TAZEWELL COUNTY ZONING BOARD OF APPEALS HEARING

Date: May 1, 2008
Time: 6:00 p.m.
Location: McKenzie Building
Court and Fourth Street
Third Floor
Pekin, Illinois

PRESENT:

ZONING BOARD OF APPEALS

Loren Toevs, Chairman
Mary Hoeft
Steve Larson
Duane Lessen
Jim Newman
Ken Zimmerman
Bob Vogelsang

ALSO PRESENT:

Kristal Deininger
Mike Holly, Esq.
Paul Lewis, Esq.
Nick Hayward
Jackie Workman
Judy Searle
Melissa Killion

I N D E X

Frank Miles, Esq. Chris Spanos, Esq.
Bill Whitlock
Bennett Lasco

CHAIRMAN TOEVS: Let me have your attention. We're about to start this meeting.

The same ground rules that applied before, apply now, about extraneous testimony and so on and so forth.

Okay, I would like to have a roll call, please.

MS. DEININGER: Hoeft.

MS. HOEFT: Present.

MS. DEININGER: Larson.

MR. LARSON: Present.

MS. DEININGER: Lessen.

MR. LESSEN: Present.

MS. DEININGER: Newman.

MR. NEWMAN: Present.

MS. DEININGER: Vogelsang.

MR. VOGELSANG: Present.

MS. DEININGER: Zimmerman.

MR. ZIMMERMAN: Here.

MS. DEININGER: Chairman Toevs.

CHAIRMAN TOEVS: Here.

MS. DEININGER: We have a quorum.

We need a motion to reconvene from the previous meeting.

MR. NEWMAN: So moved.
MR. ZIMMERMAN: Second.
CHAIRMAN TOEVS: That was Jim and Ken.
It has been moved and seconded that we reconvene the wind farm meeting from the 15th of April to the 1st of May.
All those favor say aye.
(All saying aye).
CHAIRMAN TOEVS: All opposed say nay.
Okay, now we're going to turn this over to Chris Spanos for his part of the presentation.
MR. SPANOS: Mr. Chairman, I think Mr. Miles has filed a motion, which I received late yesterday. I'm sure Mr. Miles would like to have that motion heard before we proceed.
CHAIRMAN TOEVS: Go ahead, Mr. Miles.
MR. MILES: Thank you, Mr. Chairman, ladies and gentlemen.
We did file a motion to limit the testimony of two of the disclosed so-called expert witnesses, specifically we objected to Luke Taylor being qualified as an expert witness, and Rene Taylor being qualified as an expert witness.
Really there are two reasons for that

objection. The first is that neither of them seems to have the academic background or experience to qualify them as an expert. And secondly, and perhaps as importantly, Mr. Taylor had an opportunity and in fact spoke during the ten-minute presentations. And Rene Taylor was asked whether she wanted to speak and indicated she did not want to speak. And so it's for those reasons that we would ask to have those two, quote, unquote, expert witnesses excluded this evening.

MR. SPANOS: May I respond?

CHAIRMAN TOEVS: Yes.

MR. SPANOS: Mr. Miles in his motion suggests that the reason that we reconvened or continued this matter was simply for expert witnesses.

If you look at the motion itself, the relief asked for does not ask for a continuance just for expert witnesses, it asks for time to put together a case.

Now, with respect to the specific objections to Rene Taylor; Ms. Taylor has lived under a wind farm for a year. There is not, I don't imagine, one other person in here that has

that expertise. And there is no requirement in Illinois law, or any other law that I'm aware of, of any specific academic knowledge. An expert witness has a specific knowledge that's not something that's common to anyone else. Ms. Taylor has this knowledge and clearly is an expert witness.

With respect to Mr. Taylor, this is Mr. Taylor's case, I think he has a right to be heard and he has information that we can bring before the Board. Sure, he had his ten minutes, but he has other things that I think we can bring before the Board that are relevant and pertinent, and I think due process requires that you give him an opportunity to be heard in this case with his lawyer asking him questions. Mr. Miles will have every opportunity to cross examine Mr. Taylor, and Ms. Taylor as far as that goes.

The one last thing I would point out with respect to Mr. Miles' motion, on one hand he seeks to bar Mr. Taylor because he's testified once already, and on the other hand he seeks to bar Ms. Taylor because she didn't testify when she had an opportunity.

If you look at the motion that was made by the Board -- if you look at the motion that I submitted to the Board, the motion to continue does not say continued for expert witnesses, it says continue the matter. Therefore, I think Mr. Miles' motion should be denied.

MR. MILES: Mr. Chairman just in a brief response. As I said the first night, the strict rules of evidence don't apply at this hearing. The purpose and object of this hearing is to get factual information before the Board responsive to the particular standards that are set forth in both the Wind Energy Conversion Ordinance and the Zoning Ordinance.

If in fact these witness, these two that we object to, are allowed to testify, they should testify from personal knowledge only, not opinion, knowledge, not things that they read someplace else, not things they saw on the Internet, but from their personal knowledge.

MR. SPANOS: That's a new motion, it's a new issue. I would like an opportunity to respond, please.

MS. DEININGER: I'm going to have to

apologize to everyone tonight. I know the sound is going to be bad in here. If you cannot hear, I truly apologize. We will make it the best that we can with what we have. So bear with us.

MR. SPANOS: Now with the interruption I forgot what the motion was. Mr. Miles is basically making a hearsay objection.

CHAIRMAN TOEVS: Yes.

MR. SPANOS: And if that's a hearsay objection and Mr. Miles wants to bar any testimony that's hearsay, then I would move to strike just about every sentence that Mr. Whitlock said in the first hearing.

Mr. Whitlock was the only person to testify, and yet the application contains nothing but hearsay, unless you call those witnesses. There are -- the sound study, did Mr. Zack testify? Does Mr. Whitlock have personal knowledge of the study? Does Mr. Whitlock know how the study was conducted? Of course he doesn't. And the reason that they didn't bring those witnesses on the first day is because a hearsay objection does not apply.

In this case, Mr. Taylor has done a ton of

research on a number of things, things that should be brought to the attention of the Board, things that are just as pertinent as any document that is included in that Application.

So, if the Board sees fit barring Mr. Taylor from testifying about any of those documents, then I would move that we strike every document in the Application because as of today those are all hearsay, too.

CHAIRMAN TOEVS: Would you define a ton of research or ton of whatever?

MR. SPANOS: We've given you a packet of information. My intention with Mr. Taylor is to go through some highlights in that information. Honestly, I don't want to give you a ton of research, I don't want to give you a ton of testimony. I would like to see us all go home early tonight -- I don't think it's probably going to happen -- but I am going to do my very best to keep it as short as possible.

You have a stack of documents, given the opportunity Mr. Taylor will summarize some of those issues for you. If then you decide that you want to go home and read some of this stuff, then you

can take it home and read what you like. That's all we intend to accomplish with Mr. Taylor.

MR. LEWIS: Mr. Chairman, if I may, because we seem to have heard three or four motions in very short order here labeled and unlabeled. And so maybe if we go back two squares we might be able to get it straight.

After this hearing started, Mr. Taylor I believe requested the Board to give him the, what may be either an indulgence or a right, to come in with evidence that he had not originally named in accordance with the usual rules of these hearings.

My understanding, and I would stand corrected by the memory of the Board because I don't think any of us has a transcript here, was that the courtesy extended was to allow Mr. Taylor the opportunity to present expert witnesses. And arrangements were made and discussed I think at some length in the second hearing about when Mr. Miles would present his experts, and when Mr. Taylor might present his experts.

And my memory, without looking at the transcript, was that tonight was for the presentation of expert witnesses and that the last

time we were here we finished, and we did finish early, we finished at 8:20, with what one might call ordinary testimony, that is personal observances, personal statements, personal understandings, which may or may not be expert but can be weighed by this Board according to how the Board judges the demeanor of that person and that person's opportunity and so forth.

So, in the first instance my understanding was that we were going to hear expert testimony tonight. Now, Mr. Miles has correctly said that courtroom rules of evidence do not apply here. In a courtroom a Judge would be asked to rule on the qualifications of the witness and would state his reasons on the record of why this witness or that witness was or was not an expert.

This Board does not have similar rules and I suspect most of the time you don't really deal with expert versus non-expert witnesses. But, under courtroom rules there is a clear distinction between an owner who wishes to testify as to his personal observation, his subjective understandings, or things that he has seen and heard, and someone who holds themselves out and

perhaps makes their living at a given subject.

In that context, someone who has lived next to something for a year probably would not qualify as an expert. I'm not sure if I lived next to a mechanic's garage I would qualify as an expert after a year as a mechanic. One can observe, but they are just that, that person's subjective observations and not trained objective analysis that would be in the nature of an expert.

So, to that extent I think Mr. Miles' motion is well taken. If we are here for experts tonight, then these should be people who can put forth professional qualifications, and I guess I would underline that word professional, not amateur or observed, or I read something somewhere, but I am in this business to make a living and have been for long enough to understand what I'm doing. To that extent I would suggest that Mr. Miles' objection is well taken, and that if others besides professional experts are testifying that the Board keep clearly in mind that they are testifying as to their subjective personal observations.

And in a court of law in a case of say eminent domain or putting through a power line, an

owner's testimony as to his subjective like or dislike or reaction to something that's going in would not qualify as an expert and would not go to the questions of value.

The standard in court, and as a matter of fact, I did look at a number of cases on this trying to determine things like siting. It would be a burden on the owner to come up with proof of what he is saying. The owner must show objective evidence. It's not such to simply say I don't like the way these things look or I think they're ugly or I don't want to be near them, there must be objective evidence as to what the harm or the diminution of value or other aspects is. The proof must include expert testimony which verifies and quantifies that particular item.

Now, an expert may rely on evidence that experts in the field normally rely on, for example, you realtor or your realty appraiser may say I pulled comps by looking at the recorder's office and looking at the tax stamps. That's something that appraisers and realtors do. He would not have to call in to court the person who bought and sold the house and have their sworn testimony. Okay, he

can rely on that kind of thing.

And an expert may do that, but must tell you what the source is and it must be a source that is a kind that is usually used and relied on by experts in that field. And again, my auto mechanic may say I got a disc from General Motors and I put it into my computer and it shows me X, Y and Z, that's a little different than I asked my cousin Harry that has been fixing Chevys for a number of years; which one is relied on by experts in the field. That's the key to that.

It's then for you to draw not only the question of is this an expert and is his source reliable, but also how much weight you give. Has he given some objective evidence, has he given the quantifiable evidence in this, and is he a person with the kind of professional experience relying on the kind of sources that an expert would rely on.

Okay. That's my piece and so my recommendation to the Board would be that those who are speaking only from subjective, personal observation or personal research, anyone can go on the computer, anyone can go down the street and look at something, that's not an expert. These are

for experts tonight, qualifications and bases. Cross examination will bring out whether it's the kind of material they rely on or should rely on, whether their expertise or their training and experience is proper.

But I think we're here to hear experts only tonight, and I think Mr. Miles' motion is well taken in that regard.

MR. SPANOS: Mr. Chairman, may I respond at least in part to counsel's statement?

I have the transcript in front of me and I have the motion that was made by Mr. Lessen. And the motion reads, "Mr. Chairman, I move that we allow for a continuance with a deadline of April 23rd" -- sorry, Frank, I forgot -- "to have documents submitted to the Zoning Administration Office by 5:00 at the end of the 23rd and that we -- those documents be distributed to the appropriate people, and we have counter testimony and testimony on May 1st."

Mr. Lewis asks, "Does your motion contemplate also identifying what witnesses there will be for purposes of, again, preparation on the part of the Applicant and the Board understanding

how long the schedule might be?"

Mr. Holly gives you a short bit of advice. "Isn't that what they asked for, a motion for a continuance?" That's Mr. Lessen.

Mr. Holly says, "Right." And he goes on and talks about scheduling and that's the motion that was approved. It wasn't a motion for expert witnesses, it was a motion to continue for witnesses. It doesn't say expert witnesses.

I would also take exception to counsel's description of what an expert witness is. An expert witness, if you're going to case law and you are going to ignore the relaxed rules of evidence, an expert witness is someone who brings a specialized knowledge, and I will underline the word specialized, not professional, it's not someone who is a doctor or an engineer necessarily, it can be, certainly.

You have to ask yourself what's the issue that this person is being presented to testify about, and does this person have specialized knowledge that no one else has or that the tryer of fact doesn't have -- and that would be you -- that's the standard for a professional -- or excuse

me -- an expert witness.

And in this case, Ms. Taylor lives in the shadows of turbines every day, every night. She experiences what happens every day, every night. She's around them all the time. Who better, who has more specialized knowledge than someone who lives in these turbines, in the area of these turbines.

And what's the purpose she is being offered for? The purpose is to tell you what it's like, what her experiences are, what she's personally experienced over the course of 11 months living in the shadows of these turbines. That is specialized knowledge. There is no one else here that has that knowledge.

CHAIRMAN TOEVS: I would agree with you except -- I agree with you, but she is one person. Are we going to depend on one person for expert testimony?

MR. SPANOS: That would go to the weight that you give it and not the admissibility of it, sir. And, you know, you can give it whatever credit you want. And Mr. Miles I'm sure will have plenty of questions for her on cross examination,

she and Mr. Miles apparently have a history, so he will have all kinds of things I'm sure to bring out. And you can consider both her testimony on direct, and the testimony on Mr. Miles' cross examination.

MR. LEWIS: Mr. Spanos, if a person lives in a house surrounded by cornfields for a year, does that make them an expert on corn and farming?

MR. SPANOS: I would suggest in Illinois, no, because there are millions of people that live in the cornfields in Illinois. There are very few that live in the shadows of wind towers that have not signed a gag order by a wind company and taken their money and said, okay, I can't come and testify. Most of those people that sign those documents signed them before they lived in the shadows of the wind towers.

MR. LEWIS: Are you going to present evidence to that statement that you just made, Mr. Spanos?

MR. SPANOS: What statement?

MR. LEWIS: That people signed gag orders.

MR. SPANOS: I certainly will.

MR. LEWIS: I would like to hear it.

MR. MILES: Let me try to respond a little bit. The motion to continue that was filed a month ago to give the objectors an opportunity to bring their people back at a later date than they were supposed to reads as follows, fundamental fairness and due process require that this matter be continued at least 30 days to enable a careful review of Horizon's Special Use Permit Application and supporting materials and to allow time to arrange for testimony by experts on land appraisals, safety and engineering issues, and environmental concerns.

I think the whole purpose of the original continuance was to allow the objectors tonight to bring their expert witnesses in, not to avoid the ten-minute rule, not to avoid the fact that they weren't ready the night they were supposed to be ready, and so I guess if there is going to be testimony allowed again by Luke Taylor a second time, then it ought to clearly be based on his personal knowledge. If Renee Taylor is going to be allowed to testify, when she chose not to when she had the opportunity before, her testimony, too, ought to be based on her personal knowledge, not on

the sort of things that an expert might rely upon to give testimony tonight.

And frankly, I think the appropriate way to do this is we hear the experts tonight, the way they're suppose to be, and if the Board wants to allow a few more lay witnesses to testify later on, that's up to the Board.

CHAIRMAN TOEVS: So now we ask the Board what they think.

MS. DEININGER: It's up to the Board.

CHAIRMAN TOEVS: If you got a feeling, strong feeling one way or another, I need a motion to do something.

MR. NEWMAN: Comment. I thought it was for expert testimony tonight, not for continued, continuation of witnesses and their subjective viewpoints. I thought we were going to be listening to experts in certain fields.

CHAIRMAN TOEVS: How do the rest of you feel?

MR. LARSON: Same feeling, because I remember a number of times we used that very specific term, expert witnesses, and was my expectation coming in tonight for the hearing.

MR. LESSEN: I made that motion, and my interpretation was that it would be experts. And that was the purpose of them identifying for the petitioner that they would be experts in whatever field they're going to testify in.

CHAIRMAN TOEVS: Then does somebody want to make a motion that --

MS. DEININGER: What you would be doing, if you chose to accept Mr. Miles' motion, you have to make a motion to accept that motion to limit --

MR. NEWMAN: I would make a motion that we accept his motion and it only include expert witnesses.

MR. ZIMMERMAN: Second.

CHAIRMAN TOEVS: Ken seconded. Anymore discussion? All those in favor say aye.

(All saying aye).

CHAIRMAN TOEVS: All opposed say nay.

Okay, now back to you, Mr. Spanos.

MR. SPANOS: I take it then that the motion is to disqualify Ms. Taylor as an expert since that's the second part of it.

CHAIRMAN TOEVS: Yes.

MR. SPANOS: That works for me. I knew

what you meant.

We'll call Richard James as a witness, please.

MS. DEININGER: If you want to stand and speak in the mic, that would be great.

MR. JAMES: Oh, yeah.

CHAIRMAN TOEVS: Give us your name and address, please.

MS. DEININGER: You need to be sworn in.

CHAIRMAN TOEVS: Raise your right hand.

(Witness sworn.)

CHAIRMAN TOEVS: Now give us your name and address.

MR. JAMES: I am going to change it. Richard R. James. My address is 3966 West Sunwind Drive, Okemos, Michigan.

CHAIRMAN TOEVS: Go ahead with your testimony.

MR. SPANOS: Thank you, Mr. Chairman.

Q Mr. James, would you tell the Board, please, how you are employed?

A I am a noise control consultant and an acoustical consultant, and I have been since 1971.

MS. SCHERTZ: Excuse me, is there a working

microphone in here?

MS. DEININGER: This is the best I can do, so sorry. I will remind everyone to speak loudly and speak into the mic. The mics don't work that well. I apologize.

CHAIRMAN TOEVS: Ma'am, Mrs. Schertz, you might move your chair over there. (Indicating).

MS. SCHERTZ: We can't hear with this furnace running. Sure, we had great michrophones all along and then when it comes time to present our experts, then we can't hear them.

MS. DEININGER: We couldn't use the other facility because the sheriff had to use it. I apologize. Everyone, please remember to speak loudly and very clearly. We will do the best that we can.

A As an acoustics expert I ought to be able to figure this out, right? We need a bigger speaker.

MR. CRAWFORD: You need to have your mouth about this far from the mic. (Indicating).

A I understand that now. It's a very close feel for a michrophone.

BY MR. SPANOS:

Q Let's try that again. Mr. James, how are you employed?

A I'm a control consultant and an acoustic consultant. I have a background in mechanical engineering. Degree from General Motors Institute, which was an accredited engineering college, is accredited.

And to give you a little background on that, when I was going to college, that was at the time when the EPA and alot of the other noise issues were coming to a head. And so General Motors wanted to educate a limited number of engineers in the necessary issues, and that was the curriculum that I took. There was about ten of us. I graduated in 1971, again, with a Bachelor's in Mechanical Engineering.

