currents?
3	A It could be, yes.
4	Q Is there anything in the record that would
5	suggest that Lake Michigan currents surrounding the
6	Waukegan facility have changed since 1978?
7	A I'm not aware of any information indicating
8	any changes in '78 in the lake currents.
9	Q Can the location of a thermal plume in Lake
10	Michigan be affected by weather conditions?
11	A Could be, yes.
12	Q Could the location of a thermal plume in Lake
13	Michigan be affected by changes in the season?
14	A It could be, yes.
15	Q So it's fair to say that the precise location
16	of a plume could vary, say, from winter to summer?
17	A It could.
18	Q And given that inherent season variability in
19	the plume's location, would it be fair to say that a
20	seasonal shift in the location of a plume, taken alone,
21	would not be considered a material change to the nature
22	of the thermal discharge?
23	A Yes. The seasonal changes would have been
24	accounted for, or should have been accounted for in the

		Page 121
1	original de	emonstration.
2	Q (	Okay.
3	A :	So in and of itself, that wouldn't constitute
4	a material	change.
5	Q i	And can the location of a thermal plume in
6	Lake Michie	gan be affected by changes to the physical
7	attributes	of the Waukegan facility's discharge canal?
8	Α	Like the size, shape?
9	Q 1	Right.
10	Α :	It could be affected by that, yes.
11	Q i	And are you aware of any such changes to the
12	structure o	of the Waukegan facility's thermal discharge
13	since 1978	?
14	A :	I'm not aware that there's been any changes
15	in the phys	sical nature of the discharge formula.
16	Q i	And now let's talk a little bit about the
17	balanced,	indigenous population of shellfish, fish and
18	wildlife.	
19		And particularly, let me start also with
20	1978. Dur:	ing the permit renewal process, did the
21	Agency cons	sider the balanced, indigenous population of
22	shellfish,	fish and wildlife at the time the Board
23	granted the	e alternative thermal effluent limitation in
24	1978?	

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1	
	Page 122
1	A Can you repeat that?
2	Q Sure. During the permit renewal process, did
3	the Agency consider the balanced, indigenous population
4	of shellfish, fish and wildlife that existed at the
5	time the Board granted the alternative thermal effluent
6	limitations in 1978?
7	A Yes.
8	Q And did the Agency's consideration of the
9	balanced, indigenous population of shellfish, fish and
10	wildlife at the time the Board granted the alternative
11	thermal effluent limitations in 1978 include
12	consideration of the field study data and study
13	findings concerning Lake Michigan organisms that formed
14	the basis for the Board's Order granting the original
15	thermal relief?
16	A Can you repeat?
17	Q Sure.
18	A I just want to make sure I'm answering
19	correctly.
20	Q Absolutely. I'll repeat my question.
21	Did Illinois EPA's consideration of the
22	balanced, indigenous population of shellfish, fish and
23	wildlife at the time the Board granted the alternative

thermal effluent limitation in 1978 include

24

	Page 123
1	consideration of the field study data and study
2	findings concerning Lake Michigan organisms that formed
3	the basis for the Board's 1978 Order?
4	A Study findings, yes.
5	Q Okay. And moving forward to the present
6	time. During the permit renewal process, did Illinois
7	EPA consider the present day balanced, indigenous
8	population of shellfish, fish and wildlife in Lake
9	Michigan?
10	A Yes.
11	Q Did the Agency's comparison between the
12	balanced, indigenous population of shellfish, fish and
13	wildlife in Lake Michigan in 1978 and the balanced,
14	indigenous population of shellfish, fish and wildlife
15	in Lake Michigan today reveal any changes in Lake
16	Michigan's aquatic community?
17	A The information in the record shows there was
18	changes in the biological community in the lake during
19	that timeframe.
20	Q Okay. And those changes would be noted in
21	the record, right?
22	A Yes.
23	Q Okay. And can I please refer you to
24	Respondent's Exhibit E, and specifically Page 673 of

	Page 124
1	Exhibit E? Mr. LeCrone, do you recognize this
2	document?
3	A Got it.
4	Q Okay, great. I'd like to refer you to
5	Page 673, and more specifically, Item Number 43.
6	A Yes.
7	Q So can I start by asking what this document
8	is?
9	A This is a page from the Responsiveness
10	Summary.
11	Q Okay. And does Item Number 43 on Page 673
12	reflect an accurate summary of the changes in Lake
13	Michigan's aquatic community that Illinois EPA
14	considered during the permit renewal process?
15	A Is this an accurate representation?
16	Q Yes.
17	A Yes.
18	Q And what were those changes that took place
19	in Lake Michigan?
20	A Based on the information available, it was a
21	change in productivity, and the like, that appeared to
22	be due to nuisance of invasive species.
23	Q And is there any basis in the record on which
24	to conclude that those changes were related to the

