

1           BEFORE THE ILLINOIS POLLUTION CONTROL BOARD  
2  
3           ROBERT GARDNER and           )  
4           YVONNE GARDNER,           )  
5                           Complainants,           )  
6           vs.                            )PCB 01-86  
7           TOWNSHIP HIGH SCHOOL           )  
8           DISTRICT 211, and GERALD           )  
9           CHAPMAN, Superintendent.           )  
10                           Respondents.           )

11  
12                           The following is a transcript of the  
13           above-entitled cause before HEARING OFFICER  
14           BRADLEY P. HALLORAN and stenographically taken  
15           before ROSEMARIE LAMANTIA, CSR, RPR, a notary  
16           public within and for the County of DuPage and  
17           State of Illinois, at Suite 8-033, 100 West  
18           Randolph Street, Chicago, Illinois, on the 19th  
19           day of December A.D., 2001, commencing at 9:0  
20           o'clock a.m.

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APPEARANCES:

ILLINOIS POLLUTION CONTROL BOARD,  
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BY: MR. BRADLEY P. HALLORAN, Hearing Officer

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BY: MR. ARES G. DALIANIS

Appeared on behalf of the Respondent.

Mr. Robert and Yvonne Gardner,  
the Complainants, appeared pro se.

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1 HEARING OFFICER HALLORAN: Good  
2 morning. My name is Bradley Halloran. I'm a  
3 hearing officer with the Pollution Control  
4 Board. I'm also assigned to this matter. And  
5 this matter is entitled, Robert and Yvonne  
6 Gardner, the Complainants, versus Township High  
7 School District 211 and Gerald Chapman, PCB  
8 01-86, and they are the Respondents.

9 Today's date is December 19th and the  
10 year 2001. This matter has been noticed  
11 pursuant to board regulations and will be  
12 conducted in accordance with Sections 103.202  
13 and 103.203 of the board's regulation.

14 This matter involves a citizen  
15 enforcement matter alleging violations of  
16 Section 24 of the act and Section 900.102 of the  
17 Illinois Administrative Code.

18 And there doesn't appear to be any  
19 members of the public here, just the parties,  
20 respective witnesses, but if there were members  
21 of the public here they would be allowed to  
22 testify subject to cross-examination.

23 There will also be, when we do our  
24 post-hearing brief schedule at the end of the

1 hearing, we'll set up public comment period for  
2 that as well.

3 Also, I want to now note for the  
4 record I'll not be making the ultimate decision  
5 in this case. The ultimate decision will be  
6 made by the Illinois Pollution Control Board,  
7 which is comprised of seven members located  
8 throughout the state of Illinois chosen for  
9 their environmental expertise.

10 My job is to insure an orderly  
11 transcript and a clear record and rule on any  
12 evidentiary matters that may appear.

13 With that said, would the parties,  
14 please, introduce themselves?

15 Mr. Gardner.

16 MR. GARDNER: I'm Bob Gardner. This  
17 is my wife, Yvonne Gardner. Next to her, Norm  
18 Miller and next to Norm, Len Krzeminski. We all  
19 live on Fairfield Lane. We are the Complainants  
20 and --

21 HEARING OFFICER HALLORAN: Thank you.

22 MR. GARDNER: Oh, okay.

23 HEARING OFFICER HALLORAN: Mr.  
24 Dalianis.

1 MR. DALIANIS: Ares Dalianis for the  
2 Respondent.

3 HEARING OFFICER HALLORAN: Okay.

4 MR. DALIANIS: We'll be calling  
5 several witnesses, Paul Connor is one of them  
6 and Steve East, who works for District 211 is  
7 another.

8 HEARING OFFICER HALLORAN: Thank you.

9 With that said, Mr. Gardner, would you  
10 like to make an opening statement?

11 OPENING STATEMENT

12 BY MR. GARDNER:

13 I filed this complaint, formal  
14 complaint with the Illinois Pollution Control  
15 Board after trying to get Township High School  
16 District 211 to correct the noise problem that  
17 began in August of '99 when they installed new  
18 chillers or a new air conditioning system in the  
19 high school. And after numerous phone calls to  
20 District 211, attending board meeting and  
21 getting no -- I think the problem -- without the  
22 problem being solved, I then went to -- first  
23 went to the mayor. Well, I called the village  
24 of Hoffman Estates. They basically told me

1           there was nothing they could do because they did  
2           not have jurisdiction over the township  
3           district.

4                       I then went to Cook County -- they  
5           referred me to Cook County Environmental. I had  
6           registered a complaint with them. They came out  
7           and investigated the complaint. They initially  
8           found them, found the noise levels higher than  
9           what was allowed.

10                      MR. DALIANIS: I want to object, just  
11           for the record. There is no real finding of  
12           that and that is one of the ultimate issues in  
13           the case. So, if he can just stay away from  
14           those sort of legal conclusions.

15                      HEARING OFFICER HALLORAN: So noted.  
16           And the record will reflect, Mr. Gardner,  
17           just --

18                      MR. GARDNER: Anyhow, after having  
19           Cook County come out, I then went to our state  
20           representative, Terry Park, whose office  
21           referred me to the Illinois Environmental  
22           Protection Agency, who then referred me to -- or  
23           to the Illinois Pollution Control Board and I  
24           initially filed an informal complaint, followed

1           it by a formal complaint. And that's what  
2           brings us here today for this hearing.

3                         HEARING OFFICER HALLORAN: Thank you,  
4           Mr. Gardner.

5                         Dr. Dalianis

6                                 OPENING STATEMENT

7           BY MR. DALIANIS:

8                         On behalf of District 211, what we  
9           intend to show in terms of the evidence is there  
10          was testing on three separate occasions. Mr.  
11          Trejo from the County Department of  
12          Environmental Control made some tests prior  
13          to -- essentially, initially after the Gardners  
14          had complained to the Department of  
15          Environmental Control.

16                         Subsequent to that the district took  
17          three substantial measures to remedy the  
18          problem, including different physical barriers  
19          to bar the noise, the alleged noise from moving  
20          off the roof of the high school. There was  
21          subsequent testing by Mr. Trejo and,  
22          furthermore, there was independent testing by  
23          the sound and acoustics firm of Kirkegaard  
24          Associates. All of that will be discussed later

1 in the hearing today, so.

2 HEARING OFFICER HALLORAN: Thank you,  
3 sir.

4 With that said, you know, I do want to  
5 note for the record that we started this hearing  
6 approximately 9:00 a.m. and I want to thank the  
7 parties for their promptness.

8 Mr. Gardner, would you like to present  
9 your first witness or are you the first witness?

10 MR. GARDNER: I'm going to be the  
11 first witness. Okay.

12 MR. DALIANIS: Do you normally exclude  
13 witnesses?

14 HEARING OFFICER HALLORAN: It's your  
15 call.

16 (Off the record.)

17 HEARING OFFICER HALLORAN: We're back  
18 on the record. Thanks.

19 Just took a couple of seconds.

20 Mr. Dalianis, you got a question?

21 MR. DALIANIS: My question was whether  
22 or not it was the board's practice to exclude  
23 nontestifying witnesses from the hearing room?

24 HEARING OFFICER HALLORAN: It's

1 usually the attorney's respective call if they  
2 wish to do an oral motion to exclude the  
3 witnesses.

4 MR. DALIANIS: Yes. I'd like to make  
5 an oral motion to exclude nontestifying  
6 witnesses from the conference room at this time.

7 HEARING OFFICER HALLORAN: Okay. Very  
8 well.

9 Any argument?

10 MR. GARDNER: I don't have a problem  
11 with that.

12 HEARING OFFICER HALLORAN: All right.  
13 Thank you.

14 Your motion is granted. The witnesses  
15 who are not testifying at this moment will,  
16 please, stand outside in the hallway or sit  
17 elsewhere.

18 SPEAKER: Are we testifying?

19 MR. GARDNER: You're going to be  
20 testifying.

21 SPEAKER: Am I testifying?

22 MR. GARDNER: Yes.

23 HEARING OFFICER HALLORAN: Then we'll  
24 come out and get you when Mr. Gardner is

1 finished testifying.

2 MR. GARDNER: They're going out, too?

3 No.

4 SPEAKER: We testify, we stay, right?

5 MR. GARDNER: No, you go out, they  
6 asked -- I thought all of the testifying  
7 witnesses are leaving.

8 HEARING OFFICER HALLORAN: Mr.  
9 Dalianis.

10 MR. DALIANIS: Well, the concern is  
11 that since -- I don't want everyone to hear  
12 everyone else's testimony from the Petitioner's  
13 side. That's all.

14 HEARING OFFICER HALLORAN: You can  
15 make a motion when his witnesses get up, if he  
16 has witnesses standing around, motion to  
17 exclude.

18 MR. GARDNER: Oh, okay.

19 HEARING OFFICER HALLORAN: So with  
20 that said, Mr. Gardner, would you like to sit up  
21 here in the hot seat, please?

22 (Witness first duly sworn.)

23 ROBERT GARDNER,  
24 called as the Complainant herein, having been

1 first duly sworn, was examined and testified as  
2 follows:

3 MR. GARDNER: My name is Robert  
4 Gardner. We going to need all of this? I live  
5 at 1545 Fairfield Lane, Hoffman Estates,  
6 Illinois, 60195. I've lived there for -- since  
7 December the 24th of 1989. I live in the house  
8 with my wife and my two sons. And beginning in  
9 August of 1999, I woke up one morning to what I  
10 thought was a back-up generator running at the  
11 high school and I didn't think much of it except  
12 it ran for, I thought, a long -- it was like two  
13 or three days. After it had ran for two or  
14 three days, I went over and -- drove over to the  
15 high school to see what was going on. I noticed  
16 that the generator was not running, but the  
17 noise -- there was noise coming from the roof of  
18 the high school. And it was at that time that I  
19 called the principal of the high school and was  
20 referred to a number of people but that's the  
21 noise -- I'm -- this is more of a statement  
22 thing because I'm -- I can't ask myself  
23 questions, right, so I'm making a statement  
24 here, right?

1 HEARING OFFICER HALLORAN: Right.

2 MR. GARDNER: Just want to make sure  
3 I'm following things. These are the kind of  
4 questions I'm probably going to be asking the  
5 witnesses as well, but to describe this noise  
6 it's a -- it sounds like a hydraulic elevator, a  
7 hydraulic motor, a low horn blowing. And after  
8 phone calls to the high school, I don't remember  
9 the gentleman's name, but I was referred to a  
10 gentleman at the District 211 headquarters.  
11 I -- am I allowed to look at notes or --

12 HEARING OFFICER HALLORAN: If you need  
13 to quickly look at your notes.

14 MR. GARDNER: Unless you need the name  
15 of the individual that -- I'm trying to think of  
16 the first person they gave me to, but, anyhow,  
17 the problem has not been -- after meeting with  
18 people in the school board and going through  
19 various municipal government agencies to get a  
20 correct -- to get something done about the  
21 problem, I've ended up here at the Illinois  
22 Pollution Control Board filing a formal  
23 complaint on the noise generated by these  
24 chillers and we want the school board to either

1 move the chillers or put some kind of sound  
2 dampening device that returns the noise levels  
3 to the negligible level that it was for the 26  
4 years prior to August of 1999.

5 That's --

6 HEARING OFFICER HALLORAN: That's  
7 about it?

8 MR. GARDNER: That's it.

9 HEARING OFFICER HALLORAN: Mr.  
10 Dalianis?

11 MR. DALIANIS: No questions for Mr.  
12 Gardner.

13 HEARING OFFICER HALLORAN: Thank you  
14 very much, Mr. Dalianis.

15 You may step down, Mr. Gardner.

16 And if you would, you can go out and  
17 call your first witness then, your second  
18 witness, I'm sorry.

19 (Off the record.)

20 HEARING OFFICER HALLORAN: We're back  
21 on the record.

22 Please, raise your right hand, Mrs.  
23 Gardner. The reporter will swear you in.

24 (Witness first duly sworn.)

1                                   YVONNE GARDNER,  
2           called as the Complainant herein, having been  
3           first duly sworn, was examined and testified as  
4           follows:

5                                   DIRECT EXAMINATION

6           BY MR. GARDNER:

7           Q.       State your name.

8           A.       Yvonne Gardner.

9           Q.       And your address?

10          A.       1545 Fairfield Lane.

11          Q.       And how long have you lived there?

12          A.       We're coming up on 12 years.

13          Q.       Let's see. And who lives in the house  
14          with you?

15          A.       You do, my husband, right now two of  
16          our sons, Philip and Troy.

17          Q.       And your occupation, what is your  
18          occupation?

19          A.       Volunteer coordinator for a pregnancy  
20          counseling center.

21          Q.       And how long have you been doing that?

22          A.       Four and a half years.

23          Q.       And can you describe your job?

24          A.       I coordinate around 150 volunteers on

1 a part-time basis for a pregnancy counseling  
2 center that has been in existence about 30 years  
3 in Palatine.

4 Q. Can you tell me when -- let's see.  
5 Make sure I ask this right.

6 Can you tell me what happened or when  
7 we -- when you noticed a noise about -- when you  
8 noticed noise coming from the high school?

9 A. Well, I don't know the exact date,  
10 they actually started doing construction during  
11 the summer.

12 Q. Summer of?

13 A. '99.

14 Q. Okay.

15 A. And then that's when they were  
16 installing the air conditioners. And then, of  
17 course, when they were put on, that's when it  
18 started.

19 Q. What would you describe the noise as?

20 A. It is a constant low hum that's --  
21 I'll just stop there. Constant low hum.

22 Q. When do you notice the noise?

23 A. When I'm in my kitchen, in our bed  
24 room, along the back deck, swimming, anything in

1 the backyard.

2 Q. And what would you like the school  
3 board to do about the noise?

4 A. Well, I'd like to definitely have it  
5 the way it used to be, as far as not having that  
6 low pitch hum constant in the background when  
7 they are running, because it's not -- definitely  
8 is not pleasant as it was before they were  
9 actually installed.

10 Q. Does the noise effect your use of the  
11 house and the yard?

12 A. I'm in my kitchen quite a bit, so it  
13 definitely does. It's just constant there.  
14 It's a -- so it would bother me a little bit but  
15 it definitely does out in our backyard and the  
16 back deck. It's definitely more aggravating  
17 there as far as being out there to eat dinner or  
18 something because we just don't do it as much  
19 anymore.

20 Q. I was going to say what has changed in  
21 your use of the back deck?

22 A. We definitely used it more, if you  
23 remember correctly, we used to watch the kids  
24 actually play baseball a lot back there when we

1 had dinner out there just about every night, and  
2 that is not the case anymore. Entertaining  
3 definitely is a factor, as far as it's always  
4 there, making that sound in the back, and it's  
5 not -- definitely is not pleasant.

6 Q. Well, when you speak of entertaining,  
7 what are you talking about?

8 A. Well --

9 Q. Can you give an example?

10 A. Definitely having friends over, we, as  
11 you know, we used to do impromptu as far as  
12 having Jackie and Gary over for pizza and  
13 swimming and stuff on the last minute notice.  
14 Also, that's why we've got the house laid out  
15 the way we do as far as for entertaining so we  
16 can entertain on a regular basis because we  
17 enjoy the company.

18 Q. Does it effect your sleep?

19 A. No.

20 MR. GARDNER: It does not.

21 MR. GARDNER: That's all my questions.

22 HEARING OFFICER HALLORAN: Thank you,  
23 Mr. Gardner.

24 Mr. Dalianis, any cross?

1                   MR. DALIANIS: Just a couple of  
2 questions.

3                                   CROSS-EXAMINATION

4 BY MR. DALIANIS:

5           Q.       Mrs. Gardner, you can have a normal  
6 conversation in the house?

7           A.       Yes.

8                   MR. DALIANIS: No further questions  
9 for Mrs. Gardner.

10                   HEARING OFFICER HALLORAN: Thank you.

11                   Mr. Gardner, any redirect?

12                   MR. GARDNER: No.

13                   HEARING OFFICER HALLORAN: Okay.

14 Thank you, Mrs. Gardner, you may step down.

15                                   (Off the record.)

16                   HEARING OFFICER HALLORAN: All right.

17 We're back on the record. We took about a five  
18 minute break. We're trying to coordinate  
19 witnesses and time schedules and that sort of  
20 thing, but in any event, Mr. Gardner's third  
21 witness has taken the stand and the reporter  
22 will swear him in.

23                                   (Witness first duly sworn.)

24                                   LEONARD KRZEMINSKI,

1 called as the witness herein, having been first  
2 duly sworn, was examined and testified as  
3 follows:

4 DIRECT EXAMINATION

5 BY MR. GARDNER:

6 Q. Len, if you can state your name for  
7 the record?

8 A. Leonard Krzeminski.

9 Q. Could you spell it?

10 A. K-R-E-Z-E-M-I-N-S-K-I.

11 Q. And could you give us your address?

12 A. 1535 Fairfield Lane, Hoffman Estates,  
13 Illinois, 60195.

14 Q. And Len, how long have you lived  
15 there?

16 A. Approximately 17 years.

17 Q. Are you married?

18 A. Yes, I am married.

19 Q. And your wife's name?

20 A. Darlene.

21 Q. And does anyone else live with you in  
22 the house?

23 A. No.

24 Q. No.

1                   Okay. And what is your occupation?

2           A.       I'm retired.

3           Q.       From -- what was?

4           A.       I retired from United Airlines,  
5           October 31st, after 32 years.

6           Q.       Can you describe the job you did at  
7           United Airlines?

8           A.       I had various jobs at United, working  
9           on airplanes, jet engines, working with air  
10          freight, working at the post offices as a United  
11          representative, that's about it.

12          Q.       Yes.

13                   When did you begin noticing noise  
14          coming from the high school?

15          A.       Well, it was the summer, 1999. It's  
16          hard to say what month, but previous to that I  
17          would say June, July and August there wasn't  
18          that much noise, but I noticed in June the  
19          massive construction going on because these guys  
20          were working late, and dumping all of this steel  
21          and scrap in the dumpsters there until 7:00 or  
22          8:00 o'clock at night, after they started --  
23          finished with construction, I would say probably  
24          August, sometime in August, when they put on

1           these air conditioners or coolers or whatever  
2           they are.

3           Q.       Can you describe the noise that these  
4           air conditioners give off?

5           A.       Well, it's a loud humming.  It's -- if  
6           you ever heard a mosquito buzzing in your ear,  
7           it could be very irritating.

8                        HEARING OFFICER HALLORAN:  If I may  
9           interrupt here for a minute, Mr. Dalianis, do  
10          you have any objection to Mrs. Gardner staying  
11          in the room at this time?