Q So how long have you been working as an acoustic engineer?

A Since 1971. At that time I was working for Chevrolet. And in 1972 -- or 1973 I should say -- I formed my own company, Total Environmental Systems. Later we changed the name to James T. Anderson and Associates. And now I'm working as an independent consultant under the name Acoustic

Solutions.

Q Would you please tell the Board -- would you please tell the Board about your teaching experience?

A I have been -- well, let's say this. In my later years, last 20 years or so, I have been teaching both at Michigan State University in their Speech and Communicative Disorders Department on the issues of noise and how it relates to speech sciences. I've also taught most at General Motors University. I have taught about all of their engineers noise control and safety and health issues. Noise control relating both to community noise issues and in-plant noise issues.

Also have been an instructor for the American Industrial Hygiene Association, Michigan Department of Public Health, and a number of other groups on the issues of noise.

Q Tell the Board a little bit about your work experience with noise related issues, please.

A One of the most important portions of the work I've done -- my firm, at one time we had 45 people before I had a health issue that caused me to split off from it. We were the tier one

supplier of noise control engineer services for General Motors, John Deere, Navistar, almost all of the large companies. We did all of the noise work, all their community noise work for the period from about 1976 forward to the present.

And so I have been involved in a lot of issues, siting of new plants, doing the studies to identify whether communities are compatible, and I also started out with a very strong interest in computer modeling.

When I was a young engineer, computers were not yet one of the tools that we have for engineering, but I saw it as an opportunity. And so my thesis for graduation was on the formulas that are used for computer modeling. At that time there were no standards, so we really had to rely on some very preliminary work. And I continued work both for in-plant modeling and community noise modeling throughout my career.

Q Have you ever been retained to evaluate and testify regarding nice related issues associated with wind turbines?

A I've worked -- since 2005 I have worked almost 90 percent of my work on wind turbines. And

I've worked with the Herron Zoning Board, Calumet Zoning Board, and a number of other communities around the country for setting up guidelines for the wind turbines.

I'm also involved in about three litigations cases at this point as the expert for the community on those cases.

Q Have you written any articles regarding wind related noise issues?

A That's a very good question. I hear everyone talking about the Internet and all the information out there. A lot of it is antidotal. One of my partners is George W. Kamperman. George Kamperman is the father of the Illinois EPA noise criteria. And also he was basically the person who helped establish those criterion, and he has monitored them over the years. He has been practicing since 1952. And so at this time he's in semi retirement.

He and I started talking about the confusion in the industry and the fact that almost all the articles that we saw were coming from only one side of the argument. So, we decided that for a paper that we're presenting this summer that we

would do a review of all of the data that we could get our hands on basically on noise studies, before and after studies, what's good, what's bad about turbines, health issues, et cetera. And then based upon our combined almost 80 years of experience, try to sort that out into a set of guidelines the communities could use that would allow them to site wind turbines without having the problems we see in the different parts of the United States at this time.

So, that paper has not yet been published. It will be presented this summer, late July, in Detroit. But I've just, we have basically just done a review of all this antidotal information that you are talking about and drawn our conclusions as to what it really means.

Q In your professional work did you have an opportunity to discuss certain health related issues with Dr. Nina Pierpont?

A One of the things we did want to do was to get right to the sources of a lot of the information, so, yes, I've carried on a number of discussions with Dr. Pierpont, shared some -- she shared some of her insights with us.

Again, this is prepublication and we really can't talk about a lot of it, medical privacy issues enter into it. But, my opinion of what she said and what her study is finding is that we do have a valid concern about health related to improperly sited wind turbines -- and that's improperly sited wind turbines.

One of the things that she pointed out is that all of her studies are for the newer models of wind turbines. A lot of the questions are why aren't we having problems in the other countries; and the other countries are using smaller wind turbines in many cases. But where they have put in the larger wind turbines those problems are cropping up overseas also.

Q Did you rely on Dr. Pierpont's studies and information in forming your conclusions with respect to the paper that you have recently authored?

A Actually, we put in a cautionary statement that that is still preliminary. There is plenty of evidence already from the World Health Organization, and other studies not specific to wind turbines but specific to noise sources, that

they can cause disturbances with sleep, that they do have an impact on health, not just a psychological impact, you know -- I don't like that -- it's physiological changes as a result of long-term sleep deprivation.

Those are well-recognized within the field whether it railroad yards, airports, just about any type of noise sources. If the noise is such that it can wake people up, it does have a physiological effect. The bulk of the study put the weight on that because it's peer review and is well established and is used by people all around the world in making the decision for land use planning with regard to noise sources.

Q Are you familiar with the Illinois Pollution Control Board standards with respect to acceptable limits of noise?

A That's another very good question. Back in 1980 or so one of my clients, General Motors was issued a complaint or a violation of the Illinois standards for the foundry over in Danville.

As a result of that, Mr. Zack was the head of the Illinois EPA's noise office at that time. As a result of that, we tried to duplicate the

readings that he found and were unable to do so after a whole summer of testing.

One of the problems we found with the Illinois EPA standard at that time is that it did not define how long a measurement should be. And so we proceeded with a rule change that took just about ten years to change the period of observation for the Illinois EPA measurement proceedings for enforcement proceedings to one hour.

And that -- in order to sustain that, we had Mr. Kamperman as one of our experts, so we really had to go through the whole standards before the hearing panel in detail. So, yes, I have a very good understanding of it both from how it's applied in a specific case, which was Danville's foundry, but also what was intended by that standard when Mr. Kamperman made the tables up in the early 1970s.

Q Why don't you give a summary to the Board of what the current noise standards are.

A Well, the summary that's provided in the Application really is a fairly good one. The standards here for a new noise source, there are daytime and nighttime standards because -- and

these standards are specified in octave bands.

Now, it may not be something that we can change at this point, but the limits set for rural communities in the -- in the Pollution Control Board standards now are questionable. They really apply more for a suburban environment. When the standards were written they were never intended to apply to very rural areas. I say that may not be an issue we can change, because the standards are what they are, but at this time there is a serious question as to whether they're really applicable for a rural community and whether they will protect that community in the way that the standard was intended to be protective.

Q You reviewed the noise study prepared by Greg Zack; is that correct?

A That's correct.

Q And you mentioned in that noise study that the standards as they are set out in the study are accurate; is that right?

A I think the standards as they're described are accurate.

I think one point, though, that is not made in this study is that the standards were intended

to be applied by use of a sound level meter, they were not -- they were not designable standards, so-to-speak. They were standards that's true use was for enforcement after a company has built a new facility, built a new foundry, or put up a wind turbine. And I think that leads to some very serious concerns about the report because what we see here is the use of computer modeling to replace measurement.

Q According to the Illinois Pollution Control Board noise standards, where is the measurement to be made with respect to the residents or the property?

A The standard is very clear, the measurement is made at the property line.

Q And you can see on the screen now those measurements -- or excuse me -- those limits as listed. And you see across the top row is the frequency, correct?

A Yes, that's correct.

Q And then what are the number across the bottom?

A The numbers below it are the maximum not to exceed limits for nighttime, I believe. Is that

the nighttime standard?

Q Yes.

A Yes, nighttime standard where you have a class C emitter emitting sound to a class A residential property.

Q For instance, on this chart at a thousand hertz, what is the maximum nighttime level?

A 41.

Q And measured where?

A At the property line.

Q And would that be the property line or the point on the property line closest to the noise source?

A That is correct.

Q Have you had an opportunity to review the numbers in Mr. Zack's study?

A Yes, I have.

Q Are you aware of whether any of those numbers exceed any of the nighttime limits as listed by the Illinois Pollution Control Board?

A I believe there are two that do exceed it. But I think a more egregious error is that all of those values that were demonstrated are at the home and not at the property line.

Q Before we go into that any further, let's talk about Mr. Zack's study. Does there happen to be -- you see on the screen a copy of what is Mr. Zack's study, a little bit different format, but the same study, right?

A Yes.

Q And you see the numbers that are marked in yellow?

A Yes, I do.

Q And what are those numbers, do you know?

A Those are the values that are at the maximum limit allowable for receiving property lines, not residents.

MR. LASCO: Excuse me, Mr. Chairman, I cannot possibly make this out from here. Is this one of the documents that were distributed this evening?

MR. SPANOS: Yes, thank you. That is under tab -- this particular document starts in tab three. And I apologize that the documents in your folder were copied in black and white instead of color, contrary to my instructions. But, you will see on the next page that there are some that clearly stand out.

Q Tell the board what is indicated by the red boxes there.

A The red boxes indicate model predictions at 42 decibels in the one thousand hertz frequency range, which is at least one decibel above the limit permitted by the Pollution Control Board's rules.

Q And what is the limit for a thousand megahertz?

A 41.

Q I'm sorry, a thousand hertz?

A 41.

Q And each of those readings is in excess of the limit; is that correct?

A Yes, they are.

Q And you see the yellow again, those are right at the limit; is that right?

A That's correct.

Q And this is, again, Mr. Zack's study; is that right?

A Yes, it is.

Q Going to page three of Mr. Zack's studies, are there also additional readings that are in excess of the Illinois Pollution Control Board?

A Yes. For resident number 95 we have an exceedence in both the five hundred and the one thousand hertz octave bands by one decibel in each case.

Q Now, do you have any opinions with regard to the accuracy of these measurements?

A That's exactly the point I was going to go to.

Q Let's take it a step at a time first, okay?

A Okay.

Q What effect -- or do you know whether or not Mr. Zack's measurements were taken to the wall of the residence or the lot line?

A He clearly states that they were at the residence.

Q And is this in accordance with the statute?

A No, it is not.

Q In fact, the statute that was cited by Mr. Zack in his report specifically says that the noise should be tested at anywhere on the property; is that right?

A That's correct.

Q Now, going forward, do you have any criticisms of Mr. Zack's modeling?

A Well, you know, I've been doing modeling for an awful long time and one of the things that I find that disturbs me is that people see the values put out by a computer and they believe them as hard, fixed, solid, to be -- what do I want to call it -- relied upon numbers, and computer prediction is anything but a hard science.

My interpretation of Mr. Zack's modeling is basically he claims he has a proprietary model and does not disclose how that model works. However, almost all models, whether they be proprietary models built by an acoustical consultant, or models that are commercially available, like Catna or Nord 2000, are bench marked in an ISO standard, an International Standards Organization, standards. And I believe that standard number is, it's 9613-2, acoustics attenuation of sound during propagation outdoors, part two, general method of calculation.

Now, this standard is very, very -- what do you want to call it -- basic. It is -- it includes many assumptions about how noise spreads that may or may not be true. But, as a general rule, the modeling equations do not pertain to any noise source that is 30 meters above the ground. And

even under the most ideal conditions where all the assumptions of a model are -- all of the assumptions of the equation match up with the reality of what is being modeled, the accuracy is only plus or minus three decibels.

So, to say we have a 41 decibel prediction when we say, first of all, the equations don't apply to a noise source that's a hundred meters off the ground, and that even if they did, we would have an error range of plus or minus three dB, means that we have to look at those numbers as being only an estimate of what might happen when the turbines are put into place and that we need to adjust those minimally at least three decibels for a known error. And that's assuming we ignore the fact that the model's equations are not accurate for wind turbines at a hundred meters because of the 30 meter limit put into the standard itself.

Q If you look on the screen now, and this is under tab, the next tab, number five I believe -- I'm sorry -- tab four. What is depicted in this diagram?

A This shows the numbers that Mr. Zack predicted with that three dB error range added to

them. And at a minimum -- well, what we have done here is we have increased the number of places where we exceed the Pollution Control Board limits up to probably about a third of the properties or so.

Q And again, the red indicates measurements that exceed --

A Predictions. If they were measurements we might have more faith in them.

Q -- predictions of what the noise level would be at the residence, correct?

A Yes, that's correct.

Q Not at the lot line?

A That's correct.

Q Okay. And red indicates measurements that exceed -- or I'm sorry -- predictions that exceed the standard, correct?

A Yes, that's correct.

Q Are there any circumstances where you would suggest that the additional number be greater than three, in other words, that Mr. Zack's figures should be increased by even more than three decibels?

A Well, as I said earlier, the modeling

equations are very general and they assume something that is not true about wind turbines. The assumption on these equations is if you have a noise source, let's say a noise source right up here in my hand, that the sound will radiate from that equally in all directions. So that if my prediction says it's 41 dB over here, then at an equal distance all the way around that circle will be 41 dB. Now, the situation with wind turbines is that they focus the sound such that there are places around the wind turbines where it will be lower than the 41 and places that will be higher.

If anyone has gone to a wind farm and stood underneath the wind turbine you will notice that it's very quiet. Now that is proof of the directivity factor. They are basically the loudest areas around the wind turbines are in front of the blades and behind the blades. So with the modeling making the assumption that it's equal all the way around it being in error, we would normally identify the directivity which is the focusing effect of the machine, and we would have an adder to these values to account for that focusing effect, and in the -- in the absence of hard data

on the directivity, my own tests when I have tried doing this indicate that should be about three decibels more, so we would have an error potential of three dB. And then we need to correct his numbers for the focusing effect with another dB, and that would put us up about six dB over his numbers.

Q On the screen now you will see what's under tab five. What does this document indicate?

A We're at six. This document reflects those adjustments made to Greg Zack's predictions.

Q And again those adjustments added on to Mr. Zack's predictions, the ones in red are the ones that exceed the --

A That's correct.

Q -- the Illinois Pollution Control Board's numbers, correct?

A Yes. And that would be just correcting for the inherent error of the model under its best circumstances, plus another correction for the focusing effect of the wind turbine sound pattern that was not accounted for in the ISO document.

Q Are there certain conditions where the turbine will produce a greater or a higher noise

level?

A Yes, very clearly Greg's model was made for the condition of seven meters per second, which -- and I'm going to say part of his study is very confusing on wind speeds, but this is my interpretation of it -- the turbine predictions he made were for the situation of the turbine not at full power but at a lower power rating. General Electric's manual for the 1.5 SE says that when it is at -- the difference between the cut in sound level and the cut off sound level is eight decibels, so it is conceivable that the sound levels from the turbine could be eight decibels higher just due to the fact that the turbine predictions were done for a lower wind speed than the maximum operating wind speed.

Q So, under these more stringent or more difficult circumstances, what is your expectation with regard to Mr. Zack's study?

A I think if we, if we just said that we took the three dB error, the three dB for directivity, and maybe half of what GE says for the increase in sound level another four, we could easily find ten decibels of error in his predictions.

Q You see on the screen attachment C, can you tell the Board, please, what this is?

A That table shows the effect of adding the ten decibels for error, directivity and wind speed to the predicted levels from Mr. Zack.

Q And you have also have an even higher number --

A We haven't talked about weather. If you read the ISO standards it says that it only applies to moderate wind conditions and for atmospheric conditions that are not going to affect the sound. If you do meteorological conditions, one of the problems you have with any noise source, and you may have experienced this in your own life, is that under certain weather conditions the sound is reflected off of an upper layer of the atmosphere so what would have been radiating up and way out and never seeing the ground now gets reflected back down and adds to the sound which comes from the noise source to the receiver directly. That kind of addition being easily add five decibels to the receiving site sound level.

This doesn't happen every day, but it is the kind of situation that can happen on a nice

evening in the summertime. There are a lot of weather conditions in which temperature inversions affect the sound propagation and that was not considered in the model.

Q And the result would be then what? The result could easily be that we would have a total of fifteen decibels of error in the predictions and that's reflected under tab seven; is that right?

A That's correct.

Q Now, you very recently had some experience observing a wind tower; is that right?

A That's correct.

Q Tell the Board the circumstances that took you out to observe that wind tower?

A I was asked to come out, put on a presentation for Lake Township's county commissioners. Lake township is a small community on the northern end of Michigan's thumb, very rural, very flat, and now targeted for Detroit Edison's Wind Turbines, and they wanted to know some of the things that I would recommend for how to set up good guidelines.

On the day I came for the meeting one of the county commissioners asked if we could go out

and take a look at the wind farm that is run by John Deere just south of their township. So we went out and we found one of the turbines. We were about a thousand, 200 feet away from it, and we were watching it. It was a day in which we had gusting winds where it would be mild for -- on the surface we would have the wind be fairly mild and then it would pick up a little bit, probably in the range of about five to ten miles per hour at surface levels.

The turbines were operating, were very obviously audible, although the sound of a wind turbine and the sound of the wind may have a lot of similar characteristics, there are characteristics of that wind turbine that make it, make it possible for an educated ear to differentiate.

I noted -- because of the fact I thought these conditions were kind of unique, I decided I would go back to my van to get my sound level meter out and find out what kind of sound levels we were testing. And as part of the story I need to say the day before the newspaper had advertised that I was coming, so I'm pretty sure John Deere's people knew I was coming.

As I came around to the other side of the van and held my meter up, the turbine that we were watching was shutdown. The first thing that happened was the blades were feathered and basically going from the mode where it generated power to just rotating, and then shut down completely.

The Commissioner thought that was coincidental at first until I pointed out to her that these are, most of the turbines are monitored remotely and it would have been perfectly possible that an operator could have seen me with a meter and shut the turbine down so that I could not get a good reading on it.

Q You were talking about feathering the blades, what does that mean?

A The amount of power that the blades can pull from the air depends on the angle of attach of the blades, and the more they dig in, then the more power you can pull out. But that also increases the turbulence and noise, so by feathering the blades, bringing them back so there is less turbulence, the sound emissions from the blades went down, even though the blades were still

rotating.

Q And this is controlled remotely; is that right?

A Remotely, yes.

Q Is it possible to shut the turbine down completely remotely?

A Yes, it is. That's the common way of doing it.

Q You spent a fair amount of time, or at least some time going out and checking on wind turbines; is that correct?

A I have for the last few years, yes.

Q And in your profession have you had the opportunity to review the operating or the owner's manual, if you will, of a wind turbine?

A One of the questions that I've had is just how safe is it to get up, if I'm going to do testing of these, how safe is it. There is a lot of Internet things, I'm sure you have all seen them, on wind turbine problems.

I finally managed to get ahold of a manual of the Vestas V-90, V-100s for the operators and the technicians and there is a specific prohibition against any employee of the wind turbine company

being within 13 hundred feet of an operating turbine due to safety concerns. And if for some reason the turbine can't be shut down remotely before they approach, they're to approach it only from the front or the back.

So, as a person who has to take noise tests around the turbines, I decided that my safe distance is also roughly about 13 hundred feet.

Q And this manual has information that you've relied on in forming your opinions?

A Yes, it is.

Q Have you formed any opinions whether or not the noise study prepared by Mr. Zack on behalf of Horizon Wind suggests compliance with the Illinois Pollution Control Board standards for noise?