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	Page 125
1	Waukegan facility's thermal discharge?
2	A There's no information I'm aware of in the
3	record that indicates it's related to temperature, no.
4	Q Does the record reflect any possible causes
5	to which those changes could be attributed?
6	A Yes. Based on the information in the record,
7	the changes were due to the nuisance of invasive
8	species affecting the productivity on the lake as a
9	whole, from my understanding.
10	Q What years did the previous permit cycle for
11	this facility encompass?
12	A I believe it was 2000-2005.
13	Q And Mr. LeCrone, can I please refer you to
14	Respondent's Exhibit I, and specifically Page 1216 of
15	the record?
16	A Okay.
17	Q Do you recognize this document?
18	A Yes.
19	Q What is it?
20	A It's the Proposal For Information Collection
21	that was submitted for Waukegan Station.
22	Q Okay. And did Illinois EPA's consideration
23	of the present day balanced indigenous population of

shellfish, fish and wildlife in Lake Michigan include

24

	Page 126
1	the consideration of the data that appears on Page 1216
2	that was collected by Midwest Generation from 2003 to
3	2005 during the two-year impingement study?
4	A The data that's indicated on Page 1216?
5	Q Yes.
6	A Yes.
7	Q And would it be fair to say that the data
8	collected by Midwest Generation from 2003 to 2005
9	during that two-year impingement study indicated that
10	the fish community near the Waukegan Station did not
11	fundamentally change relative to the fish community
12	that existed in the late 1970's?
13	A That's my understanding, yes.
14	Q And Mr. LeCrone, I'd also like to refer you
15	to Page 204 which is Respondent's Exhibit A.
16	A Okay.
17	Q Do you recognize this document?
18	A Yes, I do.
19	Q What is it?
20	A It's the comment letter from Midwest
21	Generation dated January 12th, 2012.
22	Q Okay. And on the bottom of Page 204, do you
23	see a summary of the 2003 to 2005 field data that
24	Midwest Generation collected in the vicinity of the

	Page 127
1	Waukegan Station?
2	A Yes.
3	Q Okay. Did that data that Midwest Generation
4	collected from 2003 to 2005 during its two-year
5	impingement study indicate that most Lake Michigan open
6	water or deepwater species like salmonids, sculpins and
7	coregonids are impinged in low numbers?
8	A Yes.
9	Q What do the low impingement rates for open
10	water or deepwater species indicate?
11	A That they are typically not present in the
12	area of the thermal discharge.
13	Q Okay. And would it be fair to say that that
14	would indicate that they are at minimal risk from
15	exposure to the thermal plume?
16	A Yes, correct.
17	Q And I'd like to refer you now to Page 206 of
18	the same document; and specifically, the second to the
19	last paragraph.
20	A Okay.
21	Q Did Illinois EPA's consideration of the
22	present day balanced, indigenous population of
23	shellfish, fish and wildlife in Lake Michigan include a
24	consideration of the data collected by the Illinois

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Department of Natural Resources during electrofishing studies in Waukegan Harbor that is summarized on Page 206 of the record?

A Yes.

2.1

Q And I'd like to refer you back to Page 204 for a second of the same document; and specifically, the third paragraph on this page, which starts with "MWG acknowledges" and continuing to the next paragraph, "One of the USGS transects."

A Okay.

Q So did the Agency's consideration of the present day balanced, indigenous population of shellfish, fish and wildlife in Lake Michigan include consideration of data collected by USGS in 2009 as part of a trawling program that's summarized on this Page 204?

A Yes.

Q And did the USGS trawling program data have any particular relevance to the Waukegan facility?

A I know that one of the areas that they continued to trawl was near Waukegan Station. I don't know exactly where, but it was near the station discharge.

Q Okay. And would it be fair to say that the

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trawling program results revealed that alewives remained the numerically dominant species in that vicinity of the Waukegan Station, as was also the case in the late 1970's?

A Yes.

2.1

Q And based on the information in the record, was it your understanding that changes in the composition of the Lake Michigan fish communities since the late 1970's, such as declines in rainbow smelt, occurred on a lakewide basis, rather than on a localized basis?

A That's my understanding, yes.

Q And in your experience, if a regulated facility's thermal discharge would be the cause of those changes, would you expect those changes to occur on a localized basis or a lakewide basis, as opposed to -- excuse me. Let me rephrase the question.

In your experience, if a regulated facility's thermal discharge is a cause of such changes, such as declines in population, would you expect those changes to occur on a localized basis, rather than on a lakewide basis?