12                       MR. DALIANIS:  No, I don't since she  
13          has already testified.

14                       HEARING OFFICER HALLORAN:  Thank you  
15          very much.

16                       You may proceed.

17                       MR. GARDNER:  Thank you.

18          BY MR. GARDNER:

19           Q.       What times of the day do you hear the  
20           noise?

21           A.       Bob, I really couldn't be very  
22           specific on that, because, as you know, before I  
23           retired I would leave early for work.  And on my  
24           days off it would start in the morning

1 sometimes, I didn't know approximately what  
2 time, and I would notice it when -- various  
3 times when I'm outside, but to give exact times  
4 and dates and things like that I can't do that.

5 Q. Yeah. All right.

6 Let's see. Do other people in that --  
7 has your wife said anything about the noise?

8 MR. DALIANIS: Objection, hearsay.

9 HEARING OFFICER HALLORAN: Mr.  
10 Gardner?

11 MR. GARDNER: Oh.

12 HEARING OFFICER HALLORAN: Do you have  
13 any response to that objection?

14 MR. GARDNER: Well, I'm just trying to  
15 find out, she can't be here right now, but,  
16 okay, I see where he is coming from. All right.  
17 No problem.

18 HEARING OFFICER HALLORAN: Objection  
19 is sustained. You may continue.

20 BY MR. GARDNER:

21 Q. Let's see. Does the noise interrupt  
22 your use of your home and your yard?

23 A. Yes, it does.

24 Q. Can you describe how it interferes?

1           A.       Well, when my wife and I are outside,  
2           enjoying the summer, the air, the humming,  
3           buzzing or whatever you want to refer to it as,  
4           it gets annoying.

5           Q.       Does the noise disturb your sleep?

6           A.       Yes, it does.

7           Q.       Okay.  What would you like the school  
8           board to do about the noise?

9           A.       Try to fix the problem.  I'm sure  
10          there is some solution to the noise.  I'm sure  
11          they can put something up there, add something  
12          to baffle the noise.

13                   MR. GARDNER:  That's all the questions  
14          I have.

15                   HEARING OFFICER HALLORAN:  Thank you,  
16          Mr. Gardner.

17                   Any cross, Mr. Dalianis?

18                   MR. DALIANIS:  Yes.

19                                   CROSS-EXAMINATION

20          BY MR. DALIANIS:

21           Q.       Mr. Krzeminski, where is 1535  
22           Fairfield Lane?  Can you show us in relation to  
23           the subject property where your house is?

24                   HEARING OFFICER HALLORAN:  For the

1 record, Mr. Dalianis has brought in a colored  
2 aerial photograph of the site.

3 MR. DALIANIS: I have an 8 by 10 on  
4 this, which I'll be happy to put in the record,  
5 we'll do it as Exhibit A for the Respondent.

6 HEARING OFFICER HALLORAN: That would  
7 be good.

8 THE WITNESS: This is Bob's house.  
9 This is my house right here.

10 HEARING OFFICER HALLORAN: I guess for  
11 the record we're going to have to --

12 MR. DALIANIS: You want me to give you  
13 that photo now?

14 HEARING OFFICER HALLORAN: That would  
15 be great. Somehow mark it with a pen what the  
16 witness is pointing to.

17 THE WITNESS: This is where they were  
18 doing all of the construction here, tearing all  
19 of these things down.

20 HEARING OFFICER HALLORAN: We can hold  
21 on.

22 MR. DALIANIS: Okay. This is that  
23 photo, it's a colored 8 by 10. And you can mark  
24 on that.

1                   HEARING OFFICER HALLORAN:  What I'm  
2                   going to do is, Mr. Dalianis has given us a  
3                   colored 8 by 10 photo of the same blow up that  
4                   is on the easel, and I'll have the witness when  
5                   he points to the area where he lives and certain  
6                   other questions, mark it appropriately, so, let  
7                   me see.  I think that should be okay.

8                   MR. DALIANIS:  Okay.

9                   HEARING OFFICER HALLORAN:  And I don't  
10                  know, we don't really have any colored pens,  
11                  but --

12                 MR. DALIANIS:  Does anybody have a  
13                  colored pen.

14                 HEARING OFFICER HALLORAN:  Possibly?

15                 MR. DALIANIS:  Maybe a blue ink pen  
16                  would be good.  What do you got?  Is that green?

17                 THE WITNESS:  Yes.

18                 MR. DALIANIS:  Let's see how wide this  
19                  is.  This, actually, I think that will work.

20                 Let's just do a little test here.

21                 HEARING OFFICER HALLORAN:  We'll try  
22                  it, do the best you can, sir, describing as far  
23                  as the north, east, south, west and where you're  
24                  point to on the map, and when you do, put an A

1 or a B or a C, depending what the question is,  
2 for instance, your house, put an A.

3 THE WITNESS: You want me to circle?

4 HEARING OFFICER HALLORAN: Let's wait,  
5 Mr. Gardner will back up and ask you some  
6 questions again, before -- regarding where he  
7 lives. Wasn't the question where he lives?

8 MR. DALIANIS: That was my question  
9 actually.

10 HEARING OFFICER HALLORAN: I'm sorry.  
11 Mr. Dalianis, go ahead.

12 BY MR. DALIANIS:

13 Q. Can you show us on the map, Mr.  
14 Krzeminski, where your house is and where it is  
15 in relation to the subject property?

16 A. This is my house right here.

17 Q. So you're pointing to the home due  
18 south of the subject property?

19 A. Yes. That is correct.

20 Q. And is there any house between you and  
21 the Gardners?

22 A. No, there is not. There is no -- no,  
23 there is not no house between us.

24 Q. So you're the next door neighbor south

1 from the Gardners?

2 A. That's correct.

3 Q. Tell us about your house. What style  
4 of house is it, what is the floor plan?

5 A. It's a raised ranch.

6 Q. How many square feet?

7 A. 3200 square feet.

8 Q. How many floors?

9 A. Two floors. It's a raised ranch.

10 Q. How many bedrooms?

11 A. Five.

12 HEARING OFFICER HALLORAN: Sir, for  
13 the record, if I may interject, could you,  
14 please, put an A? Is it possible to mark an A  
15 where you pointed to, where your house is, and  
16 also on the perimeter of the map, put -- Mr.  
17 Dalianis asked due south, I'm not sure there is  
18 a --

19 MR. DALIANIS: North is north here on  
20 this photo.

21 HEARING OFFICER HALLORAN: Okay.

22 THE WITNESS: That's south. Now --  
23 wait a minute. You said south?

24 HEARING OFFICER HALLORAN: I think

1 north is up here.

2 THE WITNESS: Right. North is up.

3 You asked me if I'm south?

4 BY MR. DALIANIS:

5 Q. You live south of the Gardners,  
6 correct?

7 A. Yes.

8 HEARING OFFICER HALLORAN: North is  
9 the top of the photo where the baseball fields  
10 are for the board, for the record.

11 BY MR. DALIANIS:

12 Q. Where is the master bedroom in your  
13 house?

14 A. Right in the back here.

15 Q. So facing east then?

16 A. Yes. Yes, that would be facing east.

17 Q. That's the master bedroom? Is it on  
18 the first or second floor?

19 A. Second floor.

20 Q. And is that the bedroom where you and  
21 your wife sleep?

22 A. That is correct.

23 Q. And have you slept there for how many  
24 years in that bedroom as the master bedroom?

- 1 A. Since I've been in the house.
- 2 Q. What time is your normal wake up time?
- 3 A. Well, I'm retired now. So, if you  
4 want to ask me when -- before I retired, or --
- 5 Q. Okay. Before you retired, what time  
6 did you normally get up?
- 7 A. 4:30.
- 8 Q. And then what time would you normally  
9 go to bed pre-retirement?
- 10 A. 9:30.
- 11 Q. 9:30 p.m.?
- 12 A. That is correct.
- 13 Q. Would you normally -- well, let me  
14 strike that. Let me ask another question.  
15 Before the new chillers were  
16 installed, what was your normal wake up time?
- 17 A. Before?
- 18 Q. So prior to the summer of 1999.
- 19 A. Same time.
- 20 Q. And do you normally wake up with an  
21 alarm?
- 22 A. Yes, I do.
- 23 Q. And what was your normal bed time  
24 prior to the summer of '99?

1 A. Same, 9:30.

2 Q. Have you filed any complaints against  
3 the district, Mr. Krzeminski?

4 A. No, I have not.

5 Q. Have you contacted Cook County  
6 Department of Environmental Control?

7 A. No, I have not.

8 Q. Have you contacted the Illinois  
9 Environmental Protection Agency?

10 A. No, I have not.

11 Q. Have you contacted the Illinois  
12 Pollution Control Board?

13 A. No, I have not.

14 Q. Have you taken any actions at all with  
15 respect to your property and the chillers as of  
16 the summer of 1999?

17 A. I kind of, yes. I want to say yes, I  
18 did.

19 Q. Okay. What did you do?

20 A. I went to the high school and talked  
21 to one of their representatives there. I do not  
22 remember his name though.

23 Q. You went to Hoffman Estates High  
24 School?

1 A. Yes, I did.

2 Q. Do you know when that was?

3 A. No, I don't remember.

4 HEARING OFFICER HALLORAN: If I may  
5 interject, the witness may sit down.

6 BY MR. DALIANIS:

7 Q. Do you remember the time of year that  
8 was?

9 A. What time of year?

10 Q. Was it fall, winter, you know, not  
11 winter, but summer, spring?

12 A. October 1999. October, September, I  
13 don't remember really.

14 Q. Was it a weekday or weekend?

15 A. It was a weekday.

16 Q. Do you remember who you talked to?

17 A. No, sir, I do not.

18 Q. Where did you go into the building?

19 A. I went into the main entrance,  
20 registered to come in, there was a lady there,  
21 asked me what I wanted, I told her I wanted to  
22 speak to somebody about the noise. I did not  
23 know who to go to, to speak to. And I was  
24 directed to this person, I believe it was an

1           assistant principal. I told him about the noise  
2           and at that time he says they're still working  
3           on the air conditioners.

4           Q.       Can you tell me about your use of your  
5           backyard, or tell us about the backyard area of  
6           your house?

7           A.       I have a large deck. I have -- my  
8           wife likes to garden. We spend a lot of time  
9           out on our deck, over the weekend, we spend most  
10          of our time on it. During the week, we spend  
11          our evenings out there, when it's nice, and when  
12          we have friends come over, we usually entertain  
13          on the deck, barbecue.

14          Q.       Tell me what sort of entertaining and  
15          barbecuing and outdoor activities you engaged in  
16          with your wife last summer, this past summer of  
17          2001?

18          A.       Normal, normal but annoying may I add.

19          Q.       Did any of your guests complain to  
20          you?

21          A.       That's hard to say. There was -- it  
22          was mentioned on occasion, who mentioned it or  
23          what, I do not remember. When you ask me did  
24          your friends, I don't remember who mentioned it.

1 Q. Can you have a normal conversation in  
2 the house when the chillers are running?

3 A. A normal conversation in the house?

4 Q. Yes.

5 Your home, referring back to the blow  
6 up of the aerial photo, your home would be  
7 slightly closer to the high school than the  
8 Gardners, is that correct?

9 A. By 10, 15 feet.

10 Q. Okay. Have you seen a doctor  
11 regarding your contention that your sleep has  
12 been effected by the chillers?

13 A. Have I seen a -- no, I've not seen a  
14 doctor, no.

15 Q. Your retirement was you say as of  
16 October 31 of this year?

17 A. Yes.

18 Q. And then your schedule -- are you  
19 still getting up at 4:30 in the morning now?

20 A. No.

21 Q. Are you happy about that?

22 A. Yes.

23 MR. DALIANIS: No further questions  
24 for Mr. Krzeminski.

1 HEARING OFFICER HALLORAN: Thank, you  
2 Mr. Dalianis.

3 Mr. Gardner, any redirect?

4 MR. GARDNER: Yes. I have a couple of  
5 questions for Len.

6 REDIRECT EXAMINATION

7 BY MR. GARDNER:

8 Q. Len, did you sign a petition  
9 requesting the school board to correct the noise  
10 or do something about the noise problems?

11 A. Yes, Bob, I did.

12 Q. Okay. Can you have a normal  
13 conversation during a thunder storm in your  
14 house?

15 A. Well, a normal conversation?

16 MR. DALIANIS: I'm going to object,  
17 that is really quite speculative and unrelated  
18 to the -- what we're doing here today.

19 HEARING OFFICER HALLORAN: I'll give  
20 him a little latitude. You may answer, if  
21 you're able.

22 THE WITNESS: I don't think so, Bob, I  
23 mean, if it's thundering and lightening, it's --

24 BY MR. GARDNER:

1 Q. Can you have a normal conversation  
2 with a plane flying over your house?

3 A. Inside, if I'm inside?

4 Q. Yes.

5 A. Basically, I would say probably, yes.

6 MR. GARDNER: Okay. That's it.

7 HEARING OFFICER HALLORAN: Thank you.

8 Mr. Dalianis, any recross?

9 MR. DALIANIS: No.

10 HEARING OFFICER HALLORAN: You may  
11 step down. Thank you.

12 (Off the record.)

13 HEARING OFFICER HALLORAN: We're back  
14 on record. And for the record, Mr. Dalianis has  
15 put a Respondent Exhibit A sticker on the large  
16 blow up, he is going to so kindly offer to the  
17 board, at this point are you going to offer into  
18 evidence or --

19 MR. DALIANIS: Well, I will when we  
20 get our chance to do it.

21 HEARING OFFICER HALLORAN: All right.  
22 Whatever.

23 With that said, Mr. Gardner, would you  
24 have -- excuse me, the court reporter swear the

1 witness.

2 (Witness first duly sworn.)

3 NORM R. MILLER,

4 called as the witness herein, having been first

5 duly sworn, was examined and testified as

6 follows:

7 DIRECT EXAMINATION

8 BY MR. GARDNER:

9 Q. Would you state your name, please?

10 A. Norm Russell Miller.

11 Q. And, Norm, what is your address?

12 A. 1533 Fairfield Lane.

13 Q. The town?

14 A. In Hoffman Estates, Illinois.

15 MR. GARDNER: Would you like him to

16 point it out up there at this point or --

17 HEARING OFFICER HALLORAN: Whatever

18 your preference is, Mr. Gardner.

19 MR. GARDNER: Address is fine with me.

20 BY MR. GARDNER:

21 Q. And how long have you lived at that

22 address?

23 A. Thirty-four years.

24 Q. And --

1 A. Before the high school was there.

2 Q. And who lives there -- are you  
3 married?

4 A. Yes.

5 Q. And your wife's name?

6 A. Dorothy.

7 Q. Does Dorothy live in the house with  
8 you?

9 A. Yes, she does.

10 Q. Does anyone else live in the house  
11 with you?

12 A. No.

13 Q. And what is your occupation?

14 A. I'm a printing broker, self-employed,  
15 and I work out of the home.

16 Q. And how long have you done that?

17 A. Forty years, I believe.

18 Q. Forty years. Can you describe the job  
19 a little bit?

20 A. I buy and sell printing products.

21 Q. Okay. Do you remember or did you sign  
22 a petition requesting the school board do  
23 something about the noise coming from the  
24 chillers?

1 A. Yes, I did.

2 Q. Okay. Can you describe the noise that  
3 comes from the high school?

4 A. It's like a Chinese water torture,  
5 just hums and it grates on you. You're trying  
6 to think and you're quiet, this thing just  
7 continually grates and it's on at different  
8 times. It's not a specific set time shut on and  
9 off. We were told by the district differently  
10 when I called over there.

11 Q. When do you hear the noise?

12 A. Whenever it is on.

13 Q. Well, can you describe or give some  
14 times?

15 A. Oh, in the morning, in the afternoon,  
16 and at night.

17 Q. Does the noise interfere with your use  
18 of your home and your yard?

19 A. Yes, as far as if I'm out in the yard  
20 in the summertime, there is more noise there  
21 than the children in the neighborhood.

22 At night, when I'm trying to sleep and  
23 it happens to me, I'm -- that's a different  
24 problem.

1 Q. Does the noise disturb your sleep?

2 A. It has.

3 Q. Okay. What would you like the school  
4 board to do about the noise?

5 A. Stop it.

6 MR. GARDNER: That's all the questions  
7 I have.

8 HEARING OFFICER HALLORAN: Thank you,  
9 Mr. Gardner.

10 Mr. Dalianis, any cross?

11 MR. DALIANIS: Uh-huh.

12 CROSS-EXAMINATION

13 BY MR. DALIANIS:

14 Q. Can you show on this map, Mr. Miller,  
15 where your house is, 1533 Fairfield Lane?

16 A. Probably pretty close to -- right  
17 here.

18 Q. You're directly south of Mr.  
19 Krzeminski, is that right?

20 A. Yes.

21 Q. All right.

22 A. Directly south, right.

23 Q. And that would put you a little bit  
24 closer to the school?

- 1           A.       Yes.
- 2           Q.       Can you mark on the 8 by 10 version of  
3           the map, with a green pen perhaps a B where your  
4           house is?
- 5           A.       I believe that is where it is.
- 6           Q.       What is the style of your house?
- 7           A.       It's a raised ranch.
- 8           Q.       How many square feet?
- 9           A.       2200.
- 10          Q.       How many bedrooms?
- 11          A.       Three, well, actually, four.
- 12          Q.       Four bedrooms?
- 13          A.       Yes.
- 14          Q.       And do you sleep in the master  
15          bedroom?
- 16          A.       Yes, I do.
- 17          Q.       Where is that in the house?
- 18          A.       That's facing the high school. That  
19          would be on the east side.
- 20          Q.       And what floor is that on?
- 21          A.       The second floor.
- 22          Q.       What is your normal wake up time  
23          during Monday through Friday?
- 24          A.       Okay. 6:00 o'clock.

1 Q. And what is your normal bed time?

2 A. Oh, probably 9:00 o'clock.

3 Q. Okay. And how do you normally wake  
4 up? What is your method, alarm clock, wake up  
5 on your own?

6 A. Basically, I wake up my own but I do  
7 have an alarm clock.

8 Q. Have you filed any complaints against  
9 the district with the Cook County Department of  
10 Environmental Control?

11 A. No, I haven't.

12 Should I have done that?

13 Q. How about with the Illinois  
14 Environmental Protection Agency?

15 A. No.

16 Should I have done that?

17 Q. And how about the Pollution Control  
18 Board?

19 A. No.

20 I probably should have done that, too.

21 Q. Have you contacted anybody at the high  
22 school about what you're complaining about now?

23 A. I had.

24 Q. Who did you talk to and when did you

1 talk to them?

