

BEFORE THE OHIO POWER SITING BOARD

- - -

In the Matter of the :
Application of Firelands :
Wind, LLC, for a :
Certificate of :
Environmental :
Compatibility and Public : Case No. 18-1607-EL-BGN
Need to Construct a :
Wind-Powered Electric :
Generation Facility in :
Huron and Erie Counties, :
Ohio. :

- - -

PROCEEDINGS

before Mr. Jay S. Agranoff and Mr. Michael Williams,
Administrative Law Judges, Ohio Power Siting Board,
conducted via Webex, called at 9:00 a.m. on Thursday,
October 15, 2020.

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VOLUME VIII

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1 Thursday Morning Session,
2 October 15, 2020.

3 - - -

4 ALJ AGRANOFF: It is 9 o'clock, 15th of
5 October, and we are getting into the home stretch.
6 So today we have Dr. Sasowsky and then Mr. Smallwood
7 and after that, we're just anxiously awaiting the
8 7:30 filing of the rebuttal testimony. Anybody have
9 anything that we need to discuss prior to us
10 beginning with Dr. Sasowsky?

11 If not, Mr. Van Kley.

12 MR. VAN KLEY: Yes, I am here.

13 ALJ AGRANOFF: And are you ready to call
14 your witness?

15 MR. VAN KLEY: Yes. Is he on the line?

16 ALJ AGRANOFF: Let's see whether we can
17 have him --

18 MS. KING: He is. I can promote him to a
19 panelist at any time.

20 ALJ AGRANOFF: If you could do so Kelli,
21 that would be most appreciated.

22 MS. KING: Sure.

23 ALJ AGRANOFF: Thank you.

24 MS. KING: Mr. Sasowsky, you've been
25 promoted to a panelist role. If you could unmute

1 yourself and turn on your video.

2 THE WITNESS: Thank you.

3 MS. KING: You're welcome.

4 ALJ AGRANOFF: Mr. Van Kley, please call
5 your next witness.

6 MR. VAN KLEY: All right. Very good. We
7 will call Dr. Ira Sasowsky.

8 ALJ AGRANOFF: Thank you. I am awaiting
9 his -- there he is. Hello, Dr. Sasowsky.

10 THE WITNESS: Good morning.

11 ALJ AGRANOFF: Please raise your right
12 hand.

13 (Witness sworn.)

14 ALJ AGRANOFF: Thank you.

15 Please proceed, Mr. Van Kley.

16 MR. VAN KLEY: All right. Thank you.

17 - - -

18 IRA SASOWSKY, Ph.D.

19 being first duly sworn, as prescribed by law, was
20 examined and testified as follows:

21 DIRECT EXAMINATION

22 By Mr. Van Kley:

23 Q. Dr. Sasowsky, would you state your name
24 and spell both your first name and your last name,
25 please.

1 A. My name is Ira Sasowsky, I-r-a,
2 S-a-s-o-w-s-k-y.

3 Q. All right. And do you have a copy of
4 your written direct testimony with you?

5 A. Yes, I do.

6 Q. All right.

7 MR. VAN KLEY: Your Honor, I would like
8 to mark this as LR Exhibit 3.

9 ALJ AGRANOFF: It shall be so marked.

10 (EXHIBIT MARKED FOR IDENTIFICATION.)

11 Q. (By Mr. Van Kley) Dr. Sasowsky, do you
12 have LR Exhibit 3 in front of you?

13 A. Yes.

14 Q. Okay.

15 A. That would be my testimony.

16 Q. Okay. Uh-huh. And did you prepare this
17 testimony?

18 A. Yes, I did.

19 Q. All right. Do you have any changes or
20 corrections to make to the testimony?

21 A. No, I don't.

22 Q. All right. And if you were going to
23 answer the questions in your testimony today, would
24 your answers to these questions be the same as you
25 wrote when this testimony was originally filed?

1 A. Yes.

2 MR. VAN KLEY: All right. At this time,
3 your Honor, Dr. Sasowsky is ready to answer
4 questions.

5 ALJ AGRANOFF: Thank you, Mr. Van Kley.
6 Mr. Secrest.

7 MR. SECREST: Thank you, your Honor.

8 - - -

9 CROSS-EXAMINATION

10 By Mr. Secrest:

11 Q. Good morning, Doctor. How are you?

12 A. Good. Thank you.

13 Q. Good. I see you looking around the tiles
14 to see who is actually speaking.

15 A. Oh, okay. I see you.

16 Q. My name is Jon Secrest. I am one of the
17 attorneys for Firelands Wind in these proceedings.
18 You've offered testimony in one other wind project,
19 correct?

20 A. That's correct.

21 Q. Okay. Are you familiar with the project
22 area for the Emerson Creek wind project?

23 A. I am familiar with the area, yes.

24 Q. Okay. Thank you. And are you familiar
25 with the proposed turbine layout for this project?

1 A. From what I've seen in the Application,
2 I'm familiar with it.

3 Q. Thank you. Prior to filing your direct
4 testimony, did you review any of the Ohio
5 Administrative Code for the developer's obligations
6 relating to geological investigations for wind
7 projects?

8 A. I did not access the Ohio Administrative
9 Code.

10 Q. Okay. Have you personally performed any
11 studies or analyses relating to existing wind
12 projects?

13 A. Ones that have been constructed already,
14 is that what you mean?

15 Q. Yes, Doctor.

16 A. No, I have not.

17 Q. Okay. Thank you. Have you studied -- so
18 I take it then you have not studied the effects of
19 karst or karstic features on any existing wind
20 projects?

21 A. I have not personally studied any
22 existing wind projects so no, I haven't studied them
23 with respect to karst.

24 Q. Okay. Are you aware of any wind projects
25 that have been constructed in karst areas?

1 A. I am not sure about that. I have read
2 some papers I think from Oklahoma about a wind farm.
3 I'm not sure if it was completed on karst or whether
4 it was just a preliminary study on karst but that
5 would be the limit of my examination of the subject.

6 Q. Okay. Thank you. And some of those
7 papers, were those provided in these proceedings by
8 your counsel? Do you know? Excuse me. By counsel
9 for the Resident Intervenors and Black Swamp Bird
10 Observatory.

11 A. I don't believe that is how I got them.
12 They were published in a conference proceeding that I
13 had attended, so they were a part of the published
14 scientific literature.

15 Q. Okay. Thank you. Have you performed any
16 borings at any of the proposed turbine sites?

17 A. No.

18 Q. Have you installed any standpipe
19 piezometers at any of the proposed turbine sites?

20 A. No.

21 Q. Tell me about your knowledge of the
22 typical wind turbine foundation construction.

23 A. Well, I'm not an engineer so I don't know
24 a lot about the engineering aspect of it. I am a
25 hydrogeologist but from what I've read there are two

1 main types of installation. I think one is called a
2 spread installation that involves a large concrete
3 base, and I can't remember the name of the other one,
4 but I think it's more -- it doesn't rely on such a
5 broad spread of concrete but instead goes down into
6 the rock.

7 Q. Thank you. And do you have an
8 understanding as to what type of foundation is being
9 proposed for the turbines for this project?

10 A. My recollection is that it was the spread
11 type.

12 Q. Okay. Do you have an understanding as to
13 how deep the excavation will be for spread-type
14 foundations for this project?

15 A. I did read that but I don't recall what
16 the specifications were.

17 Q. Okay. Do you have any understanding of
18 the pounds per square inch that will be exerted by a
19 spread foundation for this project?

20 A. I did look into that but it's not in my
21 testimony and I don't recall. It is a substantial
22 amount of concrete that is used for these from the
23 information that I found, but I don't know what the
24 pounds per square inch was.

25 Q. Okay. Doctor, do you have an

1 understanding as to the diameter of the foundations
2 for this project, the proposed foundations?

3 A. I did look at that in the Application but
4 I don't recall what that number is.

5 Q. Okay. Have you visited the project area
6 at any point?

7 A. I have been all across this -- that area
8 in general, but I didn't go out specifically to look
9 at turbine locations.

10 Q. Okay. During any visit to this project
11 area, have you performed any study or analysis
12 related to any existing structures in the project
13 area?

14 A. No.

15 Q. And you are aware though that there are
16 buildings and structures in the project area,
17 correct?

18 A. Yes.

19 Q. Okay. Those buildings would include
20 grain silos, for example?

21 A. I presume. I don't remember seeing any
22 but I presume so.

23 Q. Okay. Have you performed any study
24 related to subsistence of structures in the project
25 area?

1 A. "Subsidence" I think you mean?

2 Q. Yes. Thank you.

3 A. So subsidence of structures, no. We've
4 done studies of land subsidence but not the
5 subsidence of structures that are on them.

6 Q. Okay. Are you aware of any known
7 collapse of any structures in the project area?

8 A. No.

9 Q. Doctor, you have in front of you, I
10 believe, what was marked as Local Residents
11 Exhibit 3, your direct testimony?

12 A. Yes.

13 Q. If I may direct you to page 7 of that
14 testimony.

15 A. I have it.

16 Q. Thank you. Specifically I am looking at
17 Question 13 and the response to Question 13 which
18 begins on line 19.

19 A. I see it.

20 Q. The question is "How prevalent is karst
21 in the vicinity of the Project Area?" The first
22 sentence of your answer is "Karst is demonstrably
23 present in the northwest part of the project area as
24 evidenced by surficial features such as sinkholes."
25 Do you see that?

1 A. Yes.

2 Q. When you say "northwest part of the
3 Project Area," do you have any dimensions?

4 A. That was based on the map that was
5 presented in I believe the geotechnical report which
6 shows a polygon indicating the project area. I
7 didn't calculate what area clearly lies in the
8 demonstrable karst section but, you know, I could
9 estimate it by looking at the -- at the figure.

10 Q. Okay. But you have not done that?

11 A. No. I didn't calculate the percentage.

12 Q. Doctor, if I may have you skip forward a
13 page to page 8.

14 A. Okay.

15 Q. I'm sorry, page 9, please.

16 A. Okay. I am there.

17 Q. On page 9, I'm looking at line 4, the
18 sentence reads "A significant portion of the Emerson
19 Creek Wind Project area bedrock is Silurian and
20 Devonian age carbonate rock overlain by more or less
21 than 20 feet of glacial drift and/or alluvium." Do
22 you see that?

23 A. Yes.

24 Q. When you say "a significant portion," can
25 you quantify that in square miles or acres?

1 A. Well, I could if I measured it off the
2 map but I didn't do that in my written testimony.

3 Q. Okay. Thank you. Similarly, if you
4 would please refer to page 13.

5 A. Yes.

6 Q. Your response to Question No. 19 which
7 begins on line 9.

8 A. Yes.

9 Q. It states "A significant portion of the
10 project area is in karst terrain." With regard to
11 that significant portion, do you have a percentage or
12 can you quantify that in acres or square miles?

13 A. It would be easy to quantify by looking
14 at a map but I didn't present that here.

15 Q. Okay. Thank you.

16 In your direct testimony, you've
17 recommended various investigative techniques related
18 to this project, correct?

19 A. Well, I don't know whether I've
20 recommended them, but I think I have mentioned some
21 that could give answers that would be useful.

22 Q. Okay. Thank you for the clarification.
23 With regard to some of those -- well, specifically
24 with regard to dye testing, is that one of the
25 investigative techniques you discuss in your prefiled

1 testimony?

2 A. Yes, it is.

3 Q. Okay. Do you know if that's a -- if that
4 is something that is recommended or required by ODNR
5 for siting wind turbines? And by "ODNR" I mean the
6 Ohio Department of Natural Resources.

7 A. I don't know of any specific
8 recommendations that ODNR has for wind turbine
9 installation.

10 Q. Are you aware of any rules of the Ohio
11 Power Siting Board that require dye tests in relation
12 to siting wind turbines?

13 A. I'm not aware of any rules such as that,
14 though I think there are requirements for protecting
15 adjacent landowners and water supplies and things
16 like that and this would be one technique that could
17 be applied for that sort of thing.

18 Q. Is a dye test a standard practice related
19 to construction projects?

20 A. I guess it would depend upon the
21 construction project and what the potential impacts
22 are. I'm not in the construction industry so I'm
23 really not sure.

24 Q. Okay. I believe -- well, let me ask you,
25 have you provided technical assistance or consulting

1 services for any construction project?

2 A. Boy, I probably have at some time in my
3 career because I've been around a long time but I'm
4 not specifically remembering an instance like that.

5 Q. Okay. Thank you.

6 Have you reviewed the Staff Report of
7 Investigation in this case?

8 A. Yes, I did.

9 Q. Have you also reviewed the Joint
10 Stipulation and Recommendation?

11 A. I don't recognize that phrase.

12 Q. Okay. Well, are you aware that prior to
13 construction, the Applicant is required to submit a
14 geotechnical exploration and evaluation?