A In general, probably there's a lot of variables that would go into play there.

	Page 130
1	On something like on a receiving water
2	the size of Lake Michigan, I would expect it to be
3	localized. A smaller water body, it could be lakewide.
4	Q And is there any information in the record to
5	suggest that changes in the composition of the Lake
6	Michigan fish community since the late 1970's can be
7	attributed to thermal discharges?
8	A There is nothing in the record I'm aware of
9	that indicates it has anything to do with temperature.
10	Q Okay. Did you believe that you had
11	sufficient information to determine that there was no
12	material change that would cause appreciable harm to a
13	balanced, indigenous population of shellfish, fish and
14	wildlife in Lake Michigan?
15	A I believe we had sufficient information, yes.
16	Q Did the absence of a recent thermal plume
17	model deprive you of necessary information to make that
18	determination?
19	A In this case, no.
20	Q And in the context of Clean Water Act
21	Section 316(a) and related regulations, are you
22	familiar with a document known as the Handling Memo?
23	A Yes.
24	Q What is that document?

2.1

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A Not having it in front of me, it was a document outlining how USEPA wanted states to, how they wanted to consider 316(a) type relief or other thermal relief, and how it was granted to stations and under what authority and that sort of thing.

### Q Okay. And was there a new approach that was outlined in that memo?

A It was more of a revision or re-visiting of the approach that USEPA felt everyone should be following, that may or may not have been over the years. I don't know how to describe it, other than a nationwide wake-up call, for lack of a better way to describe it.

# Q And how did Illinois EPA become aware of that new approach that was outlined in the Handling Memo?

A We had received comments from USEPA on other draft permits asking us about thermal relief, how it was granted, under what legal authorities, and it caused us to begin reviewing the thermal relief granted at all the different power stations over the years.

Q Okay. And did USEPA, having issued that memo and this guidance on what to do under 316(a), eventually take any kind of position with respect to whether or not IEPA should issue the final NPDES permit

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	that	is	now	the	subject	of	this	proceeding?
--	------	----	-----	-----	---------	----	------	-------------

A They did issue a new objection letter for the permit kind of approving our approach, or not objecting or commenting to our approach in the way the final permit was issued.

Q And Mr. LeCrone, I'd now like to shift gears and focus my attention on 316(b). In the context of Clean Water Act Section 316(b) and its implementing regulations, are you familiar with something called the Phase II rule?

A Yes.

2.1

#### Q What is the Phase II rule?

A The Phase II rule when it was issued, I don't remember the year, was to apply to existing power plants, including the water intake structures of existing power plants.

Q And what was the legal status of the Phase II rule at the time Midwest Generation applied for renewal of the subject NPDES permit in January of 2005?

A In January of 2005, the Phase II rule was in effect and in litigation.

Q And what eventually happened with the Phase II rule?

A It was remanded by the Courts in either 2007

	Page 133
1	or 2008, and then withdrawn by USEPA.
2	Q Do you remember which Court remanded it?
3	A I don't.
4	Q Okay. State or federal?
5	A Federal.
6	Q Okay.
7	A I'm pretty sure.
8	Q Okay. And what is the state of the Phase II
9	rule today?
10	A The Phase II rule was, after remand was
11	withdrawn and replaced with the existing facility's
12	rule that became final in 2014.
13	Q Okay. Mr. LeCrone, can I briefly refer you
14	to Respondent's Exhibit I which begins on Page 1204 of
15	the record?
16	A Yes.
17	Q Do you recognize this document?
18	A Yes.
19	Q What is it?
20	A It's the Proposal For Information Collection.
21	Q Okay. And in 2005 when this Proposal For
22	Information Collection was prepared, was the interim
23	BTA standard applicable to the Waukegan facility?
24	A At that time, no. This was prepared under

	Page 134
1	the requirements of the Phase II rule.
2	Q Okay. And how did withdrawal of the Phase II
3	rule affect IPEA's approach to renewing the NPDES
4	permit?
5	A Well, it affected not just our approach, but
6	the permitee's approaches, and not just Midwest
7	Generation, but everyone's approach to dealing with
8	regulating intake structure operations. It kind of
9	left a vacuum there and a large chunk of uncertainty.
10	There was the last shred of the Phase II
11	rule following the remand withdrawn was a BPJ
12	requirement rule that kind of carried over to the
13	existing facility's rule when it was finalized.
14	Q Okay. And so the IEPA applied the rule as it
15	existed today which would be the existing facility's
16	rule?
17	A Correct.
18	Q And is it correct that the interim BTA
19	standard that IEPA applied with respect to the Waukegan
20	facility's cooling water intake structure was derived
21	from the existing facility's rule?
22	A Yes.
23	Q Okay. During the permit renewal process, was
24	Illinois EPA generally aware of how the Waukegan

