

## Evans, Jonathan

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**From:** drfred@myfairpoint.net  
**Sent:** Monday, July 12, 2021 4:57 PM  
**To:** Evans, Jonathan; Tom Eaton; Duclos, John  
**Subject:** AWE Considerations

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Attached are important issues you might want to discuss before any proposed solution for the AWE problems.  
Fred Ward

12 July 2021

Mr. Jonathan A. Evans, Chair

NH SEC Subcommittee

21 South Fruit Street, Suite 10

Concord, NH 03301-2429

Dear Mr. Evans: (and members)

Re: SEC 2021-02.

I learned about addition, subtraction, multiplication, and division in primary school. I also learned that I couldn't do any of these simple arithmetic operations unless the numbers were measuring similar data. My teacher wouldn't let me add 6 apples to 6 oranges to get a dozen of anything. Nor was I allowed to split the dozen "applorangs" into 12 "average" parts.

So it is with the turbine noises. NH

Rule 301.14(f)(2) completely forbids nighttime noises greater than 40 Db, but allows noises softer than 40 Db without limit. These limits were selected because they define two, very different, noise scenarios. The lower nighttime 40 Db level was created to account for sleeping. There is a level at which sleep is interrupted, and a lower level which, no matter how long it lasts, allows a good night's sleep. NH Rule 301.14(f)(2) memorializes the idea that sounds above 40 Db are loud enough to awaken (or keep awake) a sleeper. NH Rule 301.14(f)(2) does not specify a duration for the offending sound.

Yet AWE tries to make an unsupported and unsupportable distinction, by requiring a one-hour averaging scheme that will lower their average noise level below the 40Db barrier. AWE is careful not to mention other obvious schemes they might use to “get around” surplus sounds. Waking the neighbors for just a minute or two is OK, but keeping them awake for an hour or more is not OK. Is there a pill for that!

The 40 Db barrier was selected to define a real difference, selected to establish that there was a loudness level at which turbine noise was a problem. It did NOT say that “problem” noises could be compensated for, or canceled by, “non-problem” noises. Nobody would claim that 30 Db noises compensate for 50 Db noises, which are 100 times louder. They simply frustrate averaging! Mixing, and averaging, across the 40Db barrier, requires mixing sleep-interrupting noise with sleepable periods. Unless AWE can show that the sleepable periods somehow compensate for the interruptions, averaging the two is a logical violation of primary school mathematics.

AWE used 38 pages in its 1 July attempt to obfuscate this simple issue. But not one page addresses the issue of averaging dissimilar data sets. AWE has presented no evidence to show that noises below 40 Db compensate for noises above 40 Db. Without such evidence, no averaging across that barrier is allowable! AWE must show evidence that noise levels above and below that 40Db barrier are similar, or stop quoting non-barrier evidence to support cross-barrier averaging in their legal arguments.

As you deliberate these issues, you must notice the absence of any AWE evidence to support the claim that a few seconds or minutes of noise louder than 40 Db is insufficient to disturb the neighbors sleep, while an hour of such noise is disturbing. Where in their 38 pages is their supporting evidence? The “wakeful noise limit” is the heart of your mandate. Was it not the basic reason NH Rule 301.14(f)(2) introduced lower nighttime noise limits? Without settling this one issue, all the rest are irrelevant. There is a 40 Db barrier. It was put in NH Rule 301.14(f)(2) for a reason. It cannot be crossed without evidence that softer noises somehow compensate for louder ones. Where is the evidence?

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