

**Bajdek and Menge Live Sur-surrebuttal Testimony (Copied from pages of 2/2/07 PSB Hearing Transcript)**

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12 BY MR. RAUBVOGEL:

13 Q. Mr. Menge, did your firm prepare any  
14 additional information based upon the January 16 revised  
15 layout for this project, based upon the revised layout  
16 that has been submitted to the Board, did your firm -- do  
17 -- I'm sorry. I just realized that we have an exhibit  
18 that I didn't offer into evidence, and I'm going to  
19 although it is on Board Exhibit 1. Let me just refer the  
20 witnesses to it. Do you have a copy of UPC-CB-SSRB-1?

21 A. (MR. BAJDEK) Yes, I have a copy.

22 Q. Okay. Does this exhibit reflect additional  
23 work that your firm has done based upon the revised layout  
24 that was submitted to the Board earlier in January?

25 A. (MR. BAJDEK) Yes, it does. The data reflects

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1 that analysis.

2 Q. Can you briefly describe what you did for this  
3 analysis?

4 A. (MR. BAJDEK) We followed the same procedures  
5 and methodology that was described in the noise study  
6 report dated February 21, 2006 and submitted it on  
7 prefiled. And we filed the same methodology and computed  
8 sound levels with the new layout of the Sheffield wind  
9 farm, which excludes two turbines in Sutton, I believe.  
10 And we reran the model-generated new sound levels and we  
11 also used the latest reference sound power emission levels  
12 from the Clipper wind turbine that were dated December,  
13 2006.

14 Q. Are the results of your analysis reflected in  
15 this exhibit? In Exhibit SSRB-1?

16 A. (MR. BAJDEK) Yes. Our results are reflected  
17 there.

18 Q. And can you just briefly describe or summarize  
19 what those results are?

20 A. (MR. BAJDEK) In general, we compared the  
21 maximum sound levels from the wind farm, from the 2006  
22 layout, which were summarized in our rebuttal testimony  
23 back in September, we compare those maximum sound levels  
24 to sound levels with the January 2007 layout. And in  
25 general, throughout the study area, we see that the new

1 layout with the new reference sound power emission levels  
2 will produce lower sound levels than we had projected in  
3 our rebuttal testimony with the previous set of Clipper  
4 data and the previous turbine wind farm layout.

5 Q. And if you can say, does -- what is the range  
6 of difference between the two? Just average?

7 A. (MR. BAJDEK) It's on the order of a decibel.  
8 To two decibels.

9 Q. And in any instance, do the sound levels go  
10 up?

11 A. (MR. BAJDEK) Let me scan the document. Yes.  
12 There is a case where sound levels go up by about a  
13 decibel.

14 Q. Okay.

15 A. (MR. BAJDEK) They go down by about 7 decibels  
16 in other cases, for noise sensitive land use located to  
17 the northeast of the wind farm and to the northeast of  
18 Norris Mountain along Underpass Road.

19 Q. How do these levels, if you recall, compare  
20 with the highest levels that you reported in your original  
21 filing in February of '06?

22 A. (MR. BAJDEK) These again would be lower than  
23 what we had projected on previous filing. We didn't do a  
24 direct comparison, I don't think, to those previous  
25 numbers, but in general, the sound levels go down. There

1 might be a few situations where they might be the same.

2 Q. Do you recall what the highest sound level was  
3 from that February filing?

4 A. (MR. BAJDEK) 38. 38.

5 Q. What was the highest level reflected?

6 A. (MR. BAJDEK) 31 with this current layout.

7 Q. How does that compare with the noise guideline  
8 that is recommended in your original filing?

9 A. (MR. BAJDEK) Well that's a maximum sound level  
10 from the turbines. Project the long-term average sound  
11 level and noise exposure at a dose, if you will, we use  
12 another metric, we use the day/night noise level. It's an  
13 average sound level for the day. And that 31 corresponds  
14 to a roughly 38 day/night noise level, and then we would  
15 compare that to the EPA's guideline value of 55 that's  
16 been established and used and recommended to protect human  
17 health and welfare with an adequate margin of safety. So

18 that 38 is well below the EPA's guideline values.  
19 Q. All right. If you were comparing these  
20 numbers to just a nighttime level, is it possible to parse  
21 out of the EPA combined day/night level what the nighttime  
22 level, that guideline would establish?  
23 A. (MR. BAJDEK) Yes. We could parse out on the  
24 EPA guidelines, we could parse out a nighttime level.  
25 There would be equivalent to a 45 LEQ, nighttime LEQ over

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1 the 9-hour nighttime period, would be equivalent. Would  
2 be equivalent to nighttime.  
3 Q. And would you compare those numbers with that  
4 number?  
5 A. (MR. BAJDEK) A comparison could be made.  
6 These are maximum sound levels. That assume down wind  
7 propagation from all turbines in all directions. We could  
8 -- so we are assuming maximum output of the wind farm, and  
9 we could, with simple assumptions, assume that this would  
10 approximate the worst LEQ under those conditions. So the  
11 38 would compare to a 45 nighttime LEQ, and we would  
12 certainly be within the nighttime guideline, that's  
13 equivalent or supports -- could be derived from the EPA  
14 guideline values.  
15 Q. I'm sorry, if you're just looking at the  
16 nighttime, do you compare these numbers, or are you saying  
17 that you -- the LEQ would be higher than these numbers if  
18 you're just looking -- comparing these numbers to a  
19 nighttime level?  
20 A. (MR. BAJDEK) Yeah, if you're comparing these  
21 levels to a nighttime level of 45, they would be well  
22 below that.  
23 Q. No. But you would look at these actual  
24 numbers and you would compare these numbers with the  
25 nighttime level?