Page 135 1 facility's cooling water intake structure operated? 2 Α Yes. 3 Q Can I please refer you to Page 666 of the 4 record, Respondent's Exhibit E? 5 Α Okay. And I'd like to refer you specifically to 6 Q 7 Item Number 15 on Page 666. 8 Okay. Α 9 Q Do you recognize this document, Mr. LeCrone? 10 I do, yes. Α 11 Okay. What is it? Q 12 It's a page from the Responsiveness Summary. Α 13 And is Item Number 15 on Page 666 an accurate Q 14 summary of how the Waukegan facility's cooling water 15 intake structure operated? 16 To the best of my knowledge, yes. Α 17 Okay. And when the Waukegan facility's NPDES Q 18 permit was up for renewal, did Illinois EPA make an 19 interim Best Technology Available determination with 20 respect to the Waukegan facility's cooling water intake structure that was based on Illinois EPA's best 2.1 22 professional judgment? 23 We did, yes. Α

And may I please refer you to Respondent's

24

Q

	Page 136
1	Exhibit H, and specifically, Page 696 of the record?
2	A Yes.
3	Q Is Illinois EPA's interim Best Technology
4	Available determination with respect to the Waukegan
5	facility's cooling water intake structure based on
6	Illinois EPA's best professional judgment reflected in
7	Special Condition 7 of this NPDES permit?
8	A Yes.
9	Q Pursuant to which statutory or regulatory
10	provisions did Illinois EPA make that interim Best
11	Technology Available determination?
12	A It was pursuant to 40 CFR 129.90(b).
13	Q And was it also pursuant to 40 CFR 401.14?
14	A Yes.
15	Q Okay. So the Agency would have consulted and
16	applied 401.14 in making it's interim BTA
17	determination; is that correct?
18	A Correct.
19	Q And it also would have consulted and
20	applied I'm sorry. What other provision did you
21	just mention?
22	A 125.90(b).
23	Q So Illinois EPA would have also consulted and
24	applied that provision, right?

	Page 137
1	A Correct.
2	Q And so why did the Agency cite 40 CFR 125.3
3	in Special Condition 7?
4	A Well, that Citation is to the best
5	professional judgment provisions for determining
6	effluent standards. And so our attempt was to include
7	that to try and incorporated the entirety of the
8	concept of best professional judgment.
9	Q Could Special Condition 7 have been drafted
10	without citing 125.3?
11	A Yes.
12	Q In other words, so it was not a necessary
13	component of Special Condition 7?
14	A It was not the necessary primary Citation.
15	Q Okay. And was Illinois EPA's interim Best
16	Technology Available determination based on the results
17	of any impingement and entrainment studies conducted at
18	the Waukegan facility?
19	A New or existing?
20	Q Let's start with existing.
21	A There were previous studies done in the past,
22	many years ago. There were not completed studies done
23	more recently than that.
24	Q Okay. And so would Illinois EPA's interim

2.1

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Best Technology Available determination have been based, at least in part, on the impingement and entrainment data that Midwest Generation collected from 2003 to 2005?

A Yes, to the extent that it was available, yes.

Q Okay. Is there any basis in the record on which to conclude that the cooling water intake structure at the Waukegan facility does not meet interim Best Technology Available pursuant to the regulatory provisions we just discussed a minute ago?

A There is nothing in the record that indicates it would not constitute an interim Best Technology Available based on our best professional judgment.

Q And Mr. LeCrone, can you explain to me what closed cycle cooling is?

A Closed cycle cooling generally is -- well,

I'll start with open cycle. That's where you withdraw
the full flow rate of cooling water from the water
source. It circulates through the plant, and the
entire flow goes back to the water source.

In closed cycle it's generally a majority of that flow rate is recycled, and only a small portion of it may be blown down to maintain water chemistry, so

	Page 139
1	it's a great reduction in cooling water flows. And
2	typically, cooling towers are one method of closed
3	cycle cooling.
4	Q And what if anything did Illinois EPA
5	determine with respect to closed cycle cooling as a
6	possible interim Best Technology Available?
7	A Can you restate that?
8	Q Sure. What if anything did Illinois EPA
9	determine concerning closed cycle cooling as a possible
10	interim Best Technology Available?
11	A We did not determine that it was an interim
12	BTA at this time.
13	Q Okay. Mr. LeCrone, I'd like to refer you to
14	Page 622 of the record which is Respondent's Exhibit K.
15	A Okay.
16	Q Do you recognize this document?
17	A Yes.
18	Q What is it?
19	A Page 622 is Enclosure A of a comment letter
20	from USEPA dated November 25th, 2014.
21	Q Okay. And is this the letter of non-
22	objection that we talked about a minute ago in the
23	context of 316(a)?
24	A Yes.