A Well, the report clearly suggests compliance, but when you look into the details of it, as I've discussed here today, we can see that it may be at best an indication of the best face on the problem, and that reality when we begin to introduce the errors from the equations in modeling, the focusing effect, and all of the other factors that I've talked about, could easily make that model 15 decibels off in error.

Q With respect to property number 55, is the study or does the study suggest that noise levels are in compliance with the noise statute?
A 55?
Q I'm sorry, 56.
A Of the first table?
Q That's correct, of Mr. Zack's study not authored by anyone else.
A Okay.
Q It's on the screen.
A Oh. Now your question again, sir?
Q According to Mr. Zack's study is the measurement at a thousand hertz --
A Okay, those three readings in red show that although his conclusion was that they were in compliance, his data actually does not support that. And that's without corrections.
Q And the same thing for property number 95; is that right?
A That is correct.
Q Are all of your opinions that you've given here today based on a reasonable degree of acoustic engineer certainty?
A Absolutely. And like I said, one of the

problems I've had with modeling -- I started, I wrote the first papers for the Institute of Noise Control of engineers on computer modeling at a time when most acousticians didn't know what a computer was. And my papers were warmly received with comments from the moderators of we have a young kid here who is going to talk about computers, don't know what they have to do with acoustics. Nowadays acousticians use computers routinely, but they have to be used like any other tool knowing what the strong points and weak points are.

And one of the weak points in modeling is that the current algorithms at predicting sounds at a distance do not consider many of the factors that moderate the sound as it propagates between a noise source and a receiver.

And in looking at Mr. Zack's information and applying some of those corrections we can see that it can create a very significant difference from the model predicted -- or the predicted results from the equations.

Q You mentioned earlier that you worked with George Kamperman in preparing your recent paper that you are going to present this summer. What is

Mr. Kamperman's background again?

A Mr. Kamperman is one of the senior gentlemen in the field. He started consulting with Leo Beranek in 1952 or so, at a time when the government asked Leo to form a company to do this kind of work. At that time it was MIT. Later on in the later part of the 60s and 70s Mr. Kamperman headed the Chicago Office and went into private practice in 1970 or '71, at which time he was a consultant to the Illinois EPA and Pollution Control Board in establishing the guidelines, the measurement procedures, and the tables of the octave bands that we're discussing here today.

Q And did Mr. Kamperman have a working relationship with Mr. Zack at one time?

A Mr. Kamperman trained Mr. Zack. Mr. Zack is not a mechanical engineer by background, Mr. Kamperman basically took Greg under his arm and taught him what he needed to know in order to manage the department given that he did not have the engineering background.

Q And your conclusions here today, are they supported by the research that you and Mr. Kamperman have done together during the past few

years?

A Yes, they are. And in fact I discussed some of this with Mr. Kamperman because I was concerned about his long-term relationship with Mr. Zack. And Mr. Kamperman, his comment was if these kind of errors are being made, they need to be pointed out.

MR. SPANOS: I don't have anything else.

CHAIRMAN TOEVS: Board members, do you got any questions?

MR. LARSON: Mr. James, I have a question about the impact of the noise because these turbines are so high off the ground, you talked about front and back and --

MR. JAMES: Yes.

MR. LARSON: -- the directional focus. How about vertical impact?

MR. JAMES: My own subjective experience is that, you know, I have been underneath a wind turbine, too, listening to it, and it is actually quieter at the base of a wind turbine than it is a thousand feet away from a wind turbine in front of it. So vertically, I don't think the issue is so much vertical on the plane of the blades in the

cylinder of the blades as they turn the front and back, upwind and downwind. As a general rule downwind being the higher noise situation.

MR. LARSON: The essence of my question isn't so much if you are standing underneath the blades or not, but if there is a tower and you have got the turbine on there, and you are underneath it, obviously, it's vertical as you go farther away, then you still have a vertical component of the noise. So what you are saying is that the noise goes, as you say, in front and behind in a cylinder?

MR. JAMES: The cylinder expands as you, basically it starts at the blade site, but as you go out from it, it expands.

MR. LARSON: So have you done measurements, actual measurements of wind turbines and plotted that kind of --

MR. JAMES: The problem with doing that is that really to get good data you need to do it in a laboratory environment, and the laboratories that test wind turbines and the wind turbine companies do not reveal that information.

MR. LARSON: So if you haven't measured

this in a real life situation, then you really don't have hard data?

MR. JAMES: I have data from the measurements that I have made around wind turbines, but it is not laboratory grade, it is field data. And what I'm saying is that we do have every reason to believe that laboratory grade information is also available, it just has not been made public.

MR. LARSON: You have data that you have actually taken and compared it to your assimilations?

MR. JAMES: Yes.

MR. LARSON: How do they compare?

MR. JAMES: As a general rule my assimilation are projected numbers that are lower than the real numbers that I measure.

MR. LARSON: Is that assimilation you use the same one that Mr. Zack used?

MR. JAMES: Yes. Yes, yes.

MR. LARSON: So you don't have your own assimilation tool?

MR. JAMES: We all use the same ISO standard in acoustics. The ISO 9613-2 is essentially the gospel. And anyone whose

prediction equations are different than that would need to justify them against the -- you know, the data that went into supporting 9613-2 would have to be duplicated if someone chose some other type of model approach.

MR. LARSON: So your experience in computer modeling really is no different than anybody else's, you are using the same formulas as everybody else?

MR. JAMES: I am, except I would be more cautious about applying those formulas to a noise source that is a hundred meters above the ground, because it specifically says in the standard, in table five, if anyone wants to look for it, that the standard only applies to noise sources that are 30 meters off the ground or less, flat and with very minimal wind distance.

MR. LARSON: So then we really don't have hard data about the effective noise when you get above 30 meters.

MR. JAMES: No, we don't. We begin to gather them in how they model aircraft noise and airplanes, but again they are studied in laboratory environments concerning the directivity, the

different sound emissions on your different power conditions, in order to let those models be accurate. But we don't have that data for the turbines, so we can't build those kind of models.

MR. LARSON: So all of this data is really speculative?

MR. JAMES: The raw data that Mr. Greg Zack did is speculative.

MR. LARSON: All of it is?

MR. JAMES: Yes. To base a decision on siting by saying, well, the table says 41, so we're okay because that's what the Pollution Control Board tables permit is over-valuing the precision of modeling today.

MR. LARSON: I guess what strikes me is there we're using computer modeling when there is a lot of wind farms out there already.

MR. JAMES: That's right. This is an error that I believe is one of the reasons why models -- projects are approved but then result in complaints from residents who live near them. I think the tools that we're using in modeling may need to be refined and we may need to find some adjustments to the model predictions to give us an appropriate

cushion of safety for the errors that the models have.

And we're seeing that minimally that should be six decibels, just based on directivity and the error. But that it could easily be up to ten decibels or fifteen decibels if we introduce other factors as I discussed.

MR. LARSON: Second line of questioning is, you made the implication that there are safety issues about being within 13 hundred feet or something like that?

MR. JAMES: Yes.

MR. LARSON: But it's safety concerns about being around --

MR. JAMES: That Vestas, the manufacturer has that concern for its own employees, yes.

MR. LARSON: When were those, the turbines, those Vestas turbines made that you talked about?

MR. JAMES: The operating manual I have is for the newest models of the Vestas.

MR. LARSON: And those were made when?

MR. JAMES: It's for the newest models, the V-90s and V-100s.

MR. LARSON: Are they in production now?

MR. JAMES: Yes, they're in production now.

MR. LARSON: Are there similar safety issues with the GE 1.5, the ones that are being planned for this site?

MR. JAMES: I would have no way to say that they're not. The machines are essentially the same, the failure modes result in the same kind of debris, and so I would have to say that that's probably a general rule that's good for all wind turbines.

MR. LARSON: Is the concern that the blades may break and fly apart?

MR. JAMES: Yes, yes.

MR. LARSON: And have there been any -- maybe this is a line of questioning that is not appropriate for you, but have there been any improvements in the reliability of the blades?

MR. JAMES: I'm sure that that's being worked on. I'm sure that it is because we've already got one fatality here in the country, a wind farm out in Oregon operated by Siemens, and that was a Vestas model in which we had a fatality. We've had several other situations

similar to that that have gone on.

MR. LARSON: Are you aware of any with GE turbines?

MR. JAMES: I'm not aware of any with GE, but I have not looked for that. My thought, I mean my purpose for the safety issue was my own personal safety.

CHAIRMAN TOEVS: Anymore questions from the Board? Mr. Miles?

MR. MILES: Mr. Lasco will ask the questions.

CHAIRMAN TOEVES: You haven't been sworn.

MR. LASCO: I don't think so. I was going to introduce myself and ask that we take a few minutes break so we can kind of go over this.

CHAIRMAN TOEVS: Let's correct that. Raise your right hand, please.

(Witness sworn.)

CHAIRMAN TOEVS: Give us your name and address,.

MR. LASCO: My name is Bennett Lasco, L-A-S-C-O. I live at 1211 Linden, Highland Park, Illinois.

May we take a few minutes break so I can

organize my thoughts a little bit?

CHAIRMAN TOEVS: Sure. One of you guys move for a recess.

MR. NEWMAN: I move.

MR. ZIMMERMAN: Second.

CHAIRMAN TOEVS: Moved and seconded that we take a recess. All those in favor say aye.

(All saying aye).

CHAIRMAN TOEVS: All opposed say nay.

(Whereupon a break was taken).

CHAIRMAN TOEVS: I need a motion to reconvene.

MR. VOGELSANG: So moved.

MR. NEWMAN: Second.

CHAIRMAN TOEVS: All those in favor say aye.

(All saying aye).

CHAIRMAN TOEVS: All opposed say nay.

MS. DEININGER: I will make a statement for everyone. We are going to have all three experts speak first. Once they have completed their testimony, then we will actually start with the witnesses that have signed up to cross examine. We will do all three experts first and then you can

come up. That way you will have the opportunity to ask questions of each expert so you don't have to go back and forth, back and forth.

CHAIRMAN TOEVS: Now we have another expert?

MS. DEININGER: No, Mr. Miles is going to cross examine.

CHAIRMAN TOEVS: You have got the floor.

MR. LASCO: Thank you, Mr. Chairman.

Q Mr. James, could we look at that slide you had up with the chart of the different octave ranges or hertz ranges and the decibel standards?

A Sure, if Chris can get it up there again.

MR. SPANOS: You have to bring your own screen for that.

MR. LASCO: You don't share the screen with us? That's okay. Is that something you can do with a -- The chart is at the top of page two of Mr. Zack's report.

MR. JAMES: Page two of Mr. Zack's report, of the appendix itself.

MR. LASCO: Table one Illinois Pollution Control Board limits. There was a slide earlier.

MR. SPANOS: I will work on it. I am

waiting for the projector to warm up.

MR. JAMES: Table one?

MR. LASCO: Yes, table one.

Q Let me ask you my question, since I don't want to take up everyone's time here. This chart sets -- we'll see it in a minute -- it's sets a standard of the noise level that's permissible in each of these various octave bands, and octave bands are just a way of breaking down sounds in another different component part?

A That's correct.

Q With a limit for each octave bands in this chart?

A Yes.

Q This is the chart. And then we were -- when you were testifying earlier you pointed out what Mr. Zack projected and with your adjustments they might exceed them in some of these octave bands; is that correct?

A Yes.

Q And you were looking at the five hundred and the thousand octave bands?

A For the smaller corrections they affect the five hundred and thousand first, but for the larger

corrections they affected other frequencies also.

Q Have you ever gone out and measured an actual operating wind turbine say at 15 hundred feet and measured what sound they produce in decibels in the thousand octave band?

A Yes.

Q What is your --

A Forty-six.

Q Where did you do that?

A John Deere. And also in the paper that we're presenting where we reviewed not only our work but the work of probably a dozen other consultants.

Q But I mean your own measurements. You have done your own measurements?

A Yes.

Q And what kind of wind turbines were these?

A GE 1.5s for John Deere.

Q And what did you measure actually, the one thousand?

A One thousand hertz, and I had 46.

Q You had 46 and at what distance was that?

A 12 hundred feet.

Q Do you know what it would be, what it was

at 15 hundred feet?

A I would have to go back and measure it or calculate it.

Q And you gave us --

A You can knock a decibel off of it, 45.

Q -- doing that adjustment here -- And do you have any kind of report of those findings with you?

A No, I don't.

Q How many times have you made that measurement, how many different turbines, how many different days?

A On that turbine it was one day, and on a similar GE at another site on the next day we took two tests. So I did a similar --

Q Let me see if I understand you. On two different occasions, two different turbines you have measured a GE 1.5?

A Yes.

Q And on the second occasion did you come up with a measurement at the thousand hertz octave band?

A Yes, I did frequency analysis on all of them.

Q And what was the measurement?

A They were right in that range of 45, 46 dB at a thousand hertz.

Q At 12 hundred feet?

A Thirteen hundred and 50 feet at one and 12 hundred feet at the other one.

Q Let me understand this. One measurement at 12 hundred of 46, and another measurement at 13 hundred and 50 feet which you said was 45 or 46?

A Yes.

Q Have you recorded those findings anywhere?

A There was information I took for the purpose of checking the work we had done on the paper to see if the readings that I would get would be similar to what we had used in creating -- in the paper we have a generic, a chart of a generic GE 1.5 SE, and I wanted to use this as an opportunity to see if my own tests would come up with the numbers that the other people came up with.

Q So did you report your observations, your recorded data somewhere?

A I have only reported it as, I will call it information for the paper. We did not detail out the graphs, we didn't report them. They were used

just to support the observations we made and the information that we reviewed and included in the report.

Q So I think that means --

A It was my personal quality check.

Q So I think that means you didn't report it?

A That's what I said, yes.

Q When you -- and by the way, did you do a model projection of what you thought the sound would be at that distance?

A I had a model using the GEs technical specs, the data that you got from the --

Q So your --

A -- 6-1-4 hundred 11 tests, and when I threw in my other factors gave me a 46.

Q So your model predicted 46?

A Yes.

Q And you came out at 46?

A I came out within that range, yes.

Q So, in other words, what you measured was what your model predicted, did I understand you right?

A It was, but I was very careful to make sure that the assumptions that I used in my model were

also as close as I could get to the way the wind was blowing, the types of conditions I had on the day I tested it.

Q And those are the only two times you have ever measured --

A A GE 1.5, yes. Vestas V-80s. A lot of the other ones we have also measured.

Q Now, when you were talking about some of the uncertainties that you described in Mr. Zack's sound modeling, those uncertainties are plus or minus, right, there could be exceedences or --

A Well, the uncertainty for the equation is plus or minus. The directivity would always be a plus. And the wind speed adjustment going from seven meters per second up to full power would also be a plus. And the weather condition effects, the temperature inversions, et cetera, would also be a plus.

Q Weather conditions would never reduce those sound readings --

A Not if you are always studying when you are upwind. In other words, the assumption is that the noise is going to be greatest in certain directions. I would change my direction at that

point, so yes, you know --

Q So, I just want to make sure I understand. Are you saying weather conditions would never reduce the amount of sound?

A They would for other locations. For a resident living off the sides or behind it, that would be true. But if the wind changes in another direction, then different people get the noise and other people get the quiet.

Q And atmospheric conditions like humidity or --

A Humidity plays a factor. A lot of things play a factor. And that's exactly the problem with the modeling. The modeling assumes that the atmosphere is a very simple atmosphere. The reality is that the atmosphere can be very complex, we can have different speeds at different levels, et cetera.

Q So, you are saying that you don't think the modeling is appropriate to be used for this kind of planning of a project?

A I think it may be a good tool but that there needs to be some validation. One of the studies that just came out recently that did a

comparison of the predicted levels at Maple Ridge -- I don't know if that's a GE or not -- but that's the -- you may even have it in your packet, accuracies of model predictions --

Q Let me just --

A -- on wind turbines at Maple Ridge Wind Farm facility. This was published in 2007.

This study found that at several -- at winds just above generator cut in speed, three meters per second, the measured noise was 3.7 above the predicted level of the receptor sites.

Q Can you repeat the last part?

A For winds just above the generator cut in speed, EG 3.07 at the 80 meter hub height, the measured noise was 3.7 above the predicted level of the receptor sites.

Q Let me go back to what I was asking you. You are saying that the modeling such as Mr. Zack did is not the appropriate way to make these kind of planning decisions, there needs to be some other -- how did you say that?

A It needs to be used with caution, it's not a sharp knife, it's a broad --

Q Do you have some other way to do it that

you proposed? You have been in this business --

A I think what I would probably do. It's the same thing, if I had a sound level meter I would calibrate -- and it has a microphone, they will only guarantee that meter is operating within --

Q You are not --

A If it's a compliance issue, if I get a reading of 41 at a thousand hertz, then I have to give the benefit of the doubt with the error that that 41 could either be 42 or it could be 40.

And if you are talking about compliance then the benefit of the doubt goes to the person who would be damaged. And so if that's what we do with all tests with sound level meters for compliance, then we need to take these same correction factors for modeling and put them into the decision-making so that we do not end up putting wind turbines in areas where they may produce sound levels that are not compatible with the local community.

Q So prior to standing here tonight, have you proposed a method for predicting sound levels from a wind turbine in order to make good planning decisions?

A We have a -- as part of the paper I did -- we put together a set of guidelines.

Q Are those available to any of us?

A When they're published in late July they will be available.

Q But none of us can see it now?

A But I tell you what they are.

Q Have you ever presented them to a regulatory body, say the Illinois Pollution Control Board?

A No, don't have to. We're not talking about my proposed regulations, we just want to know if the model is sufficiently accurate for us to look at a number like 41 and believe that it is reality and not just an indicator of what we might be getting.

Q So just to make sure I know the answer to my question, you have never proposed a technique or methodology to any kind of regulatory authority of regular like the Illinois Pollution Control Board?

A We have -- Herron and Calumet Zoning Boards have all adopted guidelines that I have set up.

Q I thought you hadn't set them up. We can't see them. How have you proposed them?

A You are talking about modeling. We don't rely on modeling in those standards, that's why I said no in the beginning. What we are setting up is criteria for the wind industry to meet that has sufficient safeguards built into it.

Q What I don't understand is how you propose for this Zoning Board or for an Applicant to this Zoning Board to predict what the noise levels will be from something that has not yet been constructed, and I thought you told me that --

A I think the modeling is a essential tool, but it cannot be used as a sharp laser tool. It's got to be looked at in terms of it's potential for errors.

Q You have never proposed modeling standards or put them on paper for anybody else to see?

A That's not my field. There are academics that play those games. I don't play those games. There are standards --

Q I thought you were a pioneer in the computer modeling?

A I did -- and what I said was the models that are currently available are similar -- I didn't pioneer it, I was one of the first people to

apply the equations that will be put out in textbooks to the computer prediction. So, I applied the science that was available using a tool at that time that was not commonly applied.