2 A. Oh, geez, I can't remember now. It  
3 was the principal.

4 Q. The principal at Hoffman Estates High  
5 School?

6 A. Right.

7 Q. Do you remember when that was?

8 A. No, I can't.

9 Q. '99, 2000, 2001?

10 A. I have no idea, you know.

11 Q. Do you remember was it a weekday or  
12 weekend?

13 A. I'm sure it was a weekday.

14 Q. Morning, afternoon?

15 A. You know, I'm not sure, it probably  
16 was the morning.

17 Q. Do you remember who you spoke with?

18 A. Although I didn't meet him, I was told  
19 he was the principal.

20 Q. You didn't meet this person?

21 A. No.

22 Q. Who did you talk to then?

23 A. On the phone. I talked to somebody  
24 identified themselves as the principal but it

1 could have been anybody.

2 Q. So you didn't actually go to the high  
3 school, you made a phone contact?

4 A. Yes.

5 Q. Can you describe the back yard of your  
6 house for us?

7 A. Grass, trees, bushes, flowers.

8 Q. Do you have a deck or a pool or  
9 anything?

10 A. I've got a small brick deck.

11 Q. When the chillers are running at the  
12 school, can you have a normal conversation in  
13 your home?

14 A. Normal conversation is when you have  
15 no interference.

16 Q. Do you have to raise your voice when  
17 the chillers are running and you're having a  
18 conversation in the home?

19 A. It's not that you have to, it's that  
20 you want to.

21 Q. Let me ask it again. When you speak  
22 with someone inside your home and the chillers  
23 are running, do you have to raise your voice to  
24 talk to them?

1           A.       Only because it interferes with your  
2           conversation, not because of -- the difficulty  
3           in thinking with the chillers on.

4           Q.       Okay.  So you're saying there is no  
5           difficulty when the chillers are on?

6           A.       Yes, there is.

7           Q.       When you and your wife have a  
8           conversation in your home and the chillers are  
9           running, let's say it's the middle of the  
10          afternoon on a hot day and you and your wife are  
11          having breakfast or sitting in the family room,  
12          do you have to raise your voice say above a  
13          normal conversational volume in order to talk  
14          with her?

15          A.       No, other than distraction of the  
16          chillers in the conversation which interferes  
17          with the conversation.

18          Q.       So you don't have to raise your voice  
19          is what you're saying?

20          A.       No, at times you have to depends on  
21          which way the wind is blowing also.

22          Q.       Since the chillers have gone into  
23          operation as of summer of 1999, has your normal  
24          wake up time changed in anyway?

1           A.       I haven't changed my alarm clock and  
2           anybody that wakes up the same time everyday  
3           doesn't need an alarm clock.

4           Q.       Okay. So the answer to that question  
5           would be no?

6           A.       I believe so.

7           Q.       And has your bed time changed at all  
8           from 9:00 p.m. pre-summer of '99, post-summer of  
9           '99?

10          A.       No.

11          Q.       You indicated after a question from  
12          Mr. Gardner that the noise has disturbed your  
13          sleep. Have you seen a doctor or related that  
14          to a physician of any type?

15          A.       No.

16                    Should I?

17                    MR. DALIANIS: No further questions  
18                    for Mr. Miller.

19                    HEARING OFFICER HALLORAN: Thank you,  
20                    Mr. Dalianis.

21                    Mr. Gardner, any redirect?

22                    MR. GARDNER: No.

23                    HEARING OFFICER HALLORAN: Thank you.  
24                    You may step down.

1                   I want to clarify for the record,  
2                   since we're going to be using the blow up, for  
3                   the board we're going to have to transpose or  
4                   remark the larger 8 by 10, the A and B of the  
5                   witness' house.

6                   MR. DALIANIS: If I can make a  
7                   suggestion.

8                   HEARING OFFICER HALLORAN: Please do.

9                   MR. DALIANIS: I think what we need is  
10                  just a felt tip marker, then we can draw an area  
11                  and say subject property, 1535, 1533.

12                  HEARING OFFICER HALLORAN: I'll get  
13                  one at the break. We'll bring it down. Do it  
14                  then. That's fine.

15                  Mr. Gardner, anymore witnesses?

16                  MR. GARDNER: No.

17                  HEARING OFFICER HALLORAN: So your  
18                  case in chief is finished, finished with your  
19                  case in chief? You rest?

20                  MR. GARDNER: Yes.

21                  HEARING OFFICER HALLORAN: Terrific.

22                  Mr. Dalianis, are you ready to proceed  
23                  or you want a 15 minute break?

24                  MR. DALIANIS: If you want to take a

1           few minute break, otherwise I'm ready to begin  
2           with Mr. East.

3                         HEARING OFFICER HALLORAN:  Let's go  
4           ahead.  Let's move forward and maybe in half an  
5           hour we can take a short break.

6                         MR. DALIANIS:  Let me say hello to one  
7           of the witnesses.

8                                 (Off the record.)

9                         HEARING OFFICER HALLORAN:  Back on the  
10          record, approximately 10:00 a.m.

11                         The Complainant, Mr. Gardner has  
12          stated that he has rested his case in chief.

13                         Mr. Dalianis is ready to proceed with  
14          his first witness.

15                                 (Witness first duly sworn.)

16                                 STEVE EAST,  
17          called as the witness herein, having been first  
18          duly sworn, was examined and testified as  
19          follows:

20   DIRECT EXAMINATION

21          BY MR. DALIANIS:

22                 Q.       Please, state and spell your name for  
23          the record?

24                 A.       My name is Steven East, E-A-S-T.

1 Q. Are you employed?

2 A. Yes.

3 Q. By whom?

4 A. Township High School District 211.

5 Q. When did you first go to work for  
6 District 211?

7 A. I began in the fall of 1973 as a  
8 part-time employee at District 211.

9 Q. What are some of the positions you've  
10 had from 1973 to the present with the district.

11 A. My first job at District 211 was as a  
12 high school student custodian cleaning the  
13 cafeteria at Hoffman Estates High School. I  
14 worked there through high school, summers,  
15 worked there through college, during breaks, and  
16 was hired full-time by District 211 in 1980.

17 Q. What was your initial position with  
18 the district in 1980 following graduation from  
19 college?

20 A. I was a construction laborer in our  
21 maintenance department.

22 Q. Then how long did you do that and what  
23 was your next position?

24 A. I did that for about a year. I've

1           been a third shift custodial supervisor. I've  
2           been a maintenance person, a second shift night  
3           foreman, building and grounds manager beginning  
4           in 1984 at Palatine High School. I was promoted  
5           to purchasing director in 1986 and the  
6           facilities component of my job was added in  
7           1991.

8           Q.       As purchasing director what are your  
9           responsibilities?

10          A.       On the purchasing side of my job,  
11          I'm -- my job is to spend the board's money. I  
12          do that by things like purchasing things like  
13          asbestos abatement, food products, school buses,  
14          heating and air conditioning equipment,  
15          contracted services for gym floor refinishing,  
16          pens, pencils, paper, all the kinds of things  
17          you would expect the public school system to  
18          have.

19          Q.       What are your responsibilities in your  
20          capacity as the facilities director for District  
21          211?

22          A.       On the facility side of my job, we  
23          have 175 full-time custodial maintenance and  
24          grounds employee. Around 25 to 30, depending on

1 the season, part-time and seasonal employees.  
2 We run three shifts a day, service about 2  
3 million square feet of buildings, 13,000  
4 students during the day, 8500 adults at night,  
5 and we operate and maintain the board's  
6 properties.

7 Q. Let's talk about your educational  
8 background.

9 You said you actually graduated from  
10 Hoffman Estates High School?

11 A. Yes, I am a Hoffman Estates graduate  
12 from 1976.

13 Q. Okay. And then did you go onto  
14 college?

15 A. I've attended both University of  
16 Illinois and Southern Illinois University in the  
17 period from 1976 to 1980.

18 Q. Did you earn a degree then?

19 A. I have two degrees. I have an  
20 associates degree in architectural technology  
21 and a bachelor's degree in architecture.

22 Q. Okay. Have you taken any additional  
23 course work or professional training over the  
24 years?

1           A.       I have. I've done some additional  
2 work. Depending on the topic, I have a number  
3 of classes in asbestos abatement, that was a  
4 very important thing that was done in public  
5 schools from '82 and continues even today.  
6 I've done some course work in energy  
7 conservation. There were some grant programs  
8 that were excellent for public schools and so we  
9 were all very involved in energy conservation  
10 work. We're currently involved in training on  
11 mold issues. That is very important in public  
12 schools right now. So I'm taking some seminars  
13 and programs on mold issues.

14          Q.       Okay. Based on your education,  
15 training, do you do any teaching of courses  
16 anywhere?

17          A.       I do teach some seminars around the  
18 state on public purchasing for schools. There  
19 is a book that I co-wrote that is used in the  
20 Master's program at Northern Illinois University  
21 for school business management, and it is a book  
22 entitled, Public Purchasing in Illinois and so I  
23 do some seminar training of that document.

24          Q.       Do you have any licenses,

1           certifications or professional memberships?

2           A.       I am a member of the Illinois  
3           Association of School Business Officials, the  
4           Purchasing Management Association and the  
5           National Institute of Government Purchasing.  
6           I'm personally a board member of the Premiere  
7           Credit Union and I'm also a board member of the  
8           Schaumburg Rotary Club.

9                        HEARING OFFICER HALLORAN:  Mr.  
10           Dalianis, I'm sorry.  Mr. Gardner had expressed  
11           some desire to do an oral motion to exclude your  
12           witnesses as well.

13                      Mr. Gardner, would you like to make a  
14           motion to exclude Respondent's witnesses?

15                      MR. GARDNER:  Yes.

16                      HEARING OFFICER HALLORAN:  All right.

17                      Mr. Connor, you're going to have to  
18           wait outside while Mr. East is testifying.

19                      SPEAKER:  Okay.  That's fine.

20                      HEARING OFFICER HALLORAN:  Off the  
21           record for a second.

22                                (Off the record.)

23                      HEARING OFFICER HALLORAN:  We're back  
24           on the record after a 30 second break.  I'm

1           sorry, Mr. Dalianis, you may continue.

2                         MR. DALIANIS:  No problem.

3           BY MR. DALIANIS:

4           Q.         Mr. East, can you tell us in general  
5           description of the Hoffman Estates High School?

6           A.         Sure.  Can I use the map?

7           Q.         Sure.

8                         Actually, would a photo be of  
9           assistance to you in giving a description?

10          A.         That would help if I could.

11          Q.         And is this aerial photo blow up an  
12          accurate depiction of the campus and the  
13          surrounding areas?

14          A.         Yes.

15                         MR. DALIANIS:  I would move that the 2  
16          foot by 3 foot aerial photo of Hoffman Estates  
17          High School be admitted as Respondent's Exhibit

18          A.

19                         HEARING OFFICER HALLORAN:  Mr.  
20          Gardner, any objection?

21                         MR. GARDNER:  Well, my objection, the  
22          only objection I have is that the photograph is  
23          not a most recent photograph in that it does not  
24          show the chillers.  Can we mark -- are we

1 allowed to, if we get this felt tip marker, are  
2 we allowed to --

3 MR. DALIANIS: Yes, I was planning on  
4 going through that with Mr. East actually.

5 MR. GARDNER: Oh, all right.

6 HEARING OFFICER HALLORAN: So any  
7 objection? You want to wait until after?

8 MR. GARDNER: I don't have -- for  
9 purposes of where our home sits, but I think it  
10 would be beneficial for the board to see where  
11 the chillers are located on the roof, where the  
12 new -- this photograph shows the old air  
13 conditioners.

14 HEARING OFFICER HALLORAN: I'll  
15 reserve my ruling.

16 Mr. Dalianis, you can proceed.

17 MR. DALIANIS: Okay.

18 BY MR. DALIANIS:

19 Q. Would you like to indicate, using the  
20 photo generally, the area and the school, et  
21 cetera?

22 A. It would be helpful if I could.

23 Q. Okay.

24 A. This is north, that is correct,

1 Hoffman Estates High School, the square section  
2 closest to the residences is the academic  
3 section of the building, three story building.  
4 This is where all the academic activities are.

5 As we move towards the east, the main  
6 entrance comes up from the south, we have the  
7 auditorium here, and then choral room. Behind  
8 that to the north, the original main gym and the  
9 student cafeteria. Behind the original gym is a  
10 gym addition, and to the far east is a swimming  
11 pool addition.

12 Q. Okay.

13 A. This addition is about 1977, and this  
14 one is about 1982.

15 Q. So the addition on the north is from  
16 '82, the addition on the far east of the  
17 property is '77?

18 A. It opened -- this addition opened in  
19 '77.

20 Q. And then what other -- what else is  
21 shown on the aerial photo in terms of the  
22 grounds of the school?

23 A. Student parking in the front. As Mr.  
24 Gardner pointed out, this is an older



1 work on the blow up.

2 Mr. Dalianis suggested that Mr.  
3 Gardner go up and remark the larger photo, his  
4 house, the witness' house, but in any event, Mr.  
5 Gardner, would you care to approach the exhibit?

6 MR. GARDNER: Sure.

7 HEARING OFFICER HALLORAN: And just  
8 explain on the record what you're doing.

9 MR. GARDNER: I'm going to draw an  
10 arrow pointing out our house and the address  
11 number, 1545.

12 MR. DALIANIS: Looks good.

13 MR. GARDNER: And then I forget Len's  
14 address.

15 MR. KRZEMINSKI: 1535.

16 MR. GARDNER: 1535.

17 And Norm is 1533.

18 MR. DALIANIS: Does that look good?

19 Does that help?

20 HEARING OFFICER HALLORAN: Yes, that's  
21 fine, but for the record, if you can put the --  
22 for the record, just announce the whole name of  
23 the witnesses, and I think you named Leonard  
24 and -- for the board.

1                   MR. GARDNER: I'm Bob Gardner. I live  
2                   at 1545 Fairfield Lane. Lenny lives at, Mr.  
3                   Krzeminski lives at 1535, Norm Miller lives at  
4                   1533.

5                   HEARING OFFICER HALLORAN: Thank you,  
6                   Mr. Gardner, appreciate it.

7                   All right. We can proceed. Mr. East,  
8                   you're still under oath.

9                   BY MR. DALIANIS:

10                  Q.       Mr. East, I'm going to hand you a felt  
11                  tip marker. If you can -- previously on the  
12                  record you gave us sort of a mini tour of the  
13                  campus in terms of what activities occurred in  
14                  the various buildings.

15                  If you can quickly do that and maybe  
16                  just jot down on the board what the actions --  
17                  what activities exists in each of the portion of  
18                  the school.

19                  A.       Okay. This square here I'll mark as  
20                  classrooms is the academic section of the  
21                  building.

22                  The front entrance of the building  
23                  closest to Higgins Road I'll mark that as the  
24                  auditorium.

1                   Moving north I'll mark the main gym.  
2           Further north, back gym. Further east, the  
3           pool, and further west, the cafeteria.

4           Q.       Great.

5                   And then you indicated, you don't need  
6           to mark this, north of the campus, the physical  
7           subject -- or the physical property is athletic  
8           fields, tennis courts and then due west of the  
9           building is the football field, correct?

10          A.       Actually due east is the stadium,  
11          tennis courts. Due west is faculty parking and  
12          then the residents.

13          Q.       Since you're standing there, I'm going  
14          to ask you to mark where the -- as of the summer  
15          of 1999 the new chillers were installed, can you  
16          do that as well?

17          A.       Okay. I'll do that. It's on the east  
18          and west sides of the classroom building.  
19          North and south there are two units, north and  
20          south of the center stairway. And would you  
21          like me to number these or what would make sense  
22          for everybody?

23          Q.       Don't number them now, just draw them  
24          on.

1           A.       Same thing on the west side, two units  
2           above the center stairway. And then unit number  
3           5 is on the lower roof over the auditorium,  
4           approximately there.

5           Q.       Okay. So that even though this is an  
6           older aerial photo that accurately reflects  
7           where the chiller units are now located at  
8           Hoffman Estate?

9           A.       Right. The former locations, the old  
10          equipment in the towers, the new locations of  
11          the five.

12          Q.       We'll get to the older equipment in a  
13          minute.

14                    Let's talk about the HVAC. What  
15          system was in place prior to the summer of '99?

16          A.       Prior to the summer of '99, we had  
17          five mechanical spaces, which are the four tower  
18          areas at the four corners of the classroom  
19          building, and a mechanical space right north of  
20          the auditorium. Heating was done with gas fired  
21          heating furnaces much like you would have in  
22          your home only much larger. They heat with live  
23          fire and an air to air heat exchanger. They  
24          call cool with what is commonly known as DX

1 cooling, which is a Freon based cooling, very  
2 much also like most homes have and the  
3 condensers were on the roof of each of the four  
4 towers and right here by the auditorium for the  
5 fifth tower. There were 23 zones, 23 units that  
6 provided heating and air conditioning to this  
7 portion of the building, the classrooms, the  
8 auditorium and the cafeteria. The gym and the  
9 pool are heat only and that is a different  
10 system.

11 Q. And then those 23 units were then  
12 replaced with the 5 chillers that you just drew  
13 on in the summer of '99?

14 A. The summer of '99, they were replaced  
15 with 5 chillers and 23 air handling units that  
16 are now inside the towers where the old ones  
17 were.

18 Q. How long had that old system been in  
19 place?

20 A. It was original from 1972, the  
21 building opened in '73 so the units were  
22 probably first started in the summer of '73.

23 Q. And then why did the district change  
24 to the current HVAC system?

1           A.       There is actually a couple of reasons  
2           that we changed. We had equipment failures with  
3           the compressors and the air conditioning side.  
4           As I mentioned, they -- the heating side, they  
5           heat with live flame. The flame blows out, it  
6           targets -- the targets burned off. So, we had  
7           been continually maintaining and replacing all  
8           of that equipment. It was at the end of its  
9           useful life at 20 plus years old.

10          Q.       Were there any life safety code or  
11          building code requirements that were not being  
12          met or had been supplemented since the  
13          construction of the building in '73?

14          A.       In 1973, public schools were built  
15          under what was known at the time as Codes 185  
16          and 175, school construction codes by the state.  
17          And that building was compliant with those codes  
18          at that time.

19                    In 1995, we underwent our ten year  
20          life safety survey, public school buildings are  
21          required to be surveyed for health life safety  
22          compliance every 10 years, '95 was ours.