15 A. I don't remember that specific
16 requirement but I did read the geotechnical report.

17 Q. In reviewing the Staff Report of
18 Investigation, do you recall that prior to
19 construction, the Applicant must participate in a
20 pre-construction conference?

21 A. I don't remember that specific
22 requirement.

23 Q. Okay. Doctor, may I please have you
24 refer to page 15 of your direct testimony.

25 A. Okay.

1 Q. Thank you.

2 A. Excuse me.

3 Q. I'm looking at the second paragraph on
4 page 15, the first sentence states "When changes are
5 made to the land surface from activities like
6 constructing turbines, water from fields, ditches,
7 and constructed areas which may be contaminated may
8 be directed into sinkholes or other openings which
9 provide a direct connection to the aquifer." Do you
10 see that?

11 A. Yes.

12 Q. Does the construction of a wind turbine
13 present any risk of water-source contamination beyond
14 that of any other construction project?

15 A. I mean, I think any -- since all
16 construction projects are different, they can have
17 different potential impacts, so I'm not exactly sure
18 how to address your question. You know, obviously,
19 you know, if somebody created an uncontrolled area or
20 a landfill right on top of a karst, that would
21 present a -- a severe hazard for contamination. If
22 you are constructing a large concrete base that's
23 changing water drainage and possibly directing water
24 into openings that it hadn't gone into before, that
25 also presents a level of potential contamination.

1 Q. Based on your familiarity with the
2 project area, are you aware there is a surface --
3 open surface quarry in the project area?

4 A. I don't recall that there was a -- I'm
5 not sure if I knew there was a quarry there.

6 Q. Okay. So you're not aware what blasting
7 might take place at that quarry?

8 A. No.

9 Q. Have you read any reports of groundwater
10 contamination in the project area due to the
11 operation of any quarries in the area?

12 A. I do not recall reading a report like
13 that, no.

14 Q. Okay. Your testimony discusses a
15 mitigation measure known as grouting, correct?

16 A. Yes.

17 Q. Doctor, what is grouting?

18 A. Grouting is an engineering practice where
19 a fluid material like a cement or grouting material
20 is pumped into the ground for a variety of purposes.

21 Q. One of those purposes is to fill voids in
22 the ground; is that correct?

23 A. As I understand it, yes.

24 Q. Okay. Thank you. Have you ever been
25 involved in any -- strike that.

1 Have you ever performed any studies
2 related to the implementation of grouting as a
3 mitigation measure for any project?

4 A. I have participated with engineers in
5 that sense, yes.

6 Q. Okay. Can you tell me the names of those
7 studies?

8 A. The one I am thinking of is a project at
9 Solebury School in Pennsylvania where they had water
10 loss into the ground and possible damage to buildings
11 because of subsidence.

12 Q. Do you recall any others?

13 A. Not off the top of my head.

14 Q. Okay. Thank you.

15 Doctor, do you, in addition to your
16 prefiled testimony, have some of the literature that
17 accompanied that prefiled testimony with you?

18 A. I have the -- well, the appendices are
19 attached to it. Are you talking about other
20 documents?

21 Q. Yes. Specifically I am referring to a
22 document titled "Evaluating Karst Risk at Proposed
23 Windpower Projects."

24 A. I have that on my computer. I could
25 probably pull that up.

1 Q. If you would, I would appreciate that.

2 MR. SECREST: And I want to make sure
3 other counsel has that document as well. It was
4 circulated by Mr. Van Kley a couple days ago.

5 ALJ AGRANOFF: Mr. Secrest, was that
6 marked as an exhibit?

7 MR. SECREST: It has not been marked,
8 your Honor, no. Assuming the Bench has it as well,
9 may I move to mark as it Applicant's Exhibit 87.

10 ALJ AGRANOFF: When was the e-mail sent
11 from Mr. Van Kley with that information?

12 MR. VAN KLEY: That was sent Monday, I
13 think, maybe Tuesday, but I did not send it to the
14 Bench. I just sent it to -- to other counsel as a
15 supplement to the document production.

16 THE WITNESS: Mr. Secrest, can you tell
17 me the author's last name on that so I can search on
18 it?

19 MR. SECREST: Certainly. There's two.
20 The first listed author is Bangsund, B-a-n-g-s-u-n-d.

21 ALJ AGRANOFF: Let's go off the record
22 for a minute.

23 MR. SECREST: Thank you.

24 (Recess taken.)

25 ALJ AGRANOFF: Whenever you are ready,

1 Mr. Secrest.

2 MR. SECREST: Thank you, your Honor.
3 Appreciate everyone's patience as well. And I don't
4 recall, your Honor, where we were. I think I moved
5 for the admission of Applicant's Exhibit 87 which is
6 literature titled "Evaluating Karst Risk at Proposed
7 Windpower Projects."

8 ALJ AGRANOFF: I think you were just
9 seeking the marking of that.

10 MR. SECREST: That's correct, your Honor.

11 ALJ AGRANOFF: It shall be so marked.

12 (EXHIBIT MARKED FOR IDENTIFICATION.)

13 MR. SECREST: Thank you.

14 Q. (By Mr. Secrest) Dr. Sasowsky, do you
15 have this literature in front of you?

16 A. Yes. Thank you.

17 Q. Thank you. Thank you for your patience.
18 And have you reviewed this document before?

19 A. Yes, I have read it.

20 Q. Okay. Do you understand this document to
21 be a discussion of the karst risk review process for
22 constructing wind turbines?

23 A. Yes. This is what the authors
24 recommended.

25 Q. Okay. If you could please turn to the

1 third page which is labeled page 29.

2 A. Okay. I'm there.

3 Q. Thank you. There's a heading entitled
4 "Investigation Methods." Do you see that?

5 A. Yes.

6 Q. And the third paragraph under that it
7 states "Not every tool is necessary or appropriate
8 for every site." Do you see that?

9 A. Yes.

10 Q. And then below it it says "Desktop
11 studies." Do you know whether the Applicant
12 performed desktop studies related to this wind
13 project?

14 A. The Applicant did perform desktop studies
15 related to the geotechnical aspects of the proposed
16 project.

17 Q. Thank you. Do you then see the next
18 column it states "Field studies"?

19 A. Yes.

20 Q. And there's four bullet points under
21 that. The last bullet point is "Drilling." And the
22 paragraph under the bullet point states "These
23 methods are listed, approximately, in the order of
24 increasing cost. Because of their cost, drilling and
25 geophysics are usually not undertaken until late in

1 the development process or once the project goes to
2 construction." Do you see that?

3 A. Yes.

4 Q. Do you understand that the Applicant has
5 performed borings at 80, approximately 80 turbine --
6 proposed turbine locations?

7 A. Yes, I do.

8 Q. Okay. Thank you.

9 If you turn to what is marked as page 32
10 of this document.

11 A. Yes.

12 Q. There is a bullet point "Use construction
13 methods." Do you see that?

14 A. Yes.

15 Q. The first sentence states "Most turbine
16 spread foundations are relatively shallow
17 (approximately 2 to 3 meters below grade at the
18 base)." Does that conform to your understanding as
19 to the general depth of spread footer foundations?

20 A. I don't remember what the depth was, so
21 that -- that seems like it's reasonable.

22 Q. Okay. Moving a couple sentences forward
23 in this same paragraph it states "Another option is
24 to grout the underlying voids full to eliminate the
25 potential for collapse." Do you see that?

1 A. Yes.

2 Q. Is grouting a mitigation method used to
3 prevent collapse of structures?

4 A. Yes.

5 Q. Okay. If you look at the last sentence
6 that same paragraph, at least the same column we are
7 looking at.

8 A. Yes.

9 Q. It states "Note that implementing
10 constructed mitigation often means that detailed
11 karst characterization is no longer required." Do
12 you see that?

13 A. Yes.

14 Q. What does that mean to you?

15 A. It means to me that these authors are
16 ignoring potential impacts to the groundwater and
17 they're focusing solely on the stability of the built
18 structure and that's really what I see with all the
19 materials that are presented in the Application.
20 Karst is treated as a problem for construction. It's
21 not recognized that people's groundwater that they
22 drink actually comes from the surface and in these
23 areas where the construction is going to be made.

24 Q. Thank you, Doctor. According to these
25 authors, if you implement constructed mitigation such

1 as grouting, you no longer have to characterize
2 karst; is that accurate?

3 A. That's what these authors say in this
4 sentence, yes.

5 Q. Thank you.

6 If you would please turn to page 33 of
7 this literature, Doctor.

8 A. Okay. I'm there.

9 Q. There is a heading "Project Examples."
10 Do you see that?

11 A. Yes.

12 Q. It says "Table 1 summarizes the extent of
13 investigation on projects where karst risk was
14 evaluated mainly by the senior author. Following are
15 some brief descriptions of a few of those sites." If
16 you refer to Table 1 about halfway down, do you see
17 the site location for Ohio?

18 A. Yes.

19 Q. Okay. And the number of turbines is
20 listed as 175? Do you see that?

21 A. I see it, yes.

22 Q. And under the column for "Built?" it says
23 "Yes"?

24 A. Yes, I see that.

25 Q. Do you know which project this

1 references?

2 A. No, I don't.

3 Q. Okay. Based on this literature though,
4 this references a wind power -- wind energy project
5 in Ohio of 175 turbines where karst risk was
6 evaluated; is that your understanding?

7 A. Yes.

8 Q. Doctor, you previously referred to a
9 project that you had participated in and it was at
10 the Solebury School?

11 A. Yes.

12 Q. Would you mind spelling that, please.

13 A. S-o-l-e-b-u-r-y.

14 Q. Thank you, Doctor. Did that project
15 involve a quarry?

16 A. Yes.

17 Q. Okay. And did that study involve dewater
18 and deepening mining?

19 A. Yes.

20 Q. Okay. Thank you. In that case was
21 grouting offered as an engineering solution to return
22 the water table to the previous level?

23 A. There was -- there was a lot of different
24 engineering proposals offered that -- that definitely
25 was discussed but it was not implemented, not for the

1 purpose of returning water to its previous level.

2 MR. SECREST: Okay. Your Honor, may I
3 have about 5 minutes to review my notes and confer?

4 ALJ AGRANOFF: Certainly.

5 MR. SECREST: Thank you.

6 ALJ AGRANOFF: Why don't we come back at
7 9:45.

8 (Recess taken.)

9 ALJ AGRANOFF: Let's look, everybody is
10 back. Mr. Secrest.

11 MR. SECREST: Thank you, your Honor.

12 Q. (By Mr. Secrest) Dr. Sasowsky, you
13 indicated or you assume there are grain bins or grain
14 silos located in the project area; is that right?
15 I'm sorry, I did not catch that answer.

16 A. Yes, I did.

17 Q. Okay. Thank you. Are you aware that a
18 grain bin, a standard-size grain bin, approximately
19 60 feet in diameter, when full, would exert 4 times
20 the pounds-per-square-foot pressure on the surface as
21 compared to a spread footer wind turbine foundation
22 that is proposed for this project?

23 A. No, I was not aware of that.

24 Q. Doctor, the Solebury School project you
25 were involved in, by way of background, was that a

1 matter in which the school had actually filed suit
2 against the quarry, claiming that the quarry had
3 caused sinkholes due to its deepening of the mines
4 and blasting?

5 A. That's the general setup. I don't --
6 there were a number of legal proceedings involved,
7 and I don't think it initiated with them filing suit
8 against the quarry. I think they requested action by
9 the state agency to protect their groundwater supply.

10 Q. Okay. Based upon your recollection, was
11 your involvement related to a determination as to
12 whether the quarry caused the sinkholes?

13 A. Yes, it was.

14 Q. Okay. Your involvement was not to study
15 the effects of grouting, correct?

16 A. No, no, that wasn't.

17 MR. SECREST: Thank you, Doctor. At this
18 time I have no further questions.

19 ALJ AGRANOFF: Thank you, Mr. Secrest.

20 Ms. Aidun, any other counsel have
21 clarifying questions of this witness?

22 I will assume silence means no.

23 Redirect.

24 MR. VAN KLEY: Thank you, your Honor.

25 - - -

1 REDIRECT EXAMINATION

2 By Mr. Van Kley:

3 Q. Dr. Sasowsky, do you still have
4 Exhibit 87, the Bangsund paper in front of you?

5 A. Yes, I do.

6 Q. All right. Let's talk about that paper
7 for a little while. Do you see any indication in
8 this paper that the authors were considering any
9 groundwater concerns when they prepared it?

10 A. It doesn't seem to be on their mind
11 really. They are approaching it more from the idea
12 of karst causing problems to the project rather than
13 the project causing problems to the karst.

14 Q. Let's go to page 32 which would be the
15 seventh page of the PDF.

16 A. Okay. I'm there.

17 Q. Okay.

18 ALJ AGRANOFF: Did you say page 32,
19 Mr. Van Kley?

20 MR. VAN KLEY: Yes, your Honor.

21 ALJ AGRANOFF: Thank you.

22 MR. VAN KLEY: Give me just a moment. I
23 was looking for a passage that was discussed earlier
24 and I may have written down the wrong page.

