

1                                   **STATE OF NEW HAMPSHIRE**2                                   **SITE EVALUATION COMMITTEE**

3  
4   **May 15, 2023** - 10:06 a.m.                                   *(Electronically*  
5   Public Utilities Commission                                   *filed on 05-30-23)*  
6   21 South Fruit Street Suite 10  
7   Concord, New Hampshire

8                                   **IN RE: SEC DOCKET NO. 2021-02**  
9                                   **SITE EVALUATION COMMITTEE:**  
10                                   Investigation of Complaints  
11                                   Regarding Antrim Wind Energy  
12                                   Facility.

13                                   ***[Public meeting for presentation***  
14                                   ***of the Final Report on the Sound***  
15                                   ***Study my HMMH, Inc., and also to***  
16                                   ***receive public comment, followed***  
17                                   ***by deliberations of the***  
18                                   ***Subcommittee]***

19                                   **PRESENT:**20                                   **SITE EVALUATION COMMITTEE:**

21   Jonathan A. Evans                   Dept. of Transportation  
22     *(Presiding as Presiding Officer)*  
23   W. Michael Fitzgerald   Dept. of Environmental Services  
24     *(Designee)*  
25   Thomas R. Eaton                   Public Member

26   Also Present for the SEC:

27                                   John-Mark Turner, Esq.  
28                                   *(Sheehan Phinney Bass & Green)*

29                                   Mark W. Dell'Orfano, Esq.  
30                                   *(N.H. Department of Justice)*

31                                   Andrew Biemer, SEC Administrator

32                                   COURT REPORTER:   *Steven E. Patnaude, LCR No. 52*

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**APPEARANCES AS NOTED:**

**Reptg. Antrim Wind Energy:**  
Barry Needleman, Esq.  
Thomas B. Getz, Esq.  
*(McLane Middleton)*

**Reptg. Counsel for the Public:**  
K. Allen Brooks, Esq.  
*(N.H. Dept. of Justice)*

**OTHERS PRESENT (as noted):**

- Richard Block
- Fred Ward
- Lori Lerner
- Lisa Linowes
- Eric Werme
- Robert Edwards
- Tom Boyle
- Jan Boyle
- Nancy Watson
- Joe Wilkas

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<i>to find that, based on the evidence before the Subcommittee, the facility was not out of compliance with the terms of the Certificate through 2021, and to recommend that the full SEC not undertake any enforcement action</i>	
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**P R O C E E D I N G**

PRESIDING OFCR. EVANS: Good morning.

Thank you for joining us today. I will now call this public meeting to order on the issue of compliance for Antrim Facility, Docket 2021-02. Joining me today are public member Tom Eaton and Mike Fitzgerald. Mr. Fitzgerald is a designee for the New Hampshire Department of Environmental Services, replacing John Duclos, who retired from State service at the end of March.

I would also like to assure you that all comments received by the deadline have been read and reviewed by this panel. Thank you for your input. The Subcommittee reserves the right to ask clarification questions, as needed. This meeting will not include cross-examination, and we will not tolerate interruptions. Thank you for your understanding.

The purpose of this meeting is to investigate the complaints through the end of calendar year 2021. There are two issues before the Subcommittee today: Review and acceptance of the Sound Study by HMMH, and overall determination of compliance, or lack thereof, by

1 Antrim Wind.

2 This meeting will contain three parts.  
3 First part of the meeting will be preparation of  
4 the Sound Study by HMMH. This period will not  
5 include public comments. The second part of the  
6 meeting will be the public comment period. If  
7 you have signed up to comment, we will call you  
8 in order -- in the order we received them. The  
9 third part of the meeting will be the  
10 deliberation phase. During this phase, we will  
11 publicly deliberate on the two issues I mentioned  
12 previously, and make a determination on  
13 overall -- on overall compliance.

14 Unless there's further business at this  
15 time, we will now accept the presentation from  
16 HMMH.

17 *[Court reporter inquiring of Presiding*  
18 *Officer Evans whether Christopher Menge*  
19 *should be sworn in for the*  
20 *presentation.]*

21 MR. DELL'ORFANO: Yes. Please do.

22 *(Whereupon **CHRISTOPHER MENGE** was duly*  
23 *sworn by the Court Reporter.)*

24 MR. WARD: I want to rise on a point of

1 order, Mr. Chairman.

2 PRESIDING OFCR. EVANS: Right now, the  
3 first task, we can maybe talk about it later, but  
4 right now I'd like to --

5 MR. WARD: Well, but it's on the  
6 presentation, that's why.

7 PRESIDING OFCR. EVANS: I would like to  
8 just accept the presentation at this time. Thank  
9 you.

10 **PRESENTATION ON THE SOUND STUDY**

11 **CHRISTOPHER MENGE, SWORN**

12 PRESIDING OFCR. EVANS: All right,  
13 Chris. Chris, you may proceed.

14 MR. MENGE: Oh, yes. My name is  
15 Christopher Menge. I am an acoustical from --

16 *[Technical issue regarding the use of*  
17 *the computer for the overhead display.]*

18 MR. MENGE: Looks like you're going to  
19 have to log back in again, Drew.

20 PRESIDING OFCR. EVANS: Give us one  
21 moment please.

22 *[Off the record.]*

23 MR. MENGE: I can proceed on some of my  
24 experience.

1 PRESIDING OFCR. EVANS: Okay.

2 MR. MENGE: I have been working for  
3 HMMH since -- and my firm is a nationally and  
4 internationally known acoustical consulting firm.  
5 We're based in Burlington, Massachusetts. But we  
6 have offices all over the United States, in many  
7 different parts of the U.S. Thank you.

8 ADMIN. BIEMER: Just touch the mouse  
9 from time to time.

10 MR. MENGE: Thank you. I have been --  
11 I have been with HMMH since the early 1980s.  
12 And, prior to that, I worked at Bolt, Beranek &  
13 Newman, in Cambridge, as an acoustical  
14 consultant, starting in 1972. My experience, at  
15 least my entire career has been dealing with  
16 outdoor noise issues, ranging from highway noise,  
17 transportation noise, community noise issues,  
18 such as racetracks, wind turbines, I've done a  
19 number of wind turbine studies in the '80s, and  
20 also other industrial sources as well.

21 So, my education background is in  
22 physics and mechanical engineering, for a brief  
23 summary there.

24 So, my idea here is to give a brief



1 presentation of my Report and our Study, an  
2 overview. And I have also incorporated some  
3 responses to some of the written comments that we  
4 received into my presentation.

5 So, first, I will provide an overview  
6 of our Noise Monitoring Program that we did to  
7 determine compliance. We conducted it from June  
8 9th to July 1st, in 2022, on three separate  
9 occasions. And we monitored noise in  
10 representative locations in the vicinity of the  
11 Antrim Wind facility, attempting to get different  
12 wind conditions on these different occasions.  
13 And this presentation will present results of the  
14 analysis, and I will show some tables from my  
15 report.

16 This first slide that is up now is a  
17 map of our study area. And I will provide a  
18 brief description of what's on it. Sort of in  
19 the center is the wind turbines. It shows -- oh,  
20 by the way, the map is oriented where north is to  
21 the left. So, it's been rotated counterclockwise  
22 90 degrees, compared with a north/south map.

23 And, so, we had -- I show five noise  
24 monitoring locations in the red squares, and the

1 wind turbines are shown with numbering "1"  
2 through "9" along that ridgeline.

3 The sites shown in the eastern section,  
4 which is at the top of the graph, we have the  
5 location near the intersection of Reed Carr Road  
6 and Craig Road, and have another location that is  
7 a little further down Craig Road. There's a  
8 location to the north, at Loveran's Mill Road.  
9 And then, another one at New Hampshire DOT  
10 Maintenance Facility, off of Route 9, and then  
11 another off of Salmon Brook Road, on an easement,  
12 a power easement there.

13 The three occasions, the first two  
14 occasions were separate noise measurement trips,  
15 over a 24-hour period. And the measurements were  
16 conducted at Reed Carr and at Loveran's Mill, and  
17 the New Hampshire Maintenance Facility, on those  
18 three -- on those two first occasions, and then,  
19 on the last occasion, we relocated from Reed  
20 Carr, to Craig Road, to the south, and from the  
21 New Hampshire Maintenance Facility, to the  
22 Loveran's Mill Road. The primary reason was to  
23 get away from existing local noise sources that  
24 were affecting the measured sound levels of the

1 wind turbines.

2 At Reed Carr, in the middle of the  
3 night, we ended up with some frog sounds from a  
4 nearby wetland, Bow Bog. So, we moved farther to  
5 the south, to Craig Road, away from the bog, and  
6 at a similar distance from the wind turbines.