23                    In '95 it was identified that these  
24          machines were in need of repair, and, in fact,

1           were targeted for replacement. The state Board  
2           of Ed approved the life safety survey and, in  
3           effect, then gave us the authority to sell bonds  
4           to fund the work that replaced that equipment,  
5           along with many other projects in all of our  
6           schools.

7           Q.       What was the goal in installing the  
8           new HVAC system?

9           A.       Well, moving forward, after 1995, the  
10          State of Illinois adopted the BOCA code as the  
11          building code for public buildings.

12                 So, what that did for us is gave us  
13          instead of the 175, 185 code, gave us a newer  
14          code that we were forced to comply with.

15                 So the simple idea of take out the old  
16          ones, throw them away and put in the new ones  
17          was no longer an option for us.

18                 What the code mandated was additional  
19          air exchanges in every room. So when you have  
20          lots more fresh air coming in, you have to  
21          temper that air, either heat it or cool it, so  
22          we wound up needing larger outside air intakes,  
23          which are visible on the sides of these towers.

24          Q.       And would a photo of those air intakes

1 be of assistance to you in describing what they  
2 looked like and the role they play, et cetera?

3 A. I'd be glad to show it, if you have  
4 one.

5 Q. What I'd like to do now is just for  
6 purposes of identification I've got some photos  
7 of the school and, Mr. Gardner, let me show you  
8 the air intakes. These are the three photos  
9 that I'm going to ask Mr. East to talk about.

10 MR. GARDNER: Okay.

11 MR. DALIANIS: Mr. Halloran, if you  
12 want to take a look at them before I show them  
13 to Mr. East?

14 HEARING OFFICER HALLORAN: I can see  
15 when Mr. East -- thank you.

16 BY MR. DALIANIS:

17 Q. You're talking about bringing in more  
18 fresh air under the life safety code in BOCA.

19 Do those pictures reflect the changes  
20 made to the school to bring in more fresh air?

21 A. Yes. We kind of have a before and  
22 after here, maybe I can -- excuse me. I'm going  
23 to use this one as the before photo. And this  
24 is the side of the northwest tower closest to

1 the residences directly west of the school and  
2 this photo shows -- I apologize, you can't see  
3 this. This photo shows the original air intake  
4 from 1973.

5 So this is before we did any work and,  
6 in fact, this is also how it looks still today.

7 MR. DALIANIS: I'd like to mark this  
8 as Respondent's Exhibit B.

9 HEARING OFFICER HALLORAN: By all  
10 means. Thank you.

11 THE WITNESS: Now, as I said, we  
12 needed to add additional outside air into the  
13 building to comply with the current code. This  
14 photo is the other side of the very same  
15 mechanical tower.

16 BY MR. DALIANIS:

17 Q. So that would be the east side of the  
18 northwest mechanical tower?

19 A. Correct.

20 This photo shows the original air  
21 intake along the black edge and then it also  
22 shows the size of the new air intake that was  
23 added to bring fresh air into that tower.

24 Q. So essentially the district made a cut

1 out into the tower to bring in this additional  
2 required fresh air?

3 A. Yes, actually cut the concrete out and  
4 put this grill in to get more air into this  
5 vertical three story space.

6 Q. At this time I'd like to mark this as  
7 Respondent's Exhibit C.

8 HEARING OFFICER HALLORAN: Thank you.

9 BY MR. DALIANIS:

10 Q. Okay. And you're looking at another  
11 photo now, Mr. East?

12 A. The last photo is actually the side of  
13 tower, this would be the northeast tower and  
14 this is the west face of that, and this shows  
15 the same thing. It shows the emergency  
16 generator, the main power transformer, the  
17 original grill in the corner by the black pipe,  
18 and the new grill that was cut in.

19 So when we cut the new grills in, we  
20 cut them in on the inside away from everybody to  
21 draw air from kind of the front of the school  
22 and the back of the school. We didn't put them  
23 on the outside of the towers, just the insides.

24 Q. I'd like to mark this as Respondent's

1 Exhibit D?

2 HEARING OFFICER HALLORAN: Thank you.

3 BY MR. DALIANIS:

4 Q. So, getting back to -- you indicated  
5 that the previous system needed replacement.  
6 One of the things that had to be changed at the  
7 school in connection with the new system that  
8 went in in '99 was the allowance for additional  
9 fresh air to come in?

10 A. Correct.

11 Q. And was the old system capable of  
12 bringing in that much fresh air?

13 A. No, it was not.

14 Q. Okay. What additional actions were  
15 put into place with respect to the new system,  
16 when it was installed?

17 A. Well, let me explain to you how the  
18 new system works.

19 I mentioned that we heated with live  
20 fire like your home furnace and we cooled like  
21 your home air conditioner in the 1973 system.  
22 When we put the new 1999 equipment in, as I  
23 said, we were taking a lot more air in,  
24 therefore, larger equipment required to temper

1           that air.

2                       On the heating side, we are heating  
3           now with warm water. Each of these towers has  
4           small sets of boilers and those boilers warm,  
5           not steam, the water. That warm water  
6           circulates through a coil, air blows across the  
7           coil, the air is warm and heats the building.

8                       The opposite is true for cooling the  
9           building under the new system. These units that  
10          are on the roof have a small amount of  
11          refrigerant in them, Freon what most people  
12          would know it as. And what these units do is  
13          they are chillers, they create cold water. So,  
14          as air blows through them, the air is chilled,  
15          it's piped into these towers, a similar coil  
16          exists, air blows across the chilled coil, cools  
17          the air, then cools the rooms. Return air is  
18          picked up back in the towers through duct work  
19          in the building and outside air is introduced  
20          through the grills that I showed you.

21                      The law requires us to temper 33  
22          percent outside air at a minimum. So if it's 20  
23          below zero outside, I still have to bring in 33  
24          percent of my air at 20 below zero. So you can

1           imagine the size of equipment we had to go to in  
2           order to deal with a building that is 300 plus  
3           thousand square feet and the amount of required  
4           outside air that we introduce.

5           Q.       What was the previous air exchange  
6           requirement?

7           A.       That is a Paul Connor question.  I  
8           really don't know.

9           Q.       When did the design process begin for  
10          this whole changeover?

11          A.       We hired our architects in late 1998  
12          and that's Arcon Associates.  And they then  
13          hired Paul Connor at Amsco as the engineer on  
14          the project.

15          Q.       And what was involved in the process  
16          of checking the new system, what were you  
17          looking for?

18          A.       What we were looking for was code  
19          compliance, a reasonable, although expensive,  
20          reasonable cost to install, a reasonable cost to  
21          run, and something that could be retrofitted  
22          into a 1973 building without being tremendously  
23          intrusive.

24          Q.       What was the district's total cost of

1 replacing the old HVAC system and installing the  
2 new one?

3 A. Without the architects' and engineers'  
4 fee, the price was \$4.42 million --

5 Q. Okay.

6 A. -- and change.

7 Q. And when was that new system in place  
8 and operating?

9 A. We pre-purchased this equipment on the  
10 roof. We pre-purchased all of the air handlers  
11 and boilers in early 1999. I would say we maybe  
12 awarded that work January or so. And then  
13 awarded the contract to install the  
14 pre-purchased equipment in probably March of  
15 '99. Work began the day that summer school --  
16 the day that school ended for the summer and we  
17 started up the unit shortly before the start of  
18 school in August of '99.

19 Q. The chillers are manufactured by whom?

20 A. By York.

21 Q. And then how about the air handlers?

22 A. Are Trane equipment.

23 Q. And then the boilers are?

24 A. Boilers came from Born Quest, I

1 believe.

2 Q. Okay. Did the district receive any  
3 complaints after the new system began operating?

4 A. Yes.

5 Q. And from whom did the district receive  
6 the initial complaint?

7 A. Mr. Gardner.

8 Q. Has anyone subsequently complained  
9 that you're aware of to the district?

10 A. No.

11 Q. Initially, what action did the  
12 district take in response to the Gardner's  
13 complaint?

14 A. The first thing we did was we  
15 contacted York to see if there was any deviation  
16 from our specification in the machinery that was  
17 specified. We called for chillers that had the  
18 sound proof package York offered at the time.  
19 There is a quieter fan motor. There is a  
20 quieter compressor and there is -- I should back  
21 up. There are two compressors in each one of  
22 these units, and we did, in fact, order and they  
23 did, in fact, deliver the quieter package that  
24 they offered at that time.

1                   So the first thing we did was go back  
2                   and say did you send us the wrong stuff.

3           Q.       What did they tell you?

4           A.       They said we had the right stuff.

5           Q.       And you were able to confirm that and  
6           check that it was what you had specified?

7           A.       Paul Connor from Amsco was able to do  
8           that.

9           Q.       All right. What additional steps  
10           initially did the district take?

11           A.       We limited our hours of operation to  
12           start at 6:00 o'clock in the morning on weekdays  
13           and to not start until 9:00 o'clock in the  
14           morning on Sunday, and our operation would end  
15           at, I believe, 9:00 o'clock at night.

16           Q.       Did the district employ any sort of  
17           physical barriers or sound proofing on the  
18           chillers?

19           A.       That was kind of next. We hired a  
20           couple of contractors to put first a -- kind of  
21           a sound blanket around the compressor itself.  
22           These machines -- and do we have a photo of the  
23           machines?

24           Q.       Yes. At this time I'd like to produce

1 for identification purposes an interior photo of  
2 the chiller units on top of the roof showing a  
3 wrapped compressor.

4 MR. DALIANIS: Mr. Gardner, that is a  
5 photo of it right there.

6 MR. GARDNER: Oh.

7 BY MR. DALIANIS:

8 Q. Mr. East, why don't you tell us what  
9 is in the photo?

10 A. This is the unit closest to the  
11 residences. It's actually the northwest unit.  
12 These units for description purposes are, of  
13 course, very large. They have angled coils with  
14 fans on top of them. The compressor units  
15 themselves are in the bottom of this enclosure.

16 What this photo shows is one of the  
17 compressors with the black wrapping on it which  
18 was provided to us by York as a sound  
19 deadening -- I don't want to say blanket but a  
20 sound deadening wrap to go over the compressor.  
21 So that is shown as it is today on this  
22 particular machine.

23 Q. From what you know, did that have much  
24 of an effect or help at all?

1           A.       It had an effect but I don't think it  
2           had a good effect. I don't feel -- I don't  
3           personally feel that it made any difference in  
4           noise, but it did overheat the compressor. So I  
5           know that we didn't get any good out of it for  
6           them or anybody, and we got some bad out of it.  
7           So it wasn't a very successful attempt.

8                   MR. DALIANIS: At this time I'd like  
9           to introduce the wrapped compressor as  
10          Respondent's Exhibit E.

11          BY MR. DALIANIS:

12          Q.       What was the next step the district  
13          took to address Mr. Gardner's concern?

14          A.       The next thing we had, we had, of  
15          course, contractors working in the buildings  
16          still. We were finishing up and doing punch  
17          list items. And one of the suggestions that was  
18          made was that we wrap the bottom of the units  
19          themselves with an insulated blanket. As I said  
20          they're kind of V shaped with coils, but they  
21          are rectangular boxes, so there is some open  
22          area around the bottom. So our next thing was  
23          to purchase and install a knitted blanket or  
24          quilted blanket around the bottom of the unit.

1 Q. Would a photo help you illustrate what  
2 these blankets looked like?

3 A. That would be helpful.

4 MR. DALIANIS: Mr. Gardner, this is a  
5 photo that I'm going to ask to introduce as the  
6 Respondent's next exhibit. It's a blanket  
7 wrapping the chillers on the roof of the  
8 building, showing one of them.

9 Here you go, Mr. East.

10 BY MR. DALIANIS:

11 Q. Why don't you tell us what that photo  
12 depicts?

13 A. Okay. This one is actually standing  
14 on the roof approximately here, kind of at the  
15 south edge of the roof, looking back toward  
16 units one and two here along the west side. And  
17 what this shows is the rectangular unit and then  
18 the quilted insulated blanket that we had  
19 mechanically fastened to the outsides of those  
20 units and wrapped around the parts that are  
21 open, which is basically both sides. So those  
22 blankets were installed in -- oh, they weren't  
23 all done at one time. We had trouble getting  
24 delivery. I think we had some in October and

1           some that may have gone even longer, November  
2           before we had them all on.

3                       MR. DALIANIS:   Okay.   Mr. Halloran,  
4           I'd like to mark this as Respondent's Exhibit F.

5                       HEARING OFFICER HALLORAN:   Thank you.

6           BY MR. DALIANIS:

7                       Q.           After installing the compressor  
8           blankets and the exterior wraps, what was the  
9           additional step the district took at that point?

10                      A.           The next thing, the original contract  
11           included a visual barrier around the bottom of  
12           all of these units, basically shielding the part  
13           that now has the blanket, though we didn't at  
14           the time know there would be a blanket there.  
15           We had a very thin fiberglass vision panel that  
16           was intended to be installed so that the  
17           machines would not be as visible and as  
18           noticeable as you drive by the building.   What  
19           we did was hold off on the installation of that,  
20           and we actually asked our architects to design  
21           something that would be larger and more rigid so  
22           that what we could get was, whatever deflection  
23           of noise we could gather, we would at least  
24           bounce the noise up in the air instead of

1           spilling it out over the property.

2           Q.       So these were -- how would you  
3 describe these vertical barriers?

4           A.       These are metal framed, metal stud  
5 framed panels that are -- skin -- I'm sorry.  
6 Metal frame structure that has sort of a gypsum  
7 plaster finish on the outside. It's about  
8 similar in color to the white of the building.

9                   MR. DALIANIS: Mr. Gardner, I've got  
10 five photos showing the vertical barriers on the  
11 five chillers, if you want to take a look at  
12 those. And you want this as a group exhibit?

13                   HEARING OFFICER HALLORAN: Let's do it  
14 as a group exhibit.

15                   MR. DALIANIS: That's fine.

16                   That would be G, I think.

17                   HEARING OFFICER HALLORAN: G, correct.

18                   Five photos?

19                   MR. DALIANIS: That's correct. Yes.

20 BY MR. DALIANIS:

21           Q.       Okay. Mr. East, I'm going to hand you  
22 additional photos of the chillers. Why don't  
23 you explain for the record what is there now,  
24 what was installed, what Arcon recommended, et

1           cetera?

2           A.       Okay.  Let me separate these out a  
3           little bit.

4                        These four photos show a three sided  
5           panel configuration around the four machines on  
6           the classroom portion of the building.  And what  
7           they show is the inside metal framework and the  
8           outside plaster finish and maybe the plaster  
9           finish is best shown here.  You can see that  
10          they're about 10 feet tall and about 10 feet or  
11          so away from the unit.  This is maybe the better  
12          one because it shows the blankets and the  
13          relationship here.  And those panels, as I said,  
14          are on three sides around the outside of these  
15          units.

16          Q.       Including the units on the lower level  
17          auditorium?

18          A.       Let me get to that.  This looks like  
19          number -- what would be number 5 here, what  
20          we -- what we were fearful of is that the noise  
21          getting into the neighborhood might not be  
22          coming from the closer units, that, in fact,  
23          might be coming from the lower unit on the  
24          auditorium roof because there is a line of sight

1           toward the houses from that unit. So, rather  
2           than -- when we upgraded all of these panels to  
3           a 10 foot hard wall panel, we upgraded this unit  
4           to a 20 foot wall or it's probably 18 feet,  
5           completely blocking the line of sight to the  
6           neighborhood, hoping that we could gather  
7           whatever noise was coming from this machine and  
8           bounce it off this large panel and push it up  
9           into the air. So this one has a different panel  
10          configuration than the other ones in that it's a  
11          similar construction but it is taller.

12           Q.       And it's all four sides, correct?

13           A.       It's actually, it's all four sides,  
14          it's hard to see in this picture because the  
15          building blocks it. There is the lower panel  
16          for vision screening around the front and then  
17          the high panel in the back. And you could see  
18          the inside of the high panel is finished on this  
19          one because you got a harder surface to bounce  
20          off of and this is visible from driving up to  
21          the school so we have a better looking panel and  
22          a harder surface panel on this one which is unit  
23          5.

24                    HEARING OFFICER HALLORAN: Can you do

1 me a favor and mark No. 5 with the pen you have  
2 in your hand on the back of the photo you were  
3 describing?

4 And, Mr. Dalianis, if you could,  
5 please, just put 1 through --

6 MR. DALIANIS: I did 1, 2 -- like  
7 that.

8 HEARING OFFICER HALLORAN: That's  
9 terrific.

10 MR. DALIANIS: Sure.

11 BY MR. DALIANIS:

12 Q. Between the compressor wraps and the  
13 chiller blankets and the vertical barriers, what  
14 is the total amount of money the district spent  
15 in addressing Mr. Gardner's complaint?

16 A. York provided us the original  
17 compressor wrap at no cost. It was kind of them  
18 to do that. So we didn't have any money there.  
19 We spent a little over \$20,000 on the insulated  
20 blankets to both the company that made them and  
21 a different company that installed them. The  
22 upgrade cost on the walls, I don't have a  
23 separate break out for that, so I don't have a  
24 number that I would put to that. And I don't --

1 I couldn't guess how many hours of architecture  
2 and engineering fees that we have in. If I were  
3 to just throw a number out I'm sure we've passed  
4 40,000 awhile ago trying to get all of this  
5 stuff down to try and get some kind of  
6 resolution here.

7 HEARING OFFICER HALLORAN: Stop here.  
8 Mr. Dalianis, is this one of your witnesses?

9 SPEAKER: I am Jim --

10 MR. DALIANIS: You know what, you're  
11 going have to sit outside for a few minutes,  
12 because the hearing office has excluded all of  
13 the witnesses.

14 HEARING OFFICER HALLORAN: Thank you  
15 very much.

16 BY MR. DALIANIS:

17 Q. Mr. East, I'm going to show you for  
18 identification purposes, two purchase orders,  
19 that are -- were on district stationery and can  
20 you tell me what these are and what cost they  
21 represent?

22 A. We have an October 25, 1999, purchase  
23 order to Industrial Noise Control for  
24 \$10,917.20. That is the purchase of the

1 insulated curtains that went around the units.

2 Q. Okay.

3 A. And then the other one is from Harley  
4 Insulation and that is the installation of those  
5 units on -- or those blankets on these units,  
6 \$9,079.90.