25 ALJ AGRANOFF: Take your time.

1 Q. (By Mr. Van Kley) Here we go. It's on
2 the previous page, so it would be on PDF page 6 and
3 the page is numbered 32. And we will go to the first
4 column on that page under the heading of use -- "Use
5 construction methods."

6 A. I have it.

7 Q. All right. I believe you were asked
8 about a sentence in that paragraph that starts seven
9 lines below -- six lines below the title "Use
10 construction methods" and the sentence starts with
11 the words "Another option."

12 A. Yes, I see it.

13 Q. Okay. So that sentence reads as follows:
14 "Another option is to grout the underlying voids full
15 to eliminate the potential for collapse." And my
16 question about that sentence is whether that sentence
17 is related to safeguarding groundwater from the
18 turbine or whether it's related to a different
19 purpose given the wording of the sentence in the
20 context of the paragraph?

21 A. Well, to my read, the context is clearly
22 about protecting the constructed turbine. That's
23 really the focus of this whole article. I mean, if
24 you go to the end of this section, you know, they
25 state that the -- if karst isn't identified until the

1 construction phase, then the project may not be
2 profitable. So really the concern here is the
3 perspective it's taken is from a -- an engineering
4 standpoint and making the project work. It's not
5 about protecting the environment that's present or
6 minimizing the impact.

7 Q. And now going to the third PDF page which
8 the page is numbered 29.

9 A. Okay.

10 Q. You were asked some questions about the
11 desktop studies listed in column 1 on that page and
12 then some -- about -- you were also asked about the
13 field studies in column 2 on that page. And you were
14 asked about the reference to drilling at the end of
15 the list of field studies. Do you recall that
16 testimony?

17 A. Yes.

18 Q. Okay. Now, do you have any observations
19 with respect to whether waiting until just before
20 construction to perform drilling in the Emerson Creek
21 wind case would be advisable?

22 A. Well, I think, in general, drilling is a
23 mixed bag in karst investigations. And the reason
24 why is even if you have a -- a 1-acre site and you
25 put 100 drill holes in it, you could still miss a

1 large void that's present or a cave. So it's -- it's
2 difficult to sort of use that as a way to fully
3 characterize the site.

4 Now, for -- as I said before, the
5 geotechnical report and the -- and the desktop study
6 by Hull, those seem to be focusing on challenges that
7 would be faced in constructing these turbines and the
8 associated ecostructure with them. It wasn't focused
9 on protecting the resource that the groundwater users
10 need. And, in fact, if you look through, you know,
11 all those reports, you know, the mention of
12 groundwater is really pretty cursory and there is no
13 plan laid out to even determine where people's water
14 is coming from.

15 It seems like the only thing that's being
16 done to potentially protect people is to observe
17 setbacks. And setbacks can be useful but they are
18 not really protective in a karst area where the
19 groundwater flow directions may be highly irregular
20 and may even go in opposite directions than might be
21 assumed.

22 MR. VAN KLEY: Okay. I have no further
23 questions at this time.

24 ALJ AGRANOFF: Recross.

25 MR. SECREST: Very briefly, your Honor.

1 Thank you.

2 - - -

3 RECROSS-EXAMINATION

4 By Mr. Secrest:

5 Q. Dr. Sasowsky, you just referenced a
6 geotechnical report and the Hull report. Do you
7 recall that the geotechnical report recommended that
8 the Applicant per -- perform void assessments at
9 certain sites?

10 A. Yes.

11 Q. Okay. Do you understand that the
12 Applicant intends to follow that recommendation?

13 MR. VAN KLEY: Objection. He doesn't
14 know what the Applicant intends to do in its own
15 mind.

16 MR. SECREST: I will withdraw the
17 question.

18 Q. (By Mr. Secrest) Dr. Sasowsky, have you
19 listened in on any testimony during these
20 proceedings?

21 A. Yes.

22 Q. Whose testimony have you listened to?

23 A. I listened to the testimony of the
24 Applicant's witnesses from the geotechnical firm and
25 from Hull.

1 Q. Okay. Did you listen to Mr. Pedder's
2 testimony?

3 A. I don't recall that name and I'm sorry I
4 don't.

5 Q. That's okay. He was the first witness in
6 this case, Development Manager for Apex.

7 A. No, I did not listen to his testimony.

8 Q. Okay. Doctor, have you performed any
9 studies in the project area related to water
10 contamination potentially caused by agricultural
11 operations?

12 A. I would say peripherally we have
13 performed such studies in our examination of the
14 springs and the geochemistry of those springs that
15 are in the Bellevue area.

16 Q. That would be confined to the Bellevue
17 area; is that right?

18 A. Well, the springs in the Bellevue area
19 like the Castalia Blue Hole and Miller's Blue Hole
20 discharge water that's from a regional groundwater
21 flow system so they cover presumably a very large
22 area because of the size of their springs but their
23 actual catchment area, to my knowledge, has never
24 been precisely defined.

25 MR. SECREST: Thank you, Doctor. I do

1 not have any further questions.

2 ALJ AGRANOFF: Thank you, Mr. Secrest.

3 - - -

4 EXAMINATION

5 By ALJ Agranoff:

6 Q. I do have a few clarifying questions,
7 Dr. Sasowsky. If you could please turn to your
8 direct testimony for me, please.

9 A. Yes.

10 Q. Specifically on page 4. Let me know when
11 you are there.

12 A. I'm there.

13 Q. Okay. And if you take a look at the
14 second and third lines.

15 A. Yes.

16 Q. You make reference to sinkholes, caves,
17 and the term "disappearing streams."

18 A. Yes.

19 Q. Could you please give me a little bit of
20 context as to what each of those terms are defined as
21 in the context of your testimony.

22 A. Yes. So sinkholes are features on the
23 surface of the earth that are bowl-shaped
24 depressions. And they may be kind of small, like
25 maybe, you know, the size of a -- of a trailer, or

1 they can be quite large. In this area there are some
2 that are maybe as long as a mile across. So these
3 are basically just closed depressions in the earth
4 where the surface has dropped down and they have
5 internal drainage, meaning that rainwater that falls
6 into them doesn't flow out of them, it just goes down
7 into the earth there. So those are sinkholes.

8 Caves are just human-sized openings that
9 go into the earth. So just to the west of the study
10 area, there is a commercial operation called Seneca
11 Caverns which you can go and pay, you know, \$10, to
12 go take a tour of the underground and look at the
13 rocks and the features there.

14 And then disappearing streams are simply
15 streams or rivers on the surface that instead of
16 flowing to a larger stream or to a Lake, instead just
17 disappear into the ground, typically at a sinkhole of
18 some sort. And so the name given to them,
19 "disappearing streams," just refers to the fact that
20 they don't continue.

21 And these are at -- if you look at the
22 map that's one of my attachments in my testimony, it
23 shows the surface streams. That is -- get you the
24 letter. It's Figure 5 -- sorry, Exhibit G in the
25 back that shows the surface drainage in Ohio. And

1 the area that has karst in it is noticeably absent of
2 surface streams because all of the water is going
3 underground into sinkholes or disappearing streams.

4 Q. Are you done?

5 A. Yes.

6 Q. Okay. Thank you.

7 For the purposes of defining a karst
8 region, do you have to have all of the components
9 that we were just discussing, sinkholes, caves, and
10 disappearing streams, or does the presence of just
11 one of those potentially constitute a karst region?

12 A. You definitely don't need to have all
13 three. And I don't think you even need to have one
14 of them. Because the karst can truly be hidden
15 underneath the surface cover and, in fact, you know,
16 in this part of Ohio, when the glaciers receded, laid
17 down a lot of sediments on top and so they sort of
18 have draped over and into the karst area. So I would
19 say that, you know, you don't necessarily have to see
20 sinkholes, caves, or even disappearing streams and
21 you could still have karst underneath.

22 Q. And if you could turn to page 7 of your
23 testimony.

24 A. Yes. I'm there.

25 Q. Line 14.

1 A. Yes.

2 Q. You make reference to "karst behavior."

3 What is --

4 A. Yes.

5 Q. -- karst behavior in the context of your
6 testimony?

7 A. Specifically it would mean rapid
8 groundwater flow through openings in the earth so
9 below the surface. And I guess what I was getting at
10 there is sort of what I was saying a few moments ago,
11 that just because you don't see a lot of karst on the
12 surface, it doesn't mean that problematic conditions,
13 like rapid groundwater flow, aren't occurring down
14 below.

15 Q. Are you done with your answer?

16 A. Yes.

17 Q. Thank you.

18 And then on Question 13 where you
19 indicate that karst is demonstrably present in the
20 northwest portion of the project area, if you can
21 give me some context as to what you intended by
22 "demonstratively."

23 A. I guess I was just saying that because
24 there are sinkholes there, there are mapped and
25 identified sinkholes there, there's no question that

1 it's karst there so I think with any of those three
2 features, if we -- if we had sinkholes there, we had
3 caves there, we had disappearing streams, any one of
4 those would make it certain that karst is present.

5 Q. The fact that you didn't discuss the
6 other directional portions of the project area in
7 that answer, are you indicating that karst is not
8 present in other sections?

9 A. No. Unfortunately not because the -- the
10 bedrock units, the rocks that form the karst are
11 exposed at the surface to the west -- well, in the
12 northwest part of the study and to the west. But
13 those same rocks are still present in the subsurface
14 even as you go to the east in the project area. So
15 it could be that the karst is present but it's in --
16 it's not at the surface. It's down lower.

17 Q. In an answer to a question that
18 Mr. Secrest asked you, you were discussing subsidence
19 of a structure.

20 A. Yes.

21 Q. What is that?

22 A. Basically it's when the foundation no
23 longer holds up the structure because support has
24 been removed from underneath or laterally from the
25 foundation. So if you can -- it's kind of hard to

1 visualize, but there is in my Exhibit F of my
2 testimony, there is a small illustration that shows
3 the concept of land subsidence that might be helpful.
4 Basically its materials being pulled down, from
5 underneath, down into the subsurface and so the land
6 surface lowers.

7 Q. Are you done with your answer?

8 A. Yes.

9 ALJ AGRANOFF: Thank you.

10 Based on my limited clarifying questions,
11 does any counsel have follow-up?

12 MR. VAN KLEY: I will.

13 ALJ AGRANOFF: Mr. Van Kley.

14 MR. VAN KLEY: Yes.

15 - - -

16 FURTHER REDIRECT EXAMINATION

17 By Mr. Van Kley:

18 Q. Just quickly, Dr. Sasowsky, with regard
19 to the last point you made, and I am going back to
20 the question about the presence of or potential
21 presence of karst in areas of the project area.
22 Other than the northwest part, if the karst is
23 located at a deeper depth in the areas other than the
24 northwest area, can those karst features still affect
25 construction of structures on the surface of the

1 ground?

2 A. Their effects can certainly be felt --
3 could certainly be felt up to the surface. In fact,
4 many of the sinkholes, some of the large ones that
5 are seen in the Bellevue area, we believe are forming
6 at depth of hundreds of feet and then propagating up
7 to the surface. So it is possible that effects could
8 be felt above. I don't know exactly how those might
9 impact the construction because that's really beyond
10 my expertise.

11 Q. What about their potential effects on
12 groundwater?

13 A. If there are pathways open to the surface
14 that were not open before or if pathways are closed
15 off, then it could have the potential to effect
16 groundwater.

17 I guess what -- what I would say on the
18 topic of water which I think is the biggest concern
19 from my perspective is when somebody lives in a rural
20 area and they have a water well, they depend upon
21 that well to -- to continue working so that they can,
22 you know, take showers, cook, drink, and so forth.
23 And it's really a critical resource for them. So if
24 there's any activities that are going to be
25 undertaken that could have the potential to disrupt

1 such supply, it's important to study it beforehand to
2 understand where their groundwater is actually coming
3 from.

4 You know, it's -- the water is down there
5 in rocks. It's not down there in, you know, some
6 underground swimming pool or something like that.
7 And it comes from somewhere. Where it comes from in
8 general is rain which is landing on the surface of
9 the land and percolating in at some recharge zone and
10 then making its way to their well. But without
11 understanding, for an individual well, where that
12 water is coming from, it's really not possible to
13 minimize the potential impact.

14 MR. SECREST: Your Honor, I move to
15 strike the last portion of Dr. Sasowsky's soliloquy
16 starting with "I guess what I would say." That was
17 nonresponsive. There was no question pending and
18 outside the scope of your Honor's limited clarifying
19 questions.

20 ALJ AGRANOFF: Mr. Van Kley.

21 MR. VAN KLEY: I think it was responsive
22 to my question which was a follow-up on your Honor's
23 question so I think it was appropriate.