7 Our locations are not located at the  
8 homes of the complainants, where we had  
9 anticipated we might conduct measurements. But  
10 we had difficulties in containing unconditional  
11 access to those homes. And, instead we conducted  
12 short-term measurements at these other locations  
13 that I just showed on the map.

14 Some commenters had suggested we didn't  
15 measure as close to the turbines -- to the  
16 turbines as the homes are located, but we did get  
17 as close as possible to the homes, and while also  
18 staying on public property, and maintaining lines  
19 of sight to the turbines, to the extent possible.

20 Our monitoring was conducted at three  
21 different times of day: A mid-day period, and  
22 evening period, and then a late night period; and  
23 following the Sec 301.18 noise rules, to the  
24 extent that we could.

1           Our monitoring was conducted for  
2           one-hour periods, and we included continuous  
3           listening and logging of all the noise sources  
4           and of the dominant sound. The monitoring also  
5           including recordings, an ADA [?] recording  
6           continuously of the sounds, throughout the hour.

7           We did not conduct long-term  
8           monitoring, due to instrument security concerns,  
9           and also the challenges that we found of using  
10          unattended noise data for compliance purposes.  
11          We found that the presence of noise from wind in  
12          the trees, and with traffic on Route 9, both of  
13          which had similar frequency content to the sound  
14          of the wind turbines, that it made it active  
15          listening and observation, listening with stereo  
16          hearing, to help us to discern what periods were  
17          contaminated by other sources, such that the  
18          turbine sound was not dominant. And, therefore,  
19          that enable us to select the useful data periods  
20          for analysis.

21          As I said, the monitoring included  
22          continuous logging. And this was done with -- on  
23          the instrument, with software that we have, that  
24          is the annotations are taken on a device that

1 connects via Bluetooth to the instrument, and  
2 recorded. That's all the annotations of what the  
3 observer is hearing for noise sources during the  
4 measurement.

5 We measured for a total of 27 one-hour  
6 periods over the three occasions. But we found  
7 that, as we analyzed the data, the interference  
8 of noise from wind in the trees, and from traffic  
9 on Route 9, masked or covered up the sound of the  
10 turbines so much, in that only in 13 of the 27  
11 periods did we have sufficient good quality data  
12 of wind turbine sound, where our observer could  
13 be confident that it was contributing  
14 significantly to the overall sound level that we  
15 had usable data. So, we have these 13 periods.

16 And it also prevented us from  
17 collecting usable wind data during the higher  
18 wind conditions, because that generated more  
19 wind-in-the-trees sound, and made it more  
20 difficult to collect, you know, useful data from  
21 the sound from the wind turbines themselves.

22 We couldn't measure background sound  
23 levels without the turbines in operation. So, we  
24 didn't. Because, and the reason is we didn't

1 contact the turbine operator about the  
2 monitoring. This was intentional. So, the  
3 operator was unaware of the monitoring and would  
4 operate the turbines normally. Therefore,  
5 because we didn't have background at the same or  
6 near the same time that the wind turbine sound  
7 data was collected, we couldn't evaluate  
8 compliance relative to the L90 background sound  
9 level criteria in the SEC noise rules, and we  
10 focused on the maximum limits.

11 Our data analysis included filtering  
12 out of the high-frequency sounds of birds, frogs,  
13 and insects that did affect the A-weighted sound  
14 level. And we followed ANSI/ASA standards for  
15 doing that, cutting off the highest frequencies  
16 in many of the data samples, in order to have  
17 useful information in the frequencies where the  
18 wind turbine produces its sound.

19 My next slide is an image of our  
20 Table 1 from our Report. It shows the A-weighted  
21 sound level metrics of Leq. And it shows the  
22 sound measurement periods, the elapsed time,  
23 whether the sound was filtered for biogenic sound  
24 or not, and the overall period Leq for the entire

1 measurement period, as much as we had of good  
2 quality sound, as logged by our observer.

3 The SEC Noise Rule 301.14(f) states  
4 that the daytime period of 8:00 a.m. to 8:00  
5 p.m., the sound level should not exceed 45 dBA  
6 Leq or 5 dB above the background, L-90. And it  
7 identifies nighttime as between 8:00 p.m. and  
8 8:00 a.m., and the sound level should not exceed  
9 40 dBA from the wind turbines, or 5 dB above the  
10 background.

11 The nighttime periods, or the -- you  
12 can see the time periods shown there, for  
13 example, the first one, "Reed Carr Road", "6:15  
14 p.m.", on "June 9th", to "7:15 p.m." That would  
15 be our evening period. Typically, after 6:00  
16 p.m., we have evening periods. There's another  
17 evening period at Salmon Brook Road following  
18 that, and then one at the New Hampshire DOT  
19 Facility, starting at "9:15".

20 Then, we had early morning measurements  
21 for the next day, at 2:00 -- from 2:00 p.m. to  
22 about 5:30 a.m. total -- 2:00 a.m., excuse me, to  
23 5:30 a.m. total.

24 The next day -- the next trip, we came

1 back on June 17th. And, unfortunately, we were  
2 only able to get two periods with good data  
3 there. It was -- there was enough wind, we chose  
4 a windier period. Unfortunately, that -- we  
5 ended up with difficulties, due to wind in the  
6 trees covering up the wind turbine sound for most  
7 of the measurements in that. So, we only have  
8 two days -- two periods in the middle of night,  
9 on the 16th and 17th of June.

10 Then, on our third trip, the winds were  
11 less, and we were able to measure more periods  
12 than we had the previous trip. That was from  
13 June 30th to July 1st. And we had -- that was  
14 the measurement occasion where we had moved the  
15 Reed Carr Road site down to Craig Road, to avoid  
16 the bullfrogs. And then, we had moved the New  
17 Hampshire DOT Facility site, which was rather  
18 close to Route 9, to a spot north of Route 9,  
19 well north of Route 9, on Loveran's Mill Road, to  
20 get away from some of the Route 9 noise.

21 You can see that the overall A-weighted  
22 sound levels range from about 30 -- from in the  
23 high 20s dBA during the one-hour periods, of up  
24 to 39 on our first measurement.



1           My next slide -- oh, I did want to  
2           mention that one commenter had suggested that  
3           these reported values suggest that the turbines  
4           exceeded the predicted values for the turbine  
5           noise, which were in the mid-30s, and not any in  
6           the high 30s. But the commenter makes an  
7           assumption that these sound levels that are shown  
8           here are due exclusively to the wind turbine, and  
9           that's not the case. That the observer who was  
10          listening for sound was able to hear the  
11          turbines, and they were contributing to the  
12          overall sound level. But, in many cases, we  
13          had -- he had periods where there was a  
14          combination of wind in the trees and turbine  
15          sound, or a combination of maybe some very  
16          residual traffic noise as the car got farther and  
17          farther away, and turbine noise that would add to  
18          the overall sound level. So, this doesn't  
19          necessarily suggest that the turbines are  
20          exceeding the predicted sound levels from the  
21          original study.

22                 My next slide, it's getting a little  
23                 hard to see. I apologize, I thought maybe we'd  
24                 have a more visible screen at this distance. But

1 this shows a summary of the wind data that were  
2 collected at the wind turbines. After several  
3 months went by, we were able to get data, after  
4 our measurements, several months went by, we were  
5 able to get downloaded data from the wind  
6 facility operator, from each turbine, during all  
7 of our measurement periods. And every ten  
8 minutes, the turbine will report its average wind  
9 direction for that period, wind speed, and power.

10 And what we have is the summary of the  
11 wind direction, speed, and power, during each of  
12 our measurement periods. And it's a summary over  
13 the entire period. And it's a summary -- it's an  
14 average of all nine wind turbines. So, it's an  
15 average value. But it does show that -- these  
16 are compass points for the wind direction. So,  
17 the range of directions that we're seeing there  
18 is -- ranges from the west to the south-southwest  
19 during all three periods. And the wind speeds,  
20 the average wind speeds, in some cases, were  
21 fairly low. On that last trip we made there on  
22 June 30th, we have some fairly low wind speeds,  
23 in the 3.3 meters per second average. But we  
24 also have wind speeds averaging 10 meters per

1 second, and the higher powers that result from  
2 those higher wind speeds.

3 My next slide shows additional  
4 information that we include in the Report, which  
5 is -- this is one example of the five-minute  
6 period sound levels during our first measurement  
7 period at Reed Carr Road, on June 9th, at 6:15  
8 p.m.