Q You're aware, I'm sure, that the Illinois Pollution Control Board standards distinguish between different classes of land and property?

A That's true.

Q Right?

A Yes.

Q And there are three classes, right?

A A, C -- A, B and C.

Q And A is residential property?

A That's a generalization, but that's fairly close.

Q They each have their own definition, that would roughly go to A being residential, B being industrial and commercial, and C being rural?

A C is Industrial. B is commercial.

Q Well, where would ag land fall into --

A Actually when these tables were set up agricultural land really was not part of the consideration. It was more of a suburban concern at the time the tables were set.

Q So are you saying that agricultural land is not classified as either, any of A, B or C?
A It is probably in the tables for land, the classes, but the specific octave band limits when they were designed with that in mind --
Q We will talk about that in a minute, but what I want to know right now --
A But we're not talking --
Q How is agricultural land classified within A, B and C? There are some standards in there, aren't there? The Illinois Pollution Control Board have some standards you have told us, right?
A I don't see where agricultural land comes in. Greg Zack clearly states that the -- that wind turbines are class C under the table, and the residents are class A, so I don't see where agricultural land comes in. Nobody has talked about agricultural land. We're talking about the people who live near wind turbines as class A.
Q And the land that the people who live near this project live on, is that zoned residential?
A That's typically class A, yes.
Q No, I didn't ask you that. I asked you how was it zoned?

A I have no idea.
Q Do you think -- you didn't look into that?
A I don't see how it's even relevant to the issue.
Q I'm not talking about the home itself, the land?
A You know, I don't know about the specifics here, but a lot of the communities I have been working with don't have zoning. And I don't know if Tazewell does or not. But, for the purpose of applying the Illinois Pollution Control Board's tables, the only thing that matters is class C, B or A according to the tables. I don't remember where it is. That defines what types of land uses go into each of those categories.
Q I am going to represent to you that I'm looking at a table right now that says agricultural land use goes into land class C.
A That could be.
Q And I'm also going to represent to you that the land surrounding this project is zoned as agricultural land in this county. I may be wrong about those things, and I'm sure your counsel will point that out if I am, but will you take those two

assumptions from me?

A You can make the assumption.

Q There is no Illinois EPA standard that sets a limit on the sound that promulgates from a class C source to another class C land; isn't that right?

A It may or may not be. I don't know.

Q The standard we're looking at here --

A The standard, as the Rail Splitter noise impact assessment was presented, it says that the recipients, the receivers are class A and the wind turbine's a class C. And I didn't come prepared to discuss whether or not those assumptions were correct.

Q And in the report that you are referring to also measures it at the residence, right?

A Yes, instead of the property line.

Q Mr. Zack's report treats the residence as a class A recipient; is that right?

A But the standard is written for the property line.

Q That's not what I asked you. We'll talk about that in a minute. The report treats the residence as a class A recipient, right?

A Yes, it does. It treats them as a class A.
Q It does not treat the property line as a class A recipient, you agree with that, right?
A It ignores the property line.
Q And your testimony is that the Illinois EPA standards require the measurements be made at the property line?
A Yes. That is the way the measurement standards are written.
Q How do you know that?
A That is -- well, figure it up.
Q Is there an EPA regulation --
A Yes, there is a measurement procedure and it specifies 25 feet off the property line.
Q And it tells you where to make the measurement --
MR. HOLLY: We do have a court reporter and we need to make sure that she gets the record accurate, and if the two of you continue to talk over each other, that's going to be very difficult for her to do.
And for the interest of keeping the record clear and keeping her sane, please don't talk over each.

And as far as the questions, I don't want anybody to get into a situation where it's an argumentative situation or there is a banter going back and forth. Cross examination is just your opportunity to ask questions, and your opportunity to answer those questions.

So, if there is a question he poses, just simply answer his question.

BY MR. LASCO:

Q Would you look at page two of Mr. Zack's report? Do you have that there?

A I have that.

Q In there section 901.102 is set forth -- is set forth on page two, do you see that?

A Could you get that up, Chris?

Q And this is the standard that says how one should measure noise transmitted to class A land, right?

A Yes.

Q And it says at the very end there, when measured at any point within such receiving class A land provided, however, that no measurement of sound pressure levels shall be made less than 25 feet from the property line noise source?

A Right. That says that the standard can be applied 25 feet within the property of the receiving --

Q Well, you told us it had to be measured at the property line.

A Well, at the property line according to this rule, 25 feet is in case the noise source happens to be right on the property to give sufficient distance so that we're not too close from the noise source when we measure it.

Q So when you said at the property line you meant not closer than 25 feet?

A 25 feet to the property line.

Q Are you familiar with any interpretations of the Illinois Pollution Control Board about what that section means in terms of where the measurement should be taken?

A I am only familiar with how that applied to the case with General Motors.

Q You have never been employed by the Illinois EPA or Illinois Pollution Control Board, have you?

A No, I was not.

Q And you never have been authorized by the

State of Illinois to issue any type of interpretations of their guidelines or --

A No.

Q Are you familiar with the case of Turris, T-U-R-R-I-S, Coal, C-O-A-L, from the Illinois Pollution Control Board --

A Go ahead.

Q Have you heard of that case, that interpretation?

A No.

Q Then we don't even need to talk about it.

My understanding is the Illinois Pollution Control Board interpreted this section that we were just looking at as -- sorry, I don't have the number at my fingertips, 901.102, to say that the measurements of noise projected to a residential property should be made at the residence.

A In contradiction of their measurement procedures? I don't know.

Q I am just asking you if you are familiar.

A I don't know what precedent, what weight that has to --

MR. HOLLY: Please wait for each person to finish before you answer, and before you ask

another question.

MR. LASCO: You are absolutely right. I apologize, particularly to the court reporter.

Q When you told your little story about going to the John Deere turbine in Michigan, you took out the meter and the turbine was shut down?

A Yes.

Q You're not suggesting that anybody connected with Horizon had anything to do with that, are you?

A I have no idea. It could have been absolutely coincidental.

Q Are you suggesting that anyone connected with Horizon had anything to do with that?

A I have no idea. Maybe just coincidental.

Q I am asking you a question. Are you suggesting that anybody having anything to do with Horizon had anything to do with that?

MR. SPANOS: I object. He answered the question three times. He said he had has no idea.

BY MR. LASCO:

Q And you talked about a safety manual of the Vestas --

A Yes, Vestas V-90 and V-100 operating

manual.

Q About keeping some distance from the turbine?

A Yes.

Q Do you have that manual with you? Can we look at that?

A I don't have it with me. I can make it available if you want to see it.

Q We would appreciate seeing that. And you're not testifying here as an expert on safety engineering or anything like that?

A I am not. I only used that manual for my own guidance in terms of what was the proper distance to stay away from them.

Q So you're just telling us what you read in a manual?

A What I read as to how I -- why I'm not at five hundred feet doing the measurements, yes.

Q And you didn't bring it with you to show us what it said, you are just telling us what you remember from reading it some other time?

A That's true.

Q You said something about, that you think that a lot of wind projects have been located so

that they result in complaints because of the failure to correctly anticipate the noise introduced, do you remember saying something like that?

A I said something to that effect, yes.

Q I didn't get the words down, have you compiled any kind of tabulation yourself as to the number of people in the State of Illinois who live near an operating wind farm and have complained about noise problems?

A I have not done it as a scientific study.

Q You know, I wanted to ask you about one other thing. You said you referred to Mr. Zack's study as putting the best face on a -- on the potential interpretation, results, something to that effect, do you recall that?

A That's correct.

Q Now, is it right that Mr. Zack's study did not account for any dampening of the sound by the ground absorption; is that right?

A That's correct.

Q And that wasn't put in the best face?

A The ground absorption, when you have a noise source a hundred meters above the ground, and

you are talking about a measurement site a thousand feet away, ground absorption is not an issue, nor are trees, nor are vegetation, and he did not take those into consideration because they don't apply.

Sound source in this case is about the home from the perspective of most homes that are close to wind turbines.

Q And he also didn't make an adjustment for atmospheric absorption; is that right?

A Yes, he did.

Q Minimal adjustment?

A It was an assumption that -- it's not minimal, it's the adjustment.

Q And he used --

A It was an --

Q On the basis of his calculations, he used data provided by the turbine manufacturer, right?

A It appears to be because his numbers looked very close to what I have seen from GE before.

Q And the report says that, that he used the numbers that are provided by GE, right?

A Yes.

Q And he also said the number we have on GE has an uncertainty value of plus or minus two; is

that right?

A Yes.

Q So they could have been higher or lower by two?

A Yes.

Q And he applied the assumption that it was higher by two, right?

A That's true.

Q In some of the octave bands he applied the assumption that it was higher by six?

A I don't remember that comment.

Q If you look at page five I think you will see that. In any event, would you agree that that's a conservative assumption to make, to apply the maximum uncertainty and assume the maximum?

A As far as it goes, yes. That is one -- you know, I give him the fact that he did provide corrections for some of those issues, and also for hemispherical spreading, but I'm pointing out things he did not include.

Q You made a brief reference earlier in your testimony to Dr. Nina Pierpont, right?

A Yes.

Q You are not a medical doctor; is that

right?

A I am not. That's why I talked to one to find out what a medical doctor had to say about this.

Q You are not qualified yourself to make any judgment about the quality of the body research?

A I would not try to, no. That's why I rely on the international standards and the international documents from groups like that.

MR. LASCO: No other questions.

MR. JAMES: Okay.

MR. SPANOS: Redirect?

CHAIRMAN TOEVS: ZBA, do you got any redirect questions?

MR. LARSON: Yes. I need some clarification. On page five that is up here now, there is plus six dB that was added onto these numbers. How does that correlate to your charts where you had plus six? Is that your plus six compounding the conservative estimate that they made?

MR. JAMES: There is another one -- yeah, the plus six -- the ones that I pointed out would be in addition to the plus six that he's talking

about here.

MR. LARSON: Can you explain that?

MR. JAMES: Well, when you start measuring very low frequency sounds, the 31.5 hertz, it gets more difficult to be precise, and what Greg is saying is that based upon GEs analysis of its own data they feel that the 31.5 hertz band could be as high as plus or -- as high or low as plus or minus six off of the number that they reported.

Q Just the 31.5?

A But just the 31.5. I don't want to take away any credit as to what he did do to try to get the model to reality. Those are all proper corrections that he made.

MR. VOGELSANG: I would like to ask a simple question. If you were going to buy some land and you were going to build a home for yourself, and you were going to have a wind turbine near you, at what distance would you have it where the noise barrier would be nil?

MR. JAMES: That was one of the things that we looked into for our paper. And our review indicated that at about two kilometers we get to the point where there is minimal likelihood of the

wind turbine creating an ongoing problem. And I think that's about, what, a mile and a half in our terms.

MR. VOGELSANG: Thank you.

MR. JAMES: Am I close?

MR. SPANOS: It's 1.2.

MR. JAMES: 1.2 miles. Thank you, Chris.

CHAIRMAN TOEVS: Any other questions?

MR. SPANOS: I don't have anything. Give me just one second, would you please? Just a couple, sorry.

Q Mr. Lasco I think just asked you a number of questions about the credibility and the reliability of Mr. Zack's study. Did Mr. Zack's study take into account multiple sources of sound?

A He used an adder of 0.5 dB to account for all of the turbines other than the one that was closest to the property.

Q So, is that an adequate factor to consider when you may have more than one wind turbine?

A This was one of the questions they had on his model, normally you would calculate the effect of all wind turbines on each resident. And that way if you have a situation where there is several

of them around a home that are all in close proximity they would be accounted for that way. And he just used an average 0.5 dB. I think it made his calculations simpler, but it also introduced another opportunity for error.

Q So, what you're saying is that if there is more than two turbines within that two kilometers that you were just talking about both of those turbines would have some noise effect on the residence, correct?

A If you had a person living an equal distance between two turbines, then it would be expected that the sound level from the two turbines would be somewhere in the neighborhood of three to six dB higher than any one turbine depending on frequencies and a lot of other things, but it would be more than the 0.5.

Q And does that go back then to your, the charts that we've shown three to six decibels at?

A Well, we didn't include that as a factor, but we could include that in also. But that would be very specific just the way he did it.

MR. SPANOS: I don't have anything else.

MR. LARSON: I have a question. Mr. James,

you mentioned you went out and took some readings, some actual sound readings?

MR. JAMES: Yes.

MR. LARSON: Could you explain where you took those relative to a circle around the turbine, if the turbine is blowing -- the wind is blowing from the north to the south? Where were you on the compass when you took those readings?

MR. JAMES: We were directly downwind of the turbines.

MR. LARSON: Would you consider that the loudest, the noisiest point on the compass?

MR. JAMES: Upwind and downwind, depending on how the wind is blowing are going to be your two primary noise --

MR. LARSON: Did you consider it all the way around, though, so you would get --

MR. JAMES: No, because we couldn't get on a lot of the properties. This was only limited access roads where we didn't have to literally get on the property of people who we had not, did not have permission to get on the property.

MR. LARSON: Have you ever measured that in any other location?

MR. JAMES: Not all the way around it, no.
MR. LARSON: Because I'm wondering about the variation, the peaks and valleys, the highest and the lowest, because if the house is right beside the turbine it may have a lower noise, but if it's in the wind --
MR. JAMES: The wind varies around the seasons, you kind of have an equal opportunity noise source there.
MR. LARSON: I am trying to understand the noise dynamics. There are prevailing winds around here, so the percentage of the time it blows one direction is higher.
MR. JAMES: If you find out which direction the wind blows you can more than likely figure out where you will have trouble from a wind turbine.
MR. LASCO: I had one follow up point, Mr. James.
Q You said that one of the flaws you find in Mr. Zack's study is he used only this 0.5 decibels additive factor for multiple turbines, where do you see that in his report?
A Let's go for it. If you can find it, Chris. My eyes are blurry enough at this point I

can't find it. I am looking at it backwards. On page seven, second paragraph, last sentence, he says this conclusion is not valid for multiple turbines.

Q On page seven there he's referring to determining what he called the minimal distance for a single turbine to a single residence; is that right?

A But if you had two turbines at the same distance, then his distance would have to be reduced by about half.

Q Again, I'm sorry, that's not what I am trying to talk about. When you say -- the sentence that says this conclusion is not valid for multiple turbines, the sentence right before it he is talking about the minimal distance from a single turbine to a single residence, right?

A He is referring to his 41 dB at one thousand hertz, so my assumption is that he is referring to his model results in general and not just his statement about one turbine.

Q I am going to ask you again. The statement here is a statement about a single turbine and a single residence, isn't it? It says that right in

black and white on the piece of paper; is that right?

It says the conclusion is not valid for multiple turbines, and the sentence before that says the minimal distance a single turbine should be from a single residence is 1 thousand 20 feet, right?

A That's correct.

Q And that's the conclusion that it is not valid for multiple turbines?

A That's correct.

Q He doesn't say it is not valid for multiple turbines, it is a statement about a single turbine and a single residence; isn't that correct?

A That's correct.

Q It says nothing about adding the factor of 0.5 dB for testing the effect of multiple turbines, does he?

A Well, I'm going to say I read it in here somewhere. I can't find it at this point.

Q And it doesn't say where --

A But what it does say is that his model results, the 41 dB at a thousand hertz that he presents in his tables appears to be single turbine

calculations.

Q So you would expect his tables and attachment C to Mr. Zack's report to be based on a single turbine sound level?

A That appears to be what he is saying. He says nothing specific about it being turbines, other than this comment, which says a single turbine.

Q I'm getting confused and I got to sort out a couple things here.

The first thing I want to know is, are you interrupting attachment C to the tables that project predicted sound levels at the various different house numbers, are you interrupting that to be based on a single turbine source, or to be adding together multiple turbine sources?

A My interpretation of it is that given the information he provided, it is possible to say that is a single turbine at each residence, the closest turbine.

Q And then my other question is, where did you get this thing you said about he uses a 0.5 additive factor for multiple turbines?

A That's what I can't find at this point.

Q I can represent to you that you're not going to find it. I don't think it's there. Take all the time you need to look.

A It's may not be. I won't quibble about the 0.5. That's not the errors -- even the single turbine error is not going to be equal to the potential error from the equations and the other things that I discussed earlier. We're talking potential errors of ten decibels that far overwhelms the impact of multiple turbines.

Q It's assuming all the things that you projected happen just the way you were talking about?

A That's right, just like he assumes everything happens the way he projected.

MR. LASCO: Thank you.

MR. JAMES: Okay.

CHAIRMAN TOEVS: Okay, we're going to change our order just a little bit. Anybody in the audience whose name is on here that wants to cross examine this witness, stand up and I'll swear you in and then we'll have you --

MS. DEININGER: We will allow them to ask questions.

CHAIRMAN TOEVS: -- ask questions or cross examine. All of you stand and raise your right hand.

(Witnesses sworn.)

CHAIRMAN TOEVS: Come on up, Randy. Give us your name.

MR. PRESSWOOD: Randy Presswood, 2449 2200th Avenue, McLean, Illinois.

CHAIRMAN TOEVS: Go ahead.

MS. DEININGER: Randy, did you sign in to speak?

MR. PRESSWOOD: Yes.

MS. DEININGER: An actual form to be able to come forward and speak? You did not submit anything to my office?

MR. PRESSWOOD: No, ma'am.

MS. DEININGER: I'm sorry, you cannot talk. I apologize.

CHAIRMAN TOEVS: Sorry. Okay, Mrs. I think Aper?

MS. DEININGER: Schertz.

CHAIRMAN TOEVS: Mrs. Schertz.

MRS. SCHERTZ: Do I need to come up there? I only have one question.

MS. DEININGER: Come on up.
MRS. SCHERTZ: I'm not sure you will know the answer to this since you're not from our state.
CHAIRMAN TOEVS: Give us your name and address.
MRS. SCHERTZ: Kim Schertz. Post Office Box 347, Hudson, Illinois, 61748.
CHAIRMAN TOEVS: Okay.
MRS. SCHERTZ: In my very limited understanding of the Illinois Pollution Control Board regulations, I remember reading about a year ago that the classification, any time there is a house on agricultural land the entire parcel of land automatically becomes class A with the residence. Because that's the case at our house, we have 65 acres with a house on one corner --
MR. HOLLY: Is this --
MRS. SCHERTZ: I'm asking, can he confirm this is correct or he doesn't know or it's incorrect?
MR. JAMES: I can't speak to that.
MRS. SCHERTZ: Okay, thank you.
CHAIRMAN TOEVS: Come on up. Name and

address, please.

MR. EGLI: It's Rod Egli. 1473 Hopedale Road, Delavan.

CHAIRMAN TOEVS: Go ahead.