24 ALJ AGRANOFF: I am going to overrule the
25 objection and allow the testimony to stand.

1 MR. VAN KLEY: I have no further
2 questions.

3 ALJ AGRANOFF: Thank you.

4 Anything further from any counsel?

5 MR. SECREST: No, thank you, your Honor.

6 ALJ AGRANOFF: Okay. Thank you,
7 Dr. Sasowsky.

8 THE WITNESS: Thank you.

9 ALJ AGRANOFF: Mr. Secrest.

10 MR. SECREST: Your Honor, may I move --
11 sorry.

12 ALJ AGRANOFF: You can go first. It
13 doesn't matter.

14 MR. SECREST: You asked me first.

15 ALJ AGRANOFF: Yeah.

16 MR. SECREST: I move for the admission of
17 Applicant's Exhibit 87.

18 ALJ AGRANOFF: Any objection?

19 MR. VAN KLEY: None.

20 ALJ AGRANOFF: There being none,
21 Applicant Exhibit 87 shall be admitted as part of the
22 record at this time.

23 (EXHIBIT ADMITTED INTO EVIDENCE.)

24 ALJ AGRANOFF: Mr. Van Kley.

25 MR. VAN KLEY: We will move the admission

1 of LR Exhibit 3.

2 ALJ AGRANOFF: Any objections?

3 MR. SECREST: No objection.

4 ALJ AGRANOFF: There being no objection,
5 LR Exhibit 3 shall be admitted as part of the record
6 at this time.

7 (EXHIBIT ADMITTED INTO EVIDENCE.)

8 ALJ AGRANOFF: Thank you.

9 Judge Williams.

10 ALJ WILLIAMS: Thank you, Judge.

11 Attorney Van Kley, we are ready for your
12 next witness.

13 MR. VAN KLEY: All right, your Honor.

14 Could we take just a real brief comfort break?

15 ALJ WILLIAMS: That would be fine. It's
16 10:12. So 10:20 okay?

17 MR. VAN KLEY: Sure.

18 ALJ WILLIAMS: Let's get Dr. Smallwood to
19 try to log on a minute or two ahead. I know there
20 was some connection issues still. So 10:20. Thank
21 you.

22 (Recess taken.)

23 ALJ WILLIAMS: Please proceed.

24 MR. VAN KLEY: Thank you, your Honor.

25 Your Honor, we would call Kenneth Shawn Smallwood to

1 the stand, please.

2 ALJ WILLIAMS: Good morning,

3 Mr. Smallwood. How are you?

4 THE WITNESS: I am doing good. Yourself?

5 ALJ WILLIAMS: I'm doing well. I
6 appreciate you joining us at the early hour of west
7 coast time.

8 THE WITNESS: My pleasure.

9 ALJ WILLIAMS: Would you raise your right
10 hand. I will swear you in.

11 (Witness sworn.)

12 ALJ WILLIAMS: Thank you.

13 Attorney Van Kley.

14 MR. VAN KLEY: Thank you, your Honor.

15 - - -

16 KENNETH SHAWN SMALLWOOD, Ph.D.

17 being first duly sworn, as prescribed by law, was
18 examined and testified as follows:

19 DIRECT EXAMINATION

20 By Mr. Van Kley:

21 Q. Dr. Shawn -- Dr. Smallwood, would you
22 state your full name, please, and spell out your
23 middle name and your last name.

24 A. Kenneth Shawn Smallwood. Shawn is
25 S-h-a-w-n. Smallwood is S-m-a-l-l-w-o-o-d.

1 Q. All right. And Dr. Smallwood, do you
2 have a copy of your direct testimony with you?

3 A. I do on my computer screen.

4 Q. All right.

5 MR. VAN KLEY: Your Honor, at this time,
6 I would like to mark his testimony as BSBO Exhibit 2.

7 ALJ WILLIAMS: So marked.

8 (EXHIBIT MARKED FOR IDENTIFICATION.)

9 Q. (By Mr. Van Kley) Dr. Smallwood, did you
10 prepare this testimony?

11 A. I did.

12 Q. Do you have any corrections or changes to
13 make to the testimony?

14 A. No.

15 Q. If you were asked the questions that are
16 in your testimony today, would your answers be the
17 same as they were when you originally wrote your
18 answers?

19 A. It depends on the question. So the
20 question could lead me down a different path, it's
21 true, but I would say largely, yes.

22 Q. Okay. Well, the question is whether --
23 whether -- whether the -- your answers to the
24 questions in your direct testimony that you have in
25 front of you are accurate.

1 A. Yes.

2 MR. VAN KLEY: Okay. At this time, your
3 Honor, we would make Dr. Smallwood available for
4 cross-examination.

5 ALJ WILLIAMS: Thank you, Attorney Van
6 Kley.

7 Attorney Secrest.

8 MR. SECREST: Thank you, your Honor.

9 - - -

10 CROSS-EXAMINATION

11 By Mr. Secrest:

12 Q. Good morning, Dr. Smallwood.

13 A. Good morning, Mr. Secrest.

14 Q. How are you?

15 A. I'm doing good.

16 Q. Good. As you know, I am counsel for
17 Firelands Wind in these proceedings. Have you had
18 the opportunity to listen in on any other portion of
19 these proceedings?

20 A. Yes. Last week I saw testimony provided
21 by Mr. Good and Mr. Leftwich.

22 Q. Thank you.

23 A. I didn't see all of it. Some of it.

24 Q. Okay. Thank you.

25 Doctor, are you a statistician?

1 A. No.

2 Q. Okay. You don't have any degree in
3 statistics, correct?

4 A. That's correct.

5 Q. Have you ever performed a bat mist-nest
6 study in Ohio?

7 A. No.

8 Q. Are you permitted to even do so?

9 A. No. I don't think so.

10 Q. And by "permitted," I don't mean allowed.
11 I mean do you have a permit from Fish and Wildlife
12 Service that would allow you to do a bat mist-net
13 study in Ohio?

14 A. No.

15 Q. Thank you. Have you ever conducted any
16 bat studies in accordance with the Ohio Department of
17 Natural Resources' monitoring protocols?

18 A. Not -- no, not specifically, no.

19 Q. Okay. Do you know how many bat species
20 regularly occur in Ohio?

21 A. Probably about 10 -- 10 to 12.

22 Q. Okay. You did indicate you listened in
23 on Mr. Leftwich's testimony. He was asked a similar
24 question and named a number of bats. Can you do the
25 same?

1 A. Well, I can name them but I am not a bat
2 expert, so. I could -- Indiana bat, hoary bat,
3 silver-haired bat, eastern red bat. Who am I
4 missing? I don't -- I would have to look them up.

5 Q. Okay. Doctor, what is a presence/absence
6 survey?

7 A. That is a survey where you are trying to
8 determine presence or absence. I mean, you -- it's
9 kind of a survey where you provide enough effort
10 where you are satisfied with the absence
11 determination if you -- if that's your determination
12 if you didn't find presence.

13 Q. How many presence/absence surveys for
14 bats have you completed?

15 A. None myself.

16 Q. Okay. Have you completed any field
17 research or monitoring of wind energy's impacts on
18 bats in the midwest?

19 A. Not personally.

20 Q. Okay. Doctor, you just referenced one
21 species of bat, the Indiana bat. Can you tell me,
22 can you describe for me, please, what Indiana bat
23 summer roosting habitat is like?

24 A. No.

25 Q. Have you performed any studies or

1 analysis of the project area to determine what
2 percentage of the project area is suitable habitat
3 for Indiana bats?

4 A. I'm sorry, can you repeat that?

5 Q. Perhaps.

6 A. That first part I didn't hear. You broke
7 up.

8 Q. Have you performed any studies or
9 analysis of the project area to determine what
10 percentage of the project area is suitable habitat
11 for Indiana bats?

12 A. Oh, no.

13 Q. Okay. Doctor, you do have in front of
14 you your -- at least on the computer, your testimony
15 which has been marked as BSBO Exhibit 2, correct?

16 A. I do.

17 Q. May I have you refer to the bottom of --

18 A. Hang on. Let me get the PDF copy so I
19 make sure I am in the same place as you.

20 Q. Sure. I am going to be at the bottom of
21 page 10.

22 A. Okay. Got it.

23 Q. Thank you. I'm looking at line 21.

24 "Presence/absence determination" in italics. And it
25 states "According to Sichmeller et al. (2012), their

1 first study objective was achieved. They concluded,
2 'The results of the 2012 survey indicate that this
3 species [Indiana bat] is not present within the
4 ECWRA.'" Do you see that?

5 A. Yes.

6 Q. Do you understand "ECWRA" to be a
7 reference to the project area?

8 A. At that time, yes.

9 Q. Okay. Thank you. Your testimony
10 continues: "However, as I pointed out earlier,
11 absence is difficult to prove. And in fact,
12 Sichmeller et al. (2012) was later proven wrong.
13 Baer et al. (2017b) captured an Indiana bat on the
14 study area in 2017." Do you see that?

15 A. Yes.

16 Q. Okay. Do you understand that Baer et al.
17 captured an Indiana bat in a location that was not
18 part of the project boundary in 2012?

19 A. I can't remember exactly but I know the
20 bat flew all over the place including the project
21 site.

22 Q. Okay. And in reviewing -- did you review
23 the results of any aerial telemetry related to that
24 Indiana bat?

25 A. In one of the reports, yes.

1 Q. Do you recall that indicated that the
2 usage area did not overlap with the later area that
3 was surveyed?

4 A. I don't remember that.

5 Q. Okay. Doctor, do you have -- do you have
6 some exhibits in front of you?

7 A. Yes. I mean, I can get them.

8 Q. Okay. Do you have the Indiana Bat
9 Section 7 and 10 Guidance for Wind Energy Projects?

10 A. Say -- can you give me an exhibit number?

11 Q. It was premarked as BSBO No. 5.

12 A. I don't have it listed as No. 5 here.
13 You want the U.S. Fish and Wildlife Service Indiana
14 bat guidelines?

15 Q. That's correct.

16 A. Which year? 2011, 2017 or 2020?

17 Q. Revised 2011. October 26, 2011.

18 MR. VAN KLEY: Jon, why don't you use the
19 exhibit number that you already marked into evidence.
20 Didn't you mark that into evidence yesterday or the
21 day before?

22 MR. SECREST: No, I did not mark this
23 into evidence.

24 MR. VAN KLEY: Okay. Is this one of the
25 documents you provided us to send on to

1 Dr. Smallwood?

2 MR. SECREST: This is one of the
3 documents you provided.

4 MR. VAN KLEY: Okay.

5 ALJ WILLIAMS: It's also marked as LR 5.

6 THE WITNESS: I don't have any documents
7 called LR 5. My exhibit numbers go from 47 to 76.

8 ALJ WILLIAMS: Is anybody going to
9 attempt to send it electronically?

10 MR. VAN KLEY: Yeah. I will send it to
11 him.

12 MR. SECREST: Your preference,
13 Mr. Van Kley and your Honor, we can move on to
14 another topic right now or wait. It does not matter
15 to me.

16 MR. VAN KLEY: That's fine. You can move
17 on and in the meantime I will send the document to
18 him.

19 MR. SECREST: Okay. Thank you.

20 ALJ WILLIAMS: Thank you.

21 Q. (By Mr. Secrest) Doctor, please refer to
22 page 8 of your testimony.

23 A. I'm there.

24 Q. I'm looking at Question 6 on page 8. It
25 says, Did the data convincingly achieve the goals and

1 objections -- objectives of preconstruction bat
2 studies? Do you see that?

3 A. Yes.

4 Q. And in your response, you've referenced
5 the Range-wide Indiana Bat Summer Survey Guidelines,
6 2017. The 2009 Ohio Department of Natural Resources
7 On-Shore Bird and Bat Pre- and Post-Construction
8 Monitoring Protocol for Commercial Wind Energy
9 Facilities in Ohio, and the Ohio Division of Wildlife
10 Guidance for Bat Permitted Biologist. Do you see
11 that?

12 A. Yeah.

13 Q. Do you dispute that the data and studies
14 performed by the Applicant in this case related to
15 bats conform with those protocols and guidelines?

16 A. No, no.

17 Q. Okay. Thank you.

18 Doctor, if you could please fast forward
19 to page 11 of your testimony.

20 A. I'm there.

21 Q. And I'm looking at the bottom of that
22 page starting on line 21.

23 A. Yes.

24 Q. It states "Bat species diversity and
25 abundance. Although the first objective of Baer et

1 al. (2017a,b) and Wetzel et al. (2018) was to
2 document bat species diversity and abundance within
3 the Project boundary, their field methods were less
4 capable of achieving this objective than were the
5 earlier mist-netting studies of 2011 and 2012 (Figure
6 2)." You go on to state "By adding net-nights per
7 station, these later investigators might have diluted
8 the metric with less productive nights, possibly
9 because bats learn to avoid the nets." Do you see
10 that?