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1 A. (MR. BAJDEK) Yes. Yes. That would be the  
2 comparison. Yeah. 31 to 45.  
3 Q. You used the number 37 a second ago. And I  
4 just wanted to understand. What numbers would you compare  
5 if you were comparing?  
6 A. (MR. BAJDEK) We compared the numbers in this  
7 column -- I understand the question now. We compared the  
8 numbers in this column in this exhibit to the nighttime  
9 LEQ. And then the day/night noise level that is 7

10 decibels higher than these levels here, is compared to the  
11 full exposure for the day which is the day/night noise  
12 level and compared to a 55 in that case.

13       There are two different ways of looking at it.  
14 The full exposure over the course of a 24-hour period, and  
15 then what happens just during at night. So these numbers  
16 are applicable to and would be comparable to a nighttime  
17 limit, and then the full exposure, the 70 would be higher  
18 -- would be comparable to the 55.

19     Q.   And you said that these represent the maximum  
20 numbers, is that what you said?

21     A.   (MR. BAJDEK) Yes.

22     Q.   And what assumptions are you making about that  
23 number when you're comparing it to the 45 LEQ for the  
24 nighttime?

25     A.   (MR. BAJDEK) We are assuming that the turbine

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1 would operate for the full nighttime at sustained levels,  
2 this high. These sustained maximum sound levels. When  
3 actuality there will be some fluctuation. I mean the  
4 sound output from the turbines will go up and down with  
5 time over the course of the nighttime. But this assumes,  
6 you know, steady full operation of the wind farm down wind  
7 conditions in all directions.

8       So it's kind of like a worst case LEQ that one  
9 could imagine for the wind farm.

10    Q.   Chris, if you have something to add --

11    A.   (MR. MENGE) Sure. I would just point out that  
12 when he says a full operation, he means a full power  
13 operation. Where we are assuming that the wind speeds  
14 would be 7 meters per second or greater such that the  
15 noise output of all the wind turbines would be at their  
16 high level rather than at a lower level.

17    Q.   And that assumption is made for the entire  
18 nighttime period?

19    A.   (MR. MENGE) Right.

20    Q.   All the time?

21    A.   (MR. MENGE) Yes.

22    Q.   To arrive at these numbers?

23    A.   (MR. MENGE) Yes.

24       BOARD MEMBER BURKE: Mr. Raubvogel, I  
25 should have done this before, but I want you

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1 to realize a couple of things as far as the

2 Board practice is concerned when you're  
3 testifying as a panel. We are not necessarily  
4 big proponents of panel testimony. And part  
5 of the reason is that you sometimes don't get  
6 the whole story. So we have a couple -- an  
7 admonishment that we give you should be aware  
8 of.

9 If you're asked a question and one of  
10 you responds and the other one thinks there is  
11 either more that should be said, or in fact,  
12 disagrees, then you've got to speak up then.  
13 It's sort of an either then or forever hold  
14 your peace, and you're going to be-- we are  
15 going to view this testimony as what was said  
16 no matter what might have been in your head.  
17 So it behooves you right then if you have  
18 something you disagree with, or feel needs to  
19 be expanded, you should be saying it.

20 MR. MENGE: Interrupt the other person  
21 and start speaking.

22 BOARD MEMBER BURKE: As soon as he's  
23 done with the answer, say well but to clarify,  
24 whatever you've got to say to get it in front  
25 of us so we understand.

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1 CHAIRMAN VOLZ: You don't need to  
2 necessarily interrupt, but you need to speak.

3 MR. MENGE: Certainly.

4 CHAIRMAN VOLZ: You also need to respond  
5 to the question.

6 BOARD MEMBER BURKE: When he's finished  
7 you need to explain why there is another  
8 clarification or disagree.

9 MR. MENGE: Okay. Thank you.

10 BY MR. RAUBVOGEL:

11 Q. Can you turn to the second page of the exhibit  
12 and just briefly state what it is?

13 A. (MR. BAJDEK) This is the revised layout of the  
14 wind farm showing the location of the turbines on Libby  
15 Hill. And the new turbine layout has all the turbines in  
16 the Town of Sheffield.

17 Q. What else is shown on that map?

18 A. (MR. BAJDEK) And there is our prediction sites  
19 that were used in the noise modeling which we computed  
20 sound levels explicitly.

21 Q. Based upon the revised layout, are any of the  
22 opinions that you've expressed regarding this project, do  
23 any of those opinions change?

24 A. (MR. BAJDEK) My opinions still hold. As  
25 stated in the noise study report.

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1 Q. And Chris Menge?

2 A. (MR. MENGE) Yes, they still are valid.

3 MR. RAUBVOGEL: That is all we have for  
4 surrebuttal.

5 CHAIRMAN VOLZ: Thank you.