MR. EGLI: I just want to know if it's going to affect my house being I have about 15 wind towers within one mile of my house, and also a transformer station that also I found out that puts out noise. And I'm wondering, I think I have about three of them within 23 hundred feet, have a group of six that's within three thousand feet. What do you think the wind noise on something like this would be?

MR. JAMES: I would say as a general -- there will be days when you have a problem. It may not be every day, but there will be days when you will have a noticeable nighttime disturbance.

MR. EGLI: So if I got my windows open in the nighttime I am going to hear it?

MR. JAMES: That's right. On days when you have a stable atmosphere and the turbines are operating at their full capacity, but the ground level winds are low, kind of the typical summer evening, those will be the likely times when you

would be able to hear the wind turbines.

MR. EGLI: Okay, that's my only questions. Thank you.

CHAIRMAN TOEVS: Nobody else out there?

MR. LASCO: Mr. Chairman, may I follow up on the last question, please?

CHAIRMAN TOEVS: One more time.

MR. LASCO: Hopefully just one.

Q When you answered Mr. Egli's question, and you said that he would have a problem on a still night or certain conditions, not every night but some nights, when he had his windows open he would be able to hear, at what level would he be able to hear, can you compare --

A Well, I'm making an assumption that his background sound level at night, that basically he's in a quiet rural environment without a lot of noises at night, would be roughly in the 30 decibel range, and that he would probably find the wind turbines to be eight to ten decibels above that background.

Q So 38 to 40, that's what that works out to?

A Let's say 36 to 40 depending on weather conditions and other things.

Q There is kind of a fan going or a ventilation system in here now. If everybody was quiet in this room right now, what would be the decibel level in this room right now?

A With the fans.

Q With the fans.

A This is a fairly noisy room. 50, 55 dB. That's the projector, the blowers for the heating and air conditioning. If it was a quiet office, if it was someone's living room, we would be talking 35, 40 decibels unless the TV was on.

Q But right here when everybody is quiet you are saying it's 50 to 55?

A If we put a wind turbine outside here in Pekin, it probably would not be an audible problem in the interior, but this isn't what we're talking about for the people that are living in the rural communities.

Q I am trying to give everybody in the room a sense of what this sound is, what it is on the ground and --

A What I am trying to say it's not a comparison that is valid. It's not apples and apples. This is a meeting room in which people --

people in many cases have an expectation of how a different room is going to sound. This is good for the kind of room it is. It would not meet a person's criteria for what they want in a living room, which would be 35 to 40 decibels. Assuming, like I said, they don't have any amplified music.

Q I am going to try to ask my questions again. I think it's a fair question for everyone in the room here to know.

How would a sound expert put into numbers the sound we hear in this room now, it's the only sound in the room, everybody can hear it and --

A I don't think it's a fair question because I don't --

MR. HOLLY: Let him at least finish his question. If you don't know it, you can't answer it.

MR. JAMES: I don't know.

MR. HOLLY: He hasn't finished the question.

BY MR. LASCO:

Q Do you know the question?

A I know the question.

Q And your answer is 50 to 55?

A I wouldn't be able to put a precise number on this room other than a generic number for how we design these rooms when they're being designed.

Q So you are telling me that an acoustic expert as you stand here right now and listen to this room you have no idea what the decibel level is? You said before --

A I am saying if you are looking for a scientific answer I need a meter.

Q I was looking for your estimate. You said 50 to 55?

A One of the things that people don't understand is that the ear is not a linear meter. What we hear, what we judge, is different for all of us, and it includes emotional characteristics, and that's why I can't answer those questions. If I was to take a guess what should this room be, 50, 55 dB, but do I know that is what it is, not without an instrument. That's why sound level had -- acoustical consultants have instruments and don't have calibrated ears. We can't calibrate the ear.

Q Are you finished?

A Yes.

MR. LASCO: Okay, thank you.

MS. DEININGER: Call your next witness.

MR. SPANOS: Just one second. I will talk to him out in the hall and come back.

I call Mike McCann to the stand, please.

CHAIRMAN TOEVS: Mike, raise your right hand.

(Witness sworn.)

BY MR. SPANOS:

Q Give us your name and address, please.

A Michael McCann, spelled M-C capital C-A-N-N. My business address is 500 North Michigan Avenue, Chicago.

Q Mike, tell the Board how you are employed.

A I'm the owner of my own appraisal firm, McCann Appraisal, LLC.

Q Mike, would you give the Board a brief summary of your educational background?

A Certainly. I've taken a wide variety of courses through the Appraisal Institute following a couple years of college at Dupage.

The courses that I've taken through the Appraisal Institute in the form of real estate appraisers all were appraisal and marketability

related courses, all resulting in obtaining an appraisal license as listed in my qualifications on the board.

MR. LASCO: Excuse me, Mr. Spanos, can you just tell us if that document is in your booklet where we can find it?

MR. SPANOS: Yes, sir. Thank you.

CHAIRMAN TOEVS: It's tab 8.

MR. SPANOS: Tab eight, second page.

Q Are you licensed to appraise in Illinois?

A I'm a licensed appraiser, certified general real estate appraiser, which is the highest of the three levels of licensing by the State of Illinois.

Q How long have you been working as an appraiser?

A For 28 years with experience appraising virtually all types of residential and commercial property.

Q Would you briefly describe for the Board the types of properties you have worked on over the course of your career?

A Again, all types of residential, commercial, industrial property, vacant land, farms, houses, reaching from the Kominsky Park

Stadium, the old one, and all the land that was around it that was acquired to build the new stadium, to sanitary landfills, quarries, power plants, typical industrial facilities, shopping centers, trucking terminals, really just about every type of property that is out there to appraise.

Q And who has hired you in the past, Mike?

A I've worked for a wide variety of clients; private enterprises, law firms such as yours, many governmental bodies. I have been appointed by the federal courts on pipeline property in Will County as a commissioner to hear evidence on property value and property value damages as it related to a pipeline going through a rural area in Will County, also corporations, lenders, private individuals, investors, just again the whole variety of potential clients that are sometimes in need of appraisal services.

Q Have you ever been asked to evaluate the affects of a perceived negative trait upon the value of residential real estate plots?

A Yes, I have.

Q In what circumstances?

A Again, a wide variety of circumstances. Sometimes it can be an issue such as contamination from a leaking underground storage tank, or recently a residence adjacent to the Braidwood Nuclear Power Plant where the treated water has leaked from where there are pipelines and saturated the groundwater and migrated to adjacent property. For many applications where there is stripping off of property that sometimes affects the parking, or ingress or egress to the property, in which cases damage can result to the value of the property beyond the value of the land actually acquired.

Q How about the effect of wind turbines or a wind turbine facility?

A I have had a few occasions to evaluate wind turbines, yes.

Q And you were asked in this case to evaluate the potential effect of the Rail Splitter Wind Farm on residential property in Tazewell County, correct?

A That's correct.

Q And what methodology did you follow in arriving at your conclusions?

A Well, I used the methodology that was best

suited to the information that is available, since this is still a relatively new land use in Illinois. But again, with review of the proposed Rail Splitter Wind Farm Project, you know, including you know, the location of the project overall, the number of turbines, the height of the structures, and the orientation with respect to the nearest homes. So I also inspected the project area, reviewed the project map, and again the proposed turbine locations. I also made a curb site inspection of each of the objector homes that I'm aware of that have been -- have retained your firm.

And beyond that I reviewed MLS listings and sales data for homes in Lee County for properties within or immediately adjacent to Mendota Hills, an existing wind farm which is a smaller, I should say not as tall of towers or structures or turbines as what's proposed here.

I also researched the final conclusions of a prior case study property that had been on the market for a very extensive period of time. The last time I looked at one of these proposed facilities and found the ultimate conclusion of how

that property was in fact impacted by being basically surrounded by these turbine facilities.

Beyond that, I also made a literature review including the REPP report, which I believe has been referenced in this hearing prior to me being here, as well as reports contained in appendixes eight and nine to the Application. And then I incorporated the market trends that exist for residential properties adjacent to these facilities into a probable value impact on homes in the Rail Splitter Project.

Q What methodology -- or I'm sorry -- what does the term USPAP, U-S-P-A-P, stand for?

A USPAP, that stands for the unified standards of professional appraisal practice. It was essentially established by an Act of Congress following the savings and loan bail out in the late 80s.

It's in fact now codified in Illinois law under the Illinois Appraiser Licensing Act of 2002.

Q Have you been certified in any Illinois courts as an expert on USPAP?

A USPAP is what the appraiser's call that. And, yes, I have by the circuit courts in Cook

County.

Q Does USPAP and the Real Estate Appraisal Licensing Act establish standards or requirements for how appraisals of property value should be conducted?

A Yes, USPAP does, and by being incorporated into Illinois law it in fact does set standards for how property is to be appraised.

Q What are those standards?

A An appropriate methodology has to be used, and the methodology has to fit with what is available in the market. Sometimes current sales analysis is used if it's available, the sometimes, in like a case like this, trying to find the effect of the use in question, wind farms on property values, just studying the actual property value trends in close proximity to such a facility versus further removed plots that have no such impact or that would be so minimal as to be immeasurable, you know, several miles out from such a project.

Q And you've reviewed Horizon Wind Energy's Application for Special Use Permit in this case?

A I have, yes.

Q Page 22 of the Application refers to

property values, have you reviewed this section of the report?

A Yes, I have.

Q And the section also refers to appendixes eight and nine in the Application, right, you mentioned those before?

A Yes, I did.

Q In the REPP report; is that right?

A Yes.

Q You had an opportunity to review the REPP report in the past?

A Yes.

Q What is the REPP report?

A Well, the REPP report is essentially an industry publication as opposed to something made by an appraisal firm or an objective third party. As I've learned in the past, it is essentially a study that was done at the behest of and financed by the wind power industry.

What it purports to show is an encompassing study of plot values in wind farm locations, for example, in the I-10 corridor near Palm Springs, California, LaQuinta, I have actually visited that particular location and I found that what the REPP

report is purporting is highly inaccurate really because it was describing 25 thousand plot sales that had been reviewed, many of which were in that area and -- well, it's purporting to value for the affect of a wind farm, or really multiple wind farms, on residential property values.

Even in that study it recognizes that 70 or 72 percent of the properties aren't even within a view shed of these wind farm facilities.

My personal visit out in the area revealed that that's a very rural and desolate area. The most I saw other than -- and at that I-10 corridor, other than a variety of different generations of wind farm and turbine facilities, some smaller, some larger, some old and rusty and out of commission, and some fairly modern ones, was that there was not a single residence in site anywhere along that corridor.

In fact, I had family that has a property in the Palm Springs area and that's why I had the occasion to visit that particular corridor and I found it to be an inappropriate location unless you are trying to value for the impact of wind farms on grazing land.

Q Does the REPP report review or include any properties located in the State of Illinois?

A It does not.

Q You have mentioned the word view shed, the Board probably already knows, but explain that to us.

A It mean different things to different people, but the way I use the term, if you are in close enough proximity that it actually impacts your view as opposed to being such a great distance that it can merely be seen from a great distance. I use view shed in a more confined use of the term. Properties in this case that are in the view shed are certainly located within the project footprint, covering quite a few sections, I believe nine different sections in Tazewell County, as well as properties in close enough proximity, say within three/quarters of a mile to a mile that -- it's a daily occurrence as opposed to being on the other side of 39 when looking at Mendota Hills.

And, you know, there is some locations that these wind farms can be viewed from as much as five miles away, and in one of the other appendixes there is two different locations cited that the

wind farms in Texas and elsewhere can be seen as far as eight or 24 miles away. While that certainly is visible, I wouldn't really call that view shed in the sense that it has any potential for impact on property values.

Q Do you think that the REPP -- do you have an opinion as to whether or not the REPP report is in any way relevant to the effects of wind farms in Illinois?

A I do.

Q And what's your opinion?

A It's irrelevant.

Q And why is that?

A Well, it again draws on locations which are outside Illinois, it does not reflect the local market or even a comparable market. It reflects Palm Springs property values at a point in time when values were spiking, you know, to six hundred thousand, million and a half, multi-million dollar properties; far different than what we find along Litwiller Road or Boynton Road in Tazewell.

These are not rural residential properties, these are estates, in most cases, with walled little communities, and each house, for that matter

most of them, having at least six foot and in some cases eight foot walls around the houses.

It again uses data that does not, doesn't have the potential to reflect any impact on the property values as a result of wind farms because of the lack of view and lack of proximity.

Q What about the methodology used in the REPP report, do you feel like it's sound, does it meet with USPAP?

A Just the fact that it's not using information that is relevant to the question at hand, you know, the impact on property values, any statistical analysis of useless information ends in an useless results.

Q Let's talk about appendix number eight and appendix number nine. Were either of those studies done in Illinois?

A No, they were not.

Q Were either of those studies done specifically for the Rail Splitter Project?

A They were not.

Q Do you recall when the study or those studies were performed?

A Appendix eight, the Grover study, I believe

2002, and then the new study in August, 2006.

Q Do we have any more information today than what was available in 2006 with regard to property values and the effects of wind farms?

A Yes, we do. It's still an area that needs considerable study and really should be funded to be done in a very objective and empirical manner, but it might take some time because, frankly, a lot of the plots immediately adjacent to these facilities just don't sell, they get pulled off the market, or an example we are going to go through in a few minutes, sits on the market for nearly three years prior to selling at a discounted price.

Q Now, you mentioned before that this isn't your first wind farm that you have been involved with, correct?

A That's correct.

Q When you first were asked to do a property value study with respect to a wind farm, what kind of information was available at that time?

A Well, really just literature and information like this REPP report.

Q Was there much in the way of sales out there that you could look at and compare?

A There really wasn't much. There were some sales that occurred before or during the planning stages of wind farm facilities, but the ones that are most relevant really reflect what property value trends are once the project is constructed, not when it's merely proposed or there is an application pending, such as this matter.

Q Is there more information available today?

A Yes.

Q And why is that?

A Well, passage of time, and it has, the market is starting to catch up with the actual impact of these facilities.

Q And specifically, are you referring to any wind project?

A I am referring to the Mendota Hills project in Lee County.

Q Is that one of the older wind projects here in Illinois?

A Yes, it is.

Q So it makes sense that over time you would have a little more data there since they have been there a little bit longer; is that right?

A Yes, that's correct.

Q Have you reviewed any other studies with respect to wind farm effects on property values that we haven't talked about?

A Well, I have reviewed a, in the past some information about an assessor's sale ratio study in Wisconsin.

Q What did that study show?

A Well, it showed property sales were, actually adjacent to an existing wind farm there, were a significant percentage lower, 15 to 20 percent lower, if I remember correctly, or maybe as high as 27 percent in closer proximity to what the baseline or assessed values were, as differentiated from the other properties in that county that were selling at much closer to, you know, a 1.0 factor to the assessment ratio.

Q Does the public's perception of a negative trait or a perceived negative trait with respect to something like a wind farm have an effect on property values?

A Well, it certainly can, if it's a perception that sticks or if there is an aversion to selling -- or excuse me -- to buying properties based on unknowns and fears and lack of guarantees

and so forth. When it's an unknown quantity, there is the fear, and those kind of perceptions can certainly be a factor in the buy/sell decision.

Q You have heard some testimony and talk today about health issues, environmental issues, et cetera, are those the type of issues that can have a negative effect on property values?

A To the extent that people react to them by selling out lower or not buying at all or holding out for a discounted price, yes, it certainly can be a factor.

Q In your research have you found that there is a significant portion of the general public that has a general negative perception of wind farms or property around wind farms?

A Not just in my research, but also in the research cited in appendixes eight and nine. There is a variety of studies referenced in those two appendixes that cite various surveys of communities and assessor's offices, and so forth, and there are several references to peoples' perceptions along that line, yes.

Q All right, let's talk about the appraisal that you did. There is a map of the properties and

wind turbines, did you go out and look at any of these properties?

A I went out and looked at all of them up and down all the roads in that immediate area, and specifically stopped and looked at each of the properties that are your clients.

Q What was the next step then in your appraisal?

A Well, do you want me to go through them real quick? If you would prefer that I not refer to them by name. This is some of the typical homes in this particular area. If you want to scan through them. And what I did -- if you want to keep scanning through them.

Q Just a minute here.

A The first photo that was on the prior screen was the Taylor residence, and that's a view that also picks up -- that's a view northwest and from the various vantage points on the property I looked at where the wind towers were proposed.

And I was able to determine, you know, on that property that there is going to be various vantage points from within the plot that the wind turbines would be visible in fairly close

proximity.

That photo came up kind of dark, but that's another view of the Taylor residence. With a view east, northeast towards the location of the nearest wind turbine.

And the next photograph is a view southeast from the Taylor residence. I apologize for the quality of these photos.

Q Well, they didn't copy very well.

Now let me ask you a question about this picture. Does this depict where a wind turbine will be as part of the plan, or according to the plan a wind turbine is going to be placed somewhere in this picture?

A Yes. From the best of my recollection, it will be behind that stand of trees that are standing in the side yard, the easterly side yard of the Taylor residence.

Q And will that tower be visible over that stand of trees?

A I believe it's going to be. It will be 389 feet tall to the tip of the blade, and you have to be standing right up next to the trees for that to provide any effect of screening.

Q I think you said this was kind of looking in the opposite direction or to the south?

A South, southeast, yes, towards the location of another wind farm turbine. And there the topography kind of slopes down, and then in the far background of the photo, further back up on the ridge and pretty much centered in that photo, what I attempted to do is show using the map or orientation where that wind turbine was being proposed. It's clearly an unobstructed view, not even any on site trees or bushes or anything that would shield the view.

Q And is this the look out of the Taylor home basically?

A From the front yard, yes. The view southeast from the front side yard.

The next photo, that just shows a testing tower I believe it is adjacent to the Taylor property just south of the location of that wind proposed turbine to the east of the Taylor residence.

But where that's located, along the north side of Boynton Road again, is just south of where the stake is which as I understand it is where the

turbine is proposed to be constructed.

Q And the next photograph, it's much better on the paper than on the screen, but that's the Walter residence on the north side of Litwiller Road between Townhall and Bethel.

And the next photograph, if we could, is the Maurer residence on the south side of Litwiller Road between Bethel and the Hopedale. That one has perhaps the best opportunity to screen the view because of the on-site mature trees. And to the southwest I believe is where the nearest turbine is going to be located, but again still in fairly close proximity.

And if we go to the next photograph, it appears to be new construction on the Litwiller residence property on the east side of Bethel Road between Litwiller and Boynton.

The following photograph is another representation of that new residence on the right and the shop building on the left.

The following photograph is the original, what I believe to be the original Litwiller residence. All located, you know, right in a row on the east side of the road.

Can we go back just for a second, Mike, and point on the map -- this is the Litwiller property right here, correct?

A Where it's pointing, yes.

Q And that property is surrounded by a number of turbines; is that right?