11 A. Yes.

12 Q. Your statement, bats learn to avoid nets,
13 would you agree that avoidance comes from multiple
14 nights of net use?

15 A. Yes.

16 Q. And would you agree that it's more prone
17 for bats to develop avoidance if the net nights are
18 back to back, consecutive nights?

19 A. I don't know.

20 Q. Okay.

21 A. Probably.

22 Q. Doctor, in reviewing the studies for this
23 project, did it become clear to you that net nights
24 were not, in fact, added; that this study did not
25 increase calendar nights; it just increased the

1 number of nets that were placed?

2 A. I recall that some stations were
3 monitored for three nights instead of two. That's my
4 recollection. I could be wrong but that's my
5 recollection.

6 Q. Well, are you aware that the Ohio
7 Department of Natural Resources' protocols require
8 nonconsecutive net nights?

9 A. No. I don't remember that.

10 Q. Okay. Doctor, what are bias trials?

11 A. Those are trials that identify bias for
12 adjustments to -- to an estimation -- to an estimate.

13 Q. Bias would include searcher efficiency,
14 correct? I am sorry, I didn't catch your answer.

15 A. Yes.

16 Q. Thank you. Bias would also include
17 carcass persistence, correct?

18 A. Yes.

19 Q. And although we've had some discussion,
20 will you please tell us what searcher efficiency is.

21 A. Yes. It's the rate at which searchers
22 detect available carcasses versus miss them.

23 Q. And what is carcass persistence rate?

24 A. That's the rate at which carcasses
25 persist in the field and the relevance is does it

1 persist long enough to be available for the next
2 search. Because a search is done periodically. They
3 may be weekly, they may be every month, it just
4 varies from project to project and through time. So
5 the question is how many carcasses that were killed,
6 you know, deposited by a wind turbine are still
7 available after the next, you know, through that time
8 period to the next search.

9 And it actually gets even deeper than
10 that. We assume that each search was going to find,
11 you know, all the available bats but they don't.
12 Some of them persist longer and it won't be available
13 for multiple searches.

14 Q. Thank you, Doctor.

15 Would you agree that searcher efficiency
16 may differ based upon the substrate strata at a wind
17 farm?

18 A. Yes.

19 Q. And would you also agree that searcher
20 efficiency may be affected by the age of the carcass?

21 A. Yes.

22 Q. Would the amount of area searched at an
23 individual turbine potentially affect the number of
24 bat carcasses available to be found?

25 A. Well, yeah. I mean, that's a strange

1 question. The bat carcasses are there. Even in the
2 areas you don't search, they are available to be
3 found. The question is whether you search those
4 areas where they are. Does that make sense?

5 Q. Yes. Thank you.

6 Doctor, a large portion of your testimony
7 discusses Wolfe Island, correct?

8 A. Some of it, yes.

9 Q. Okay. Wolfe Island is an island in Lake
10 Ontario, correct?

11 A. Yes.

12 Q. Okay. On Wolfe Island, do you know how
13 close the closest turbine is to the shoreline?

14 A. I measured it. I don't remember off the
15 top of my head.

16 Q. Okay.

17 A. Yes.

18 Q. Do you recall that it's less than half a
19 mile?

20 A. I don't remember. I think so.

21 Q. All right. Do you know how far Wolfe
22 Island is from the project area, the Emerson Creek
23 wind project area?

24 A. It's across the Lake, yeah, north end of
25 the Lake.

1 Q. Close to 400 miles, correct?

2 A. I don't know the exact distance.

3 Q. Doctor, if you would please refer to
4 page 19 of your testimony.

5 A. I'm there.

6 Q. Thank you. You have a table that begins
7 on 19 and continues through half -- about half of
8 page 24. Do you see that?

9 A. Yes.

10 Q. Do you have a citation for the
11 information contained within this table?

12 A. Citation, what do you mean, like each
13 line item?

14 Q. How did you come up with the information
15 that's included on this table?

16 A. I reviewed -- well, I've been working on
17 this problem for 21 years and so I have my personal
18 experience and I have also reviewed many reports and
19 published papers, talked to many colleagues, so
20 that's how I compiled the table.

21 Q. So you compiled this based upon personal
22 experience and review of literature? This was not
23 taken from any other piece of literature; is that
24 right?

25 A. No. This is my product and also includes

1 conferences, workshops, yeah, my whole experience
2 with the science around wind turbines and wildlife
3 and how to estimate fatality rates and use rates.

4 Q. Okay. Doctor, please refer to page 26 of
5 your testimony.

6 A. I'm there.

7 Q. Thank you. I'm looking at, it starts on
8 line 13, it says "Wolfe Island's fatality estimates
9 for bats were based on the same basic fatality
10 estimator used at wind projects across North
11 America." Do you see that?

12 A. No. You said line 13?

13 Q. I'm sorry if I did. I meant to say
14 line 3.

15 A. Gotcha, okay.

16 Q. Okay. Now looking at line 3, did I read
17 that correctly?

18 A. I heard 13 but I got three down --

19 ALJ WILLIAMS: Can you read it again?

20 MR. SECREST: Certainly.

21 Q. On line 3 of page 26 of your testimony,
22 Doctor, it states "Wolfe Island's fatality estimates
23 for bats were based on the same basic fatality
24 estimator used at wind projects across North
25 America." Do you see that?

1 A. Yes.

2 Q. Okay. When you are referring to
3 "fatality estimator," is that an estimator that you
4 developed?

5 A. No. This is the basic estimator that's
6 been around for decades.

7 Q. Okay. You have an equation on line 5 and
8 could you just tell us what those symbols refer to?

9 A. Yeah. So the F-hat, that's the estimate,
10 that's number of fatalities. And the F without a
11 hat, the numerator in the ratio, that's the counted
12 number of fatalities. And below that is the symbol
13 that indicates the proportion of fatalities not
14 found.

15 Q. Okay. So is that a delta under there?
16 That indicates the proportion of fatalities not
17 found; is that what you said?

18 A. That's right.

19 Q. Okay. Starting on page line 20 -- or
20 excuse me, starting on page 26 and continuing to
21 line -- page 34, do those pages include an
22 explanation of the fatality estimator that you used
23 to reanalyze Wolfe Island's mortality rates?

24 A. I believe so. It's page 34, you say? So
25 I discussed the terms, yeah.

1 Q. Okay.

2 A. Sure.

3 Q. Other than yourself, have these methods
4 to evaluate -- strike that.

5 If you turn to page 28 of your testimony,
6 doctor.

7 A. Yeah.

8 Q. There's a heading "Maximum search
9 radius." Do you see that?

10 A. Yes.

11 Q. Okay. Can you just describe for us what
12 this heading and section entails.

13 A. It's a problem that I introduced in a
14 paper in 2007 in the Journal of Wildlife Management,
15 among other factors, that can influence fatality rate
16 estimates. I pointed out that there was no
17 consideration in the -- in the literature up to that
18 point of the variation in the search radius; so how
19 far we search from turbines. It seems like there is
20 no solid standard for how we even come to that search
21 radius. It's just a professional judgment really
22 mostly. There was some excuses given or some
23 standards proposed but I didn't see their exercise.
24 For example, there was this rule, I can't remember
25 what it was, 1.5 times a tower height or something

1 like that. That was a standard but where did that
2 come from?

3 So I pointed out there's variation in
4 maximum search radius and so your fatality counts are
5 going to vary based on how far out you search.
6 People don't really know how far out from the turbine
7 a -- you know, the casualties are falling. That's
8 what it addresses. I quantify it in 2013 in a paper
9 I published in Wildlife Society Bulletin and I've
10 tried -- I have been after that ever since, trying to
11 nail it down.

12 Q. Thank you, Doctor. I appreciate the
13 explanation.

14 With regard to the search radius, has the
15 method that you used in reanalyzing the Wolfe Island
16 data and what's contained within your testimony, has
17 that been evaluated by anyone other than yourself?

18 A. Yeah. It's peer reviewed and published.

19 Q. Okay.

20 A. Three times.

21 Q. Has it been tested in the field by anyone
22 other than yourself? Do you know?

23 A. There's no -- how do you test in the
24 field? The only way you can test in the field is
25 actually search farther than the maximum search

1120

1 radius established for a project. So somebody has to
2 actually search well beyond this -- take a subset of
3 turbines, for example, at a project and search way
4 out there to find out how accurate this is. But I
5 also tested it with dogs. So I did test it in the
6 field, yeah, myself and my colleagues, we tested it
7 in the field in the Altamont Pass, using
8 scent-detection dogs, in 2017.

9 Q. You referenced the Altamont Pass. Is the
10 terrain in Altamont Pass predominantly grassland?

11 A. Yes.

12 Q. And it's mountainous or hilly terrain,
13 correct?

14 A. I'm sorry, I didn't hear that.

15 Q. It's mountainous or hilly terrain,
16 correct?

17 A. It varies. So sometimes it's fairly
18 flat, sometimes it's pretty hilly.

19 Q. Okay. Thank you.

20 You just referenced use of detection
21 dogs. And I see in your testimony, too, you
22 reference that and also cited to Smallwood et al.
23 2020.

24 A. Yes.

25 Q. Which Smallwood et al. is that? Because

1 I am looking at one that's titled "Relating bat
2 passage rates to wind turbine fatalities"?

3 A. Well, we used the detection dogs for that
4 but that's not the one I am talking about.

5 Q. Okay.

6 A. It should -- the title should include
7 "scent-detection dogs" at the beginning of that
8 title.

9 Q. Okay. That was the question I had, which
10 one was it. Thank you.

11 ALJ AGRANOFF: Mr. Secrest, where were
12 you referencing that in his testimony?

13 MR. SECREST: In his testimony, it's on
14 page 28, line 18 begins discussing the study and then
15 the reference to "Smallwood et al. 2020" is on line
16 20.

17 ALJ AGRANOFF: Thank you.

18 A. By the way, I think there's only one
19 Smallwood et al. 2020, so it should be pretty clear
20 that's what I am talking about.

21 Q. Okay. Thank you. Doctor, if you would
22 please refer to page 30 of your testimony.

23 A. I'm there.

24 Q. Thank you. I'm looking under the heading
25 "Available search area actually searchable." Do you

1 see that?

2 A. Yes.

3 Q. Okay. The second sentence says
4 "Adjustment factors for unsearchable areas were
5 therefore 1.73 and 1.17 for fatality rates estimated
6 from searches out to 50 meters and 60-meter maximum
7 search radii." Do you see that?

8 A. Yes.

9 Q. Does that assume that carcass density is
10 uniform at all distances from the turbine?

11 A. It does.

12 Q. Okay. And, Doctor, may I have you refer
13 to page 33 of your testimony.

14 A. I'm there.

15 Q. Great. Starting at line 3, it states
16 "Some may argue that carcass persistence rates will
17 vary among wind projects due to variation in
18 scavenger communities and ecological conditions, but
19 this argument would be speculative because it has not
20 been supported by any study to date." Do you see
21 that?

22 A. Yes.

23 Q. Okay. So as part of your testimony, you
24 took mortality studies from Wolfe Island, correct?

25 A. Yes.

1 Q. Results of mortality studies, correct?

2 A. Yes.

3 Q. Okay. You then applied some carcass
4 persistence rates and searcher efficiency rates based
5 on Altamont Pass studies to reanalyze the Wolfe
6 Island data; is that accurate?

7 A. Is that what I did? I don't remember if
8 I used theirs or mine. I think what I did is I used
9 overall detection rates in the Altamont Pass which
10 are more robust. There's also species -- their body
11 mass adjust -- their specific body mass because these
12 trials they are doing at Wolfe Island, they lump all
13 species together, big broad groups, like small birds,
14 you know, medium birds, large birds, and all bats
15 together.

16 And it becomes a problem because there is
17 a lot of variation, and all bat carcass persistence
18 rates should not apply to a small myotine bat. It
19 just doesn't. And what makes the problem even worse
20 is that these -- these detection monitors oftentimes
21 will use the bats they find, if they are using bats
22 at trials, and they will redeploy them in trials.
23 And the ones they find tend to be the larger bats so
24 you're, you know, causing a feedback problem where
25 you're adjusting for the bats you don't find based on

1 the bats you did find which are large bats. And so
2 you are biasing against the small bats.

3 So for these reasons I had to use my own
4 overall detection rate which unfortunately nobody
5 else has used it that I'm aware of. I introduced it
6 in 2012. I published on it in 2018 -- or 2017, so it
7 hasn't had much time to grow in the scientific
8 community.

9 Did I answer your question? I'm sorry.

10 Q. You did. I'm just writing down some
11 notes.

12 A. Okay.

13 Q. I think you answered the question. So
14 the searcher efficiency rate you used to reanalyze
15 the post-construction mortality data from Wolfe
16 Island was derived from studies in Altamont Pass,
17 California, correct?