Page 140 1 And I'd like to refer you to Item 2 Number 3 on Page 622. And I was wondering if you could 3 please just read to me the very first sentence of that 4 item? 5 The very first sentence in number three? Α 6 Q Yes. 7 Α "Special Condition 7 provides the best 8 professional judgment Best Technology Available 9 determination for the cooling water intake structure as 10 required by Clean Water Act Section 316(b)." Did this statement from USEPA give you some 11 measure of confidence and/or confirmation that Illinois 12 13 EPA's interim Best Technology Available determination 14 with respect to the Waukegan facility's cooling water 15 intake structure based on Illinois EPA's best 16 professional judgment was consistent with and not in 17 violation of Section 316(b) of the Clean Water Act and 18 its implementing regulations? 19 Α Yes. 20 MR. NAGRA: Thank you, Mr. LeCrone. I have no 2.1 further questions at this time. 22 HEARING OFFICER HALLORAN: Thank you. I quess 23 we're on a roll.

Miss Franzetti, do you have any questions

24

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Page 141 1 of this witness? 2 MS. FRANZETTI: Not at this time. 3 HEARING OFFICER HALLORAN: Okay. Miss Dexter? MS. DEXTER: I think I have just a few. 4 5 CROSS EXAMINATION 6 By: Ms. Dexter 7 A few minutes ago you had stated that you 8 relied on the findings of the thermal studies that were 9 conducted pursuant to the 1978 thermal variance, but 10 not the studies themselves? 11 Α Right. 12 Can you point me to where those findings are Q located in the record? 13 14 Α Not off the top of my head, no. They are 15 discussed in -- I believe they are discussed in the summary of Midwest Generation's comment letter. 16 Let me 17 see if I can find it. I'm not sure where it is in the 18 record. 19 You were also asked a question about whether 20 the lake currents have changed. I would build on that 2.1 question and ask whether IEPA evaluated whether the 22 change in the nature of the discharges where the flow 23 was reduced has been evaluated, that new flow has been 24 compared to lake currents and the effect on lake

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CI	ır	r	eı	nt	s	?
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2.1

A I believe I was asked if the currents could have changed. I don't know that they have or they haven't.

The reduction in flow rates would have or should have had a corresponding effect on the size of the plume. It should have been smaller. The velocities exiting the discharge canal should have been lower. The flow out of it should have been lower, and that should have resulted in smaller plume.

- Q But is there any of that information in the record, any analysis of the actual --
  - A There are no plume studies, no.
- Q You were asked some questions about decline in the ecologic productivity in Lake Michigan?
  - A Yes.
- Q Where, if anywhere, in the record does the Agency find that a balanced, indigenous population of shellfish, fish and wildlife still exist in the receiving waters of Lake Michigan?
  - A Pardon me?
- Q Did the Agency make a finding anywhere on the record that there is in fact a balanced, indigenous population of fish, shellfish and wildlife in the

	Page 143
1	receiving waters?
2	A Directly, no.
3	Q Now I will direct your attention to page 666
4	that's been referred a few times in the Responsiveness
5	Summary. I want to say it's H in that book?
6	A No.
7	Q E?
8	A Yes.
9	Q So at the bottom of the page the question is
10	posed, "What current and historical data did Illinois
11	EPA have regarding impingement and/or entrainment at
12	this facility?" And then the Agency responses, "The
13	Illinois EPA used the data provided in the 1975/1976
14	study conducted in accordance with the 316(b) of the
15	Clean Water Act."
16	Isn't it true that the referenced studies
17	are not located in the record?
18	A I don't believe those studies in their
19	entirety are in the record, no.
20	Q Thank you.
21	You also stated a few minutes ago that the
22	Agency did not determine that closed cycle cooling was
23	interim BTA. I hope I didn't screw up what you said.
24	But