A North, northeast, several to the west and northwest, and to the south also, yes.

Q Is that terrain there fairly flat?

A It was pretty flat, yes. It's certainly not enough topographic relief to provide any effect of screening.

Q And that again is the Litwiller home; is that correct?

A That's correct, the new construction.

Q So could you tell from the angle that you were taking the pictures where the turbine would be according to the map?

A Well, that is a view east, slightly southeast, of that residence, so basically every point on the compass.

Q Okay.

A And that photograph is a view southeast.

Q Now I think we're caught up.

A And I'm not sure I can pronounce this name correctly, the Egli residence on Hopedale Road between Boynton and Armstrong, a nice brick ranch, which is again in pretty close proximity and surrounded by, within the footprint of the project area.

This is the Bradshaw residence on the north side of Armstrong Road between Bethel and Hopedale.

Q Again the turbines would be visible from the property?

A Yes. If I recall correctly, that particular residence, there is turbines proposed just to the left in the photo, so that would be to the north and northeast. And I would have to look at the map to refresh my recollection about any others around it.

Q Let's go through these and then we will come back to the map.

A Okay.

There is another Walters residence on the west side of Stagecoach, south of Armstrong, kind of an angle road that extends south from Armstrong.

And there we're getting into one of the Mendota Hills properties.

Q Look at the various homes and tell us -- this is the Taylor residence. Is that turbine there that's B16-4-1 the turbine that's behind the trees; is that correct?

A Correct.

Q And the other one, that's B21-2-1 is off in the field?

A Yes.

Q And there is another one there that looks like B22-1-2, would that also be observable from the Taylor property?

A Yes.

Q It has to stick up higher than the ridge line in order to catch the eye?

A Yes.

Q How about B15-3-1?

A It depends on the height of the turbines.

Q This is the Bradshaws and the Walters, all the turbines are to what direction?

A East, southeast.

Q Will all these turbines be visible from the Bradshaw and Walters residence?

A I believe so. There is more to the north. I believe I may have cropped that a little short.

Q It looks like the Egli home would have a nice view of about seven or eight turbines, maybe ten; does that sound right?

A Yes, quite a few of them, west, southeast, east, southeast.

Q You did some comparison studies; is that right?

A Yes.

Q Tell us about the comparison homes that you are referencing here in the report.

A I used this in the previous zoning matter for a proposed wind farm. Going forward -- back up one, Chris. There you go. That's a home at 965 Bradshaw Road. That's the Paw Paw School District. That's the west side of 39. And that's just a view south down Big Hamm Road, and you can see one of the turbines.

And I would point out that those are, from memory, about 1250 feet in height from the base to the tip of the rotar, so you can kind of imagine the scale with adding about 50 percent of that to the height of the turbines that are proposed in

Tazewell.

If you go to the next photograph, hopefully it's a better view of that residence.

Q Before we move, is this a turbine right here? (Indicating).

A Yes, it is.

Q And is that one right there? (Indicating).

A Yes.

Q And another one? (Indicating).

A Yes.

Q How about right here? (Indicating).

A I believe it is, yes.

Q How about right here? (Indicating).

A There is quite a few of them, which that next photograph also picks up one behind it.

Q (Indicating).

A Yes. And the following photograph gives you a little bit more of the orientation along the south lot line, and what the house looks like. It's kind of in a field of wind farm turbines.

Q What do you know about this house, Mike?

A I inserted that slide in my report, a basic description of the property. It was new

construction completed in the fall of '05. It's a three bedroom, two bath home on a five acre lot, carved out, a nice lot that had a couple of mature trees on it.

The house has hardwood floors in the living room and dining room, and a fire place, sliding glass doors. The plaster bedroom has a private master bath and shower and whirlpool tub. Split floor plan and a full basement, and attached two-car car garage. Also an out building that is 52 by 48 with water and electric. It's the Paw Paw School District.

And upon completion of construction it was listed in the fall of 2005. It was listed at a price of 329 thousand. That is about right for what it is. Nice size lot, private master bathroom. It compares favorably in the market to many of the existing homes in the area, you know, well kept homes, homes that have updated features by today's standards, and many of those homes were listed and selling in the high 200s.

At the point in time this was on the market there was very little in the way of new construction, but I judge that to be a fairly

reasonable asking price. But like with most, you expect the list price to come down a little bit to result in a sale.

This property sat on the market for about 840 days, having gone through several different realtors before a sale was finally accomplished at 275 thousand dollars. 28 months, 840 days is -- let me put it this way, it is a marketing time that a relocation company just would absolutely not deal with at all.

If somebody owned that property and sought to bring it into a relocation program, they see market value at typical marketing times and if a property is in a market location or a particular setting where the marketing times are longer, the relocation companies charge an appraiser that's doing such a relo their appraisal to determine the value assuming a reasonable marketing time, and they usually use in the neighborhood of 60 days perhaps to as long as 90 days.

I found in Lee County at the time this property was originally listed outside the Mendota Hills project area that the typical marketing times were over a hundred days, so even that wouldn't

meet the relo standards, but even the other properties, just in homes located in close proximity to Mendota Hills, were also experiencing marketing times in excess of 300 days, 400 days as this one, the end result was 840 days, and a discount from the original asking price of just under 17 percent or 55 thousand dollars.

But a typical price reduction for new construction at that point in time, and normally that was kind of the peek of the market when everybody was buying properties with that irrational exuberance as we are hearing about now with the mortgage companies busting and so forth. But new construction is often selling at list price, and in some cases, you know, even a competitive bidding prices higher than list price, but I'm assuming for the sake of this study that a normal reduction would be in the neighborhood of five percent under normal market conditions from list price. And these still shows a discount that can be attributed to the wind farm of about 11 and a half percent.

Now, again, that's new construction and the builder had a pretty high basis in it compared to

existing homes, which may have been owned for five, ten, twenty years or longer and just do not have enough flexibility. The end result was over, you know, 800 days in marketing time and a much higher than normal discount to the sale price even after that time.

Q Did you learn since you prepared this report any additional information with regard to the home sales in Lee County?

A Well, in Lee County what I did learn was there was, for many of the homeowner's in close proximity to the Mendota Hills facility, that when the new assessment came out they brought in considerable testimony to the Board of Review from a number of property owners claiming that they could not sell their homes and, bringing in evidence of having listed the properties and with no success.

And that's part of the problem with doing a full blown empirical study in a location such as this, that there just is not a large amount of relevant data. But, that in itself is data in a sense, if you look at it from a, you know, sort of an appraisal perspective or investor perspective,

just the absence of sales is evidence in itself that there is a considerably smaller demand or ability to sell properties in the face of these wind farms.

Q What did you learn with respect to the amount of time these properties were listed for sale? You talked about them coming into the tax assessor to try to get a reduction in the amount of appraised value, what did you find out about the time these places had been for sale?

A Again, time and time again they were citing, listing the same thing, they had expired, had been pulled off the market because there was nobody even coming to look at the properties, that there was just a dearth of interest in properties, residential properties that were located in close proximity to these turbine facilities.

Q Okay, Mike, did you come to some conclusions with regard to the effect on property surrounding the proposed Rail Splitter site?

A I did. I did a fairly generic analysis here just to show what the objectors, just for the objectors, your clients. This doesn't even begin to cover all the homes that would actually be

impacted but -- excuse me -- with seven objector homes within the footprint, and assuming an average value of 275 thousand dollars for these existing homes, and as I mentioned earlier the existing homes I would expect them to be discounted deeper than the new construction because, frankly, most buyers in the market will pay a higher price for new construction compared to existing homes. The existing homes should sell and can sell and do sell, but usually they're not as high up on the list as new construction, so using a somewhat higher discount rate of 20 to 30 percent for existing homes, that would vary depending on how many turbines are nearby, how close they are, and then the individual perceptions, I'm just using an average of 25 percent diminution factor or a loss of value, and only counting seven objectors' homes, there is nearly half a million dollars in reasonably certain value loss if every one of them tried to sell. They would be looking at pretty significant discounts to get out of those properties and back into a more serene or rural setting.

Q I think we've touched on these, Mike. Is

there anything else you want to add regarding the basis of your opinions that we haven't talked about?

A Well, there is a lot of property that raises concern for neighboring owners, but usually those properties are down the street and the operations are being conducted with completely enclosed buildings. A wind farm is really unique in that regard, you cannot conduct the operations within an enclosed building, or they're not going to work. You would have to build a 40 story building to run the operation if you would.

They take up tremendous amounts of land or cast a shadow on the view shed, if you will, of thousands of acres as opposed to much smaller land areas for even a big project. A couple hundred acres would be considered a big project in most cases. I think I counted the section and it's 640 acres. I think I counted 64 hundred acres just in Tazewell County that will have at least one turbine located in it and otherwise be in the shadow.

These wind farm turbines surround the properties, and certainly there are some lease payments being made, or at least agreements being

entered into to pay the participating property owners and it probably will be a benefit to those particular properties and their value as long as they're passing on the increase in utility taxes to the utility company. But I would add, the benefit to those applicants and the energy company themselves is really at the expense, and not just from an aesthetic standpoint but a immeasurable sense, on the property values.

As a real estate appraiser, having worked on many litigation sites, I found that not to meet the standards for most the zoning changes of real estate when it came at the expense of surrounding owners.

Q Mike, are you familiar with the consent of a guaranteed property -- excuse me -- I need one of those glasses of water, a property value assurance plan?

A I worked at a few of them and designed one very recently for a project that raised a lot of concerns out in Kendall County. What a property value assurance plan is is a mechanism that any concerned property owners can elect to sign up for, and depending on how it's designed and there is a

variety of ways they can be designed, where the applicant for the land use in question essentially pays for a couple of appraisals of the property to set a baseline, a value for the property. And then depending on the circumstances and how it might or should be, you know, modified or customized to fit the circumstance it provides for mechanisms to pay property owners any loss in values should they sell at something lower than the appraised value. And there really should be a mechanism to adjust the value up in line with the rest of the market area, in this case, you know, that part of Tazewell County that has no wind farm, you know, I mean if this is approved.

There is also property value assurance plans that reflect -- oh, for example, there was a wind farm application or project out in Kern County in California, which is the Bakersfield area, where a number of area residents objected and the wind farm company, the energy company, just bought those homes out entirely and allowed those people to relocate without having to first experience a few years of whatever the worst fears might be or whatever the reality of the wind farms would be for

them.

Q I'm sorry, go ahead.

A Those property value assurance plans can be customized to fit the circumstances, and I certainly would be willing to work with the Board if you wanted to approve this project with a condition to that effect. I do have some experience with that.

I am not trying to get another job, but part of the reason that I am here is there is legitimate concern, this is the biggest investment a lot of people make, their homes.

Q What situations have you seen where property value assurance plans have been agreed to?

A Well, I've seen it with respect to a few different sanitary landfills. I've seen it most recently with respect to a limestone quarry that was first denied all through the zoning process in Kendall County and then received approval through the court process, and the applicant, to their credit, in that matter even though the court didn't require it still was willing to buy the property value assurance plan. They put their money where their mouth was when they assured the residents and

the County Board that their property values aren't going to go down, they're backing it up.

Q So in this case where the Application and Horizon Wind Energy says that property values won't go down, if there is a property value assurance plan agreed to, what would the risk be to Horizon if they're right?

A If they're right, The risk would really be some fairly nominal administration time and expense to retain a couple of local appraisers to establish baseline values and then monitor, a little communication with the neighbors, which I would think they would want to do anyhow just as part of a good neighbor policy, keep them apprised of what's going on with any issues of concern.

Q And if Horizon is wrong and there is no property value assurance plan, what is the risk to the landowners surrounding the project that didn't enter into one of the thousand dollar a year agreements or didn't enter into one of the five hundred dollar per turbine agreements to be on their property?

A Well, in my estimation, the risk to them is either the inability to sell their homes or having

to sell at a fairly significant discount, a substantial loss in value, in order to relocate out of such a project area.

In fact, I will take it a step further. If the supply of affected homes increases, that could really exacerbate the effect of this. You know, all you need is 20 properties sitting on the market on wind farm locations and the prices are really going to plummet.

Q Is there such a plan in the Application filed by Horizon Energy?

A No, there isn't.

Q Would this proposed plan then help the property values or the assure the property value of the residents who own land around the property?

A If it's well drafted it could very well be a valuable tool for as much the area residents, but for the company. You can buy a lot of good will with that kind of assurance.

Q One second, please.

MR. SPANOS: I have no more questions for this witness. I would like the point out to the Board that we have attached two sample property value assurance plans under tab 32, the first

couple of documents under tab 32.

Thank you.

MR. MCCANN: Before we start any cross examination, would you mind if I grab a cup of water?

MR. SPANOS: Could we take another ten-minute break before we get started?

CHAIRMAN TOEVS: Yes, let's take ten minutes. Does the Board move to take a ten-minute recess?

MR. MILES: How long are we going to go tonight? We would like to get our cross done in one cross examination, either tonight or come back and make sure we get it done.

CHAIRMAN TOEVS: You got one more expert witness?

MR. SPANOS: Well, that's the ruling. That's all I have left. Yes, sir.

CHAIRMAN TOEVS: I would estimate that we might adjourn at 10 or 10:15.

MR. SPANOS: I would agree to that. I think Mr. McCann would not like to have to come back the second time, if we can do him tonight and not take a break. If that helps getting him done,

let's go. Whatever.

CHAIRMAN TOEVS: We will just go?

MR. MILES: Let's take a short break and let him get a drink.

(Whereupon a short break was taken).

CHAIRMAN TOEVS: Okay ZBA, do you got any questions?

MR. LARSON: I heard the term when we started that there was a study behind tab eight and nine. I think I heard that.

MR. SPANOS: I'm sorry, it's appendix eight and nine in the Application is what we're referring to.

MR. LARSON: I thought we were talking about the tabs in your handout.

MR. SPANOS: I didn't include anything that was not already in the Application.

MR. LARSON: How many data points did you have in this, your analysis of the -- was it -- what was the location where this piece of property was located?

MR. MCCANN: On Bingham Road.

MR. LARSON: In Steward, Illinois. What site was that?

MR. MCCANN: That's Mendota Hills Wind Farm.

MR. LARSON: From how many data points did you have that you used to come to your conclusion on your 4 points here of the projected value diminution.

MR. MCCANN: I wish that was a simple answer, but it's really one closed sale.

MR. LARSON: This example --

MR. MCCANN: Yes, but there are quite a few properties that have been pulled off the market and had extensive marketing times. And why that's relevant is because as time goes on, the property gets stale on the market, and the price drops. It's a typical situation of the real estate plot.

MR. LARSON: Was this piece of property built by an individual to live in, he lived in during this time, or was it a spec home?

MR. MCCANN: It was a spec home.

MR. LARSON: So it laid dormant, empty, during that time period?

MR. MCCANN: As far as I know, yes, sir, it did.

MR. LARSON: Would you consider this maybe

a worst case scenario at 840 days? That sounds like a long time.

MR. MCCANN: It is a very long time and being that it's new construction, I would expect that some homes, if they stayed on the market rather than being pulled off the market, could even exceed that.

MR. LARSON: And in this example, the value loss was 16.6 percent?

MR. MCCANN: Right.

MR. LARSON: How did you get to the 25 percent average loss of value in your conclusion?

MR. MCCANN: Well, there is a certain amount of judgment that goes into that based on other situations where you have problematic properties and the type of discounts that can typically be realized or are typically realized when a property losses its general appeal on the market. And that could be for a number of reasons, you know, ranging from, like I mentioned the Braidwood situation, and I don't mean to compare the presence of a wind farm with contamination of groundwater, but in some sense it is comparable, the market aversion to buying and living in a house

that has some type of dis-amenity or negative effect.

MR. LARSON: But you had no analytical data behind that, it was an estimate, the 25 percent?

MR. MCCANN: It's an estimate, yes, it's not an absolute fact.

MR. LARSON: I'm curious, do any of your appraisals add or detract value based on school districts that they're in?

MR. MCCANN: Well, if I'm appraising a property in one school district and using a comp from another, I very well might make an adjustment if the market shows a premium is being paid in one of the school districts versus the other, yes, that can be an important factor in residential properties.

MR. LARSON: What type of differentiations might there be?

MR. MCCANN: Well, I can tell you this, in Aurora, Illinois, for example, there is part of it, a newer part of town, that is in the Naperville School District which is considered much more desirable, and you go literally across the street from the Naperville School District to the Aurora

School District and you might see property values 50 thousand, 75 thousand lower, significant discount from what they are in the Naperville School District.

MR. LARSON: So in those is there a linkage or a correlation between the value of a school district and its revenue, revenue being -- the tax revenue that is supporting those schools?

MR. MCCANN: Oh, I think I understand your question. If the school has more money to spend, does it enhance the quality of the market perception?

MR. LARSON: Right.

MR. MCCANN: I think the simple answer is yes, but there are certainly some examples that I'm aware of where school districts spend money frivolously, and just raising more tax revenue is not necessarily translated into a better education or increased property values. And one of the city --

MR. LARSON: I understand there is a lot of variables, but do you recognize or see in your work that school districts that are well funded, tend to have higher property values than school districts

that do not have as much?

MR. MCCANN: I would have to say yes.

MR. LARSON: So if this application were to go through and tax revenues were increased, hence the schools were to benefit from that, that could have a positive effect on property values?

MR. MCCANN: County wide or district wide I would say so, but within the project area itself, I don't see that, no.

MR. LARSON: So your experience doesn't see that kind of impact, is that what you're saying?

MR. MCCANN: I'm saying with a higher funding for the school district, as a general rule, property values I would expect them to benefit from that. District wide or county wide, within the project area itself, the dis-amenity or the negative influence, the market conception is going to over shadow the benefit of a better school district, a better funded school district, because there will still be other property in Tazewell County outside of the footprint of this project that they can go avail themselves of that better school district.

MR. LARSON: Thank you.

MR. MCCANN: Certainly.

CHAIRMAN TOEVS: Any other questions from ZBA? Go ahead, Ken.

MR. KLOPFENSTEIN: I just want to make sure that I understand the property in question it's new construction?

MR. MCCANN: Yes.

MR. KLOPFENSTEIN: What year was it constructed?

MR. MCCANN: Completed in the fall of 2005.

MR. KLOPFENSTEIN: And was that before or after the wind farm was constructed?

MR. MCCANN: After.

MR. KLOPFENSTEIN: After the wind farm was constructed?

MR. MCCANN: Yes.

MR. KLOPFENSTEIN: So unlike the current situation where the homes already exist and a wind farm is going to be constructed around the homes, this was a construction in an area where the wind farm already existed; is that correct?

MR. MCCANN: Well, yes, but I do recall speaking with the realtor that had the second

listing on this house, and my recollection is that she said that the gentleman had bought the lot before the wind farm was completed, so it was really just the natural conclusion of his original plans.