9 And, since the SEC Subcommittee had  
10 agreed that a five-minute period would be, I  
11 think, the shortest period that we would do an  
12 overall evaluation for, we did that. And each  
13 period is a total of five minutes, aggregated.  
14 You may notice that, in some cases, the start  
15 times and the end times don't equal five minutes.  
16 For example, that second one goes from 6:20 to  
17 6:27. And the reason is that there would have  
18 been two minutes within that timeframe where the  
19 observer had noticed audible sound from other  
20 sources, and had suggested that those be excluded  
21 from the wind turbine data. But the total  
22 period, in each case, is of sound from -- that  
23 was deemed to be quality sound, and should be  
24 included in the analysis, is five minutes long.

1           The value shown for the 6:33 p.m.  
2           period to 6:39 of "41.1 dBA", we had one  
3           commenter state that this indicates a violation  
4           of the 40 dBA noise criterion. But I would point  
5           out that this is a daytime -- this occurs during  
6           the daytime period, because it's before 8:00 p.m.  
7           So, it's not -- it wouldn't be officially a  
8           violation. But all the others are below 40. And  
9           there were no other five-minute periods in the  
10          entire dataset that we have shown in the Report  
11          that exceed 40, or are 40 and above.

12           There is a table like this in the  
13          Report for every one of our measurement periods  
14          that shows all the five-minute values as well.  
15          This is just an example of the first one, at Reed  
16          Carr Road.

17           And this is my last slide. It's  
18          showing the detailed information that we also  
19          include in the back of the Report, the appendix  
20          that shows the detailed wind direction and wind  
21          speed, and power information. There are several  
22          tables, it's many pages long. So, for each  
23          monitoring period, the wind turbine reports every  
24          ten minutes an average value of the wind speed,

1 wind direction, and power, as I had mentioned  
2 earlier in the summary slide.

3 And this one shows how we broke all the  
4 details down and came up with the monitoring  
5 period average of a 2 -- of a wind direction  
6 average of "276" degrees. And it shows what each  
7 turbine reported during each of the ten-minute  
8 periods. And you can see there's variation, and  
9 some the turbines are showing, you know, wind  
10 direction, in the first one, "01", is showing  
11 wind directions, you know, fairly low 200s  
12 degrees, that's pretty close to, you know,  
13 south-southwest. But, then, we have Turbine 5  
14 showing values over 300 degrees, which is getting  
15 pretty close to northwest. So, there's some  
16 variation in the reported wind directions from  
17 the different turbines.

18 That's an overall summary of my Report.  
19 And thank you for the opportunity to present it.

20 PRESIDING OFCR. EVANS: Thank you, Mr.  
21 Menge.

22 I guess now, probably, what I'd like to  
23 do is offer either of the Subcommittee members an  
24 opportunity to ask Mr. Menge any questions that

1           they may have of his presentation.

2                   MR. WARD: I have a point of order,  
3           Mr. Chairman.

4                   PRESIDING OFCR. EVANS: I'm sorry. I  
5           really --

6                   MR. WARD: I have a point of order.

7                   PRESIDING OFCR. EVANS: No. I do not  
8           want interruptions.

9                   MR. WARD: I don't know whether you can  
10          stop it.

11                   We are getting into a discussion of  
12          that Report. My point of order is --

13                   PRESIDING OFCR. EVANS: Please.

14                   MR. WARD: -- that Report is useless.  
15          And it's deliberately useless, because it's --

16                   PRESIDING OFCR. EVANS: If you  
17          cannot -- if you cannot keep your comments to the  
18          time when we have allotted for comments, then you  
19          will be asked to be removed from --

20                   MR. WARD: And that is overruling my  
21          request for a point of order?

22                   PRESIDING OFCR. EVANS: We -- this is  
23          not what we're doing right now, okay?

24                   MR. WARD: You're offering the Report.

1                   PRESIDING OFCR. EVANS: We are  
2                   discussing -- we have been asked to -- to take a  
3                   look at this, and that is what we are doing.  
4                   And, as a Subcommittee, this is what we are doing  
5                   right now. I would ask that you sit down. If  
6                   you can't, then you will be asked to be removed.

7                   MR. WARD: In other words, you're not  
8                   going to allow -- you're going to allow this  
9                   Report to be put up for discussion, is that what  
10                  you're saying?

11                  MR. EATON: He's on the list to talk.

12                  PRESIDING OFCR. EVANS: Yes. We  
13                  have -- we have -- the second, as I mentioned  
14                  previously, one of the things we will be doing is  
15                  allowing for public comment. That will be your  
16                  opportunity. You've signed up. You can comment  
17                  at that point.

18                  MR. WARD: So, there's no allowance for  
19                  comments about things that are irrelevant. Is  
20                  that what you're saying?

21                  PRESIDING OFCR. EVANS: That is your  
22                  opportunity to comment about things that are  
23                  "irrelevant", as you've said.

24                  MR. EATON: I have no questions at this

1 point.

2 PRESIDING OFCR. EVANS: Mr. Fitzgerald?

3 MR. FITZGERALD: Yes, one question.

4 Could you explain a little bit better  
5 your --

6 *[Court reporter interruption regarding*  
7 *the use of the microphone.]*

8 MR. DELL'ORFANO: Michael, could you  
9 speak a little bit louder for us?

10 MR. FITZGERALD: Yes. I'm sorry.

11 Could you give a little more  
12 explanation as to the differentiation of  
13 background noise and the turbines, and explain  
14 what you mean when you say "There's no background  
15 at times"?

16 MR. MENGE: I don't believe I said  
17 "There's no background at times." But what --  
18 when we -- when observers go out and collect  
19 noise data, and we are focusing on a particular  
20 noise source, --

21 MR. FITZGERALD: Excuse me, I'm sorry.  
22 I think what you said was that you -- because you  
23 did not observe or you did not inform the  
24 facility of your observations, that you "were not



1           able to obtain background." Is that --

2                   MR. MENGE: Yes.

3                   MR. FITZGERALD: Okay.

4                   MR. MENGE: The background would be the  
5           facility shut down, without any turbines  
6           operating.

7                   MR. FITZGERALD: Okay.

8                   MR. MENGE: So, that would be a  
9           comparison where you would ask them to shut down  
10          for a one- or two-hour period, for example. You  
11          would measure before the shutdown and then you  
12          would measure during the shutdown, and do a  
13          comparison to see what the sound level  
14          differences are.

15                  MR. FITZGERALD: Okay.

16                  MR. MENGE: And that was called for in  
17          the rule. But, because the facility was not  
18          contacted for such a shutdown, and that we did  
19          not get any background information without it  
20          operating. And, as I said, that was intentional,  
21          so that there would not be any, let's say, so  
22          that it would be normal operation of the  
23          turbines, since he was unaware of any monitoring  
24          going on. Yes.

1 MR. FITZGERALD: Okay. And, second,  
2 you indicated that you were "unable to obtain  
3 unconditional access" at certain residential  
4 areas, and you chose locations. So, those, the  
5 locations that you chose, you believe are  
6 representative of the actual distance of the  
7 residences that are in question and are the  
8 source of complaints?

9 MR. MENGE: They're a little different.  
10 They're not exactly the same. But we got as  
11 close to the residences as we can. The  
12 residences, some of them are located on Reed Carr  
13 Road, some are on Loveran's Mill, some are on the  
14 Salmon Brook Road area. So, staying on public  
15 property, we did get as close as we could. And  
16 we also needed a safe place to deploy our  
17 instrument, and some of those roads are quite  
18 narrow. And, so, we looked for places where we  
19 could pull off a little bit as well.

20 MR. FITZGERALD: Thank you.

21 PRESIDING OFCR. EVANS: Chris, did  
22 you -- was there an intent to kind of maintain  
23 like a line-of-sight to each of as many turbines  
24 as you could? Or, you know, could you speak a

1           little bit to how that might, you know,  
2           line-of-sight might influence whether or not, you  
3           know, noise -- the noise, the variations in  
4           noise?

5                       MR. MENGE:  Yes.  Sure.  In some cases,  
6           there were -- there was some trees, tree leaves.  
7           But, because of the height, the elevation of the  
8           turbines, they're, you know, well above the  
9           ground in the vicinity of the homes.

10                      So, while not in all cases did we have  
11           direct line-of-sight without any -- excuse me --  
12           without any, a few tree branches in the way, in  
13           all cases we had a line-of-sight through a modest  
14           number of trees.  And, in some cases, we had a  
15           direct line-of-sight, particularly the Salmon  
16           Brook Road easement, where the trees were all  
17           cleared, and we were able to see the turbines  
18           very clearly.