7 Q. So these two invoices, which are  
8 approximately 20,000, are for the wraps on the  
9 chiller units on the roof?

10 A. Right.

11 Q. I'd like to mark these as Group  
12 Exhibit H-1 and H-2.

13 HEARING OFFICER HALLORAN: Sure.

14 BY MR. DALIANIS:

15 Q. Then what was the cost of the vertical  
16 barriers, based on your recollection?

17 A. The original panels that were, the  
18 fiberglass were included in the original  
19 project. I'm afraid I don't have a break out on  
20 the upgrade cost. It was somewhere in the  
21 contract and I would have to do some additional  
22 research with that contractor to know what we  
23 paid them. It was a complicated contract  
24 because the contractor was behind, we had

1 significant penalty dollars on this contractor,  
2 and so there is -- it's a complicated operation  
3 to figure out how much he was ahead and we were  
4 ahead.

5 Q. Right.

6 And then have any of your board  
7 members or any other people from the district  
8 gone and contacted Mr. Gardner or visited his  
9 home, et cetera?

10 A. I'm aware that the board president  
11 Martha Schwarcheski(phonetic) and board member  
12 Ann Klimcowitz(phonetic) had had conversations  
13 with Mr. Gardner. I'm not firsthand aware of  
14 how that went.

15 Q. Okay. Additionally, did the district  
16 retain any sound or acoustic consultants to make  
17 sound level measurements?

18 A. We hired Kirkegaard & Associates to do  
19 sound testing for us along the west property  
20 line. They had worked for us in the past on  
21 other jobs, to give us advice on how to put  
22 machinery inside buildings and we worked with  
23 them successfully. So we hired them again to do  
24 some sound tests here.

1 Q. Are you aware if the county sent  
2 anyone out to do any sound level testing?

3 A. Rudy Trejo was sent out, I presume  
4 following a call from Mr. Gardner, he appeared  
5 at the school on about the first week in  
6 September of 1999. I believe he did some sound  
7 testing at that time. And I've written a couple  
8 of letters back and forth with him, had a number  
9 of conversations with Mr. Trejo and at my  
10 request he came out in August of 2000, when we  
11 had completed all of the work that we had  
12 planned to do and did some additional sound  
13 testing right along here, behind these houses to  
14 get some final readings for his office.

15 Q. Okay. And then you personally, you've  
16 had substantial contact with Mr. Gardner on this  
17 matter as well?

18 A. Mr. Gardner and I have had a number of  
19 phone conversations, we've met personally a time  
20 or two.

21 Q. You gave him your home phone number,  
22 didn't you?

23 A. At one point I left him my -- he had  
24 my work number, my voice mail number, I left him

1 my home phone number because we had difficulty  
2 and I have to admit my staff turned some  
3 machinery on on Sunday earlier than they should  
4 have and I assured Mr. Gardner we wouldn't have  
5 that mistake again and if we did that he was to  
6 call me at home on Sunday and tell me that that  
7 happened and I would make sure that we didn't  
8 have that problem again. And we, fortunately,  
9 didn't have to have that communication at all.

10 MR. DALIANIS: Okay. Fantastic.

11 Thank you very much, Mr. East.

12 HEARING OFFICER HALLORAN: Thank you.

13 Mr. Gardner, any cross?

14 MR. GARDNER: Yes.

15 HEARING OFFICER HALLORAN: Do you need  
16 Mr. East to stand at the diagram or the photo  
17 or --

18 MR. GARDNER: I don't think so.

19 CROSS-EXAMINATION

20 BY MR. GARDNER:

21 Q. Mr. East, you mentioned that when you  
22 were putting this project together you wanted to  
23 make sure you were compliant with codes.

24 Do you know what the Illinois, the

1 State of Illinois minimum level of noise is for  
2 days and evenings?

3 A. No, I do not.

4 Q. Do these visual barriers that you  
5 installed, do they provide any kind of -- or are  
6 you aware that they provide any kind of acoustic  
7 continuation or do they reduce -- or are they  
8 designed to reduce the noise?

9 A. No, they're actually designed to  
10 redirect the noise. They don't have any  
11 capability of absorbing sound inside themselves.

12 Q. Okay. Do you remember the meeting  
13 that you and I and Mr. Hyde(phonetic) had in the  
14 fall of 1999?

15 A. Yes, I do.

16 Q. Do you remember discussing a parapet  
17 wall at that time?

18 A. Yes, I do.

19 Q. Can you describe for the board what a  
20 parapet wall is?

21 A. A parapet wall architecturally is a  
22 wall that extends at height above an existing  
23 roof level.

24 Q. Okay. Did we discuss, do you remember

1           telling me that -- in the meeting we had with  
2           yourself and Mr. Hyde that that might be an  
3           option for reducing the noise level?

4           A.       Yes, I do remember saying that.

5           Q.       Okay. Let's see. Do you know from  
6           your understanding of these chillers, is it  
7           possible that they can be moved to a new  
8           location without effecting the operation? Do  
9           they have -- restate.

10                    Do the chillers from your knowledge of  
11           the system, do they have to be on top of the  
12           roof to operate properly? Can they be at  
13           another location, could they be moved to another  
14           location?

15           A.       Can I use the map to address that?  
16           Maybe I can explain what we have going here.

17                    In 1972 when this building was being  
18           designed and being built, the theory in  
19           education was that we had wide open classrooms  
20           and everybody could kind of see each other and  
21           some of you were probably in buildings where  
22           that happened. That had been very popular in  
23           the late '60s, was still in vogue kind of in the  
24           '70s. It was modified a little bit for Hoffman

1 Estates High School. The original architects  
2 decided that metal moveable panel walls would be  
3 better than having wide open buildings. So this  
4 building has -- as I said this is a 3 story  
5 steel framed building with precast concrete  
6 panels on the outside. There are very few  
7 columns, which are the vertical members running  
8 through the building, and very few beams, which  
9 are the horizontal members running through the  
10 building, there are very few of those in the  
11 open area of classrooms in this building. What  
12 you have instead is some drywall walls in the  
13 hallway and a lot of moveable panels that are  
14 just ceiling height. They touch the ceiling.  
15 They don't go above the ceiling. The great  
16 theory was that you can take those panels down,  
17 reconfigure them as you wished to to change room  
18 sizes and make things big or small or more cozy  
19 or what have you.

20 Dealing with that drives us to --  
21 structurally the only place in the building that  
22 is strong enough to hold these units, because a  
23 question could easily be asked why aren't they  
24 in the middle or somewhere else, because we only

1       have significant structure in the stair towers,  
2       these units get pushed out to a place that can  
3       structurally support them, and not easily. The  
4       stair towers have more columns and beams in them  
5       than anywhere else but at spring break of '99 we  
6       actually added structural steel in the third  
7       floor ceiling through the windows of these rooms  
8       in order to put enough structure there to hold  
9       the machinery that we were going to set in the  
10      summer. So, these machines reside on these  
11      edges because this is the only place  
12      structurally that they were practical to  
13      install.

14                    To get to your question, can they be  
15      relocated somewhere else and work? The answer  
16      is they cannot be relocated inside to the center  
17      of the building in any practical fashion to work  
18      because in order to do that we would have to add  
19      additional beams, the horizontal members, and  
20      significant additional vertical members all the  
21      way through three floors of the building and  
22      into the ground in order to provide enough  
23      structure to hold those machines up. They're  
24      heavy. They vibrate, would take some

1 significant structural work to get that to  
2 happen, very expensive. I would ball park  
3 hundreds of thousands of dollars before we could  
4 accommodate that and a significant amount of  
5 intrusion into the building.

6 To relocate them on the ground, and we  
7 did look at that as one of the choices when we  
8 were looking at this design. From a piping  
9 standpoint, the two units that are to the south  
10 of the center line of the building could go on  
11 the ground around the two south towers that they  
12 serve. The two units to the north of the center  
13 line of the classroom building could go on the  
14 ground around the two towers that they serve.  
15 And that would be a reasonable piping distance  
16 that could be achieved there. What you have,  
17 though, is you're taking these machines and  
18 putting them closer to the neighborhood and onto  
19 areas that we use for teacher parking, wood  
20 shop, auto shop, deliveries, school bus loading  
21 and unloading. We'd be putting them in the way  
22 closer to the homes.

23 The idea of moving all of the units  
24 away from the homes I think would be

1 unrealistically expensive because of the need to  
2 up size this equipment to be able to pipe all  
3 the way to these towers. From a practical  
4 standpoint you'd either have to come up and go  
5 over the building and come down, go around the  
6 building or go through the building. All of  
7 those things would be very expensive to try and  
8 push through the building if we were to try to  
9 put these machines in the front yard.

10 Q. It is possible to put them in front of  
11 the school though?

12 A. That would be a question for an  
13 engineer. I would guess -- my opinion would be  
14 these machines would have to be upsized to be  
15 larger machines in order to accomplish that.

16 Q. Including the unit that is on top of  
17 the auditorium?

18 A. Again, same thing. You'd be  
19 covering -- well, you can see, a fairly large  
20 distance, if you were to try and put that unit  
21 someplace out in the front yard.

22 Q. Okay. My other -- well, I don't know  
23 if you can -- let me see if you can answer this  
24 question.

1                   Are there sound enclosures that can be  
2                   installed around -- when I say a sound  
3                   enclosure, is there a sound proofing enclosure  
4                   that can be installed around the unit?

5                   A.       I believe the answer is yes, there are  
6                   sound enclosures that are made to absorb sound  
7                   and release muffled sound.

8                   We run into the same situation.  Those  
9                   sound enclosures would be huge, as you might  
10                  imagine, to completely enclose these units and  
11                  still have enough space so that air could  
12                  circulate, which is the function of having these  
13                  units.  The weight of those, both the dead load  
14                  of the box sitting there and the live load of  
15                  whatever wind or snow gets blown against them  
16                  would either push them off the roof or at a  
17                  minimum we would have the same condition of  
18                  having to put columns down through the building  
19                  to the ground and beams horizontally to support  
20                  the weight and the load of those enclosures.

21                  MR. GARDNER:  That's all.

22                  HEARING OFFICER HALLORAN:  Thank you,  
23                  Mr. Gardner.

24                  Any redirect?

1                   MR. DALIANIS: Just one brief  
2 question.

3                   REDIRECT EXAMINATION

4 BY MR. DALIANIS:

5           Q.       The system that was installed using  
6 the York International chillers, has that been  
7 used elsewhere in the district?

8           A.       Actually, it has the year before, in  
9 the summer of '98 we used this product on the  
10 roof of Schaumburg High School, a different  
11 design building with a different spatial  
12 relationship to the neighbors, but the same  
13 units. They've been actually very good units.  
14 We have won a couple of awards for the  
15 engineering, design of that building. And those  
16 units don't have the enclosures or anything  
17 around them because that building has a  
18 different configuration. It has some penthouses  
19 that are similar in function but different in  
20 shape than these towers.

21                   MR. DALIANIS: Thank you very much,  
22 Mr. East.

23                   HEARING OFFICER HALLORAN: Thank you.

24                   MR. GARDNER: Can I ask or is that --

1 HEARING OFFICER HALLORAN: I'm sorry.  
2 Yes. Do you have any recross, Mr. Gardner? I'm  
3 sorry.

4 MR. GARDNER: I do.

5 RE CROSS-EXAMINATION

6 BY MR. GARDNER:

7 Q. Schaumburg, you're talking about  
8 Schaumburg High School, and those -- since that  
9 has been brought up, let's see, there are -- as  
10 you described your -- you have the units -- is  
11 this correct when I say you have the units  
12 sitting behind rooms that are on -- they look  
13 like rooms on top of the roof? There is --  
14 there -- are there -- let me see how -- let me  
15 rephrase that.

16 A. Okay.

17 Q. Penthouses, there are penthouses  
18 blocking the view of the units from the  
19 residential homes that are around Schaumburg  
20 High School, is that correct?

21 A. Partially correct.

22 Schaumburg is a much more horizontal  
23 building. There are roof top penthouses that  
24 are full height, 15, 18 foot tall rooms that

1 cover part of the roof of Schaumburg High  
2 School. Between those penthouses we have  
3 equipment, these York machines. There is a  
4 lower roof similar in configuration to the  
5 cafeteria at Hoffman and the homes that would be  
6 similarly situated to your home only at  
7 Schaumburg High School also have a line of sight  
8 to the machines that sit between these rooms.  
9 So, yes, partially, there are penthouses on the  
10 roof. And no, partially because there are some  
11 neighbors that have the same vision line that  
12 you have, though I would offer my opinion that  
13 it was a greater distance but that they do have  
14 a similar view of the machinery that you have.

15 Q. Would you agree it's a considerable  
16 distance because -- do you agree that there  
17 is -- to the west of Schaumburg High School a  
18 football stadium, parking lot, maybe around  
19 let's say 10 acres of land separating those  
20 homes from the school building?

21 A. They are definitely further than your  
22 home.

23 MR. GARDNER: Thank you.

24 HEARING OFFICER HALLORAN: Anything

1 else?

2 MR. DALIANIS: Thank you.

3 HEARING OFFICER HALLORAN: Thank you.  
4 You may step down.

5 MR. DALIANIS: Can I ask a practical  
6 question? I have four more witnesses and I  
7 would imagine that it will take no more than 2  
8 hours to complete. Is it possible that we can  
9 just go through the lunch hour, because some of  
10 them do need to get on with their other  
11 activities for the afternoon? It's about 11:00  
12 o'clock now.

13 HEARING OFFICER HALLORAN: When you  
14 say 2 hours, are you including, anticipating Mr.  
15 Gardner and his cross?

16 MR. DALIANIS: Sure, I would think  
17 based on the questions I have, and then if it is  
18 similar duration for cross, because I made  
19 certain promises to them in terms of when --  
20 especially when they got here, I said I needed  
21 them right away and now they've been sitting,  
22 I'd like to have them testify.

23 HEARING OFFICER HALLORAN: I  
24 understand.

1                   Mr. Gardner, any problem with going to  
2                   1:00, 1:15, but we will take a --

3                   MR. DALIANIS:   Like a bathroom break?

4                   HEARING OFFICER HALLORAN:  Sure.  Is  
5                   everybody comfortable now?

6                   MR. GARDNER:   Smoke break.

7                   MR. DALIANIS:   I'm fine now.

8                   HEARING OFFICER HALLORAN:  Let's  
9                   proceed.

10   (Off the record.)

11                   HEARING OFFICER HALLORAN:  We're back  
12                   on the record.  It is approximately 11:10, and  
13                   Mr. Dalianis is going to call -- his second  
14                   witness is in the seat, and I would ask the  
15                   court reporter to swear him in.

16   (Witness first duly sworn.)

17   JAMES DAGLEY,  
18                   called as the witness herein, having been first  
19                   duly sworn, was examined and testified as  
20                   follows:

21   DIRECT EXAMINATION

22                   BY MR. DALIANIS:

23                   Q.       Please, state and spell your name.

24                   A.       James Dagley.  D-A-G-L-E-Y.

1 Q. And are you employed, Mr. Dagley?

2 A. Yes, I work for York International.

3 Q. When did you first go to work for York  
4 International?

5 A. In 1992.

6 Q. Okay. What are your current  
7 responsibilities at York?

8 A. I am the zone sales manager. I'm  
9 responsible for all new equipment sales in the  
10 greater Chicago area.

11 Q. How long have you had those  
12 responsibilities?

13 A. About three and a half years.

14 Q. Okay. Could you tell us briefly about  
15 your educational background?

16 A. I have a bachelor of science and  
17 engineering in mechanical engineering, material  
18 science from Duke University. And I have an MBA  
19 from Chapman University.

20 Q. Okay. And your MBA was finance,  
21 marketing sales, like that?

22 A. It wasn't a specific, but there are  
23 courses in finance and marketing.

24 Q. Okay. Can you tell us about any

1 additional course work, professional education  
2 or in-house training you completed related to  
3 HVAC work and your responsibilities at York?

4 A. York has got a detailed training  
5 program when you first start, and then there is,  
6 you know, probably two or three classes a year,  
7 product specific classes, engineering specific  
8 classes, we come out with a new product or just  
9 generally industry knowledge.

10 Q. Have you taken any courses on the  
11 millennium air cooled liquid chiller?

12 A. Yes, I have.

13 Q. Do you have any licenses,  
14 certifications or professional memberships?

15 A. I've been a member of ASHRAE.

16 Q. Can you tell us what that is?

17 A. It's the American Society of Heating  
18 and Refrigeration -- Heating, Refrigeration, Air  
19 Conditioning Engineers.

20 Q. And what does it take to become a  
21 member of ASHRAE?

22 A. It takes -- I don't remember  
23 specifically but I think you have to be in the  
24 business for five years and get a recommendation

1 and then submit an application and then a group  
2 in Atlanta reviews your application.

3 Q. You need to be sponsored by  
4 somebody --

5 A. -- sponsored and be recommended.

6 Q. Are you generally familiar with York's  
7 line of HVAC and chiller products?

8 A. Yes.

9 Q. You mentioned you are familiar with  
10 the millennium air cooled liquid chillers sold  
11 by York?

12 A. Yes, sir.

13 Q. Do you know if this model is the one  
14 that was installed at Hoffman Estates High  
15 School in the '99?

16 A. Yes, there are five installed there, I  
17 believe.

18 Q. Would a photo be of assistance to you  
19 in giving your testimony today?

20 A. Couldn't hurt, but --

21 Q. If you need it, it's up there.

22 A. Okay.

23 Q. Actually, what I'd like to do is refer  
24 him to one of the exhibits here.

1 HEARING OFFICER HALLORAN: By all  
2 means.

3 BY MR. DALIANIS:

4 Q. I'm showing you what has been marked  
5 as Respondent's Group Exhibit G-1. Is this a  
6 picture of the York millennium chiller?

7 A. Yes, it is.

8 Q. And that is the same chiller that is  
9 on the roof at Hoffman Estates High School?

10 A. Yes, it is.

11 Q. Great.

12 Is that model, the millennium widely  
13 in use today?

14 A. Very, very widely.

15 Q. Any idea how many of these millennium  
16 chillers are in use in Illinois for instance?

17 A. I would say an estimate would be, you  
18 know, in the neighborhood of 2 to 300 --

19 Q. How about throughout the United  
20 States?

21 A. -- since about '99 I would say.

22 In the United States since '99 I'd say  
23 between 3 and 5,000.

24 Q. Okay. And how about worldwide since

1 '99?

2 A. Probably closer to 8 to 10,000, in  
3 that range.

4 Q. Okay. And is the millennium installed  
5 at other schools, secondary, elementary,  
6 university, et cetera?

7 A. Yes, it is. It's a very popular model  
8 for school districts. This particular model is  
9 the basis of design for all new or all air  
10 conditioning projects for the Chicago Public  
11 School system.