18 A. I don't remember. I have to go back and
19 read my testimony, I'm sorry.

20 Q. That's okay. You said you published on,
21 was it, searcher efficiency rates in 2017?

22 A. Overall detection rates.

23 Q. Overall detection, thank you.

24 A. So I mean -- what I mean by overall
25 detection is a combination of all adjusted factors

1 combined.

2 So it dawned on me, by 2011, 2012, that
3 these trials we're performing, one for carcass
4 persistency, one for search detection, are
5 unrealistic because they interact.

6 So I don't care in the end, as an
7 analyst, somebody trying to estimate fatalities, I
8 don't care whether a searcher missed a carcass
9 because it was there and they just missed it or it
10 was because it was removed by a scavenger. The fact
11 is the carcass had been there, it was killed by the
12 turbine, we assume, and the searcher missed it.
13 That's what matters. That's the only thing that
14 matters; did you find it or not.

15 So I came to this approach for coming to
16 overall detection rates which is gotten at by simply
17 randomly placing carcasses in the search area and
18 then, you know, at random times, and then wait and
19 see if the searchers find them or not. And they have
20 multiple opportunities to find it. If the carcass is
21 still there through two or three or four searches or
22 for an entire year, the searchers have the entire
23 time to find it or not. That's more realistic
24 because that better simulates what really happens
25 with carcasses in the field rather than these

1 articles of trials.

2 Q. And this overall detection rate, when you
3 say you published on it in 2017, was that publication
4 based on a three-year study?

5 A. It was -- that one was based on a
6 three-year study, yeah.

7 Q. Okay. And if you recall that study, year
8 one and two of the study produced pretty consistent
9 results; is that accurate?

10 A. Yes.

11 Q. Okay. Year three did not, though,
12 correct?

13 A. We were in an extreme drought, yes.

14 Q. So year three, you had, I think it was
15 about a 25 percent variable in actual detection rates
16 from what you estimated?

17 A. I don't remember.

18 Q. Okay. And your conclusion was that that
19 was the result of, as you just said, an extreme
20 drought in year three, right?

21 A. That's my hypothesis but I don't know.

22 Q. Okay. And I believe the study actually
23 says that you had hypothesized that in year three a
24 drought caused essentially an increase in scavenging
25 of carcasses; is that right?

1 A. Year three, I think it was -- I
2 thought -- I don't remember. I honestly don't
3 remember.

4 Q. Well, you do recall that the hypothesis
5 was that extreme drought caused the estimator to
6 essentially fail in year three, correct?

7 A. I don't think -- I don't think it failed.
8 It was just being treated differently. What do you
9 mean by "failed"?

10 Q. Well, during the third year there was a
11 25 percent error in the validation estimates,
12 correct?

13 A. I don't remember.

14 Q. Okay.

15 A. Also -- keep in mind there are also two
16 studies, two three-year studies. You are talking
17 about one of them. There is another one.

18 Q. Doctor, going back to page 33 of your
19 testimony, the sentence we previously read on lines 3
20 to 7, related to carcass persistence rates.

21 A. Yes.

22 Q. With regard to your rean -- reanalysis of
23 the Wolfe Island data, you were applying a carcass
24 persistence rate from studies in California; is that
25 right?

1 A. I thought I used overall detection rate.
2 I don't remember. I have to go back and read my
3 testimony, I'm afraid, for the details.

4 Q. Okay. Does overall detection rate
5 include carcass persistence rates?

6 A. It would. It's inclusive, yes.

7 Q. Okay. Would you not agree that
8 site-specific searcher efficiency and carcass removal
9 rates would give a better indication of actual
10 mortality?

11 A. Can you run that by me again?

12 Q. Sure. Would you agree that site-specific
13 searcher efficiency rates and carcass removal rates
14 would provide a better indicator of mortality?

15 A. I would agree that overall detection rate
16 site -- specific to the site would give a better
17 indication of mortality, not separate trials for
18 searcher detection and carcass persistence.

19 Q. But searcher efficiency and carcass
20 persistence are included in the overall detection,
21 correct?

22 A. Yes. The difference is in the method.
23 So the method involves placing the carcasses for
24 one -- for one trial, you get everything you need in
25 one trial instead of trying to perform separate

1 trials, one for search detection and one for carcass
2 persistence.

3 Q. Doctor, will you please look at the
4 bottom of page 33 of your testimony.

5 A. Yeah.

6 Q. I'm looking at the very bottom, the start
7 of the last sentence where it says "I made two sets
8 of estimates, the first using onsite estimates of the
9 adjustment terms" in parens "with a couple of changes
10 as noted in the footnotes of Table 2." Do you see
11 that?

12 A. Yes, yeah, good. Okay. I see it.

13 Q. Thank you. And Table 2 is actually on
14 page 36 of your testimony; is that right?

15 A. Yes.

16 Q. Okay. And I do see footnotes A and B.

17 A. Yes.

18 Q. When, on page 34, you refer to "a couple
19 of changes," specifically what changes do these
20 footnotes indicate were made?

21 A. I used overall detection rate, da, da,
22 da, da. I used D for -- okay, that's one change I
23 made.

24 Q. Doctor, I don't mean to interrupt but for
25 the benefit of Ms. Gibson, our court reporter, you

1 probably would need to slow down a bit when you are
2 reading that.

3 A. Okay.

4 Q. Thank you.

5 A. I'm sorry. So one change I made was I
6 introduced -- I made an adjustment for over --
7 searcher -- search radius bias, little d. They had
8 none. And I used dogs in the Altamont Pass which are
9 more accurate, creating a pattern of carcass fall
10 from the turbine. Their turbines are the same size
11 at Wolfe Island as the turbines I did the dogs at the
12 Altamont Pass; that was convenient, so. The
13 scent-detection dogs were also much more accurate and
14 didn't suffer the kind of dropoff of detection rates
15 as the distance from the turbine increased.

16 So what we found is that the farther you
17 go from the turbine, the more often human searchers
18 are missing bats. And there's a couple of reasons or
19 obstacles. One is the vegetation grows a little
20 taller. Another reason is the slope might get
21 steeper and so it's harder to search, harder to keep
22 your transects. So there's a distance effect.

23 And I felt using dogs was -- well, dogs,
24 they were definitely more accurate. So I got the
25 pattern -- I represented the pattern of carcass fall

1 based on dog searches around Altamont wind turbines
2 and I applied that to Wolfe Island.

3 Q. And that's what's denoted in footnote A
4 of Table 2 on page 36?

5 A. Yeah. I think there's -- another change
6 may have been about the snow. I can't remember, it's
7 vague in my mind, but they had some results from,
8 what was it, their detection rates from snow
9 conditions were off the wall, so I replaced them.

10 Q. Doctor, could you please refer back to
11 page 34 of your testimony.

12 A. Yes.

13 Q. So with regard to this reanalysis of the
14 Wolfe Island data, I am looking at page 6 -- excuse
15 me, line 6 of page 34, you state "However, whereas I
16 had a model developed from detection trials
17 integrated into a 7-day fatality search interval, I
18 lacked a similar model for the 3.5-day interval used
19 at Wolfe Island." Do you see that?

20 A. Yes.

21 Q. Okay. So you had detection trials based
22 on 7-day search intervals; is that what that means?

23 A. Yes.

24 Q. Okay. And that's from Altamont Pass,
25 correct?

1 A. Yes.

2 Q. Okay. Wolfe Island only had
3 three-and-a-half-day intervals, correct?

4 A. I don't remember if only, but they had
5 three-and-a-half-day intervals. That's what I talk
6 about here.

7 Q. Well, Doctor, if you would please refer
8 to page 36.

9 A. I'm there.

10 Q. Okay. Line 10 through 11, you state
11 "Based on my analysis of the fatality monitoring data
12 from Wolfe Island, I am able to estimate the number
13 of bat fatalities that are likely to occur at the
14 Emerson Creek wind project." Do you see that?

15 A. Yes.

16 Q. Okay. So is it accurate to sum up what
17 you have done, to state that you used results of
18 detection trials from California, applied those to
19 Wolfe Island, Ontario, and then used the results of
20 that application to estimate the Emerson Creek wind
21 project in Ohio?

22 A. Yes.

23 Q. Okay. And did you make any account for
24 the difference in substrate strata of wind turbines
25 between Altamont Pass and Wolfe Island?

1 A. Let's see. I don't think so. There is
2 no way to do that.

3 Q. Okay. So you did not account for the
4 fact that Altamont Pass is predominantly grassland,
5 whereas, Wolfe Island is predominantly agricultural
6 land?

7 A. No.

8 Q. And do I understand correctly that the
9 searcher efficiency that you used to reanalyze Wolfe
10 Island was based on the dog-detection studies?

11 A. No. Only one part of it. That's just --
12 that search rate is biased.

13 Q. Thank you.

14 The fatality estimator that you employed
15 to reanalyze the Wolfe Island data, is that used by
16 the U.S. Geological Service?

17 A. I don't know.

18 Q. Okay. You are not aware whether the U.S.
19 Geological Service uses that same fatality estimator?

20 A. I don't know. No. I don't care. I
21 mean, I don't have any reason to check.

22 Q. Okay.

23 A. I don't know.

24 Q. Do you know what GenEst is?

25 A. Yes.

1 Q. For the record that's capital G-e-n
2 capital E-s-t. That is, GenEst is a mortality
3 estimator, correct, Doctor?

4 A. Yes.

5 Q. Are you aware that that fatality
6 estimator is being developed in conjunction with the
7 United States Geological Service?

8 A. Yes.

9 Q. Okay. Do you have in front of you what
10 was premarked as Applicant's Exhibit 73?

11 A. Let me get it.

12 Q. Thank you.

13 MR. SECREST: Your Honor, we premarked a
14 document titled "Performance of the GenEst Mortality
15 Estimator Compared to The Huso and Shoenfeld
16 Estimators" as Applicant's Exhibit 73. May I
17 formally move to have it so marked.

18 ALJ WILLIAMS: So marked.

19 (EXHIBIT MARKED FOR IDENTIFICATION.)

20 MR. SECREST: Thank you.

21 A. I see it. I have it.

22 Q. Thank you, Doctor. And do you see that
23 one -- this report was prepared by a number of
24 individuals including Daniel Daltorp and Manuela
25 Huso?

1 A. Yes.

2 Q. And do you understand, if not by name
3 recognition but the footnote No. 2, that those are
4 employees of the United States Geological Service?

5 A. I'm aware of that, yeah.

6 Q. Okay. And did Ms. Huso previously author
7 articles employing a fatality estimate that she
8 developed?

9 A. An estimator you mean? Well, is this a
10 variation of the common estimator, yes. It's the
11 Huso estimator, and it's just a variation of the same
12 common estimator we're all using which the point of
13 my testimony that you referred to earlier, you had me
14 look at earlier which is F divided by δ . That's
15 pretty much what they all are.

16 Q. Is that what the GenEst estimator is?

17 A. That's pretty much it, yeah.

18 Q. Well, if you turn to page 22 of
19 Applicant's Exhibit 73.

20 A. I'm there.

21 Q. Thank you. I am looking under the
22 numeral 4, "Implications for the Analysis and Design
23 of Post-Construction Monitoring Studies." Do you see
24 that?

25 A. Yes.

1 Q. The first bullet point says "GenEst is
2 currently the best available statistical mortality
3 estimator." Do you see that?

4 A. I see it.

5 Q. Okay. How does GenEst differ from the
6 mortality estimator that you employed to re --
7 reanalyze the Wolfe Island data?

8 A. It -- the -- it basically differs in
9 separating the searcher detection and carcass
10 persistence into two different groups, two different
11 factors. I don't. And when you do that, when you
12 separate them out, you actually increase the chance
13 for error and bias to become a problem. For example,
14 carcass detection is determined often from their --
15 what I see these authors most often doing is using
16 mean days carcass removal as their carcass
17 persistence term, okay?

18 The problem with that it's subject to the
19 number of days you perform the trial. And it gets --
20 the problem becomes bigger if that -- if your trial
21 bridge extends well beyond the search interval at the
22 project. So you are doing weekly search intervals,
23 and you have a trial detection for carcass
24 persistency, it goes for 60 days, you could have a
25 very much biased estimate of carcass persistence.

1 It's going to result in a low -- biased low estimate
2 of fatalities.

3 This happens because whenever you do --
4 whenever you put a sample of carcasses out, whether
5 it be birds or bats, let's say you put out 50
6 carcasses, there's always the one or two bats that
7 are going to last throughout the entire trial period.
8 And what they do is they run your mean up, your
9 average. And that's what we are looking for is mean
10 days carcass persistence in this case. And so the
11 longer you are in the trial, the bigger the mean goes
12 because you have more days for a couple of bat
13 carcasses, and they basically destroy -- they
14 misrepresent the 50 bat carcasses you put out. It's
15 not robust. I published on this in a paper in 2018,
16 so it's known.