19                      But I believe that, had we conducted it  
20           during the winter, there would have been clear  
21           visibility of all the turbines, because of the  
22           elevations of the measurement sites that we  
23           chose, and the turbines themselves.  They're on a  
24           ridge.  So, there's good sound propagation.  A

1           few trees, tree branches between the source and  
2           the receiver, won't have any effect on those  
3           mid-frequency sounds produced by the turbine.

4                       PRESIDING OFCR. EVANS: Thank you.

5                       MR. EATON: Chris, I'm just trying to  
6           understand.

7                       You were not able to be on a couple of  
8           pieces of property. Can you explain to me why?

9                       MR. MENGE: The SEC Subcommittee wanted  
10          to have an unconditional access to those  
11          properties, and so that our observer and our  
12          monitoring person could come and go as he/she  
13          pleased without interference. And the residents  
14          asked for an opportunity to review the  
15          measurement protocols, and to ask questions of  
16          the person conducting the monitoring. And the  
17          SEC Subcommittee wasn't in agreement with that  
18          request. And, so, therefore, we chose different  
19          locations. In collaboration with the SEC  
20          Subcommittee, we agreed to be able to conduct an  
21          adequate noise measurement program with the  
22          short-term monitoring, and at locations that were  
23          near the homes.

24                       And, in hindsight, a long-term

1 monitoring would have been less successful, in my  
2 opinion, than our short-term monitoring, with an  
3 observer logging all of the audible events.

4 Because the contributions from other sources of  
5 sound were very significant, particularly when  
6 the winds were up. The wind-in-the-trees sound  
7 tended to mask or cover up the sound of the wind  
8 turbines. And, so, it was -- particularly an  
9 A-weighted sound level. So, it was difficult to  
10 make certain that we had periods that were valid.

11 And in these, as I mentioned before, on  
12 the period during the 17th of -- 16th and 17th of  
13 June, when we went up during windy periods to try  
14 to get, you know, the kinds of weather conditions  
15 that I believe tended to precipitate complaints,  
16 the data weren't useful for most of the time,  
17 except in the middle of the night.

18 PRESIDING OFCR. EVANS: For the -- at  
19 some of the higher ones, you can't necessarily,  
20 you know, attribute that all the noise that, you  
21 know, occurred, say, during that one that was in  
22 question about the 41., whatever it was, 3, or  
23 something like that, you can't necessarily  
24 attribute all of that to the -- all of the noise

1 during that, you know, five-minute, you know,  
2 compiled period, basically, you can't attribute  
3 that all necessarily just to the wind farm?

4 MR. MENGE: Actually, no. Because we  
5 have the recordings of the sound during the  
6 entire period, I went through and listened to  
7 almost all of them. Because our -- my observer,  
8 it wasn't me who actually did the data  
9 calculation, it was one of my colleagues at my  
10 company, who has lots of noise measurement  
11 experience, and has -- is very familiar with all  
12 this instrumentation that is quite sophisticated  
13 these days. And, so, he did his best what he  
14 heard to exclude things that happened.

15 But I did notice that one thing, during  
16 that five-minute period where we got the 41, that  
17 he had not excluded was one particularly loud  
18 bird. And I believe that that period was not  
19 filtered. I'd have to look back at the chart.  
20 But there was something that definitely hadn't  
21 been excluded, and was affecting the sound level.

22 And I thought "well, this is" -- "this  
23 is okay. It doesn't show a violation at night,  
24 because it's not a nighttime period." So, we let

1           it go. He hadn't excluded it. And I thought  
2           "Well, maybe we just let it go as is." Maybe the  
3           bird contributed a moderate amount to that.

4                     But, you're right. There are all kinds  
5           of sources. And it's up to the -- it's actually  
6           rather difficult in the field to make a  
7           determination, when you have two or three sound  
8           sources, to determine which one is controlling  
9           the A-weighted sound level.

10                    I know, John, you have experience with  
11           sound measurements. And it's a challenge. You  
12           watch the meter to see what the A-weighted sound  
13           level is, you listen, and you see -- and you can  
14           tell what you hear, and whether or not one  
15           source, the wind in the trees, that you can  
16           discern, versus the turbine, is dominating. And,  
17           if the wind comes up, there's a big gust, and the  
18           sound level increases, then you know it's the  
19           wind, and he would flag those as "not valid" for  
20           purposes of data processing.

21                    So, there's judgment involved, and one  
22           does one's best.

23                    PRESIDING OFCR. EVANS: Thank you. Any  
24           other questions from either of you?

1 MR. EATON: No.

2 PRESIDING OFCR. EVANS: I think he's  
3 answered all of my questions as well. Sorry.

4 MR. MENGE: Thank you.

5 PRESIDING OFCR. EVANS: Thank you, Mr.  
6 Menge.

7 So, now, I think we will move onto the  
8 public comment phase of the meeting. We are  
9 going to call speakers in the order that they  
10 signed up. And, while I think we had mentioned  
11 previously that we would allow, say, for two  
12 minutes of presentation, we can probably, you  
13 know, given the number of speakers here, we can  
14 probably bump that up to, say, three minutes.  
15 So, just -- but, again, we're just trying to keep  
16 things, you know, within reason that, as far as  
17 time, you know, the amount of time for each  
18 comment period.

19 So, with that, the first person who  
20 requested to speak was Mr. Eric Werme.

21 MR. WERME: "Werme".

22 PRESIDING OFCR. EVANS: "Werme".

23 MR. WERME: Thank you. With the extra  
24 minute, I'll have time to introduce myself.



1           I do not live in Antrim. I live in  
2           Sutton. I'm a retired software engineer, but I  
3           have been interested in science fields for my  
4           whole life, and weather, in particular, and  
5           climate change, and other stuff.

6           So, I wrote -- now, I'm just going to  
7           the testimony here, which I wrote down.

8           In my *pdf* submission two weeks ago,  
9           "Critique, Comments and Weather: A review of the  
10          Rand and HMMH sound studies", I tried to stick to  
11          facts and analysis.

12          Today, I'd like to shift a bit to the  
13          emotional side, in particular, "disappointment".  
14          I'm disappointed that I did not find the contract  
15          with HMMH, in particular, what they were told to  
16          study. I was disappointed to read "access to  
17          properties to conduct the monitoring was not  
18          available." I was more disappointed to read that  
19          the property owners wanted monitoring to be done  
20          from their properties; I don't see how  
21          negotiations led to that miscommunication.

22          I was disappointed with the dates and  
23          weather HMMH chose to study, and am extremely  
24          disappointed that, after a difficult day impaired

1 by strong ground level winds, the next day was  
2 chosen for its forecast of light winds.

3 I shall be disappointed if this  
4 Subcommittee chooses to accept the HMMH Report,  
5 over the richer and more valuable 2021 Report by  
6 Rand Acoustics.

7 I understand that Antrim Wind Energy  
8 submitted a review by Epsilon Associates that  
9 rejected the Rand Report, in part due to, and I  
10 quote, "NH SEC Rule Site 301.18.e requires that  
11 monitoring include periods with the wind turbines  
12 in both operating and non-operating, i.e.,  
13 "background" modes. This was not done during the  
14 Rand testing period. ...Mr. Rand's failure to  
15 comply with this basic SEC requirement renders  
16 his conclusions meaningless, since there is no  
17 basis for differentiating turbine noise from  
18 other noise."

19 On the other hand, today's report  
20 similarly states that, "Since HMMH had no control  
21 over or contact with the operators of the Antrim  
22 Wind turbines, HMMH could not get them shut down  
23 for periods to enable measurement of background  
24 sound levels."

1           In summary, I will be disappointed if  
2 you accept the HMMH Report today.

3           Thank you.

4           PRESIDING OFCR. EVANS: Thank you,  
5 Mr. Werme.

6           The next individual who requested to  
7 speak was Dr. Fred Ward.

8           *[Mr. Ward distributing documents.]*

9           MR. WARD: These may be spread around  
10 to the Committee, and any extras.

11          Is the microphone on?

12          *[Court reporter indicated that, if the*  
13 *red light is on, the microphone is on.]*

14          MR. WARD: First of all, Mr. Chairman,  
15 I object to your threat to make me leave on a  
16 point of order. Now, I may not know all of the  
17 legal things to it, but I thought a point of  
18 order could be put in, and cannot be ignored  
19 merely for the convenience of either the chair or  
20 the board. I don't want to claim I know that,  
21 but I suspect that.

22          In any event, my point of order was  
23 very simple. The Report from HMMH does not  
24 include recognition of RSA 162-H, Rule 301.18(i),

1           which requires that any checking of a noise  
2           complaint has to be done under the same  
3           meteorological conditions, "same meteorological  
4           condition".