	Page 144
1	A Something to that effect.
2	Q Something to that effect?
3	A Yes.
4	Q Can you point to where that is in the record,
5	where that finding was made?
6	A It's kind of proving a negative. There is
7	no that determination doesn't exist.
8	Q Okay. When you stated a few minutes ago that
9	there is no evidence that the existing technology
10	doesn't meet interim BTA requirements, what legal
11	standard were you measuring the evidence against? How
12	did you decide there's no evidence proving that?
13	A Well, the BTA standard itself does not
14	contain any criteria upon which to make a
15	determination; it's solely based on the Agency's best
16	professional judgment.
17	Q Thank you.
18	And you talked a little bit about the
19	non-objection letter from you, the EPA?
20	A Yes.
21	Q Is it your understanding that a
22	non-objection letter should be construed as an
23	affirmative approval of USEPA?
24	A I believe it is what it says it is, a letter

```
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1
     of no objection.
2
          HEARING OFFICER HALLORAN:
                                      Thank you.
3
          MS. DEXTER: I have no further questions.
          HEARING OFFICER HALLORAN:
4
                                     Thank you. Mr. Nagra?
5
          MR. NAGRA: Just one minute.
                  No further questions, Hearing Officer.
6
7
          HEARING OFFICER HALLORAN: Miss Franzetti?
8
          MS. FRANZETTI:
                          Yes.
9
                     CROSS EXAMINATION
10
                         Ms. Franzetti
11
               I'd like to go back to the EPA letter,
          Q
12
     Mr. LeCrone.
                   It's Exhibit K, Respondent's Exhibit K.
     Go back again to record number Page 622.
13
14
          Α
               Okay.
15
               And with respect to counsel's questions about
16
     it's a no objection letter, so what does that mean?
17
     Does it mean that USEPA, for example, reviewed your
18
     draft proposal and did not find any basis to object to
19
     it as being contrary to the applicable regulations and
20
     laws?
2.1
          Α
               Correct.
                         It means they have reviewed our
22
     draft permit and find that it meets the requirements of
23
     the Clean Water Act.
24
               Okay. Now, you also testified a little while
          Q
```

	Page 146
1	ago about the Handling Memo?
2	A Yes.
3	Q And how that was a wakeup call that things
4	were going to be done differently going forward,
5	correct?
6	A Correct.
7	Q Okay. And USEPA Region 5 particularly did
8	bring that to the Illinois EPA's attention, correct?
9	A Correct.
10	Q And that's what you were referring to when
11	you said there were other thermal discharge permits or
12	proposed permits where USEPA Region 5 had raised this
13	issue of questioning the adequacy of the information
14	the Illinois EPA had to renew a thermal effluent?
15	A Yes, it did. It began a review of all the
16	thermal relief that had been granted and the legal
17	authorities under which that relief was granted and how
18	the Agency treated that relief that had previously been
19	granted by the Board.
20	Q And all of that preceded the issuance of this
21	November 25th, 2014, letter with no objection to the
22	renewal of the Midwest
23	A Those discussions and that sort of thing?
24	Q Yes.

	Page 147
1	A Yes.
2	Q Okay. And the USEPA, in staying on this
3	Page 622, in Paragraph 1, expressly references the
4	thermal alternate limit, doesn't it?
5	A Number one 1 622, it does reference the
6	316(a), yes.
7	Q So is it your understanding that USEPA
8	Section 5 had in fact specifically paid attention to
9	this draft permit proposed renewal of the 316(a)
10	alternate thermal effluent limit?
11	A They did. They conducted a full review of
12	the draft.
13	Q And similarly, they singled out in
14	Paragraph 3 on that same page your agency's best
15	professional judgment determination with respect to the
16	cooling water intake structure; is that correct?
17	A Correct.
18	Q Now, counsel for petitioners I'm sorry.
19	I'm going back for a moment to this 316(a)
20	issue with respect to this letter. Counsel for
21	petitioners has pointed out that there was not a new
22	plume study done as part of the renewal process for
23	this Waukegan Station permit, correct?
24	A Correct, yes.

	Page 148
1	Q Is it your understanding that the sub-part K
2	regulations that the Board has found applicable to this
3	permit, they require a new thermal plume study before
4	an alternate effluent limit can be renewed?
5	A I do not believe that sub-part K requires
6	that neither medical plume study be conducted.
7	Q Is it your understanding that it is a site-
8	specific decision based on all of the relevant
9	information before the Agency?
10	A Yes. It's the information necessary to
11	justify continuation.
12	Q Did USEPA in talking to you about this issue
13	ever say to you, you must require a new thermal plume
14	study before you can renew such an alternative effluent
15	limit?
16	A I do not recall them ever mentioning or
17	requiring a new thermal plume setting.
18	Q Now, you testified earlier just in terms of
19	your background, that you've been with the Agency, I
20	think it's 24 years this past May?
21	A Yes.
22	Q And I think you also testified that you've
23	been involved in the decisions by the Agency to issue
24	renewed NPDES permits for electric generating stations?