17 By the way, I don't agree with their
18 bullet 1. It's not the best estimator.

19 Q. Doctor, is it accurate that GenEst does
20 not use mean days for carcass removal?

21 A. It usually does but it doesn't have to.

22 Q. Okay. And the Huso estimator also does
23 not use mean days, correct?

24 A. Usually does. Yeah, they use mean days
25 to get to a term they call R's of A. That's the

1 probability of detection -- or probability of carcass
2 persistence in the next search, but R's of A is based
3 on mean days plus removal usually.

4 Q. Doctor, is it standard practice in
5 wildlife studies to calculate confidence intervals
6 around estimates of use or mortality studies or for
7 mortality --

8 A. Mortality usually is not -- usually they
9 don't do it for use surveys.

10 Q. Okay. Doctor, your testimony refers to
11 the Technical Assistance Letter, specifically I am
12 looking at page 47 of your testimony.

13 A. I'm there.

14 Q. Under the response to Question 14, which
15 the question is "Is the proposed mitigation
16 adequate?" The second bullet point states "Curtail
17 all turbines at wind speeds up to 6.9 meters per
18 second during spring (March 15 to May 15) and fall
19 (August 1 to October 31) migration from 30 minutes
20 before sunset to 30 minutes after sunrise." Do you
21 see that?

22 A. Yeah.

23 Q. Is March 15 to May 15 the typical spring
24 migration period for migrating bats in Ohio?

25 A. I don't know.

1 Q. Okay. So are you aware that August 1 to
2 October 30 time period is a typical migrating period
3 for migratory -- fall migrating period for migratory
4 bats in Ohio?

5 A. I am more familiar with that, but the
6 data from the acoustic detection surveys in 2011 and
7 2012 indicated peak to be a little different from
8 this range, so it looked to me like the range is more
9 like July 1 to September 15. But it's hard to tell
10 because you only have two years of data, and the
11 results are quite different. In one year they had a
12 big omission at one of the met towers of the acoustic
13 detectors installed. There is a big gap in data so
14 it's hard to tell exactly when the peak was.

15 Q. With regard to this mitigation,
16 curtailing the turbines, is that likely to reduce --
17 strike that.

18 With regard to the curtailment in the
19 Technical Assistance Letter, is that designed to
20 reduce mortality of Indiana bats? Do you know?

21 A. I don't remember specifically.

22 Q. Okay.

23 A. What's this letter? I will assume so,
24 but I don't remember.

25 Q. Okay. That's fine. Well, regardless, is

1 it not accurate that curtailment during spring and
2 fall migration would reduce -- potentially reduce
3 mortality of all bat species?

4 A. Probably. I'm not sure but probably. I
5 would call it minimized or, you know, reduce happens
6 -- reduction happens after you have got diminished
7 mortality, right? So you have got a problem and you
8 do something and then you reduce the impact. So if
9 you introduce some mitigation measure right from the
10 start, then you are minimizing.

11 Q. Did your estimate of fatalities for the
12 Emerson Creek wind project take into account this
13 mitigation or curtailment?

14 A. I think I -- did I do that? I don't
15 remember but I think I did address that somewhere
16 along the line.

17 Q. Okay. You can't recall where you may
18 have addressed that?

19 A. I think it was in the Wolfe Island
20 estimate so I think I -- they did -- they did
21 implement mitigation at Wolfe Island, and I also
22 pointed out that wherever mitigation -- I think I
23 pointed this out, I am not sure, I am unclear of my
24 memory how I did this but I pointed out that if you
25 are going -- if you compare fatality estimates from

1 one project to another and the mitigation was being
2 imposed at the project, you are, you know, baking
3 that in to your extrapolation of the proposed
4 project.

5 Q. Doctor, will you please refer to what has
6 been admitted and marked as Applicant's Exhibit 48.
7 It's the U.S. Fish and Wildlife Service's Land-Based
8 Wind Energy Guidelines.

9 A. I will have it up here in a minute.

10 Q. Thank you. And when you do, I am looking
11 at page 26.

12 A. Yeah. I'm there.

13 Q. Great. Thank you. The third column on
14 page 26, there's a broad heading "Tier 3 Technical
15 Resources" and then in italics "Tier 3, Question 1."
16 Do you see that?

17 A. Yes.

18 Q. It states "Acoustic monitoring can be a
19 practical method for determining the presence of
20 threatened, endangered, or otherwise rare species of
21 bats throughout the proposed project." Do you see
22 that?

23 A. I see it.

24 Q. Okay. Do you agree with that?

25 A. It can be, yeah, if it's deployed early

1 in a fine enough grain, sufficient grain, not just
2 one station at one tower. If you come to the area
3 with acoustic detectors and search really hard, have
4 a lot of detector nights, you probably get a fair
5 representation of bat use in the area.

6 Q. Okay. If you turn to the next page, page
7 27.

8 A. Yeah.

9 Q. Looking about a third of the way through
10 the first full paragraph, the sentence starts with
11 "Mist-netting is best." Do you see that?

12 A. Wait. Yes.

13 Q. Okay. It states "Mist-netting is best
14 used in combination with acoustic monitoring to
15 inventory the species of bats present at a site,
16 especially to detect the presence of threatened or
17 endangered species." Do you see that?

18 A. Yeah, I see it.

19 Q. It carries on to state "Efforts should
20 concentrate on potential commuting, foraging,
21 drinking, and roosting." Do you see that?

22 A. I do.

23 Q. Did the Applicant not set its mist-net
24 sites in potential roosting areas?

25 A. I assume that some of them were there,

1 yeah, in potential roosting areas but there are
2 probably many more they didn't sample.

3 Q. Is it your contention that the Applicant
4 should have mist-netted every potential roosting site
5 in the project area?

6 A. That's a good question. So probably,
7 yes. They probably should have because we are
8 talking about a very sensitive special resource, not
9 just Indiana bats but all bats. They are incredibly
10 important. I don't think the general public realizes
11 how important they are.

12 If we lose our bats, we could be in big
13 trouble. Increased pesticide use will result in much
14 more exposure to pesticides to the public,
15 endangering public health. And you are going to kill
16 off your pollinators and your arthropod, ag pests,
17 agricultural pests. It's just a huge downstream
18 effect to let our bats die. We can't do that. We
19 need to know -- another approach, by the way, another
20 approach might be, if you don't want to do the
21 mist-net study and a more thorough study, is just
22 assume they are all there and then manage
23 accordingly.

24 Q. You previously testified you've never
25 performed a presence/absence survey, correct?

1 A. Well, not for bats.

2 Q. Okay. With regard to the studies
3 performed at the project area, you are aware
4 specifically acoustic monitoring for bats was, excuse
5 me, partially completed by placing monitors on met
6 towers, correct?

7 A. Yes.

8 Q. And "met" is a meteorological tower,
9 correct?

10 A. Correct. So one study placed a detector
11 on one met tower one year, and the next year I think
12 was two towers.

13 Q. Okay. Are you aware that the Ohio
14 Department of Natural Resources' protocols require
15 monitoring on -- acoustic monitoring on met towers?

16 A. Yeah, yes.

17 Q. Okay. And if you look at page 31 of
18 Applicant's Exhibit 48, the Service's Wind Energy
19 Guidelines.

20 A. Yes. I'm there.

21 Q. On the bottom of the first column, the
22 beginning of the last sentence, "One frequently." Do
23 you see that?

24 A. Oh, yeah, yes, I see it.

25 Q. It states "One frequently used method is

1 to place acoustic detectors on existing met towers,
2 approximately every two kilometers across the site
3 where turbines are expected to be sited." Do you see
4 that?

5 A. Yes.

6 Q. Doctor, do you know how many bats in
7 total were captured in mist nets during the surveys
8 conducted on the project area?

9 A. I don't remember. I think I tallied
10 them, but I don't remember off the top of my head.

11 Q. Okay. Would you agree, Doctor, that
12 mist-net studies and acoustic monitoring have
13 different goals?

14 A. Not entirely. I mean, the primary goal
15 is to find out who is there, which bat species are
16 present. So in that respect they both have the same
17 goal. They each have their benefits and faults or
18 shortfalls.

19 Q. Doctor, have you had an opportunity to
20 receive the Indiana Bat Section 7 and 10 Guidance for
21 Wind Energy Projects?

22 A. Oh, I haven't checked. I'm sorry.

23 Q. That's okay.

24 A. Check my e-mail.

25 ALJ WILLIAMS: Jon, is that BSBO 4 -- or

1 5, I mean?

2 MR. SECREST: It is, your Honor. Thank
3 you. Perhaps now would be a good time for a
4 10-minute break. I can review my notes.

5 THE WITNESS: I do have it.

6 MR. SECREST: Okay. Thank you. Perhaps
7 streamline the rest of it.

8 ALJ WILLIAMS: That sounds favorable.

9 Anybody have any questions or procedural
10 issues before we go on break?

11 Seeing none, we will reconvene at 11:30.
12 Thank you.

13 MR. SECREST: Thank you, your Honor.

14 (Recess taken.)

15 ALJ WILLIAMS: Back on the record.

16 Attorney Secrest.

17 MR. SECREST: Thank you, your Honor.

18 Q. (By Mr. Secrest) Doctor, just a few more
19 questions for you. You have in front of you the
20 Indiana Bat Section 7 and 10 Guidance from the Fish
21 and Wildlife Service, correct?

22 A. In 2011, yes.

23 Q. Thank you.

24 MR. SECREST: And, your Honor, also this
25 was premarked as BSBO No. 5. It perhaps makes more

1 sense for me to have it marked Applicant's 88.

2 ALJ WILLIAMS: So marked.

3 (EXHIBIT MARKED FOR IDENTIFICATION.)

4 MR. SECREST: Thank you, your Honor.

5 Q. (By Mr. Secrest) Doctor, are you familiar
6 with this document?

7 A. Only to the extent I have read it. I
8 read it for this project.

9 Q. Okay.

10 A. Yeah.

11 Q. And, in fact, I believe you cited to it
12 in your testimony, correct?

13 A. Yes.

14 Q. Thank you. I'm looking at page 13.

15 A. Computer wake up. Got it.

16 Q. Great. No. 6, the question is "What is
17 the typical height that Indiana bats fly while
18 foraging during the summer period." Do you see that?

19 A. Yes.

20 Q. It states "Response: Based on published
21 data," in parens "see below, we believe that Indiana
22 bats typically forage and fly within an air space
23 from 2 to 30 meters." Do you see that?

24 A. Yes.

25 Q. Have you conducted any studies that would

1 contradict that estimate of 2 to 30 meters?

2 A. Not for Indiana bat specifically but I
3 could tell you it's the same opinion that holds for
4 other species of myotine bats because our detector
5 station -- detector stations often detect them at
6 near ground level instead of high off the ground, so
7 we often associate myotine bats with low flights.

8 But when you go out there and look with a
9 thermal imagery camera, like I have done, you will
10 see these small bats, these -- or actually they would
11 be myotine bats that I am looking at in the Altamont
12 Pass, they don't just fly at low heights. They will
13 go up to investigate the wind turbines or maybe for
14 other reasons but many of the bats I've seen, that I
15 assume are myotine bats, I have seen at heights that
16 are consistent with the rotor height of a turbine.
17 I've also seen them go from ground level to the
18 operating rotor of a turbine whenever they encounter
19 it. And they can ascend -- but they can ascend very
20 quickly. I mean I saw a canyon bat, the night before
21 last, it went from 2 meters above ground to 40 meters
22 in about 2 seconds.

23 Q. Doctor, when you reference myotine bats,
24 are Mexican free-tailed bats included?

25 A. No.

1 Q. Okay. You just referenced canyon bat.
2 Those aren't present in Ohio, correct?

3 A. I don't know. I don't think so, no.

4 MR. SECREST: Okay. Thank you. Doctor,
5 at this time I have no further questions.

6 THE WITNESS: Okay.

7 ALJ WILLIAMS: Thank you.

8 Any clarifying questions from other
9 counsel?

10 Seeing none, Attorney Van Kley, redirect.

11 MR. VAN KLEY: Thank you, your Honor.

12 - - -

13 REDIRECT EXAMINATION

14 By Mr. Van Kley:

15 Q. Dr. Smallwood, let's just cover a few
16 topics here in the same order as Mr. Secrest covered
17 them in his cross-examination. So we'll start with
18 introductory questions about your background,
19 starting with his question about whether you have a
20 degree in statistics. Do you need a degree in
21 statistics to issue the opinions you have in your
22 testimony in this case?

23 A. No. I think you need -- the way I look
24 at statistics is like other tools. It's a tool. And
25 it's nice to have Ph.D.-level statisticians around

1 but, you know, it's a device which I oftentimes use
2 but it's just a toolkit.