5                        When I was going to third grade, I  
6           think I learned that "same" meant that you had to  
7           know one thing to compare it to another. HMMH  
8           doesn't even know what the meteorological  
9           conditions were that were important for any of  
10          the complaints. And, if they do, they certainly  
11          didn't present it.

12                       Now, that's leaving aside trying to  
13          match that later on. You have to know what it is  
14          in order to compare to same; they did not.

15                       Now, I tried to find out in the  
16          history, and reading all the material, where we  
17          went from "same meteorological conditions" to  
18          "well, any old time in the spring." Well, let me  
19          just say, first of all, the longest days of the  
20          year are in late June -- are in mid to late June.  
21          So, to contend that these are "just any old  
22          times", when the nighttime is only a few hours.

23                       The point of the "same meteorological  
24          conditions", which I'm sure Mr. Menge knows, or

1           doesn't seem to want to admit it, the same  
2           meteorological conditions have to be a long  
3           night, with very little wind. There is no  
4           evidence, I've taken a look at this weather data  
5           and everything, there is not only no evidence  
6           that these kinds of nights were selected, but  
7           just the opposite; the times selected were  
8           deliberately selected to not produce strong  
9           turbine noises. Now, whether that is deliberate  
10          or not, I know not. But I am damn suspicious.

11                         And what it comes down to is, what I  
12          want to do is to make a motion that we not  
13          accept, and we not discuss, the Report from HMMH,  
14          who should have known better, even with the wrong  
15          instructions, that what they did was not relevant  
16          to what they were supposed to be finding out.  
17          And their statement in their report that "this  
18          shows that there's no problem", is the most  
19          absurd comment I can imagine. Even with the  
20          wrong instructions, HMMH knows that's not true.

21                         Thank you.

22                         PRESIDING OFCR. EVANS: Thank you,  
23          Dr. Ward.

24                         The next speaker who requested to speak

1 was Barry Needleman.

2 MR. NEEDLEMAN: Mr. Chair, members of  
3 the Committee, thank you. Barry Needleman, I  
4 represent Antrim Wind.

5 I believe that the first noise  
6 complaint in this matter was filed in January of  
7 2020. That makes it well over three years that  
8 this process has been going on. I've been  
9 practicing in front of the SEC for 25 years, and  
10 I can't recall a proceeding that's lasted longer  
11 than this.

12 I really think it's time for this  
13 matter to be concluded. The process has been  
14 extensive. It has involved an enormous amount of  
15 public input, and it has involved an enormous  
16 amount of analysis.

17 Following the commission of this  
18 facility, as required by the SEC Certificate,  
19 various sound assessments were provided to the  
20 Committee by the consultants for Antrim Wind.  
21 Some of those assessments were independently  
22 assessed by Tocci & Associates, hired on behalf  
23 of the Committee. Now, we have the Report from  
24 HMMH. So, in other words, we have multiple

1 assessments, from different sound consultants,  
2 repeatedly confirming that this Facility is in  
3 compliance with the applicable standards.

4 That being said, I think this Committee  
5 has fulfilled its task, and it's time for this  
6 matter to be concluded. And I would ask that you  
7 accept the Report, and refer to the full  
8 Committee for a conclusion here.

9 Thank you.

10 PRESIDING OFCR. EVANS: Thank you,  
11 Mr. Needleman.

12 Next speaker was Richard Block.

13 MR. BLOCK: Yes. Hello. My name is  
14 Richard Block. And, for the last 35 years, I  
15 have lived on the south slope of Windsor  
16 Mountain, overlooking the ridge on Tuttle Hill.  
17 My home has a view of Antrim Wind's turbines.  
18 With picture windows facing south, I can clearly  
19 see the red flashing strobe lights flashing in  
20 unison all night long.

21 After the last few years of watching  
22 those lights flash all night, every night, I can  
23 only come to the conclusion that Antrim Wind has  
24 absolutely no intention of complying with their

1 Certificate, which specifies the use of a  
2 radar-controlled aircraft warning lighting system  
3 to "almost eliminate this nighttime light  
4 source", that's Antrim Wind's words. Either the  
5 radar system just doesn't work or Antrim Wind  
6 just doesn't activate it.

7 At the same time, after several years  
8 of this non-compliance, as well as written  
9 complaints and testimonies to the Subcommittee, I  
10 can only conclude that the Site Evaluation  
11 Committee has no intention of enforcing  
12 compliance to Antrim Wind's Certificate, since no  
13 attempt appears to have ever been made to do so.

14 The residents of Antrim had been  
15 assured by the SEC that the Certificate of Site  
16 and Facility With Conditions was intended to  
17 predict all -- protect all concerned. The  
18 "Conditions" included were there to make sure  
19 that, as per state law, Section 162-H:16, the  
20 turbine facility "will not have an unreasonable  
21 adverse effect on aesthetics".

22 If Antrim Wind ignores and continuously  
23 violates the conditions specified in the  
24 Certificate, and the Site Evaluation Committee



1 continuously ignores those violations and makes  
2 no effort to assure compliance, then the entire  
3 Certificate of Site and Facility With Conditions,  
4 and indeed the entire Site Evaluation Committee  
5 purpose and existence, mean nothing. And the  
6 residents of Antrim and the citizens of the State  
7 of New Hampshire are being victimized and  
8 deceived into thinking that there exists a state  
9 agency whose purpose is to look out for their  
10 safety and best interests, when, in reality, none  
11 exists.

12 Thank you.

13 PRESIDING OFCR. EVANS: Thank you,  
14 Mr. Block.

15 Next speaker was Lori Lerner.

16 MS. LERNER: Thank you. Can you hear  
17 me?

18 PRESIDING OFCR. EVANS: Yes.

19 MS. LERNER: Okay. I'd like to state  
20 that this Report is severely flawed. Part of the  
21 presentation of the sound technician was that  
22 "the sound study was done to the extent we  
23 could". That's just not good enough.

24 As we heard, the sound testing was not

1 done at the complainants' locations, which, in  
2 reading the statute and the rules, the  
3 requirement for a complainant -- a complaint  
4 study is to be done at the sites that the  
5 original testing had been done back when. My  
6 understanding is there was no -- no attempt to  
7 reach out to those who have complained, and who  
8 also live in close proximity to the wind  
9 turbines. The testing that was done was at a  
10 distance greater than the wind -- than the actual  
11 residents who have these issues.

12 And also, along with Fred Ward's  
13 statements, it's very clear in the statute that  
14 complaints are to be determined and studied  
15 "under the same meteorological conditions". I  
16 could not find anywhere, in any of the Report,  
17 where it referenced what those conditions were at  
18 the time of the testing. So, did they coincide  
19 with the timing of the complainants' concerns.

20 Also, in terms of the background noise,  
21 I don't understand why, given the time period  
22 that HMMH has had to do this testing, they could  
23 not have had another on-site study or review  
24 asking Antrim Wind to turn off the turbines to do

1 the on/off testing? It didn't have to coincide  
2 with the timeframes here. It could have been at  
3 any other time, and that was not done, which, to  
4 Ric Werme's point, should nullify this report.

5 I thank you for your attention. And I  
6 would just ask this Committee to please give  
7 careful consideration, particularly  
8 Mr. Needleman's comments that "we've been  
9 studying this for many years", I disagree with  
10 that. This is the first time a complaint study  
11 was done. Unfortunately, it wasn't done as  
12 prescribed by the statute.

13 Thank you very much.

14 PRESIDING OFCR. EVANS: Thank you, Ms.  
15 Lerner.

16 The next speaker would be Lisa Linowes.

17 MS. LINOWES: Thank you, Mr. Chairman.  
18 A couple of things. The monitor locations -- oh,  
19 for the record, my name is Lisa Linowes.

20 The monitor locations that were  
21 selected are in violation of 301.14(f)(2), which  
22 clearly states that the location where the  
23 monitor for testing for complaints, or any time,  
24 any time there's an exceedance, regardless of a

1 post-construction study, has to be located "on a  
2 property that is used in whole or in part for  
3 permanent or temporary residential purposes, at a  
4 location between the nearest building on the  
5 property used for such purposes and the closest  
6 turbine." There is no case where that was where  
7 these monitor locations were there.

8 To Mr. Menge's comment that the  
9 locations "were close enough", the table that's  
10 in his Report states that the turbines,  
11 particularly on Salmon Brook Road, were one and a  
12 half miles away from the turbines. I mean,  
13 obviously, everyone in this room knows that sound  
14 dissipates with distance. So, if you're going  
15 to -- if you have a complaint at 3,800 feet, in  
16 some cases under 3,000 feet, which was the case  
17 for the woman that lives on Keene, Keene Road,  
18 and you're measuring a mile and a half out?  
19 You're not going to get the measurements that  
20 those people are experiencing.