	Page 149
1	A Yes.
2	Q And in that context, I take it you have had
3	experience in looking at thermal discharges from the
4	various electric generating stations in Illinois?
5	A Yes.
6	Q Because you've been involved in that since
7	2009?
8	A In my managerial role, yes. And prior that
9	that, I was a permit writer.
10	Q Okay. So were you a permit writer from the
11	time you joined the Agency 24 years ago?
12	A Yes.
13	Q So have you been dealing with over the whole
14	24 years as electric generating station NPD'S permits
15	come up for renewal? You've had some experience?
16	A Yes. I was never the permit engineer for the
17	Waukegan Station permit, but I was for most of the
18	others.
19	Q Most of the others in the state?
20	A Yes.
21	Q Roughly, can you give us an idea of how many
22	that is?
23	A I believe all of them, except for the Midwest
24	Generation permits.

```
Page 150
 1
                           Now, in the course of that, I
               All right.
 2
     take it you have seen thermal plume studies?
 3
          Α
               Yes.
 4
               So you're generally aware of --
          0
 5
               I'm aware of what they are.
          Α
 6
               -- what they are?
          Q
 7
          Α
               Yes.
 8
               Okay. I just wanted to establish that as a
          Q
 9
     foundation.
10
                  And you were mentioning in responding to
11
     Ms. Dexter's questions that the plume here should have
12
     been smaller based on, I think you mentioned heat
     rejection rate, reduction in flow rate, nature of the
13
14
     discharge canal?
15
          Α
               Correct.
16
               Can you elaborate a bit on --
17
          MS. DEXTER: Objection.
                                    This is not contained in
18
     the Administrative Record.
19
          MS. FRANZETTI: It's his working knowledge, his --
20
          HEARING OFFICER HALLORAN: Could you read back the
2.1
     question, please?
22
                               (The question was so read
23
                                by the court reporter.)
24
          MS. DEXTER:
                       I think we're veering off the
```

```
Page 151
1
     general --
2
          HEARING OFFICER HALLORAN: Well, I'll allow a
3
     little latitude. You may proceed.
     BY MS. FRANZETTI:
4
5
               Can you explain the basis for the opinion you
6
     expressed that this plume, this thermal plume, should
7
     have been smaller today than it was back in the late
8
     70's when the Board originally granted the thermal
9
     alternate effluent limit?
10
          MS. DEXTER: I'm going to object again, because
     none of this basis is in the record. It should be in
11
12
     the record --
          MS. FRANZETTI: The reduction in the heat rate is.
13
     The reduction in the flow is.
14
15
                                     I'll allow it.
          HEARING OFFICER HALLORAN:
16
          MS. FRANZETTI: The distinction of our discharge
17
     canal is.
18
          HEARING OFFICER HALLORAN:
                                     Excuse me, Miss
19
     Franzetti. I allowed it. The witness may answer.
20
          THE WITNESS: The size of the plume would be a
     function of the flow and velocity exiting the discharge
2.1
22
     canal. If the dimensions of the canal and the water
23
     levels do not change, then a reduction in flow would
24
     result in a reduced velocity exiting that same
```

	Page 152
1	dimensional cross-section of the discharge canal, so
2	that effect should result in a smaller plume or a
3	smaller influence on that velocity exiting out into the
4	lake.
5	BY MS. FRANZETTI:
6	Q From your familiarity with this permit
7	record, and there is a diagram showing the discharge
8	canal, but I don't want to take the time to make you go
9	to it if you
10	Let me just ask it outright. Are you
11	generally familiar with the discharge canal location?
12	A The canal itself, not with like the
13	cross-sectional dimensions of it or that sort of thing.
14	Q No, no. Exactly.
15	But so the heated effluent is discharged
16	into a canal, correct?
17	A Correct.
18	Q Right. It's not discharged into an open area
19	nearshore where it might immediately hang a 180-degree
20	turn and hit the shore?
21	A No, because the canal exits into the lake,
22	but the I guess it depends on how you want to
23	characterize the discharge from the outfall. You know,
24	it exits the plant into the canal, the canal enters the

```
Page 153
1
     lake.
2
               Exactly. Okay.
          0
3
          MS. FRANZETTI: No further questions.
4
          HEARING OFFICER HALLORAN: Miss Dexter, recross?
5
          MS. DEXTER: Nothing further.
6
          HEARING OFFICER HALLORAN: Okay. Let's take a
7
     short recess, please. Five minutes.
8
                         (There was a break taken, after
9
                          which the hearing was resumed
10
                          as follows:)
11
          HEARING OFFICER HALLORAN: All right, thanks.
12
                  We're back on the record. My esteemed
13
     panel, they informed me they do not have any questions
14
     of this witness or any other witness.
15
                  My question is, are you going to do
16
     closings, or are you going to save those for the
17
     Briefs?
18
          MS. DEXTER: I'll save them for the Briefs.
19
          HEARING OFFICER HALLORAN: Okay. Have we
     decided -- I'm sorry. Closings, Miss Franzetti?
20
2.1
     Mr. Nagra?
22
          MS. FRANZETTI: No. We'll address it in the post-
23
     hearing Brief.
24
          HEARING OFFICER HALLORAN:
                                     Terrific.
                                                 Have you
```