3 And when I was in undergraduate -- when I
4 was an undergraduate at UC Davis, somewhere along the
5 line -- I used to hate statistics, I avoided it like
6 the plague, and there is one class I took, Stats 13,
7 a general introductory course, I took it like three
8 or four times before I actually finished the course.
9 But then I took this nonparametric stats class from
10 this one professor and for some reason what she said
11 clicked with me and from there I took multiple stat
12 classes in grad school, I took multivariate analysis
13 twice, I took other stats classes, so I have a lot of
14 background in stats, I just don't have a degree in
15 that but I don't claim to be -- I'm not a
16 statistician. I just use it as a tool.

17 Q. You were also asked whether you have
18 conducted any bat surveys in Ohio. Does that affect
19 the validity of -- did the fact that you have not
20 done any bat studies in Ohio affect the validity of
21 your testimony?

22 A. No, because I'm not really addressing,
23 you know, bat natural history in Ohio. I'm
24 addressing our ability -- our confidence in
25 predicting fatalities based on pre-construction

1 surveys and how we should go about estimating
2 fatalities if the project is built. My expertise is
3 in predicting impacts, the number of bats killed per
4 megawatt per year, not in -- yeah, so I don't need to
5 be there to do that.

6 Q. You were also asked whether you had done
7 any bat surveys in the west and I believe you said
8 you had not. Does that affect the validity of your
9 testimony in this case?

10 A. I don't think so.

11 Q. Would the reason for that be the same as
12 the reasons you provided in your answer to my
13 question about whether not having done any bat
14 surveys in Ohio affects your testimony?

15 A. Yes, my explanation would be the same.

16 Q. You were also asked whether you performed
17 any presence/absence bat studies. And you said that
18 you had not. Does that affect the validity of any of
19 your testimony in this case?

20 A. I don't think so.

21 Q. Why not?

22 A. If -- one doesn't need to have done one
23 to understand what they are, and I analyzed --
24 I've -- I've analyzed presence/absence results many
25 times, especially for multiple studies. I do a lot

1 of expert witness work involving multiple projects,
2 so I often review conclusions of presence/absence
3 surveys involving burrowing owls or some other
4 species.

5 And what I am good at is pulling the
6 results and looking for patterns so that's been my
7 contribution. But I have done presence/absence
8 surveys for other species like tiger salamanders,
9 red-legged frog. I can't remember what else.

10 Q. You were asked a number of questions
11 about differences between the habitat in Altamont
12 Pass and the habitat in Wolfe Island. Do you recall
13 those questions and answers?

14 A. Yes.

15 Q. Do those differences in habitat affect
16 the validity of your testimony in this case?

17 A. Only in terms of specific adjustment
18 factors maybe -- maybe they could differ between
19 sites. The adjustment factors could differ between
20 sites. We don't know if they differ, but they could,
21 so there it could affect the validity of my estimates
22 but, you know, the way I look at it is if they're
23 wrong, they are going to be wrong a little bit here
24 and there. And so you are going to go from a big
25 number of bat fatalities per megawatt to another big

1 number. It's not going to make that big of a
2 difference.

3 And that probably goes to questions --
4 I'm sorry, I am going beyond your question, but it
5 goes to earlier questions I got from Mr. Secrest
6 about the different fatality estimators. I know
7 there is a lot of literature on that and a lot of
8 people make a big deal about it but they really don't
9 differ, the results don't differ that much from one
10 estimator from the next. Where they differ is the
11 field methods feeding the estimator.

12 MR. VAN KLEY: I don't have -- I don't
13 think I have any more questions. Thank you very
14 much.

15 ALJ WILLIAMS: Thank you, Attorney Van
16 Kley.

17 Attorney Secrest, any redirect -- or
18 recross?

19 MR. SECREST: If I may just have 5
20 minutes, your Honor.

21 ALJ WILLIAMS: It's 11:40. We'll come
22 back at 11:45.

23 MR. SECREST: Thank you.

24 (Recess taken.)

25 ALJ WILLIAMS: Back on the record.

1 MR. SECREST: Yes.

2 ALJ WILLIAMS: Attorney Secrest.

3 MR. SECREST: Thank you, your Honor.

4 - - -

5 RECROSS-EXAMINATION

6 By Mr. Secrest:

7 Q. Dr. Smallwood, I just have one bit of
8 follow-up. Did you just testify that the results of
9 the various estimators don't necessarily differ or
10 don't essentially differ?

11 A. Not to the degree that field methods
12 cause different estimates. So, for example, if you
13 feed an estimator, whether it's the GenEst estimator
14 or my estimator or somebody else's estimator with
15 results from scent-detection dogs of bats, you get a
16 much different estimate than if you feed it what
17 information -- detection rates from humans.

18 So, for example, I did a study where I
19 overlapped scent-detection dogs with human searchers,
20 the same study, same search areas, same methods
21 except one team was dogs and the other team was
22 humans. We found 71 bats during our study, and the
23 humans found 1. Their one bat represented one
24 species; we found four species. So it is night and
25 day.

1 There is no estimator in the world could
2 make up the difference between doing that, those two
3 different sets of outcomes. So, again, field
4 methods, not the estimator. The estimators are
5 pretty much the same across -- except for those that
6 use mean days carcass removal, that's -- there's a
7 bias there, it's a recognized bias; otherwise, they
8 are pretty much the same.

9 Q. So do you dispute your estimator
10 generally results in higher estimates of mortality
11 than other estimators such as the Huso and Shoenfeld
12 estimator?

13 A. If you use carcass persistence and
14 searcher detection in separate trials, separate
15 studies, and feed the estimator for what I use, if
16 you do it that way, then, yes, it overestimates on
17 the short interval, short-search intervals, not
18 long-search intervals. On long-search intervals,
19 it's deadly accurate. Short-search intervals,
20 sometimes the bias is higher, but if you use overall
21 detection rate, no, I don't agree with that.

22 Q. You just -- you referenced the studies
23 related to the scent-detection dogs compared to
24 humans. For that study, is it accurate that the
25 scent-detection dogs were searching daily, off-leash

1 dogs were searching weekly, and humans were searching
2 biweekly?

3 A. No. That's not correct.

4 MR. SECREST: Okay. Thank you, Doctor.
5 Appreciate you waking up early with us. I have no
6 further questions.

7 THE WITNESS: My pleasure. Thank you.

8 ALJ WILLIAMS: Dr. Smallwood, I want to
9 make sure Attorney Agranoff -- Judge Agranoff, you
10 are okay?

11 ALJ AGRANOFF: I'm good, thank you.

12 ALJ WILLIAMS: Okay. Dr. Smallwood,
13 again, thank you for getting up early and testifying
14 this morning. You're excused. Thank you.

15 THE WITNESS: Thank you.

16 ALJ WILLIAMS: Take up the exhibits,
17 Attorney Van Kley.

18 MR. VAN KLEY: Yes. We will move into
19 admission BSBO Exhibit 2.

20 ALJ WILLIAMS: Attorney Secrest?

21 MR. SECREST: No objection.

22 ALJ WILLIAMS: No objection?

23 MR. SECREST: Correct.

24 ALJ WILLIAMS: I lost the "no."

25 Okay. Attorney Secrest.

1 MR. SECREST: May I move for the
2 admission of Applicant's Exhibit 73 and Applicant's
3 88.

4 ALJ WILLIAMS: Attorney Van Kley?

5 MR. VAN KLEY: No objection.

6 ALJ WILLIAMS: Those are all deemed
7 admitted.

8 (EXHIBITS ADMITTED INTO EVIDENCE.)

9 ALJ WILLIAMS: That appears to conclude
10 what we had anticipated doing today. Anybody have
11 any procedural issues as we start to unwind for the
12 day?

13 MR. VAN KLEY: Just to confirm the start
14 time tomorrow, is it 1 o'clock?

15 ALJ WILLIAMS: Why don't we do 1:30.

16 MR. VAN KLEY: Okay.

17 ALJ WILLIAMS: Gives you a little extra
18 time. Rehydrate or whatever you have to do.

19 MR. VAN KLEY: Yes. Whatever it turns
20 out to be. Who knows.

21 ALJ WILLIAMS: We will do 1:30. So we'll
22 look for whatever is going to be filed via additional
23 testimony as outlined earlier by 7:30 eastern
24 tonight, and we will reconvene tomorrow at 1:30. We
25 will plan on taking cross from the two witnesses that

1 are likely to provide additional testimony tonight.

2 MR. VAN KLEY: Can we ask for the order
3 of tomorrow's two witnesses?

4 MR. SECREST: Checking on that. One
5 moment.

6 Yes. The rebuttal witness in response to
7 Mr. Schreiner's testimony will take the stand first.

8 MR. VAN KLEY: Okay. And can you provide
9 us with the names of those two experts or two
10 witnesses?

11 MR. SECREST: Yes. The Deepseh,
12 D-e-p-e -- I will let Ms. Pirik chime in with the
13 spelling.

14 MS. PIRIK: Yes, your Honor. It's
15 D-e-e-p-s-e-h.

16 ALJ WILLIAMS: I'm sorry, Chris. Can you
17 do that again more slowly?

18 MS. PIRIK: Sure. D-e-e-p-s-e-h.

19 ALJ WILLIAMS: Okay. Thank you.

20 MS. PIRIK: Let me say this one more time
21 because I'm moving the letters around.

22 D-e-e-p-e-s-h.

23 ALJ WILLIAMS: All right.

24 MR. VAN KLEY: So were there three Es all
25 together there or two?

1 MS. PIRIK: There are three Es.

2 ALJ WILLIAMS: D-e-e-p-e-s-h.

3 MS. PIRIK: Correct.

4 ALJ WILLIAMS: Deepesh.

5 MR. VAN KLEY: D-e-p -- so D-e-e-e-p --

6 ALJ AGRANOFF: Double E. Double E.

7 ALJ WILLIAMS: D-e-e-p-e-s-h.

8 MR. VAN KLEY: E-s-h. Okay.

9 ALJ WILLIAMS: And that's in rebuttal to
10 Schreiner. And then in rebuttal to Smallwood?

11 MS. PIRIK: Well, and Deepesh's last name
12 is R-a-n-a.

13 MR. VAN KLEY: Okay.

14 ALJ WILLIAMS: Okay. That's in rebuttal
15 to Mr. Schreiner?

16 MS. PIRIK: Correct.

17 ALJ WILLIAMS: And then rebuttal to
18 Mr. Smallwood?

19 MR. SECREST: I can manage this one. You
20 want to mute.

21 ALJ WILLIAMS: "Smith"?

22 MR. SECREST: Paul Rabie, R-a-b-i-e.

23 ALJ WILLIAMS: Okay.

24 MR. SECREST: Your Honor, what time would
25 you like those witnesses to do their technology test?

1 ALJ WILLIAMS: Just have them on at 1:15
2 eastern.

3 MR. SECREST: Okay.

4 ALJ WILLIAMS: I guess we will take
5 Deepesh, Deepesh Rana and Paul Rabie beginning at
6 1:30 tomorrow afternoon.

7 ALJ AGRANOFF: And then the one other
8 item that we ultimately need to discuss is a briefing
9 schedule. And just for your consideration, that way
10 tomorrow you can be able to give us your feedback, we
11 were thinking initial briefs on November 20, Friday,
12 November 20, with reply briefs due on Friday the 4th
13 of December.

14 I think, Mr. Van Kley, that would
15 hopefully not cause an overlap on some of those other
16 cases that you are involved in.

17 MR. VAN KLEY: Uh-huh, yeah, appreciate
18 that. We'll take a look at those schedules and give
19 you some feedback tomorrow.

20 ALJ AGRANOFF: Okay.

21 ALJ WILLIAMS: Okay. Anything else for
22 the good?

23 MR. SECREST: No, thank you, your Honor.

24 ALJ WILLIAMS: Attorney Van Kley?

25 MR. VAN KLEY: No, your Honor.

1 ALJ WILLIAMS: All right. We are
2 concluded for the day. We will talk again tomorrow
3 at 1:30.

4 ALJ AGRANOFF: Thank you.

5 ALJ WILLIAMS: Thank you.

6 (Thereupon, at 11:54 a.m., the hearing
7 was adjourned.)

8 - - -

1 CERTIFICATE

2 I do hereby certify that the foregoing is a
3 true and correct transcript of the proceedings taken
4 by me in this matter on Thursday, October 15, 2020,
5 and carefully compared with my original stenographic
6 notes.

7
8 _____
Karen Sue Gibson, Registered
Merit Reporter.

9
10 _____
Carolyn M. Burke, Registered
Professional Reporter.

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12 (KSG-6975)

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Case No(s). 18-1607-EL-BGN

Summary: Transcript in the matter of the Firelands Winds, LLC hearing held on 10/15/20 - Volume VIII electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc. and Gibson, Karen Sue Mrs.