12 Q. Is that right? Okay.

13 Has York set forth any specifications  
14 for the type and level of sound produced by the  
15 millennium model?

16 A. We have a -- we have a list of -- a  
17 list -- we have an engineering supplement that  
18 listed the sound power levels of the units.

19 Q. And do you know what those  
20 specifications are for the millennium?

21 A. I have a copy of it with me.

22 Q. Can I take a look at that?

23 A. There are three different sized  
24 models, I believe, at the high school.

1 Q. Okay. So why don't you kind of  
2 explain to us what this is because it's not --

3 A. Sure.

4 This just shows the sound power levels  
5 taken 1 meter away from the unit in accordance  
6 with this ARI 370 standard.

7 Q. What is ARI?

8 A. ARI is an industry group, a non -- I  
9 guess nonpartisan industry group that stands for  
10 the Air Conditioning and Refrigeration  
11 Institute, and they have published basically the  
12 guidelines of how you measure the sound on  
13 manufacturer's equipment, so.

14 Q. Okay.

15 A. And this sound just shows an 8 octave  
16 bands, the sound power levels with the weighted  
17 average in decibels shown.

18 Q. What octave bands was the machine  
19 tested at according to ARI?

20 A. According to ARI from 63 hertz all the  
21 way up to 8,000 hertz.

22 Q. What was the A-weighted average?

23 A. For the two 150 ton machines it's 9.9.  
24 For the two 200 ton and the one 130 ton is 103.

1 Q. And then which ones are installed on  
2 the roof at Hoffman Estates High School?

3 A. I believe 2 are 150 ton machines. One  
4 is a 230 ton machine and the other two are 200  
5 ton machines.

6 Q. Okay. And then has the millennium  
7 undergone any testing, federal, state, industry  
8 specific to conform the sound level information  
9 you're discussing?

10 A. There is no real, I guess, independent  
11 testing organization to comply with, other than  
12 the method you use. All the testing that I'm  
13 aware of has just been performed by York  
14 International.

15 Q. Okay. As far as you know, the  
16 millennium meets all of the applicable sound  
17 level standards in the HVAC industry?

18 A. As far as I know.

19 HEARING OFFICER HALLORAN: Excuse me,  
20 Mr. Gardner, have you taken a look at this  
21 document that the witness is referring to?  
22 Would you like to review it?

23 MR. DALIANIS: Actually, I'll probably  
24 put it in so I think it would be a good idea.

1                   MR. GARDNER: I believe it might be in  
2                   the discovery, did you put it --

3                   MR. DALIANIS: No, it's not in  
4                   discovery because this is a new document from  
5                   York. This is their sound specifications.  
6                   What was in discovery were the specifications  
7                   for the request for proposals from the district.

8                   MR. GARDNER: But there was technical  
9                   material in there. I didn't know if this was  
10                  part of the technical part.

11                  MR. DALIANIS: No, I think that may be  
12                  Davis' information.

13                  BY MR. DALIANIS:

14                  Q.           Generally, would you describe the  
15                  millennium as widely accepted and among the  
16                  industry standards for chillers today?

17                  A.           Absolutely.

18                  MR. DALIANIS: I have no further  
19                  questions for Mr. Dagley.

20                  HEARING OFFICER HALLORAN: Thank you,  
21                  Mr. Dalianis.

22                  Mr. Gardner, any cross?

23                  MR. GARDNER: Yes.

24                  CROSS-EXAMINATION

1 BY MR. GARDNER:

2 Q. All right. Can you on the board up  
3 here point out which size units are located at  
4 which locations, would you know that or do you  
5 know where --

6 A. I'm not sure if based on my memory I  
7 would remember which ones are where.

8 Q. Okay.

9 A. I'm sure they would be pretty easy to  
10 figure out, but --

11 Q. Do you know if there is a -- is your  
12 sales -- are your -- you said you have the zone  
13 sales manager so you would have a territory, are  
14 you responsible for all the units of the  
15 millennium that were sold in Schaumburg and  
16 Hoffman Estates over the past three years?

17 A. Yes.

18 Q. Does the Dominick's grocery store at  
19 Golf and Barrington Road have one of your units  
20 on top of it?

21 A. Dominick's? That doesn't sound  
22 familiar. It might be York product there, I  
23 don't know if it is a millennium --

24 Q. Okay.

1           A.       -- chiller or not.

2           Q.       When you -- you mentioned that the --  
3           there are -- that schools -- a number of schools  
4           are installing your units, the millennium units.

5                    Do you know if these schools have  
6           residential homes located as close to them as  
7           Hoffman Estates, do you know if -- of all of  
8           these millennium units that you say are being  
9           sold to school districts or being sold for  
10          schools, are those schools similarly located in  
11          relationship to residential homes? Do they have  
12          homes as close to them as Hoffman Estates has  
13          homes close to it?

14          A.       A good portion of the units we've sold  
15          in the past few years have been to the city of  
16          Chicago public schools, where they're  
17          retrofitting an existing building. In most  
18          cases our machines end up on the ground  
19          literally right next to a residential's home, I  
20          mean right next to the property line. So it's  
21          quite common that they're much, much closer than  
22          Hoffman Estates High School.

23          Q.       The home --

24          A.       The distance between the residential

1 home and our unit is typically much, much closer  
2 than the distance in Hoffman Estates.

3 Q. Okay. Let's see. And just to make  
4 sure I have this measurement correct, the  
5 measurements on this are -- is that going to be  
6 entered as an exhibit?

7 MR. DALIANIS: You know, I want to  
8 enter it as Respondent's Exhibit I, and I can do  
9 that on redirect or now with your indulgence.

10 HEARING OFFICER HALLORAN: Sure. Why  
11 don't you mark it and Mr. Gardner can refer to  
12 it as such.

13 BY MR. GARDNER:

14 Q. Just to make sure I understand, these  
15 measurements were taken 1 meter away from the  
16 units running at full power?

17 A. They were taken in accord with the  
18 standard, I think there is a series of --  
19 memory, I might be wrong, but 8 to 10 points at  
20 different points around the chiller. I believe  
21 it is 1 meter away but there is a whole, you  
22 know, 20 page book, this standard is ARI 370  
23 that tells you exactly how to take the sound  
24 measurements, so.

1           Q.       Do the units give off, from your  
2           knowledge of these units, is there -- can  
3           they -- when I use the word full power, is there  
4           such -- oh, okay.

5                       From your knowledge of the units, can  
6           they -- is there a low power setting? Is there  
7           a step up of power that these units can operate  
8           at or are they just on or off?

9           A.       They, for example, a 200 ton, 200 ton  
10          chiller we'll maybe see, you know, 200 tons, I  
11          don't know, according to the Chicago weather  
12          data less than 1 percent of the time it runs.  
13          At some other point it is going to be less, it's  
14          going to be running at some part load condition  
15          less than 200 tons. So, yeah, it is not just on  
16          or off. It will run all the way down to about  
17          10 percent load. So if it's 200 ton chiller, it  
18          will run down to about 20 tons, which covers a  
19          pretty wide range of operating conditions in  
20          Chicago and typically speaking as it -- as it  
21          unloads, when it is less than full load, the  
22          sound is quieter.

23          Q.       When you say it's running at 10  
24          percent of load, can you describe what -- is

1           there a -- are there multiple pumps that are --  
2           let's say there is 10 pumps in there and at 10  
3           percent load only 1 of the pumps is running or  
4           it is it one pump at different -- operating at a  
5           different RPM? When I say RPM, I'm talking  
6           about revolutions per minute.

7           A.       Well, there is -- there is really two  
8           things that would produce sound on the unit.  
9           There is fans on the top and those come on at  
10          stages. So there might be let's say 8 fans and  
11          they'll come on in stages. They're not just all  
12          8 on or off. They will be on according to load.  
13          And most of these machines have two compressors  
14          that perform the refrigeration and they will --  
15          they will come on and off as needed but if you  
16          got one compressor on, if you have a 200 ton  
17          chiller, 100 ton load, you'll have one  
18          compressor on and then it has got a slide valve  
19          that will modulate, it always runs at a fixed  
20          RPM but this slide valve moves to run it at less  
21          than 100 ton capacity.

22          Q.       The noise could or will the noise vary  
23          through -- let's say you were -- would the noise  
24          level vary throughout the day in a -- during a

1 85 degree day, would the noise level coming from  
2 one of these units vary throughout the day or  
3 would it stay at the same level?

4 A. It will vary slightly here during the  
5 day.

6 Q. And is it possible that if somebody  
7 was to measure the noise given off by these  
8 units that not -- they have -- we've got 5 banks  
9 of units, or -- okay, how many compressors are  
10 in a bank?

11 A. In one chiller, on these chillers  
12 there is two compressors per chiller.

13 Q. Two compressors. So there is -- on  
14 Hoffman Estates High School, there are a total  
15 of 10 compressors?

16 A. Correct.

17 Q. And is it possible that at any given  
18 point all 10 compressors might be on or they --  
19 all 10 compressors might be off or half?

20 A. Sure, that's possible.

21 Q. Okay. Have you received -- has York  
22 received any -- are you aware of any complaints  
23 that York has received from any of the units  
24 installed at -- on the Chicago schools?

1 A. Not that I am aware of.

2 MR. GARDNER: That's all I have.

3 HEARING OFFICER HALLORAN: Thank you.

4 Any redirect?

5 MR. DALIANIS: No redirect.

6 HEARING OFFICER HALLORAN: All right.

7 Off the record.

8 (Off the record.)

9 HEARING OFFICER HALLORAN: All right.

10 We're back on the record. And Mr. Dalianis

11 about to call his third witness.

12 MR. DALIANIS: At this time I'd like

13 to call Mr. Rudolf Trejo.

14 HEARING OFFICER HALLORAN: Thank you.

15 Please, raise your right hand, sir, and the

16 court reporter will swear you in.

17 (Witness first duly sworn.)

18 RUDOLPH TREJO,

19 called as the witness herein, having been first

20 duly sworn, was examined and testified as

21 follows:

22 DIRECT EXAMINATION

23 BY MR. DALIANIS:

24 Q. Please, state and spell your name for

1 record, Mr. Trejo?

2 A. Rudolph Trejo, Jr., R-U-D-O-L-P-H  
3 T-R-E-J-O.

4 Q. Are you employed, Mr. Trejo?

5 A. Yes, I am.

6 Q. By whom are you employed?

7 A. Cook County Department of  
8 Environmental Control.

9 Q. How long have you been employed by the  
10 Cook County Department of Environmental Control?

11 A. Seventeen years.

12 Q. And what are your current  
13 responsibilities at the department?

14 A. I am now the manager of industrial  
15 services that responds to asbestos and  
16 demolition permits and investigations.

17 Q. And how long have you been the manager  
18 of industrial services?

19 A. Two and one half years.

20 Q. Can you briefly tell us about your  
21 educational background?

22 A. Grade school here in Chicago. High  
23 school here at Chicago. College here in Chicago  
24 at Illinois Institute of Technology, degree in

1 double EE, bachelor's.

2 Q. In addition to your electrical  
3 engineering degree, do you have any training or  
4 professional experience in sound level  
5 measurement?

6 A. I have taken seminar courses given by  
7 the county or through the county facilities with  
8 a sound certified agency.

9 Q. Over the course of your professional  
10 career, how many times have you conducted sound  
11 level testing would you say?

12 A. Approximately 20, 20 some -- 26 times.

13 Q. Twenty-six times?

14 A. Twenty-six times.

15 Q. Okay. Have you conducted sound level  
16 testing to measure outdoor noise levels before?

17 A. Yes, I have.

18 Q. Okay. Let me draw your attention to  
19 the fall of 1999. Are you familiar with the  
20 noise complaint filed against Township High  
21 School District 211 in this matter?

22 A. Yes.

23 Q. How did you become familiar with the  
24 complaint?

1           A.       On two occasions.  One I was contacted  
2           by the school district.  And number 2 I was  
3           contacted by a complainant, a Mr. Gardner.

4           Q.       Okay.  Your first contact, was that  
5           with Mr. Gardner or with the district?

6           A.       It was with Mr. Gardner.

7           Q.       And then when, approximately when was  
8           that initial contact?

9                     If this would be of assistance, I have  
10           your Cook County Department of Environmental  
11           Control report.

12          A.       I would appreciate that.

13                     MR. DALIANIS:  Mr. Gardner, you have  
14           seen that before.

15                     MR. GARDNER:  Yes.

16                     MR. DALIANIS:  I'm going to hand that  
17           to Mr. Trejo.  Let me give you a copy.

18                     HEARING OFFICER HALLORAN:  Thank you.

19                     THE WITNESS:  The complaint came in on  
20           September 1st of 1999 from a Mr. Bob Gardner.

21           BY MR. DALIANIS:

22           Q.       Okay.  And then did that -- did the  
23           complaint cause you to come out to visit the  
24           high school?

1           A.       Yes, it caused me to respond to the  
2           complaint.

3           Q.       When did you make your response and  
4           visit Hoffman Estates High School?

5           A.       I visited the site on September 7th.

6           Q.       Okay.

7           A.       At 2:30 p.m. in the afternoon.

8           Q.       Did you conduct any sound level  
9           measurements on your initial visit to the high  
10          school on September 7th of '99?

11          A.       Yes, I did.

12          Q.       And you indicated it was about 2:30 in  
13          the afternoon?

14          A.       Correct.

15          Q.       Okay. Do you remember what the --  
16          sunny, overcast, raining, temperature,  
17          approximately?

18          A.       The weather at that time was sunny,  
19          approximately 8 miles per hour wind, and that  
20          was about the size of my report in terms of the  
21          weather conditions.

22          Q.       Okay. Let's talk about the test that  
23          you actually conducted at the high school.

24                    What type of testing equipment did you

1 use?

2 A. I used a Bruell and Care sound  
3 measuring device on the A-weighted scale. It's  
4 a portable hand held unit.

5 Q. And does that have a microphone  
6 attached to it?

7 A. Yes, it does. It has a micro sensor  
8 attached to it.

9 Q. Do you employ the use of a wind screen  
10 at all?

11 A. Yes.

12 Q. What is the wind screen like on this  
13 testing device?

14 A. The wind screen is a polyurethane,  
15 it's about the size of a golf ball, allows noise  
16 to come through it but it diffracts ambient  
17 radicle noises and it protects the device so  
18 that it won't rust or get -- in inclement  
19 weather.

20 Q. Is it provided by the manufacturer?

21 A. Yes, it is.

22 Q. Did you perform any calibrations to  
23 the machine prior to using it?

24 A. Yes, I did.

1 Q. And what type of calibrations did you  
2 do?

3 Is there anything that can refresh  
4 your recollection?

5 A. Yes, I would like to look at the  
6 documents.

7 Q. Okay. Now, what is the date of the  
8 document you're looking at?

9 A. August 31st, 2000.

10 Q. Okay. That was when you took your  
11 second round of tests, correct?

12 A. Correct. I used the same methodology  
13 and calibration.

14 The sound level meter was calibrated  
15 according to the ANSI standard sound meter  
16 protocol SI4-1983. This is given in the manual  
17 for the units that are supplied to us.

18 Q. Okay. And then what was the  
19 calibration procedure? Is there a sound meter  
20 or sound testing tone that comes with the  
21 machine?

22 A. There is a tonal producer that is  
23 given with the machine.

24 Q. Okay.

1 A. It has to be operated with a battery.

2 Q. And did you use that tonal machine in  
3 calibrating for your first round of tests?

4 A. Yes, I did.

5 Q. Okay. Were there any abnormal weather  
6 conditions that day that could have impacted the  
7 results of your tests?

8 A. On that day, no.

9 Q. Okay. And where did you conduct the  
10 sound level test?

11 A. I conducted the sound level tests  
12 approximately 200 feet to the northwest of the  
13 school, approximately behind the garages or the  
14 utility sheds that are affixed on the property.

15 Q. In part of the room here I've got a  
16 blow up aerial photo of the school district.

17 Would it be of assistance to point for  
18 the record and for the hearing officer's benefit  
19 generally where you were standing if you  
20 remember?

21 A. On this first test --

22 Q. This is the August '99 round. Okay.

23 A. I'm not familiar --

24 Q. Well, if I may, this is the subject

1 property right here. This is north. And these  
2 are indicated where the chillers are located.

3 A. I was approximately at this location  
4 the first time in September.

5 Q. Okay.

6 HEARING OFFICER HALLORAN: Could you  
7 mark that with a T or something?

8 MR. DALIANIS: Maybe call it T1.

9 HEARING OFFICER HALLORAN: Thank you.

10 BY MR. DALIANIS:

11 Q. Okay. Did you take your measurements  
12 with the chillers running at Hoffman Estates  
13 High School?

14 A. Yes.

15 Q. How do you know that they were  
16 running?

17 A. Because I made it a point of  
18 contacting the administration and the janitor's  
19 supervisor at that time to determine that the  
20 units were on.

21 Q. How many measurements did you make  
22 with the chillers running on that '99 -- August  
23 of -- I'm sorry, September 7, 1999, date?

24 A. To the best of my recollection, I

1 think, I took five tests.

2 Q. Okay.

3 A. And I recorded the largest or the  
4 highest sound reading.

5 Q. And what was the reading that you  
6 recorded?

7 A. 62 DB on A-weighted scale.

8 Q. 62 DB A-weighted.

9 Okay. What does A-weighted mean?

10 A. It's a measurement for the sound level  
11 being diffused.

12 Q. So it essentially is almost like an  
13 averaging of the various octave band  
14 measurements?

15 A. Correct.

16 Q. Okay. And how did you account for  
17 plane fly overs or road noise in the area?

18 A. At the time of this first complaint  
19 investigation, I took the actual recordings  
20 without secluding any kind of vibrations or  
21 anything else. As it happened, I did not come  
22 across airplanes at the time I took the five  
23 measurements.

24 Q. Okay. And are you familiar with the

1 Cook County standards for noise emissions?

2 A. Yes, I am.

3 Q. And what is the county sound level  
4 standard for a property like Hoffman Estates  
5 High School emitting a sound?

6 A. Do you have a copy of the --

7 Q. I do have a copy of the ordinance.

8 All right. Mr. Trejo, I'm going to  
9 show you just for identification purposes what  
10 is photocopied as Article 9, noise and vibration  
11 control, provisions of the Cook County  
12 ordinances, which are voluminous.

13 A. Right.

14 Q. And let me hand that to you.

15 What am I handing to you?

16 A. You're handing me the regulations upon  
17 which the noise levels are determined to be  
18 either in compliance or in violation.