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Page 154 1 discussed the briefing schedule based on how far 2 Midwest is going to waive their decision back? 3 MS. FRANZETTI: Yes, we have, Mr. Halloran. 4 What we agreed upon is that all parties 5 would file their post-hearing Briefs not later than 6 November 14th. 7 HEARING OFFICER HALLORAN: So they are going to be 8 simultaneous. 9 MS. FRANZETTI: Correct. But then, because 10 everybody wants to have the last word, there would be an opportunity for any party to file a Reply Brief not 11 12 later than December 14th. That takes into account the 13 Thanksqiving intervening holiday, as well as my 14 understanding that the Attorney General's Office has a 15 few layers of approval to go through to get a Brief 16 approved for filing. So that's the rationale behind 17 the proposed schedule. 18 I recognize that it was mentioned the 19 first meeting in February, February 2nd Midwest 20 Generation has a little concern that given the intervening Christmas holiday, it may not give the 2.1 22 Board enough time to waive the decision only to 23 February 2nd. So I was going to propose we'll waive it 24 to February 16th of 2017; and also suggest that perhaps

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Page 155
1
     a status conference with you, Mr. Halloran, at the end
2
     of January, so that in the event the Board does need
3
     additional time, that they can convey that to you and
4
     you could use that status conference to request that
5
     Midwest Generation provide some additional waiver of
     time to allow the Board to finish its work to issue its
6
7
     Order and opinion in the case.
8
          HEARING OFFICER HALLORAN:
                                     Based on your
9
     suggestions, December 14th, that would be the close of
10
     the record?
11
          MS. FRANZETTI: Correct.
12
          HEARING OFFICER HALLORAN: So that would -- I mean
13
     these guys are good and they should be finished by
14
     February 2nd, but if we run into problems, that's
15
     great.
16
                  I would suggest January 19th at
17
     11:00 A.M., have a conference call with me.
18
          MS. FRANZETTI: I'm sorry. What day of the week
     is that?
19
2.0
          HEARING OFFICER HALLORAN:
                                     That's a Thursday.
2.1
          MS. FRANZETTI: Could we go into the afternoon?
22
          HEARING OFFICER HALLORAN:
                                     1:30?
23
          MS. FRANZETTI:
                          Right.
24
          HEARING OFFICER HALLORAN: And then Midwest
```

```
Page 156
 1
     Generation, you said you're going to file February
 2
     16th, 2017, waiver?
 3
          MS. FRANZETTI:
                          Yes.
          HEARING OFFICER HALLORAN: Okay. So that's good.
 4
 5
                  So it sounds like simultaneous Briefs by
     the parties due on or before November 14th.
 6
 7
     simultaneous Replies are due December 14th.
 8
                  Is there anything else we need to discuss
 9
     before we go home? Everybody has waived closings, so
     all right. Thank you so much. Have a good, safe trip
10
11
     home.
12
                       Thank you.
          MS. DEXTER:
13
14
                          (Which were all the proceedings
15
                          had and testimony taken at the
16
                           hearing of the above-entitled
17
                           cause.)
18
19
2.0
2.1
22
23
24
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Page 157
 1
     STATE OF ILLINOIS
                             SS.
                          )
 2.
     COUNTY OF DU PAGE
 3
 4
                   I, GLORIA APOSTOLOS SIOLIDIS, C.S.R., duly
 5
     qualified and commissioned for the State of Illinois,
 6
     County of DuPage, do hereby certify that I reported in
 7
     shorthand the proceedings had and testimony taken at
 8
     the hearing of the above-entitled cause, and that the
 9
     foregoing transcript is a true, correct, and complete
     report of the entire testimony so taken at the time and
10
11
     place hereinabove set forth.
12
13
14
                          GLORIA APOSTOLOS SIOLIDIS
15
                           CSR License #084-001205
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A	addition 116:2	agencies 87:15	60:20,20 105:14	answer 14:1 22:14
<b>A.M</b> 155:17	additional 80:12	agency 1:8 2:20 3:7	alewives 129:1	23:16 24:10,16,20
ability 96:22 113:2	155:3,5	22:21 26:9,21	<b>allege</b> 109:17	24:21 25:13 28:15
able 10:11 23:16	address 9:12 109:9	33:15,16,21 40:7	allow 9:24 102:24	30:5 40:13 42:9
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