21 And, also, for the record, no one on  
22 Loveran's Mill Road made a complaint about wind  
23 turbine noise. So, even selecting that location  
24 made no sense.

1           Heard something today that, frankly, I  
2 was surprised about, and it's contradicted by Mr.  
3 Menge's own Report. He said that there were  
4 various noises inside the levels that we see,  
5 that may have bumped up the decibel levels that  
6 we see in the tables, up to 39, up to over 40.

7           First of all, a transient bird, to  
8 leave it in there and argue "well, it's not a  
9 problem, because it didn't go over the 45  
10 daytime"; that's not how a test is done. And, to  
11 have in his own Report, where it -- to the extent  
12 it contradicts his Report, his own report, I  
13 thought believably stated that he followed the  
14 ANSI standard -- the ANSI -- sorry, I'm going  
15 to -- Part 3, 12.9, Part 3, that he followed it  
16 by removing all transient sound levels. And now  
17 what we hear is that "No, well, we kind of left  
18 the wind in the trees." He says in the Report  
19 "we left the wind in the trees." "We took that  
20 out, or didn't monitor when it was there." He  
21 said "we took out the traffic from Route 9, and  
22 didn't monitor when it was there", or "we removed  
23 it, which it can be done." He went ahead and  
24 moved a monitor location, because there were

1 bullfrogs in the field, but he left a bird in  
2 there? That none of that makes sense. And  
3 there's a lack of seriousness, in terms of  
4 following the standards here. We need to isolate  
5 the sound of the turbines in his contribution to  
6 background.

7 But, to that point, Mr. Chairman, if  
8 the sound from the turbines is dominant, pursuant  
9 to the ANSI 12.9, Part 3 standard, if, and  
10 there's a definition of what it means to be  
11 "dominant", 6 decibels or more above background.  
12 If it's dominant, all of those other noises are  
13 not contributing. That noise that is dominant is  
14 the noise you measure. Mr. Menge is incorrect in  
15 his statement. And I'm sorry, I know he is an  
16 acoustician, but his understanding of the  
17 standard or the process for taking a sound study  
18 is inaccurate.

19 Now, and I just have a couple of more  
20 things. In terms of the exceedance that did  
21 occur, although now he's saying "it really wasn't  
22 an exceedance, it was a bird", and he doesn't  
23 know how much it contributed to the dBA level.  
24 But, if an exceedance occurred at any time,

1           regardless of the time of day, it will occur  
2           again.

3                       We know, from our -- what I filed with  
4           you, the turbines were not operating at full  
5           power. They were absolutely not operating at  
6           full power. I didn't hear anything about that  
7           being stated today, but that needs to be said.  
8           There's a difference between turbines operating  
9           at full power and those that are operating at  
10          half power. They're not even reaching the  
11          maximum noise level.

12                      So, if you have an exceedance, you have  
13          an exceedance --

14                      PRESIDING OFCR. EVANS: Your time is  
15          up. So, I would ask you to wrap it please.

16                      MS. LINOWES: I will. And my last  
17          point is in terms of the background sound level.  
18          He didn't know the background sound levels.  
19          We're not just talking about regular background  
20          sound levels. We're talking about continuous  
21          background sound levels, pursuant to the ANSI  
22          standard. That's out there. That does not  
23          change day-to-day, hour-to-hour, week-to-week,  
24          year-to-year, unless something big is added to

1 the environment.

2 So, I don't understand the claim that  
3 he couldn't figure out what the background sound  
4 level is and do the study. It makes no sense.

5 And, with that, I'll conclude. Thank  
6 you.

7 PRESIDING OFCR. EVANS: Thank you, Ms.  
8 Linowes.

9 The last speaker is Allen Brooks, from  
10 Department of Justice.

11 MR. BROOKS: Thank you. My name is  
12 Allen Brooks. I'm Counsel for the Public in this  
13 matter.

14 I'd like to thank HMMH, and the  
15 Subcommittee, and also all the members of the  
16 public who provided, I think, very helpful  
17 comments here.

18 I won't reiterate anything said in the  
19 public comment period. But I do have some  
20 concerns, I suppose, about the process overall.

21 I have to take the Certificate as I  
22 find it, as everyone does. And, having been  
23 through this process now for a few years, it  
24 seems like a lot of what we argue about is



1 "What's the best way to do something? What's the  
2 most fair way? What's the right way to do that?"

3 In order to be fair to the public, to  
4 the facility owners, I really think that, in the  
5 future, whether that's through rule or through  
6 conditions in the Certificate, that all of the  
7 things that we're talking about have to be  
8 spelled out ahead of time. That includes more  
9 specific information on weather, how to handle  
10 background noises, how to do averaging, how to do  
11 weighting, number of data points.

12 So, there are 13 data points selected  
13 here, after some were excluded. Is that enough?  
14 Were they taken at the right time?

15 So, it does appear that we're doing  
16 this after-the-fact. But I do enforcement, I do  
17 enforcement a lot. And, if we're going to say  
18 something about that the facility has done  
19 something wrong, we have to trace it back to what  
20 the requirements actually are in the Certificate.

21 I do have -- I wanted to echo one  
22 comment, which was, I understand the need and the  
23 desire to make sure that the integrity of the  
24 data points when they're measured is maintained

1 by not tipping off the facility, by saying that  
2 "things are going to be measured."

3 I do, though, haven't heard an  
4 explanation of why, after that's done, the  
5 facility couldn't be contacted so they could shut  
6 down, and then an accurate background level could  
7 be obtained.

8 And those are my comments. Thank you.

9 PRESIDING OFCR. EVANS: Thank you, Mr.  
10 Brooks.

11 With that, I think we'd like to take  
12 probably a fifteen-minute recess. So, let's see  
13 the time, we'll reconvene at approximately 11:20.

14 *(Recess taken at 11:05 a.m., and the*  
15 *public meeting resumed at 11:35 a.m.)*

16 PRESIDING OFCR. EVANS: All right.  
17 Let's reconvene. I apologize for the delay.

18 **D E L I B E R A T I O N S**

19 PRESIDING OFCR. EVANS: The next -- the  
20 next order on the agenda is just for the  
21 Subcommittee to have kind of a discussion on the  
22 issue of overall compliance, and based on the  
23 exhibits and testimony, monitoring reports, and  
24 the study conducted by HMMH. The question is:

## [Deliberations]

1           Whether Antrim Wind -- the Antrim Wind facility  
2           is out of compliance with their Certificate?

3                       I will now open this up to discussion  
4           by the Subcommittee members.

5                       MR. EATON:   Okay.   Mr. Chair, I will  
6           have a motion in just a minute.   But I'd like to  
7           address Mr. Block's concerns.

8                       Our purview is only until December of  
9           2021.   And I know there had been problems with  
10          the ADLS system.   We cannot address -- there are  
11          still problems in '22 and part of '23, we don't  
12          have the ability to address those here today.  
13          That has to be -- come from a further  
14          investigation.

15                      And, you know, you might want -- Mr.  
16          Block might want to talk to Mr. Needleman or  
17          Antrim Wind about that.

18                      That being said, I move that we accept  
19          the Sound Study from HMMH.

20                      MR. FITZGERALD:   Second.

21                      PRESIDING OFCR. EVANS:   All right.  
22          Now, I guess we will open up to discussion.   Do  
23          we have any further discussion on that or would  
24          we like to vote?

## [Deliberations]

1           MR. WARD: Can I ask what the motion  
2 was? I didn't quite understand it.

3           MR. EATON: We accept the -- I move  
4 that we accept their Report, to pass on to the  
5 full Committee.

6           MR. FITZGERALD: Yes, I have some  
7 discussion. Thank you, Mr. Chair.

8           So, I have a question or two from  
9 Chris. And, basically, we heard a lot of  
10 testimony that the study that you conducted was  
11 not in compliance with the requirements of  
12 Section 301 -- Site 301, and the state statute,  
13 which is a little more vague.

14           In particular, I think I would  
15 summarize those complaints as -- or, concerns as  
16 falling under two areas: That the meteorological  
17 conditions were not similar to those of the  
18 complaints, and, second, that the distance from  
19 which you conducted your studies was not  
20 representative of the residences.

21           But, in general, I guess I would like  
22 to ask you, in your best professional judgment,  
23 if you believe that the study was conducted and  
24 met the requirements of Site Rule 301.