MR. KLOPFENSTEIN: Thank you.

CHAIRMAN TOEVS: Any other questions from ZBA? Okay, Mr. Miles.

MR. MILES: Mr. Lasco.

MR. LASCO: Thank you, Mr. Chairman.

Q Mr. McCann, could you tell us when you were retained for this engagement, to look at this Rail Splitter proposal?

A I believe it was about a week ago.

Q And how much time have you spent on this engagement since you were retained?

A About three solid days.

Q And that's when you did the things you described, you drove around the area, you stopped at all the homes, you took the pictures, and figured out where the turbines were going to be and so on?

A Yes.

Q Did you go up to Paw Paw or the Mendota

area in those three days?

A Yes, I did.

Q And did you personally look at this 965 Bingham Road home when you were up there?

A Yes, I did.

Q What document are you referring to as the REPP report, R-E-P-P, report?

A (Indicating).

Q Is that something that you found in Horizon's Application?

A No. I found it referenced in Horizon's Application.

Q Are you aware of a published study of the effects of a wind farm, wind farms on property values that you think is better than the REPP study?

A Well, I've read synopses or summaries of a variety of wind farm studies, including assessor surveys, and one from the Royal Institute of Chartered Surveyors that found the negative impacts. I found another study referred to that the author was using high voltage transmission towers as a comparison that he felt was valid, apparently, because of the height of the structures

and the nature of the use.

And even though that was a static use or passive use, if you will, compared to an active use with spinning blades, he still found a ten percent value diminution in close proximity to the high voltage towers.

There is a number of studies cited in appendix eight and nine, some pro and some con, mixed results really. And I would point out that the assessor surveys, while one of these studies in the application seems to hang their hat pretty heavily on this assessor survey because I think the quote is something along the lines that the assessors are required to be objective. But it doesn't say assessors are not only supposed to find market value but they're supposed to assess properties uniformly. So they have another charge that is really contrary to separating out properties that have distinctives such as being in the project footprint of a wind farm.

Q So my question was, are you aware of a study of the effect of wind farms on property values that you think is a better study than the REPP study?

A Frankly I don't think there has been a thorough study of a populated residential area adjacent to such a facility, at least that I have seen.

I've seen a variety of studies and synopses of the studies that are, some are flawed, some are weak, but all in all it gives mixed results, and there is nothing that I've read that is convincing to me as a real estate appraiser that there is any empirical evidence that shows that wind farms do not cause value loss in the project area for residential properties.

Q So, are you aware of a study that you think is a better study of the effect of property values, wind farm property values, than the REPP studies?

A Well, I think my study is better than the REPP study, frankly, because it focuses on one property in particular, it tells the whole story from cradle to grave as opposed to using 25 thousand pieces of data for properties that don't even have a view of the wind farms. And so, in that case I would say one piece of data is better than a large scale, you know, effort that doesn't really use methodology that could result in finding

any impact.

Q One of the things you criticize about the REPP report is that it didn't look at plots in Illinois, right?

A That's correct, yes.

Q So it would be better, I take it your point is it would be better to look into specific properties in Illinois, right?

A Well, certainly every market can be a little different, while values can be dropping in San Francisco and Boston, for example, they can be rising in Chicago, so different markets react different ways at different times, and geographic economy is something that's required under USPAP, and applying a study that was prepared in a far distant location or a variety of distant locations and saying that there is, you know, compelling evidence in this market area, it's just not consistent with USPAP.

Q So it would be better to look at Illinois?

A I believe so, yes.

Q Would -- I'm not familiar with USPAP. Does USPAP have standards for the things an appraiser should do if they're asked to appraise the value of

a home?

A Well, it doesn't set up specific steps, but, yes, if you can be more specific. I will be happy to try to answer it.

Q Does one of the methods of appraising a home look at comparable sales or the sale of other homes that compare to it?

A Yes, it is.

Q And in order to do that you have to get certain data about the homes to make a comparison?

A To the extent possible, yes.

Q And what kind of information would a professional appraiser want to gather to make those types of the comparisons?

A It depends on the question they're trying to answer, and in this case I was trying to find whether or not there was any value loss, and I found one good case study example for a home that was built right in the shadow of a number of turbines, thus telling the story cradle to grave.

Q If you were doing -- I want to go back to asking you about the compared sales method to value property.

A We haven't talked about it yet, but I would

be happy to.

Q There are standard things you would do if you were looking at the properties that were comparable to each other, right?

A If you are looking at the tract home for the decision you can see the sales, certainly that is a method you would want to use.

Q You can also appraise homes that are not identical in tract sales?

A Yes.

Q And the sales technique is to go out and see if the home that you are looking at is, to find homes that are substantially comparable to each other?

A I didn't hear part of your question.

Q If you are trying to appraise a home that is not in a tract subdivision of identical homes, you need to go out and look for, using a comparable tract sales technique, as a practicing appraiser, you go out and look at homes that are comparable to the home that you are trying to appraise?

A If I put a value on that home in particular that is a step that I would follow, yes.

Q And that's what I mean, if you are trying

to put a value on a home, and if you go and look at homes that are comparable, you would look at factors like how old the home is?

A Certainly.

Q How many feet it is?

A Size and condition, sure.

Q The quality of upkeep, the quality of the landscaping, the style of the home, neighborhood, things like that?

A Sure.

Q Anything else that should go on that list?

A I would be happy to answer your questions, but it varies from site to site, house to house. There is such a wide variety that, you know, I'm sure we would like to go home tonight sometime.

Q Did you actually yourself do an appraisal of the 965 Bingham Road home that you were talking about in Paw Paw, Lee County?

A I did an analysis of the home, again, you know, looking at it from cradle to grave, but I did not put a market value opinion on that house for any purpose such as going to the bank for a loan, or for the sale to a perspective buyer, anything like that.

Q So you have no opinion then whether the original listing price of that home of 330 thousand dollars was a fair market price, right?

A Well, I did do some analysis that confirmed it was a reasonable price in light of what it was and where it was, but for the wind farm.

Q If a bank asked you whether that was a reasonable value on the basis of which to make a loan, your answer would be you didn't have enough information to tell them; is that right?

A No, that's not quite right because, frankly, with brand new construction, lenders will often look at the construction costs or the use of a cost approach. And in this case, I was able to learn that he had purchased the lot for I believe it was 67 thousand dollars, and that it was just under 18 hundred square feet, and I did a brief cost approach on it using 125 dollars a square foot. And frankly, what it showed was he sold it for less than cost.

Q Did you gather any comparable sales information with respect to that home?

A I did not have any comparable sale information that would really be comparable to that

home, so no.

Q Did you go inside the home and walk through it and evaluate its condition and things like that?

A I did not. It was new construction.

Q Do you have any experience with appraising homes in the Paw Paw or Lee County area for the purpose of determining their value?

A I have evaluated some homes in Lee County in the past, but not for individual market value appraisals.

Q You have never done a market value appraisal of a home in Lee County?

A That's correct.

Q How many homes, other than the 965 Bingham Road home, have been sold within the view shed of that Mendota Wind Farm since the wind farm has been built?

A I don't have a number on that. The MLS listing was showing one expired listing after another.

Q Did you find any other homes that have sold within the view shed of that wind farm?

A I did, in a previous study I did. It was either Stephenson or Ogle County, and again what I

was finding time and time again, it's made reference in my report to having reviewed my prior value studies, that's exactly what I was referring to. And that is that the homes in the Paw Paw area, or in the Mendota Hills area, were experiencing extensive market times and lower sale price and, you know, were generally a fair amount lower. Showing market conditions that were inferior to a location that didn't have a wind farm.

Q So are you saying that you went there and you looked for other properties that had sold but you couldn't find any?

A More recently what I saw was a lot of expired listings. In the past I had found the properties on a broader basis, some within the view shed, some not in the view shed, and you know, again, showing average lower sale prices and longer marketing times, but there -- that was more of a broad approach, not terribly dissimilar to some of the studies that actually use sale information or market information as opposed to opinions.

But, the best piece of evidence that I found to date in several of these studies is

Bingham Road plot.

Q I'm sorry, maybe I misstated, but I didn't get the answer as to whether you ever tried to find, either in connection with this engagement or some prior engagement, did you ever go and try to identify homes that have been sold since that wind farm was built?

A I think I did answer it, or I certainly was trying to. Time and time again what I was finding is when they were in close proximity to the Mendota Hills facility, the listings were expired, that they were pulling them off the market, that there were no takers.

Q You went and you looked and you found no homes had sold, is what you're saying?

A What I had found as far as the MLS listing, yes.

Q So you looked for homes that had sold in the view shed of that wind farm since it was built and you couldn't find any, all you found was expired listings?

A I found listings that had expired, that had been on the market for --

Q How many other homes did you specifically

look at the amount of time they spent on the market, where the price was a discount off the list price, where they ultimately have not sold besides the 965 Bingham Road property?

A I have not found any other sales within the immediate footprint of the view shed. You have to be a little more specific because I did describe the broader study that covered the area that included Mendota Hills, many of which were in the view shed as I defined it earlier, further out, but not within that, you know, half mile, three/quarter mile, not in the what I would call the more immediate impact area.

Q So you think you need to look specific -- you would need to look specifically within a half to three/quarters of a mile, you would not find out what you need to know if you looked at property two miles away?

A What I said previously, and I still hold as an opinion today, when you are right within the confines of the projects, the footprint, you are surrounded by these turbines or immediately next to them, that the impact is going to be fairly pronounced, and as the distance from the edge of

the wind farm increases, that impact decreases. I think about a half a mile, three/quarters of a mile, depending on what it is. And if there are any obstructions, it's not a significant view shed issue, there might be, you know, fairly nominal impact.

You get out two miles, there can still be. I think we heard Mr. James testify earlier that that's about the point where the sound issue disappears or becomes almost immeasurable. But when you are right in the project, standing or sitting in a running car with the windows open and those turbines are running, to me it sounded like a very slow helicopter. So the more you are within the immediate project area, the more noise you hear, the more visual impact you are going to have, and the more pronounced the market aversion to buying the properties is going to be.

Q Did you do a measurement as to how far the Bingham Road home was from the nearest turbine?

A Did not do an exact measurement at all.

Q Did you do any measurement at all or any way to estimate that?

A The nearest one appeared to be within a

quarter of a mile, 12 hundred feet or so, 12, 13 hundred feet.

Q You're familiar -- I'm sorry, give me a second -- did you appraise for value any of the homes of the objectors that you were talking about earlier?

A No. What I used was an example for illustrative purposes of an average value of 275 thousand, but I would not stand here and tell you that's a value that you should take to the bank with any one of these houses. It was really just kind of an average value.

The Litwiller property, for example, has two residences and a big shop on it, and one of them was a brand new construction, fairly large home. I would expect that property would sell for significantly more than 275 thousand.

Q But you're not prepared to give an appraiser's opinion about the value of any of those homes; is that right?

A I just told you the extent of my valuation of those homes.

Q Would you agree the best method to evaluate whether a wind farm has an affect on property

values would be to perform a compared sales analysis based on actual sales of the actual properties in the immediate area of an operating wind farm?

A What I would agree with is the best way to determine the impact is see what the market reaction has actually been under any pricing method. When you have a lack of data, as I stated earlier, relevant data of single family homes that have sold that can be measured, as you are describing, compared sales data, that's an indication in their own right there is a market aversion to properties of that nature. So therefore, compared sales analysis does not really lend itself to that particular kind of circumstance.

Q Mr. McCann, I don't want to speak out of school here, but we could do this a lot faster if you just answer the question that I ask. I am not going to stop you from talking, but we want to move it along.

MR. SPANOS: I would object to counsel instructing the witness under these circumstances, when counsel doesn't get the answer he wants,

although the answer is responsive to the question. If counsel would quit asking the question twice we would also move on a lot quicker.

MR. HOLLY: I would like it at this time if both parties would move along a little quicker, so I think that's good advice for both.

MR. LASCO: I appreciate that. And I will do what I can here.

Q I am going to need to ask this question again. Do you agree that the compared method is the accepted appraising methodology for determining whether a particular proposed use of a property will affect surrounding property values?

A It depends.

Q You mentioned earlier that you were involved in wind farm projects at Stephenson, correct?

A Yes.

Q You testified at zoning hearings there?

A One hearing, yes.

Q And you were working with the same lawyer that you are working with for this case, right?

A No. Same firm, different lawyers.

Q Mr. Porter?

A Yes, Mr. Porter.

Q Did you agree the compared method is the accepted appraising methodology for doing a compared sales analysis?

A I did discuss compared sales analysis and that is the ideal technique when, if I recall correctly, when the situation lends itself to it.

Q I recognize the request to move things along, and I apologize if you all want a break. I have a transcript of Mr. McCann's testimony, and it seems he might do with a little refreshing of his recollection as to what he said there. I recognize that this is a time consuming process.

MR. HOLLY: You can ask him if some sort of document would refresh his recollection. I don't know that he has indicated that one would.

CHAIRMAN TOEVS: I can barely hear you.

MR. LASCO: You cannot hear me?

CHAIRMAN TOEVS: Now I can.

MR. LASCO: I thought I was speaking up.

CHAIRMAN TOEVS: No.

MR. LASCO: I would like to ask the witness to look at the document here, which is a transcript --

CHAIRMAN TOEVS: Come up and show it to him.

MR. LASCO: -- of testimony.

MR. SPANOS: Can I see it first?

MR. LASCO: Of course you can see it first.

MR. SPANOS: What page?

MR. LASCO: I will give you that when I get back to my desk. How about the zoning chairman?

MS. DEININGER: Yes.

MR. LASCO: I have one more copy if anyone else needs one. One of the Board members?

Q Would you look at page 41, and at line 15 on that page there is a question that your lawyer asked you, "How does one go about determining if a particular proposed project or particular easement or a particular use of a property will affect surrounding property values", do you see that question there?

A Yes.

Q And you gave the answer "The accepted appraisal methodology is essentially defined as compared analysis", right?

A That was part of my answer.

MR. SPANOS: I object at the attempted impeachment. He hasn't established an inconsistent statement and is now paraphrasing the testimony out of the deposition and testifying while he is doing it.

MR. LASCO: I'm just asking him if he gave that answer, that's all.

MR. SPANOS: And you are reading an answer and paraphrasing it and it's not the complete answer.

MR. HOLLY: You can ask him about what's in the transcript and any questions that's associated with it that you think is appropriate.

MR. LASCO: I am going to try to do what I can to move this along.

Q You yourself used compared sales analysis many times in engagements where you have been asked about the effects of a project or proposed project, haven't you?

A When and where possible, yes.

Q And you have used it for a transfer station, garbage transfer station?

A Yes, I have.

Q And you used it for a landfill project and

quarry project?

A Yes.

Q And for a peeker plant project up in Bartlett, Illinois?

A Yes. You have done your research.

Q I haven't had a lot of time. I tried.

I will try to make this quick. In a compared sales analysis what you are supposed to do, as I understand it, is to try to compare actual sales that are near an existing use that's similar to the proposed use, and you want to compare those sales to the sales of other properties that are similar except that they're not near that use, right?

A Correct.

Q And so with the wind farm you want to look for properties that are near wind farms and compare their sales to properties that are otherwise similar to those but not near a wind farm?

A Yes. If possible, yes.

Q And you have the target area that is a wind farm area?

A Well, if there was a large enough data base, certainly it would lend itself to that target

area and that controlled area methodology in using compared sales as a larger data set, but, as I said there is not a larger data set, there is a limited amount of information.

Q I want to make sure we have got the terminology down. The target area is the area around the wind farm?

A In the immediate proximity to, yes. If there were more homes, more homes selling, that's what I would use as a target area.

Q And a controlled area is some other area that you identify as being similar in other respects, but it's not near the wind farm, right?

A Again, the same circumstances, yes.

Q And then you gather information on the sales of both properties and compare them to each other?

A Basically, yes. The sales prices, the days on market, the percentage of list price sold for, rates of appreciation if properties have sold and resold.

In this case there just wasn't the opportunity to do sales and resale analysis, there was the original cost and then sale price

information that was the best available information, so that is what I used.

Q And when you do compared sales analysis, you want to make sure that the properties you are comparing to each other are similar to each other in the way we talked about before in terms of age and condition and factors like that?

A Yes.

Q And just to be clear, I think we already know the answer to this, but you have never done comparison sales analysis of the effects of wind farms on property values in the area of the wind farm, right?

A In a broader sense I did from the larger data set from Lee County versus Ogle County, which I believe I testified to -- Stephenson or Ogle County, I don't recall which -- but not on a property by property basis as I think you are alluding to.

Q By the way, when you work on this kind of assignment, do you also sometimes rely on interviews with assessors in an area that has similar uses?

A Well --

Q I don't recall if you mentioned that or not.
A I do talk to assessors to find out some information, but I certainly don't adopt opinions of professional assessors who have an obligation to uniformly assess properties as well as find the market value.
Q So, you would use supervisor of assessors as a way of gathering information for, in order to evaluate potential property value effects?
A It might well be useful. It depends on what information the assessor has or what's -- or how complete it is, how relevant it is. All information isn't equal, it depends on what you are --
Q In the --
A -- valuing and what you are trying to --
Q In that transcript I gave you before, and you don't necessarily need to look at it if you remember, you talked about at what distance from the proposed wind farm you would expect to see a negative effect on property values. Do you remember talking about that in your hearing at Stephenson County?

A Somewhat, yes.
Q And you said once you got out a mile or two you would expect the decreased value to be slight?
A I believe that's consistent with what I said tonight, yes.
Q You proposed a property value protection plan to the Zoning Board for Stephenson County; is that right?
A Yes.
Q They did not accept your proposal, right?
MR. SPANOS: I object. It's not relevant.
MR. HOLLY: Is there some kind of relevance to that?
MR. LASCO: I mean I guess that's for you to judge. I thought it was.
MR. HOLLY: I don't know what a prior Zoning Board has done has any relevance for this Zoning Board in this matter.
MR. LASCO: I take your point and I will move it.
MR. HOLLY: I don't see how it's relevant.
BY MR. LASCO:
Q I want to ask you, you talked earlier when Mr. Spanos was asking you questions about the

public perception of how negative trends of the property would affect the values, is that fair, did you say something to that effect?

A I think that slightly mischaracterizes it, but public perceptions can translate into less demand for property, more compelling decisions to sell, depending on how somebody perceives a particular dis-amenity, it can definitely affect their decision in selling a property at a lower price or not buying it at all and things of that nature.

But it's just not the perceptions themselves, you know, it's not -- I just want to say if so and so down the street said that it's an ugly use that automatically property values are going to drop, it's not that simple.

Q Are your comments about the effect of a perception, is that part of your basis for the opinion that the property values of the objectors here would be affected?