19 Q. Now, is that a current version and was  
20 it current as of the summer of 1999?

21 A. Yes, it was.

22 Q. Okay. So your measurement of 62  
23 decibels A-weighted, do the results of those  
24 measurements that you took on September 7 of '99

1 meet the standard set forth in the county  
2 ordinance?

3 Let me back up. Strike that.

4 What is the county sound level  
5 standard for a property like Hoffman Estates  
6 High School?

7 A. On the A scale it is 62DB.

8 Q. And your measurement was at?

9 A. 62DB.

10 Q. So those measurements are consistent  
11 with the county level standards?

12 A. Correct.

13 Q. Okay.

14 A. For the property that was being  
15 monitored.

16 Q. Right.

17 At the time your measurements were  
18 taken in September of '99, were there any  
19 barriers or other sound remediation devices in  
20 place at or around the chillers when you  
21 conducted those sound level tests?

22 A. No, not to my knowledge.

23 Q. Okay. Did you return the next year in  
24 2000 to conduct additional sound level testing?

1 A. Yes, I did.

2 Q. And was that on or about June 13 of  
3 2000?

4 A. Yes, it was.

5 Q. Did you use the same equipment or  
6 similar equipment and procedures as you employed  
7 for the measurements taken in September of '99?

8 A. Yes, I did.

9 Q. I'd like to show you for  
10 identification purposes a letter from Mr. Trejo  
11 to Steve East dated August 31, 2000. This has  
12 previously been submitted to Mr. Gardner in the  
13 process of discovery.

14 HEARING OFFICER HALLORAN: Thank you.

15 BY MR. DALIANIS:

16 Q. Does that look familiar?

17 A. Yes.

18 Q. Is this a letter that you had written?

19 A. Yes.

20 Q. Okay. Do these represent the results  
21 of your test taken in June of 2000?

22 A. Yes, they do.

23 Q. What is the range of sound that you  
24 picked up at your June 2000 testing?

1           A.       It ranged from 48 -- or, I'm sorry, 47  
2 DB to a high of 58 DB on the weighted scale A.

3           Q.       Can you show us on the map here,  
4 Respondent's Exhibit A, where you were standing  
5 when you took the June 2000 test?

6           A.       I was --

7           Q.       Can you kind of stand to the side,  
8 too.

9           A.       Trying to point out that I was  
10 underneath these trees, so this would be T2.

11          Q.       Okay. So you were at the property  
12 line directly south of the subject property?

13          A.       Correct.

14          Q.       Okay. And according to what the  
15 ordinance at the time and what the ordinance now  
16 indicates your readings of an A-weighted 47  
17 decibels to 58 decibels is below the county  
18 standard of 62?

19          A.       Correct.

20                   MR. DALIANIS: Okay. Thank you very  
21 much. No further questions on direct.

22                   HEARING OFFICER HALLORAN: Thank you.

23                   Mr. Gardner, any cross?

24                   MR. DALIANIS: Sorry. Can I introduce

1 both of these as exhibits, Respondent's Exhibit  
2 J and K?

3 HEARING OFFICER HALLORAN: Is that  
4 what we're on?

5 MR. DALIANIS: I think the last one  
6 was I. So J will be the August form.

7 HEARING OFFICER HALLORAN: Okay.

8 MR. DALIANIS: That's K, I think, the  
9 2000 one.

10 All right. And then J is the one  
11 from '99.

12 Here you go. Thank you, Mr. Trejo.

13 HEARING OFFICER HALLORAN: Mr.  
14 Gardner?

15 MR. GARDNER: Yes.

16 HEARING OFFICER HALLORAN: Any  
17 recross?

18 CROSS-EXAMINATION

19 BY MR. GARDNER:

20 Q. Mr. Trejo, are you aware of the State  
21 of Illinois minimum decibel level allowable  
22 during the day for this kind of property?

23 A. No, I'm not.

24 Q. Okay. Do you know what it is for the

1 evening, what the State of Illinois' minimum  
2 decibel level measurements allowable for the  
3 evening?

4 A. No, I'm not.

5 Q. Can I ask you why you changed your  
6 location for the second measurement? Was there  
7 a reason why you didn't go back to --

8 A. Primarily because it was raining.  
9 There was a small drizzle.

10 Q. When you made your second  
11 measurement --

12 A. Correct.

13 Q. -- it was raining.

14 Okay. And can I go up to the board  
15 here? I just need some clarification.

16 When you refer to this measurement, it  
17 looked -- from what I can tell here it is behind  
18 my neighbor's house, 1535 Fairfield Lane, is  
19 that where your -- you wrote T2 here --

20 A. Approximately, yes, sir.

21 Q. Okay. Do you know, when you made this  
22 measurement, were you holding the device in your  
23 hand or did you mount it on a tripod?

24 A. Mounted on a tripod.

1 Q. At what elevation, do you know how  
2 high from the ground?

3 A. Three and a half foot tripod. And so  
4 there would be an extension on the tripod for  
5 approximately 6 more inches.

6 Q. Was it next to the fence when you made  
7 the measurements, do you remember?

8 A. No. It was approximately 6 feet away  
9 from the fence, sufficient so I could put a  
10 garden chair behind the tripod and monitor it.

11 Q. Okay. Are you aware that sound  
12 measurements can be effected by getting  
13 measuring devices too close to building  
14 structures?

15 A. Yes.

16 Q. Okay. So how -- you say you had a --  
17 you had your measuring device -- on the second  
18 measurement, you had a chair behind -- or you  
19 had a chair next to the fence, and then there  
20 was a chair between the tripod and the fence?

21 A. Correct.

22 Q. Are you aware there is a building  
23 right there at the -- what would be the  
24 northeast corner of that lot?

1 A. There was a building.

2 Q. Okay.

3 A. The proximity to that building and my  
4 tripod seemed to be sufficient for this test.

5 Q. Okay. When you made your first  
6 measurement, when you made your first  
7 measurement here you were behind the garages?

8 A. Yes.

9 Q. What was the location of the tripod?  
10 Was it a similar location as -- in relationship  
11 to the fence behind this house here, a chair  
12 between the fence and the tripod?

13 A. Let me clarify something.

14 Nobody asked me about how the system  
15 was being held on the first test. The first  
16 time the test was performed it was held in my  
17 hand.

18 Q. Okay.

19 A. And I tried to at that time determine  
20 if there was any violations, so the noise levels  
21 seemed to be, at that time in five different  
22 tests, it seemed to be in compliance.

23 The second test a year later seemed to  
24 be an aggravated situation so I made it a point

1 of monitoring the full one hour and a half.

2 Q. Now, when you made your second test,  
3 did you contact or how did you know when you  
4 made your second test that all of the units were  
5 running at the high school?

6 A. I did the same protocol. I contacted  
7 the management of the school and the janitor, I  
8 let them know that I was coming out and that I  
9 wanted to do the same test identical to the  
10 first year where all units were on.

11 Q. And they told you that all units were  
12 on?

13 A. Yes.

14 Q. Is it possible that the noise level  
15 could be louder if, in fact, their  
16 description -- are you familiar with the way the  
17 York millennium chiller runs?

18 A. Very generally. I am familiar with  
19 them but very generally, not specifically. It's  
20 not my training.

21 Q. Do you -- or let's see.

22 Is it possible from your knowledge of  
23 the way the York millennium unit runs that the  
24 measurements could have been louder if all

1 the -- if, in fact, not all of the units were  
2 running?

3 MR. DALIANIS: I'm going to object to  
4 that. Mr. Trejo testified that he requested  
5 that they be put on and he was told the units  
6 were running and all on. So, that is a  
7 speculative question at this point.

8 HEARING OFFICER HALLORAN: Mr.  
9 Gardner?

10 MR. GARDNER: All right.

11 HEARING OFFICER HALLORAN: You want  
12 to rephrase it?

13 MR. GARDNER: Yes.

14 BY MR. GARDNER:

15 Q. Did you enter the high school and  
16 verify at the operations panel that all the  
17 chillers were on before you took either of your  
18 measurements?

19 A. No, I did not.

20 Q. Do you certify, does Cook County  
21 Environmental certify that their sound  
22 measurements are in accordance with the Illinois  
23 Pollution Control Board, the sound measurements,  
24 do you certify that your sound measurements are

1 in accordance with the Illinois Pollution  
2 Control Board regulations?

3 A. No, I do not.

4 MR. GARDNER: That's all I have.

5 HEARING OFFICER HALLORAN: Thank you.

6 Mr. Dalianis, any redirect?

7 MR. DALIANIS: No. No, I do not have  
8 any further questions.

9 HEARING OFFICER HALLORAN: Thank you,  
10 you may step down. Thank you very much.

11 MR. DALIANIS: I'm going to bring in  
12 Clete Davis now.

13 HEARING OFFICER HALLORAN: Mr.  
14 Dalianis will bring in his fourth witness, I  
15 believe.

16 (Off the record.)

17 HEARING OFFICER HALLORAN: Mr.  
18 Dalianis, I'm thinking after this witness maybe  
19 we'll take a ten minute break and air out and  
20 come back in.

21 All right. We're back on the record.  
22 Mr. Dalianis' fourth witness is on the stand.  
23 Sir, would you, please, raise your right hand?

24 (Witness first duly sworn.)

1                                   CLETE DAVIS,  
2           called as the witness herein, having been first  
3           duly sworn, was examined and testified as  
4           follows:

5                                   DIRECT EXAMINATION

6           BY MR. DALIANIS:

7           Q.        Could you, please, state and spell  
8           your name?

9           A.        Clete, C-L-E-T-E, Davis, D-A-V-I-S.

10          Q.        Are you employed?

11          A.        Yes.

12          Q.        By whom?

13          A.        I'm employed by the firm of Kirkegaard  
14          Associates.

15          Q.        How long have you been with Kirkegaard  
16          Associates?

17          A.        Thirteen years.

18          Q.        What does Kirkegaard Associates do?

19          A.        We are consultants in architectural  
20          acoustics and other branches of the acoustical  
21          trade.

22          Q.        Prior to joining Kirkegaard by whom  
23          were you employed?

24          A.        Prior to that I was employed by Lester

1 B. Knight & Associates.

2 Q. And what did you do with Lester B.  
3 Knight?

4 A. Primarily, I was the resident field  
5 engineer on the construction of the north  
6 building at McCormick Place.

7 Q. Okay. Primarily, your career has been  
8 in acoustics and mechanical engineering  
9 generally?

10 A. That's correct.

11 Q. Okay. Can you tell us about your  
12 educational background?

13 A. Three and a half years at the  
14 University of Arizona, mechanical engineering,  
15 minor in petrology, and I've taken --

16 Q. Any course work, professional training  
17 in the engineering field?

18 A. Quite a few side courses. Noise  
19 control in industrial buildings and commercial  
20 buildings, which is a course taught in Florida.  
21 It's a 40 hour course. I've taken that twice.  
22 Several other courses in mechanical balancing  
23 and that sort of thing.

24 Q. Okay. Do you have any licenses or

1 certifications or professional memberships?

2 A. I'm a full member of ASHRAE.

3 Q. What is ASHRAE?

4 A. ASHRAE is the American Society of  
5 Heating, Refrigeration and Air Conditioning  
6 Engineers.

7 Q. What is ASPE?

8 A. ASPE is the American Society of  
9 Plumbing Engineers.

10 Q. How does one become a full member of  
11 these societies?

12 A. They are by invitation, and you have  
13 to go for a review by your peers, and they have  
14 to certify that you've completed a certain  
15 amount of work and educational background in  
16 order to be a member of the society.

17 Q. Okay. When did you begin your career  
18 in the field of noise and vibration control?

19 A. The fall of 1989.

20 Q. Okay. And that is when you joined  
21 Kirkegaard?

22 A. Yes.

23 Q. What are your current responsibilities  
24 at Kirkegaard?

1           A.       I'm a senior consultant in noise and  
2           vibration control, and actually department head.  
3           My responsibilities are the design and  
4           implementation, overseeing the construction of  
5           our projects which are --

6           Q.       What are some of the projects you've  
7           worked on?

8           A.       Wisconsin State Capitol Building,  
9           complete renovation of it. Orchestra Hall,  
10          Chicago, renovation a couple of years ago.  
11          Renovation of the Civic Opera House, Skokie  
12          Performing Arts Center, Naperville Central High  
13          School, Lawrence University at Appleton,  
14          Wisconsin, Capital University at Columbus, Ohio.

15          Q.       What value does Kirkegaard add when  
16          they have these rehab or revamping projects?

17          A.       Our responsibility to the project is  
18          to make sure that the project is suitable for  
19          the purpose that it's designed for. We deal  
20          primarily in performance venues, concert halls,  
21          auditoriums, opera houses, that sort of thing.  
22          We also do work in commercial buildings as well.

23          Q.       How many school projects have you  
24          worked on during the course of your career?

1 A. I would guess well over 50.

2 Q. And you're also a trained musician, is  
3 that true?

4 A. Yes, I play violin professionally.

5 Q. In your position at Kirkegaard, are  
6 you occasionally called on to make sound level  
7 measurements?

8 A. Frequently. Virtually every job would  
9 include that we do that that I am involved in.

10 Q. Do you have any training or  
11 professional experience in sound level  
12 measurement?

13 A. There was training involved in the  
14 Laymen Miller course in Florida, and then also  
15 training sessions by the manufacturers of the  
16 meters that we use.

17 Q. Okay. Over the course of your  
18 professional career, how many times have you  
19 conducted sound level testing approximately?

20 A. Several hundred I would imagine.

21 Q. Okay. Have you conducted sound level  
22 testing to measure outdoor noise levels before?

23 A. Yes.

24 Q. On how many occasions have you

1 measured outdoor sound levels?

2 A. Probably in excess of 50 at least.

3 Q. Okay. Have you conducted sound level

4 measurements using a Class I octave and third

5 octave band sound level meter before?

6 A. Yes.

7 Q. How many times?

8 A. That's the only thing we use.

9 MR. DALIANIS: Okay. At this time,  
10 Mr. Halloran, I would like -- I would tender Mr.  
11 Davis as an expert in noise and vibration  
12 control and sound level testing and measurements  
13 to the Pollution Control Board.

14 HEARING OFFICER HALLORAN: Mr.  
15 Gardner, any objection?

16 MR. GARDNER: Based on his training  
17 and experience?

18 MR. DALIANIS: Everything.

19 HEARING OFFICER HALLORAN: Everything.

20 MR. GARDNER: As an expert in sound  
21 measurement, again, is that right?

22 MR. DALIANIS: Noise and vibration  
23 control and sound level testing and measurement.

24 MR. GARDNER: I don't know what I --

1           what I -- by not objecting to this or by  
2           agreeing to it, I don't know that I would -- you  
3           know, to give a -- to agree with something like  
4           that without a resume and checking references  
5           and stuff like that, I guess I might have a  
6           little bit of a problem with that.

7                         MR. DALIANIS: I can -- I do have Mr.  
8           Davis' resume. I can produce that.

9                         HEARING OFFICER HALLORAN: Could you,  
10          please, and Mr. Gardner can take a quick review  
11          of that and see if that will suffice.

12                        MR. DALIANIS: Here is the firm  
13          brochure. Let me find his page.

14                        HEARING OFFICER HALLORAN: We can  
15          enter that or mark that as an exhibit as well.

16                                 (Off the record.)

17                        HEARING OFFICER HALLORAN: Back on the  
18          record.

19                        Mr. Gardner, I'm sorry, you were  
20          saying you just got done reviewing Mr. Davis'  
21          resume --

22                        MR. GARDNER: Based on what I see in  
23          this brochure here, I guess I don't have an -- I  
24          don't have a problem with that.

1 HEARING OFFICER HALLORAN: Okay. So  
2 you have no objection --

3 MR. GARDNER: No.

4 HEARING OFFICER HALLORAN: Thank you  
5 very much.

6 Your motion is granted.

7 MR. DALIANIS: Thank you.

8 BY MR. DALIANIS:

9 Q. Let me draw your attention, Mr. Davis,  
10 to the fall of 1999, are you familiar with the  
11 noise complaint filed against Township High  
12 School District 211 in this matter?

13 A. Yes, I am.

14 Q. How did you become familiar with that  
15 complaint?

16 A. We were called by Mr. Pacyna to come  
17 out and take a look at the situation and decide  
18 what needed to be done to quantify the noise in  
19 the complaint.

20 Q. Had you ever visited the Hoffman  
21 Estates High School?

22 A. Not prior to that.

23 Q. After the contact from Mr. Pacyna,  
24 when was your first visit to the school?

1 A. First visit was in September and --

2 Q. What did you do at that first visit?

3 A. At the first visit, I simply looked

4 the site over, talked to Mr. Waller -- is it

5 Waller or Weller?

6 Q. Weller.

7 A. -- Weller, who I believe was the

8 facility's manager or something of that sort.

9 Q. For the record, Mr. Davis is referring

10 to Chuck Weller, who is -- his official title?

11 SPEAKER: He is our building and

12 ground manager at Hoffman Estates High School.

13 MR. GARDNER: Can I ask a -- you said

14 September of --

15 THE WITNESS: 14, 1999.

16 MR. GARDNER: Thanks.

17 BY MR. DALIANIS:

18 Q. Okay. And then -- so your first visit

19 you talked to Mr. Weller, you walked the

20 grounds, you checked things out essentially?

21 A. Went up on the roof, looked at the

22 chillers.

23 Q. Okay.

24 A. And walked the site with Mr. Weller

1 and --

2 Q. Were there any barriers, any sound  
3 dampening equipment on the chillers at that  
4 time?

5 A. No, there were not.

6 Q. Upon your initial visit to the high  
7 school, what did you observe?

8 A. Well, there are two chillers on the  
9 west edge of the school mounted up on the main  
10 roof. There are two chillers inboard of the  
11 west edge of the roof that are probably, I would  
12 guess, somewhere around 200 feet further east,  
13 they're on the same main roof. And then there  
14 is another chiller that is on a lower roof.

15 The residences that we walked along  
16 behind on the school grounds were across the  
17 parking lot from the main building of the  
18 school.

19 Q. I'm going to point to a Respondent's  
20 Exhibit No. -- or I'm sorry, Exhibit A, and can  
21 you show us, you know, where you walked and then  
22 when we get to the testing question where you  
23 actually put your measurements as well?

24 What do you see here?

1           A.       This is the main building of the  
2 school here. And the chillers that we looked  
3 at -- there are two of them here, two here.