## [Deliberations]

1 MR. MENGE: Yes, I believe it does.

2 MR. WARD: I didn't hear the answer.

3 MR. MENGE: I believe it does meet the  
4 requirements.

5 MR. FITZGERALD: And could you address  
6 those two issues? Why the meteorological  
7 requirements --

8 MR. MENGE: Yes.

9 MR. FITZGERALD: -- are similar and why  
10 the distance issues were not a concern?

11 MR. MENGE: Yes.

12 MR. FITZGERALD: Yes.

13 MR. MENGE: With regard to the  
14 meteorological conditions, my understanding is  
15 that complaints have been occurring over a wide  
16 variety of meteorological conditions, from what I  
17 understand from the Subcommittee. And, further,  
18 we attempted to, by making three separate trips  
19 to Antrim, under different meteorological  
20 conditions, with different degrees of wind and  
21 wind from different directions, we believe that  
22 we got a representative sample of the  
23 meteorological conditions that tend to generate  
24 complaints. And, so, we think that, overall, the

## [Deliberations]

1 study was quite representative.

2 Second, with regard to the "distance"  
3 question, one thing to point out to the  
4 Subcommittee is that the wind turbines act as a  
5 line source, if you will, it's a line of them.  
6 And, so, sound levels, kind of like with a  
7 highway, sound levels drop off fairly slowly with  
8 distance from a source like that. The sources  
9 are elevated, so the effects of the ground are  
10 really rather minimal as sound propagates.

11 So, given the distances that we  
12 measured, and the distances that the homes were,  
13 I think the difference in sound levels would be  
14 very small, certainly less than a decibel.

15 MR. FITZGERALD: One additional  
16 question?

17 PRESIDING OFCR. EVANS: Yes.

18 MR. FITZGERALD: We also had concerns  
19 raised, I believe I heard that we had concerns  
20 raised that the turbines were operating either  
21 too fast or were not operating at maximum power,  
22 you know, or close to maximum power.

23 *[Interruption by Presiding Ofcr. Evans*  
24 *regarding use of the microphone.]*

## [Deliberations]

1                   MR. FITZGERALD: Oh, I'm sorry. Fine,  
2 I'll repeat my question.

3                   I believe we had concerns, and I may  
4 have missed this some, but we had some concerns  
5 raised that the turbines were not spinning fast  
6 enough, and should have -- and the measurements  
7 should have been taken at a higher power  
8 operation, or that, in some cases, they were too  
9 high, which sort of seems sort of like the Three  
10 Bears' situation, you know, it's either too hot  
11 or too warm. But could you just address the  
12 speed issue?

13                  MR. MENGE: Yes. The three different  
14 measurement trips and the different times of day  
15 allowed us to measure sound and listen to the  
16 turbines under a wide variety of wind conditions  
17 and power being produced by the turbines.

18                  And what we found was that in a  
19 moderate power setting was when the turbines, and  
20 this is very common for wind turbines, at  
21 moderate power settings, when the wind speeds  
22 near the ground are fairly low, and, therefore,  
23 the masking sound that's produced by wind in the  
24 trees, is minimal or non-existent, then the wind

## [Deliberations]

1 turbine sound tends to be more obvious, and it  
2 dominates -- more likely to dominate the overall  
3 sound level.

4 So, and we did get moderate wind  
5 conditions, and we did measure sound. And we had  
6 conditions where the back -- the other noise  
7 sources were not particularly significant, and we  
8 were measuring just the -- primarily, just the  
9 wind turbines.

10 However, I believe that the higher wind  
11 conditions, where the winds were, and the higher  
12 power conditions for the turbines, many of those  
13 we were not able to collect good quality data,  
14 because the winds were not only high at the  
15 turbines, but they were also high enough at the  
16 ground to create the wind-in-the-trees sound that  
17 masked the sound of the turbine, so the data were  
18 not usable, and that was really the issue.

19 But I believe we got a representative  
20 sample of the types of powers and wind that  
21 were -- in order to be able to make the study a  
22 valid study.

23 MR. FITZGERALD: Thank you. Thank you,  
24 Mr. Chairman.



## [Deliberations]

1                   PRESIDING OFCR. EVANS: Go ahead, Tom.

2                   MR. EATON: Yes. There was discussion  
3 that there was not any testing when the turbines  
4 were totally turned off. Wouldn't, you know,  
5 being a layman, wouldn't that have just made the  
6 decibel sound much lower anyway? Or, what  
7 difference would it make if they were off?

8                   MR. MENGE: It depends on the condition  
9 of the wind. In the cases where the wind in the  
10 trees, with higher wind conditions, when there's  
11 sound from wind in the trees, if the turbines had  
12 been shut off, the sound level -- background  
13 sound level would be the same, because we were --  
14 the sound level is being controlled by the wind  
15 in the trees in many cases.

16                   At the lower wind speeds, where the  
17 turbines were audible and contributing, we -- a  
18 background sound level probably would have been  
19 measured, so that would have been lower than what  
20 we measured with the turbines running. But we  
21 weren't able to -- we weren't able to collect  
22 that data.

23                   There has been background data  
24 collected in prior studies, when the turbines

## [Deliberations]

1           were turned off. But we were not able to collect  
2           such data.

3                       MR. EATON: Okay.

4                               *[Short pause.]*

5                       PRESIDING OFCR. EVANS: Okay. So, I'm  
6           gathering that there's probably no more questions  
7           or any discussion on that either from the two of  
8           you. And I don't have anything off the top of my  
9           head.

10                       So, I think, at this point, the motion,  
11           as I understand it, is to accept the final Sound  
12           Study Report from HMMH. And, at this time, I  
13           guess I would ask that each of you indicate  
14           whether or not your vote is a "yes" or a "no"?

15                       MR. EATON: Yes.

16                       PRESIDING OFCR. EVANS: Okay. Tom  
17           Eaton is "yes".

18                       MR. FITZGERALD: Yes.

19                       PRESIDING OFCR. EVANS: Mike Fitzgerald  
20           is "yes".

21                       And Jon Evans, "yes". So, with that,  
22           the motion is accepted.

23                       I think the next -- probably the next,  
24           and I'd like to put forward this motion: To find

## [Deliberations]

1           that, based on the evidence before the  
2           Subcommittee, the facility was not out of  
3           compliance with the terms of the Certificate  
4           through 2021, and to recommend that the full SEC  
5           not undertake any enforcement action.

6                        MS. LINOWES:   Excuse me, Mr. Chairman,  
7           on what -- on what topic?   The sound topic?

8                        MR. DELL'ORFANO:   Ma'am, this isn't the  
9           time to comment.

10                      MS. LINOWES:   The motion is not clear.

11                      PRESIDING OFCR. EVANS:   Yes.   So, I  
12           think it's more in general.   But I think that's  
13           the motion that we're considering now.   And now  
14           we'll talk about what exactly that involves.

15                      So, that would be -- that would be my  
16           motion.

17                      MR. EATON:   I'll second the motion for  
18           discussion.

19                      *[Atty. Turner, Presiding Officer Evans,*  
20                      *Mr. Eaton, and Mr. Fitzgerald*  
21                      *conferring.]*

22                      PRESIDING OFCR. EVANS:   All right.   So,  
23           the motion at hand is "to find that, based on the  
24           evidence before the Subcommittee, the facility

## [Deliberations]

1 was not out of compliance with the terms of its  
2 Certificate through 2021, and to recommend that  
3 the full SEC not undertake any enforcement  
4 action."

5 And this is a general, you know,  
6 opening it for discussion on all the points of  
7 the complaints that are kind of, you know, at the  
8 Subcommittee's, you know, that have been brought  
9 forward to the Subcommittee.

10 MR. FITZGERALD: A couple questions,  
11 points of discussion?

12 PRESIDING OFCR. EVANS: Sure.

13 MR. FITZGERALD: So, it's my  
14 understanding that, based on Tom's point earlier,  
15 that we're not considering lighting, because the  
16 issues that have been raised before us, other  
17 than Representative Vose's complaint, which was  
18 already addressed, the issues of lighting are not  
19 a question here now. That doesn't mean there  
20 aren't complaints, but those complaints were not  
21 prior to -- we're not considering complaints post  
22 December. So, the information that's before us  
23 is the HMMH study?

24 PRESIDING OFCR. EVANS: Yes.

## [Deliberations]

1           MR. FITZGERALD: And we're making a  
2 broad statement that they were in compliance.  
3 And I guess my question is, we don't have any  
4 information about any other issues that -- we  
5 don't have any evidence, either for or against,  
6 that there were any -- that they were in  
7 compliance with the rest of the Certificate.