A I think it ties into it, but it certainly is in large part in the lack of conformity and the dramatic change of the character in the immediate area, in the project area, you know, the views and

sound issues and so forth, you know, can and I believe do and will translate into a negative effect on property values, on residential property values in particular.

Q I want to ask you some questions here then about the work you did with respect to the power plant and building of one, you mentioned that before?

A Yes.

Q And that involved a power plant that was going to be built about 32 hundred feet from a residential subdivision, do you remember that?

A Yes, I do.

Q And there were concerns expressed in the community about whether that was going to have a negative effect on property values?

A That's correct.

Q And you were retained by the village I believe to give an opinion whether there was to be a negative effect on property values?

A That's right.

Q And you prepared a report for the village and you gave testimony before the village trustees?

A That's correct.

Q And one of the things you did in that analysis is you looked for other kinds of industrial uses that were near other residential areas to see if those other industrial projects had affected property values; is that fair?

A Well, it's not complete. What I looked for was other combined cycle power plants, and since that was a new particular use in that immediate area, I went to other locations in the country to review operating combined cycle power plants, you know, which again a major difference is the -- two major differences, make it three.

The difference in land area occupied, the fact that the power plant, combined cycle power plant, was not surrounding neighboring residences, and there was extensive screening, berming and buffering, between the power plant and the nearest residences. Those residences, by the way, already backed up to a sand and gravel extraction operation, or a quarry, which is exactly where the power plant was being proposed to be built, in a Chicago Elmhurst Stone Company gravel quarry that was being reclaimed.

Q Did you look at -- one of the things you

looked at when you were doing your analysis for the Village of Bartlett was a quarry in Elmhurst, Illinois, do you remember looking at a quarry in Elmhurst?

A I remember appraising the quarry in Elmhurst, Illinois. I don't specifically remember looking at that for that purpose, no.

Q I will need to give you another document. I have premarked this as Petitioner's Exhibit 10, Mr. Spanos. And here is one for you, please.

Would you look at page eight of that document? I'm sorry, start by the cover page you see. Do you recall giving some testimony to the Village of Bartlett trustees in August of 2000?

A Yes.

Q And do you see here, if you go to -- I'm sorry -- page seven, there is a reference to yourself and your property value study, and then some description there of things that you said, right, things that you talked about?

A This is not my report, this is a staff report or a committee agenda.

Q I understand that. I think it says it's the minutes, right? Next page I think it says it's

the minutes.

A Yes, August 15th, 2000.

Q And you did in fact talk to the board on that day, right, about these things?

A On or about --

Q I would just like you to look at the top of page eight and read a couple -- the fourth line there is a sentence that starts with the word "we". It says, we did a similar analysis of the Weathersfield Subdivision which is located east of the Illinois Elmhurst Quarry. Do you recall the doing that?

A I'm still looking for the spot. Would you repeat that to me again?

Q On the top of page eight.

A Okay.

Q And the third -- fourth line from the top of the page. In the middle of that line, the sentence that begins with the word "we". And really all I'm trying to ask you right now is do you remember doing an analysis of the Weathersfield Subdivision which is located near the Elmhurst Quarry?

A I believe that was the Elmhurst Quarry in

Bartlett. I thought you meant the Elmhurst Chicago Stone Company Quarry, that's what I was not remembering, that studies the property values around that quarry.

Q I am going to save everybody some time. You concluded that the quarry did not have, the Elmhurst Quarry that we're looking at here, you concluded that it did not have any adverse effect on the surrounding property values; didn't you?

A I think what I said was the real question is what effect would the peeker facility -- and that's what I was referring to. I think I was getting background information on sale prices for homes that were adjacent to that existing industrial use, which was a heavy earthmoving operation out in the open. The reclamation of that quarry, however, has created the land on which that historic industrial district was considering there combined cycle peeker plant.

Q You also looked at another power plant in that area called the -- another power plant that was in Aurora, Illinois, right, near a residential area, do you remember that?

A Yes, the Leola and Diehl Road and North

Aurora Road.

Q And you reviewed, I think you testified, a thousand transactions and you determined that there had not been an adverse effect on property values from that power plant in Aurora; is that right?

A That's true.

And that power plant was also tucked into a heavy industrial area that again pre-existed the establishment of those homes. And it was a relative peeker plant that only was running during peek demand periods. And lying between the peeker plant and those homes, I don't remember how many dozens or hundreds of transformers and a field of transmission lines on the east side of Leola Road where the nearest residential subdivision was west of Leola Road. Stone Bridge I believe was the name of the subdivision, and Cambridge Chase.

Q I'm ready to go onto the next question. Do you remember talking there about, to the village trustees, being asked questions whether the height of the smoke stacks for these power plants was going to have any effect on these properties?

A Not distinctly, no.

Q Look at the top of page nine and see if

that refreshes your recollection if one of the trustees asked you how tall the peeker stacks were going to be in Aurora.

A Yes.

Q And you gave the answer they were 25 or 30 feet tall?

A Yes, the peeker plant.

Q And that's the plant in Aurora that you were using for one of your comparisons in Aurora?

A Yes.

Q And one of the trustees asked you what was the proposed height of the stacks?

A Yes.

Q And you said the height was going to be 121 to 137 feet, is that right?

A That's what it says in the minutes, so that's what I'm assuming I said.

Q And so if you turn to the next page, on page 11, at the top of the page, Trustee Nolan then asks you again whether the height of the stacks in your opinion was going to make a difference in the value on the surrounding properties.

A Yes.

Q Do you remember, did he ask you that?

A I don't distinctly remember it, it was eight years ago. Indulge me in my memory a little.

Q You gave the answer that, no, it would not, the height of the stacks was not going to affect property values?

A That's what the minutes say, yes.

Q And then there was a further question from Trustee Nolan, if you look down the third paragraph on that page, Trustee Nolan commented, I don't want to characterize it here, but he asked you about why wouldn't -- why wouldn't there be a difference between a 30 foot stack and a hundred and 30 foot stack, right? And you gave an answer that there was no difference in the perception of the surrounding neighborhood, right?

A I'm sorry, that's not what I said. If you read it more careful, it says Mr. McCann responded that he would not say there is no difference between the perception of the surrounding neighborhood.

Q And why don't you go on and read the rest.

A For some homes there will be a visual impact, they will be able to see it.

Q Keep going.

A The question is, when they go to sell their home are they going to take any less for that. And the market says they are not. And for that market that is true.

Q You also gave examples in the prior paragraph, if you want to track along, of the coal plant in Winetka that had 1 hundred 70 foot stacks and you said that didn't affect property values either, right?

A That particular power plant will be, as I recall, out of operation. It was set down at the, essentially at the level of the lake, the homes that were nearest were up on a bluff and maybe only, from memory, half a dozen homes had a view of it. That is one of the highest priced areas and the amenity of the lake definitely offset any presence of that old decommissioned power plant.

Q Do you remember in that meeting, and I believe this would be my last point, I understand everyone is getting very impatient with me, there is some comments in that meeting about fears some homeowners might have had about the possible affects of the plant on their property values. Do you remember anything like that coming up?

A I remember I had a realtor getting up and making some remarks about --

Q If you look at page nine, there is a paragraph that starts with Ed McCann, in the middle of the page, kind of a long paragraph, and if you go down seven lines into that paragraph, there is a sentence that starts with, "I understand". I understand that everyone has some concerns and there has been some panic in relation to the issue about the ABA Facility, did you say something to that effect?

A That's what the minutes say, yes.

Q And do you remember telling the trustees that the actual factual data shows that -- why don't you look at page eight, paragraph -- lower half of the page, starts with the words "table two". And two/thirds of the way down there is a line that starts with the number 384 and then a sentence that starts with "what", right?

A Yes.

Q And what you said was, what all this actual factual data shows that some of the fears and the panicing we see with these types of facilities and other facilities don't really prove out in the

marketplace when people go to buy and sell their homes, right?

A That was true at that location, yes.

Q And you said what the market indicates is that they can be expected to get the same price they otherwise would?

A That's what the market was showing there, yes.

Q And did you also tell the board that, if you would look at page 12, the first -- the second paragraph on page 12 starts with a reference to yourself, Ed McCann, second sentence of that paragraph -- no I'm sorry -- third sentence of that paragraph, did you tell the board that on the basis of your 20 years of experience and looking at a wide variety of different developments, some of which were known as objectionable land uses, that what happens is that the fears that are often portrayed do not come to pass?

A That's what the minutes say I said, yes.

Q And that's what you said before, before to the village trustees there?

A Yes.

Q And you told the trustees that your

experience and your analysis led you to the conclusion, very bottom of page 11, that property values are a lot more resilient than what some people would lead you to believe?

A And that is true in the close in Chicago suburbs. There is such a high demand for homes that that has proven out time and time again. That's why it's all important to look at market data from very comparable locations. In this case the Mendota Hills area is far more comparable than Bartlett, or Palm Springs, or any other location.

Q How much market data did you look at? You said one house is the market data you looked at?

A No, that's not true. I said that's the best piece of evidence.

MR. LASCO: I don't have any other questions. Thank you.

CHAIRMAN TOEVS: Thank you.

MR. SPANOS: I would like an opportunity very briefly, I promise, to rehabilitate him on a couple of points, just ask him a couple of questions.

Q Bartlett, that's a well-known Illinois agricultural center, right?

A Well, maybe once upon a time, but it's not since I took my training wheels off.

Q Aurora, that's a well-known agricultural center, isn't it?

A No, Aurora has pretty much ploughed down the cornfields.

Q What about Winetka?

A Well, those homes were built a hundred years ago by some of the wealthiest, the north shore residents that built right next to the lake, like Lake Michigan.

Q How many smoke stacks are they going to tear down for this Rail Splitter project and replace with wind towers?

A I don't know of any smoke stacks that are getting torn out, but 38 or 39 spinning propellers towers.

Q Well, isn't it true then in the Bartlett project that you were talking about before, you testified that if they were taking one eyesore and replacing it with another eyesore; is that right?

A That's certainly one way to put it, and it can be a matter of opinion whether or not it's an eyesore, but certainly it's not a moving eyesore.

Q Let me change the question then. They're taking one negative trait item and replacing it with another negative trait item in the same location, correct?

A Well, they're establishing an industrial use, proposing to establish an industrial use in the biggest block of industrial land in that part of the west suburbs, so, yes, it was to the extent that an industrial use is negative, they were replacing one with another.

Q So if we go out to one of the Caterpillar plants and decide to build another Caterpillar plant or similar plant next to it, would you expect that second plant built next to the first one to have an effect on the property values?

A No. There is already a pre-existing condition.

Q And isn't that what we have here in Bartlett?

A In Bartlett, there was a pre-existing condition in Bartlett, yes, several of them.

Q I understand your testimony that -- in fact, let's talk about this exhibit that you were given. That's not your testimony, right?

A No, this is somebody's recap, I imagine a secretary's.

Q There aren't any quotation marks on any of this; is that right?

A That's correct.

Q This was a secretary at a meeting that is taking down some notes and later on typing up some minutes or do you even know?

A Well, I don't really know who took it down. But, clearly somebody was at least attempting to recap, you know, some of the things I said or testified to.

Q Mike, if we understand your testimony, the difference between the attempted impeachment that Mr. Lasco has done, and the case here is that in those cases you have one problem that's either being built next to or replacing another problem; is that right?

A In the framework of what we're talking about here, yes.

Q One thing that may have a potential effect on price or value of property replacing another one that would have a similar effect?

A I'm sorry, what did you say again?

Q So you have one piece of property -- or I'm sorry -- one proposed facility that may have a similar negative effect to either the other facilities in the same area or the one that it's replacing; is that right?

A To the extent that it's negative, yes, but as to a pre-existing condition there was already market acceptance of the presence of not just this industrial use, but a wide variety of industrial uses and, you know, we are talking about one quarry in Bartlett, but actually there were at least three, and there was also the old, you know, the list goes on on how many industrial properties and earthmoving operations there were there.

Q Do we have any of those things in Tazewell County where they're proposing this wind site?

A No.

Q Did we have, in 2000 had they studied any wind projects?

A No.

Q Were there any around in 2000 in Illinois?

A No.

MR. SPANOS: I don't have anything else.

MR. LASCO: I'm sorry, the only question --

I have two requests for the Board, please. First, that Exhibit 10 be placed in the record. And secondly, that would Mr. McCann please give us a copy of his report that he gave to the Village of Bartlett?

MR. MCCANN: Oh, well, I'm not sure that I can do that without approval from the client and that was the Village of Bartlett. But to the extent it's public record, you should be able to get it.

MR. LASCO: Thank you.

MR. SPANOS: I understand we're going to continue and come back another day. While we're here, I would ask the Board to take my exhibit. I have Exhibit 1 in the record as well. I realize there may be some objections to them.

CHAIRMAN TOEVS: I want to do one more thing tonight. How many of you want to cross examine Mr. McCann that are on this list? (Indicating). If your name isn't on this list.

THE AUDIENCE: I don't know if it is on there or not.

MS. DEININGER: It's not.

CHAIRMAN TOEVS: Okay, the two that are,

you and you, your names are on this list. Okay, come up here and I'll swear you in and you can ask your questions.

Christy, all you need to do is come up. I already swore that gentleman in back there.

Christy, raise your right hand.

(Witness sworn.)

CHAIRMAN TOEVS: One of you ask your questions.

MR. EGLI: My question was for, is it Mike?

MR. MCCANN: Yes.

MR. EGLI: You're a good example, you are from Chicago, right?

MR. MCCANN: Yes.

MR. EGLI: If you were going to go out and look for a house in the country, you were tired of living in Chicago, would you be interested in my house that's going to be surrounded by 15 wind towers, or would you look for a country setting?

MR. MCCANN: Well, I can tell you very specifically that my wife and I have done just that. And I drove her down Route 39 by Mendota Hills and she said, no way. And I might be the

head of the house, but she's the neck that turns the head.

MR. SPANOS: Why are all the guys laughing and the women are not?

MR. EGLI: Am I allowed to ask any questions of --

CHAIRMAN TOEVS: No, here is the expert witness.

MS. DEININGER: These next week.

MR. EGLI: Okay, that's the only question I have.

CHAIRMAN TOEVS: Okay Christy, you ask your question.

MS. PARR: It's not a repeat. It's wording it differently. But I would like to ask Mr. McCann, are you aware today through your professional experience or those of your colleagues of any current buyers seeking a rural location for their personal residence requesting to live within the footprint of a wind farm?

MR. MCCANN: No, I have not found anybody that's saying that's an amenity that they want to go live amongst.

MS. PARR: As wind farms become more

prevalent in Illinois, do you or your colleagues anticipate that future buyers seeking rural property for personal residences will request to purchase a home within the footprint of a wind farm or list it as a desired amenity?

MR. MCCANN: I can't imagine anybody thinking of it as a desired amenity to live in, but it's kind of neat to drive by.

MS. PARR: Will a home --

MS. DEININGER: Christy, would you state your name and address?

MS. PARR: Christy Parr. A rural residence at 722 Springfield Road, Delavan, Illinois. I also have an rural residence in Woodford County. We have two residences.

Will a home within the footprint of a wind farm most likely receive fewer showings than a comparable property or properties outside the footprint and the view shed?

MR. MCCANN: From the realtors I have spoken to that have worked that area around Mendota Hills, it's not even opinion, it's a fact there is either no showings or few showings. And as soon as people see the wind farm, they tend to walk away.

MS. PARR: Thank you. One last question, and hopefully I will invoke a little bit of a smile from all of us here tonight, because I know we're all a little tired and anxious to go on with this. But it's a serious question, and I hope it invokes a thought.

Since the Statue of Liberty is 240 feet tall, will the average buyer seeking a rural residence want to live in the shadow or near a four hundred foot turbine that is 1 hundred 60 feet taller than the Statue of Liberty?

MR. MCCANN: That opens it up to all kinds of commentary, but I don't picture a typical buyer in the marketplace wanting to live in the footprint of the almost four hundred foot tall structures, spinning structures. It's just not an amenity. And I don't know if they're building any houses on Ellis Island, but it certainly would be far more an amenity than a windmill.

MS. PARR: I missed one other question that I had that was associated with my previous question regarding the fewer showings. Can fewer showings have a correlation to the length of time on market and the final sales price?

MR. MCCANN: Absolutely.

MS. PARR: Thank you.

CHAIRMAN TOEVS: Okay, the grand scheme, we have a regular ZBA meeting on 5-6, that's next Tuesday. What I would like to do -- I would like you guys to move -- somebody move that we put this one on standby.

MS. DEININGER: Now, what we're proposing to do, we have our normal Zoning Board of Appeals meeting next Tuesday. We only have four cases, we should be done within a hour, so then we could go on to the Rail Splitter after that. They will bring back their last expert witness the same night as the normal --

MR. SPANOS: Kristal, we're talking about Lynn Westoff, is that who you are talking about?

MS. DEININGER: Yes.

MR. SPANOS: And Mr. Whitlock.

MS. DEININGER: As an adverse witness.

MR. SPANOS: I would withdraw the Ms. Westoff as a witness. And the next hearing, if Mr. Miles and Mr. Whitlock are agreeable, at the beginning of that last hearing, I have only a few questions for Mr. Whitlock, I assume you are going

to call Mr. Whitlock as a rebuttal witness anyway, I can do it in cross if you tell me that's what you are going to do, if he is going to testify. If he is not going to testify, then I would ask for the opportunity to question him beforehand, in the interest of saving time and not making us do this another day.

MS. DEININGER: So, you are saying you would do this on the 15th of May?

MR. SPANOS: If you are going to call Mr. Whitlock, I could cross examine Mr. Whitlock, I do not have to call him. If you're going to call Mr. Whitlock. And understanding that my cross will go where I want to go and I am not limited by your questions. Are you okay with that?

MR. MILES: We're fine with that.

MR. SPANOS: That would save the Board from some more suffering.

MR. MILES: Are we going to do the Westoff witness on the 6th?

MR. SPANOS: No, I'm withdrawing her.

MS. DEININGER: So, we have the regular ZBA meeting at the Justice Center on the 6th. Thank you everyone.

CHAIRMAN TOEVS: I need a motion to adjourn.

MR. NEWMAN: Motion to continue to May 15th.

MR. ZIMMERMAN: Second.

CHAIRMAN TOEVS: All in favor say aye.

(All saying aye).

CHAIRMAN TOEVS: All opposed say nay. Adjourned.

I, ARLENE H. NAUMAN, CSR, RMR, a Notary Public in and for the County of Tazewell, State of Illinois, and the Notary Public who reported the proceedings had on said day in this cause, do hereby certify that the foregoing transcript of proceedings is a true, perfect, complete and correct transcript of proceedings had on said day in this cause.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal this 7th day of May, 2008.

CSR, RMR

NOTARY PUBLIC

License Number: 084-001736

My commission expires July 18, 2009