8           So, I guess the question in my mind is,  
9 do we limit the statement to "they were in  
10 compliance with the sound requirements", because  
11 that's all we looked at in this?

12           PRESIDING OFCR. EVANS: So, I mean, I  
13 think we heard -- we heard concerns about, say,  
14 the ADLS, and that was really the main one. I  
15 don't recall whether or not there were any others  
16 that were brought up certainly during this last  
17 most recent comment period. It was really the  
18 ADLS and the noise issues itself.

19           MR. FITZGERALD: So, I guess, so, your  
20 motion, did that state something to the effect  
21 that "based on the information provided to us" or  
22 "based on the evidence that was determined here"?

23           PRESIDING OFCR. EVANS: I mean, we  
24 could --

## [Deliberations]

1 MR. FITZGERALD: Because I don't feel I  
2 can make a broad statement --

3 PRESIDING OFCR. EVANS: Okay.

4 MR. FITZGERALD: -- that "the facility  
5 was in compliance with all the conditions of the  
6 Certificate."

7 We haven't heard anything to say that  
8 they weren't, but I don't --

9 PRESIDING OFCR. EVANS: I think that's  
10 the key here, is that it's -- we're not  
11 determining compliance, we're just determining --

12 MR. FITZGERALD: Could you reread  
13 your statement?

14 PRESIDING OFCR. EVANS: Yes. So, "to  
15 find, based on the evidence before the  
16 Subcommittee, the facility was" --

17 MR. FITZGERALD: That's the key.  
18 That's what I wanted.

19 PRESIDING OFCR. EVANS: -- "was not out  
20 of compliance."

21 MR. FITZGERALD: Yes. Yes. That  
22 addresses my concern.

23 MR. EATON: As of December 2021.

24 PRESIDING OFCR. EVANS: As of December

## [Deliberations]

1 2021, that's -- and which is another key.

2 MR. EATON: Anything moving on from  
3 that is not in our purview.

4 PRESIDING OFCR. EVANS: And, obviously,  
5 the idea behind some of the -- you know, the  
6 comment periods was to give us the evidence that,  
7 you know, if there was anything to the contrary,  
8 again, going back through 2021, you know, those  
9 are the things that we were looking for.

10 So, I don't know if --

11 MR. EATON: Move the question?

12 PRESIDING OFCR. EVANS: All right.

13 So, --

14 MR. EATON: I vote "yes".

15 PRESIDING OFCR. EVANS: You vote "yes".

16 MR. FITZGERALD: Yes.

17 PRESIDING OFCR. EVANS: Yes. So, with  
18 that, the motion is accepted.

19 Now, that having been said, I do think  
20 I could say one thing that we may want to just at  
21 least discuss openly, you know, with everyone  
22 here. I think we agree that Counsel for the --  
23 with the Counsel for the Public that the process  
24 could have been improved and clearer with

## [Deliberations]

1 conditioning in the Certificate, on technical  
2 issues that would be held in determining  
3 compliance.

4 So, essentially, you know, there are  
5 some flaws in the wording of the rules and the  
6 Certificate. But, you know, so, we're kind of  
7 acknowledging that.

8 And I guess my feeling is that, you  
9 know, as we move forward here, we should  
10 probably, you know, we'll be producing kind of a  
11 final written recommendation to the full SEC.  
12 And I think that it would be appropriate to add  
13 in some language that just essentially says that  
14 we have some concerns about how some of the  
15 language in the Certificate is written.

16 MR. EATON: I think that would be  
17 great. And it does give the public an idea of  
18 what we're trying to pass on to the full  
19 Committee, and taking their concerns into the  
20 matter.

21 MR. FITZGERALD: Yes, I certainly would  
22 agree. I would like to thank the Counsel for the  
23 Public and commenters who raised some of these  
24 issues.



## [Deliberations]

1           I do feel that we were constrained in  
2           some of the determinations that we could make by  
3           the charge of the Committee, and the -- which I  
4           understand, obviously, the Committee had to draw  
5           some point in time. And, you know, we couldn't  
6           just -- we could go forever addressing continuous  
7           complaints.

8           But I do think that we owe it to the  
9           folks that have given their time here to come up  
10          with some recommendations to the Committee as to  
11          how this process, particularly the handling of  
12          complaints and the handling of noise and lighting  
13          complaints, which are, you know, flashpoints,  
14          obviously.

15          But I think that the full Committee  
16          should have some consideration of how better to  
17          (a) address complaints, and (b) consider giving  
18          greater information to the -- under the  
19          complaints, as to what types of studies should be  
20          conducted, and the guidance for those, and so on.

21          I don't think the rules right now are  
22          particularly well suited to address the -- they  
23          barely touch upon complaints. So, I'd like to  
24          see us make some recommendations to the full

## [Deliberations]

1 Committee that there be a better method for  
2 handling these.

3 PRESIDING OFCR. EVANS: Agreed. I  
4 think that there -- we do owe it to the public  
5 and the people who spoke today.

6 I guess, so, with this, we're going to  
7 work on a -- kind of a final recommendation to  
8 the full SEC. Do either of you have any  
9 objections with that being drafted by myself,  
10 working on drafting up that recommendation? Any  
11 concerns with that?

12 MR. EATON: None whatsoever.

13 MR. FITZGERALD: Absolutely.

14 PRESIDING OFCR. EVANS: All right. So,  
15 then, I will work on getting that drafted up.  
16 And --

17 MR. FITZGERALD: We will review it, I  
18 assume?

19 PRESIDING OFCR. EVANS: I don't know  
20 what the process is on that.

21 MR. DELL'ORFANO: No.

22 PRESIDING OFCR. EVANS: No.

23 MR. FITZGERALD: Why is that? Every  
24 SEC case I've been on, the Committee has reviewed

## [Deliberations]

1 the final --

2 MR. TURNER: You can, if you want to  
3 have another meeting about it. If the  
4 instruction of the Subcommittee is to the  
5 Chairman to draft, you know, the recommendation  
6 as, you know, to summarize the discussion today,  
7 I don't think we need another meeting.

8 MR. FITZGERALD: No, I'm not  
9 suggesting -- I'm not suggesting another meeting.  
10 Just an opportunity to review and comment on the  
11 draft?

12 MR. TURNER: Let me think about that.  
13 We'll talk about it offline. Yes.

14 MR. FITZGERALD: All right. I trust  
15 the Chairman implicitly. And you.

16 PRESIDING OFCR. EVANS: And, really,  
17 it's just --

18 MR. EATON: I agree.

19 PRESIDING OFCR. EVANS: The idea here  
20 is to just summarize what we -- the  
21 determinations that we made here today. So, it's  
22 nothing that's going to be any surprise.

23 MR. FITZGERALD: Yes. No, I don't  
24 expect that.

## [Deliberations]

1           PRESIDING OFCR. EVANS: It's just a  
2 matter of just making sure that our  
3 recommendations are, you know, that which, you  
4 know, what we're trying -- we're trying to  
5 provide some recommendations to the full SEC.

6           MS. LINOWES: Mr. Chairman?

7           PRESIDING OFCR. EVANS: I'd really  
8 rather not. The public comment period was prior.

9           And, so, with that, let's see. I don't  
10 think I have any other items on the agenda.

11           Drew, do you -- can you think of  
12 anything else that we needed to discuss?

13           ADMIN. BIEMER: No.

14           PRESIDING OFCR. EVANS: Okay. How  
15 about either of you? Anything else either of you  
16 would like to discuss?

17           MR. EATON: No. I think you mapped  
18 that out pretty well. That our concerns would go  
19 to the full Committee, with other  
20 recommendations.

21           PRESIDING OFCR. EVANS: All right.

22           MR. FITZGERALD: I'm in agreement.

23           PRESIDING OFCR. EVANS: Well, I thank  
24 everybody for their time. And, particularly Mr.

## [Deliberations]

1 Menge, from HMMH, for coming up and providing the  
2 presentation, as well as all those who came to  
3 provide comment.

4 With that, I guess I'd ask for --

5 MR. EATON: So moved.

6 PRESIDING OFCR. EVANS: -- a motion, a  
7 motion to adjourn?

8 MR. FITZGERALD: Second.

9 PRESIDING OFCR. EVANS: All right.

10 With that, I guess we'll -- I think we have to  
11 vote technically. So, --

12 MR. EATON: Vote yes.

13 PRESIDING OFCR. EVANS: All right.

14 And --

15 MR. FITZGERALD: Yes.

16 PRESIDING OFCR. EVANS: And yes. All  
17 right. Thank you, everyone.

18 ***(Whereupon the public meeting was***  
19 ***adjourned at 11:59 a.m.)***

20

21

22

23

24