4           Q.       You're talking about the two on the  
5 far west edge of the building, two that are in a  
6 bit?

7           A.       In a bit from there. The width of the  
8 building, and third chiller, actually the fifth  
9 chiller sits approximately right in here.

10          Q.       On the auditory section?

11          A.       That's correct, lower roof. We walked  
12 along here and looked at the edge of this and  
13 looked at the edge of the field along in here  
14 and then went back and talked about the site.

15          Q.       Okay. What is the general level of  
16 sound activity at the high school and the  
17 surrounding area?

18          A.       The general level in this area back  
19 here is relatively high. There are frequent  
20 airplane fly overs. There is a great deal of  
21 noise that funnels in here from Golf Road.

22          Q.       Higgins?

23          A.       Is this Higgins? Oh, okay. Higgins.

24                   And the parking in here, there are

1 vehicles leaving and coming, quite a bit, at  
2 least at the time that I was there.

3 Q. Okay. Did you make a second visit to  
4 the high school?

5 A. Yes.

6 Q. And do you recall the date of your  
7 second visit?

8 A. Let me look and see.

9 Second visit was on 8 October 1999.

10 Q. Okay. What did you observe on your  
11 second visit to Hoffman Estates High School?

12 A. Well, the second time we were out  
13 there on the 8th of October, we made noise  
14 measurements along the property line back here.

15 Q. Were your initial impressions of the  
16 general noise level at the site confirmed from  
17 that first visit?

18 A. Yes.

19 Q. Were you engaged by the district's  
20 design engineering firm to conduct these sound  
21 level tests at the high school?

22 A. Yes.

23 Q. And have you ever made sound level  
24 tests at Hoffman Estates High School before that

1 date?

2 A. No, not prior to that.

3 Q. And you conducted these tests on  
4 October 8 of 1999?

5 A. That's correct.

6 Q. Do you recall the time of day you  
7 conducted your sound level testing?

8 A. It was between 9:00 and 10:00 o'clock  
9 in the morning.

10 Q. What type of testing equipment did you  
11 use?

12 A. We used a Larson Davis.

13 Q. What is that?

14 A. Well, that's the manufacturer. The  
15 exact meter is an 800B as in boy, it's a Class 1  
16 octave and 3rd octave band meter.

17 Q. Okay. Is that -- is the Larson Davis  
18 measuring device the type of sound measurement  
19 device approved or allowed by the Illinois  
20 Environmental Protection Agency administrative  
21 rules and regulations?

22 A. Yes, it is.

23 Q. And does the Larson Davis meter  
24 conform with the American National Standard

1 Institutes' requirements as set forth in the  
2 IEPA regulations?

3 A. As far as I've been able to determine  
4 from reading those regulations, yes.

5 Q. And which ANSI standards does the  
6 device meet?

7 A. I don't recall just offhand.

8 Q. Is there anything that would help  
9 refresh your memory on that?

10 A. Well, there is nothing in the report.  
11 I think what you're thinking of is -- we had  
12 done a sound reduction based on an ANSI standard  
13 and that was included in -- let's see here.  
14 Hang on just a second.

15 The ANSI standard for A-weighting is  
16 the one that we reduced the values but compared  
17 them with the county standard and --

18 Q. What was the ANSI standard then?

19 A. That is 51.4 1971 R 1976.

20 Q. Okay. Have you -- you have used the  
21 Larson Davis meter before?

22 A. Yes, I have.

23 Q. Have you had any specialized training  
24 in the use of that meter?

1           A.       Yes.

2           Q.       What is that training?

3           A.       Training is done from the manufacturer  
4           and also from our technical staff within the  
5           company that uses it on a daily basis.

6           Q.       How often is the machine calibrated?

7           A.       We send it to the manufacturer in  
8           Provo, Utah, once a year for a major calibration  
9           check and then there is an individual calibrator  
10          that is supplied as part of the meter kit and  
11          that produces a discrete frequency tone that the  
12          meter is calibrated to at the factory. We can  
13          check it in the field. And what we do is before  
14          we make any measurements, we recheck the  
15          calibration on the day that we're going to make  
16          measurements.

17          Q.       And did you do a calibration on  
18          October 8th at the high school before you took  
19          your measurements?

20          A.       Yes, I did.

21          Q.       What type of microphone did you use to  
22          capture the sound that you were testing?

23          A.       The microphone is a Larson Davis  
24          microphone, it's supplied with the meter. It's

1 a half inch diameter microphone and it comes  
2 with a preamplifier that supplies the tone in a  
3 readable form to the meter.

4 Q. Okay. Did you install a wind screen  
5 on the microphone?

6 A. Yes.

7 Q. In what direction was the wind  
8 blowing, do you recall?

9 A. The wind was blowing from what I  
10 believe -- is your photograph north --

11 Q. North, south.

12 A. Okay. Yes, it was coming from the  
13 southeast across the top of the school.

14 Q. Okay. Blowing towards the subject  
15 property then?

16 A. Yes.

17 Q. Did you record the temperature at the  
18 high school the day you conducted your tests?

19 A. No, I did not.

20 Q. Do you recall what the temperature  
21 was?

22 A. I don't know precisely, but it wasn't  
23 an unusual day in the sense of excessively warm  
24 or cool.

1 Q. Were there any abnormal weather  
2 conditions that day that could have impacted the  
3 results of your test?

4 A. No. Sunny day.

5 Q. Where did you conduct your sound level  
6 tests and if you -- you can show us on the photo  
7 here?

8 HEARING OFFICER HALLORAN: I think he  
9 can just orally explain.

10 MR. DALIANIS: Unless you want him to  
11 put a CD or something like that for his --

12 HEARING OFFICER HALLORAN: Whatever  
13 you feel comfortable with.

14 THE WITNESS: I made measurements  
15 beginning right here. There was a measurement  
16 made here. That was a measurement made here.  
17 There was a measurement made here. And a  
18 measurement made here with the chillers running.

19 And then I went to the school office,  
20 which is back here, and requested that the  
21 chillers be turned off, the same four  
22 measurements were made without the chillers  
23 running.

24 HEARING OFFICER HALLORAN: Sir, could

1           you mark with your acronym CD the various dots  
2           that you made?

3                         Thank you.

4           BY MR. DALIANIS:

5           Q.         Mr. Davis, at what frequency levels  
6           did you take or did you make your measurements?

7           A.         The measurements were made in a series  
8           of 8 octave bands, beginning at 31 and a half  
9           hertz and ending at 4,000 hertz.

10          Q.         And you measured the sound for each of  
11          your test using these eight frequencies?

12          A.         That's correct.

13          Q.         What was the setting on the Larson  
14          Davis meter when you made your tests?

15          A.         We use a linear setting, and we also  
16          use a slow setting so that the meter can be read  
17          much more accurately and the meter was set, of  
18          course, for octave bands rather than 3rd octave.

19          Q.         Did it have a continuous setting also?

20          A.         Yes.

21          Q.         Is that synonymous with the linear  
22          setting?

23          A.         Yes.

24          Q.         Okay. Did you write your measurements

1 down on a form or record them in any other  
2 fashion?

3 A. Yes. They were recorded on a standard  
4 form that we use in-house.

5 Q. Okay. How did you account for plane  
6 fly overs and road noise in the area?

7 A. Well, as much as possible -- first of  
8 all, there were no measurements made when there  
9 were any airplanes flying over. The  
10 measurements were postponed until airplanes were  
11 not there anymore.

12 Q. Okay.

13 A. As far as road noise, we tried to go  
14 between the road noise as much as possible, give  
15 you a chance to slack off so we'd get a truer  
16 reading of the chillers themselves.

17 Q. Okay. What were -- before I ask you  
18 this question. Is there a document in existence  
19 that contains your readings that you made on  
20 October 8th?

21 A. Yes, sir, there is.

22 Q. Okay. I'm going to show you a couple  
23 of things here.

24 First, Mr. Gardner, you have all of

1           this already. This is some correspondence from  
2           you to Mr. Pacyna dated November 18.

3                         Does that include information on your  
4           recorded measurements?

5           A.       Yes, it does.

6           Q.       Okay. And then I want to show you  
7           another document showing -- entitled, ambient  
8           noise levels with some of your -- the graphical  
9           components of your testing.

10                        Mr. Gardner, there you go.

11                        Now, what is this that I've just  
12           handed to you?

13           A.       This is a sound level graph that  
14           illustrates the levels that were achieved or  
15           that were measured in each of the 8 octave bands  
16           and this particular set here is with the  
17           chillers running.

18           Q.       What I'd like to do now is I'd like to  
19           mark the letter dated November 18th as  
20           Respondent's Exhibit L. Can I mark your  
21           version?

22                        HEARING OFFICER HALLORAN: Sure.

23           BY MR. DALIANIS:

24           Q.       Here you go, Mr. Davis.

1                   And then the next set of materials  
2                   that is entitled, ambient noise levels, I'd like  
3                   to call that M. This will be Respondent's M.  
4                   Let me give that to you.

5                   And then, finally, Mr. Davis, I want  
6                   to show you one additional. This is  
7                   correspondence with attached graphs for the  
8                   research you did for Mr. Pacyna and I think you  
9                   have seen all of this, Mr. Gardner, and this one  
10                  I'd like to mark as Respondent's Exhibit N as in  
11                  Nancy.

12                  Okay. Here you go, Mr. Davis.

13                  Now that you've seen all of the  
14                  reports that you have generated, what were the  
15                  measurements that you recorded at the property  
16                  line of the subject property when the chillers  
17                  were running at 31 and a half hertz?

18                  A.       The single read?

19                  Q.       Yes.

20                  A.       59 DB.

21                  Q.       59.

22                  At 63 hertz?

23                  A.       62 DB.

24                  Q.       At 125 hertz?

1           A.       57 DB.

2           Q.       At 250 hertz?

3           A.       49 DB.

4           Q.       At 500 hertz?

5           A.       50 DB.

6           Q.       50.

7                     At 1,000 hertz?

8           A.       50 DB.

9           Q.       At 2,000 hertz?

10          A.       45 DB.

11          Q.       And how about at 4,000 hertz?

12          A.       37.

13          Q.       37 DB.  Okay.

14                     And did you make similar measurements

15   with the chillers off?

16          A.       Yes, I did.  Those measurements were

17   not included on this particular report.

18          Q.       Okay.  Were they included on one of

19   the other reports?

20          A.       They are in this report here.

21          Q.       The one marked as Respondent's

22   Exhibit -- it should say on the front.

23          A.       That is correct.

24                     HEARING OFFICER HALLORAN:  Is that

1 Respondent's Exhibit N as in Nancy?

2 MR. DALIANIS: You're going to have to  
3 look. I think that is N that Mr. Davis has now.

4 THE WITNESS: That's correct.

5 HEARING OFFICER HALLORAN: N as in  
6 Nancy.

7 THE WITNESS: Correct.

8 HEARING OFFICER HALLORAN: Thank you.

9 THE WITNESS: Let's see here. I  
10 don't think we have it for the subject property.  
11 We have the one next door.

12 BY MR. DALIANIS:

13 Q. Okay. Can you tell us what it is for  
14 the one next door?

15 A. The one next door with nothing running  
16 is 57.

17 Q. Okay.

18 A. At 31 and a half hertz, it's 57 and  
19 63.

20 Q. Okay.

21 A. 55 at 125. And it's 43 at 250. It's  
22 41 at 500. And it's 43 at 1,000. It's 45 at  
23 2000. And it's 31 at 4,000.

24 Q. Okay. And then you also took

1 measurements behind other properties, 1529,  
2 1531, 1533 and 1535?

3 A. That's correct.

4 Q. Okay. Did you take octave band  
5 measurements there or A-weighted measurements?

6 A. No, they're all in octave bands.

7 Q. Okay.

8 A. The only one that has been converted  
9 for sake of comparison with the county's  
10 standard is the one back of 1545.

11 Q. Okay.

12 A. And that was converted to an  
13 A-weighted reading.

14 Q. Were the procedures that you employed  
15 at each of the testing locations the same as  
16 those you used at the subject property?

17 A. They were identical.

18 Q. Okay. Why don't we go through and get  
19 your measurements for the additional properties  
20 as well, the 1529, 1531, 1533 and 1535 at each  
21 of the octave band hertz levels.

22 We'll start with 1529.

23 A. Okay.

24 Q. And then we'll just go from 31.5

1 through --

2 A. 31 and a half, the reading is 64.

3 Q. At 1529?

4 A. Yes.

5 Q. Okay.

6 A. 64 at 63 hertz. It's 54 at 125. It's  
7 51 at 250. It's 53 at 500. It's 54 at 1,000,  
8 and it's 48 at 2000, and 40 at 4,000.

9 Q. This was with the chillers on standing  
10 at the property line of 1529?

11 A. That's correct.

12 Q. Okay. How about with the chillers on  
13 standing at the property line at 1531 Fairfield  
14 Lane?

15 A. Okay. Beginning at 31 hertz or 31 and  
16 a half, 60. 60 at 63. 57 at 125. 50 at 250.  
17 51 at 500. 53 at 1,000. 48 at 2000. And 39 at  
18 4,000.

19 Q. And how about at the property line of  
20 1533 Fairfield Lane with the chillers on?

21 A. At 31 and a half it's 60. At 63 it's  
22 60. At 125 it's 58. At 250 it's 49. At 500 it  
23 is 51. At 1,000 it's 52. At 2,000 it's 44. At  
24 4,000 it's 39.

1 Q. Okay. And then, finally, at the  
2 property line of 1535 Fairfield Lane, with the  
3 chillers running?

4 A. Beginning at 31 and a half hertz it's  
5 58. At 63 hertz it's 60. At 125 it's 56. At  
6 250 it's 47. At 500 it's 49. At 1,000 it's 51.  
7 At 2000 it's 44, and at 4,000 it's 34.

8 Q. Okay. Again, the procedures you  
9 employed at each of these locations are the same  
10 as you used at the subject property?

11 A. That's correct.

12 Q. Are you familiar with the Illinois  
13 Environmental Protection Agency standards for  
14 sound emitted from a Class A property to a Class  
15 A property?

16 A. Yes.

17 Q. How are you familiar with those  
18 standards?

19 A. I have a copy, which I've read  
20 through, and --

21 Q. A copy of?

22 A. The standard.

23 Q. Okay. What are the sound level  
24 standards for sound emitted from a Class A

1 property to a Class A property at each of the  
2 frequencies?

3 A. At 31 and a half hertz, 72 DB.

4 Q. Okay.

5 A. At 63 hertz 71 DB. At 125 hertz 65  
6 DB. At 250 57 DB. At 500 51 DB. At 1,000 45  
7 DB. At 2000 39 DB. And at 4,000 34 DB.

8 Q. Okay. What is your interpretation of  
9 the test results in comparing them to the state  
10 EPA standards?

11 A. The readings that we obtained are  
12 below the allowable standard in the bottom five  
13 bands.

14 In the top 3 bands there is a 1 or 2  
15 DB increase over the standard and --

16 Q. What about on an A-weighted basis?

17 A. Well, an A-weighted basis, first you  
18 need to understand, I think, that A-weighted is  
19 the way the human ear hear sounds, which is  
20 different than the way the sound level meter  
21 hears it. And when we reduced the readings  
22 obtained on 1545 that became 54 DBA.

23 Q. So your A-weighted value for the  
24 subject property with the chillers on was 54

1 DBA?

2 A. That's correct.

3 Q. Okay. And did you have occasion to  
4 look at the Illinois Environmental Protection  
5 Agency octave band standards for Class A to  
6 Class A and come up with an A-weighted value?

7 A. We reduced those numbers to A-weighted  
8 and they came up 75 DBA.

9 Q. Okay. And do you have a formula or  
10 some sort of software that performs that --

11 A. Yes, we do.

12 Q. And then did you --

13 A. That software is supplied to us by  
14 Bruell and Care, who are manufacturer --

15 Q. Let me show you what -- tell us what  
16 this is.

17 A. Well, what we're looking at here, the  
18 frequencies on the left column, the octave band  
19 DB, or decibel level is in the center column.  
20 And the weight number is the DBA that results  
21 from the use of the algorithm formula that you  
22 see down below.

23 We're able to just plug the data into  
24 that and then the sound level meter calculates

1 the DBA from that.

2 Q. And then is that a customary way of  
3 calculating DBA --

4 A. Yes.

5 Q. -- in your industry?

6 A. Yes, meter at that point is hooked to  
7 a computer.

8 Q. Okay. And then -- so your  
9 calculations of the IEPA standards in terms of  
10 coming up with a DBA or a decibels A-weighted  
11 was 75 DBA?

12 A. That's correct.

13 Q. And did you calculate an A-weighted  
14 value for your test results taken at the subject  
15 property?

16 A. Yes.

17 Q. And what was the result of that?

18 A. 54 DBA.

19 Q. Was the methodology you used to  
20 calculate the A-weighted value for your sound  
21 level test the same one you used in calculating  
22 for the IEPA standards?

23 A. Yes.

24 Q. And in comparing 75 with 54, what

1 would be your interpretation of that?

2 A. 75 is quite higher than what we  
3 obtained at the site.

4 Q. Okay. When you made your measurements  
5 in October of '99, were there any barriers or  
6 other sound abatement devices in place at or  
7 around the chillers at the time you conducted  
8 your measurements?

9 A. No, there were not.

10 Q. What effect would wrapping the  
11 chillers and erecting barriers have on the sound  
12 levels at Hoffman Estates High School?

13 A. I would expect it would have a  
14 substantial reduction in the amount of sound  
15 emitted by the equipment.

16 Q. Let me show you some photos that have  
17 been marked previously as Respondent's Group  
18 Exhibit G1 through 5, and take a minute to take  
19 a look at these.

20 Based on what you see in those  
21 photographs, which represent the abatement  
22 measures that the district has taken for the  
23 five roof top chillers, would you expect to have  
24 seen a reduction in the sound levels from what

1           you measured back in October of '99?

2           A.       Yes, I would.

3           Q.       And would you -- how would you  
4 describe that reduction?

5           A.       Well, you can't quantify it in  
6 numbers, in DB, but I would expect it to be  
7 substantial.

8           Q.       Okay. And I also would like to mark  
9 Mr. Davis' DBA calculation as Respondent's  
10 Exhibit O. I'll mark yours.

11                   MR. DALIANIS: Okay. No further  
12 questions on direct for Mr. Davis.

13                   HEARING OFFICER HALLORAN: Thank you,  
14 Mr. Dalianis.

15                   Mr. Gardner, any cross?

16                   MR. GARDNER: Yes.

17                   HEARING OFFICER HALLORAN: Thank you.

18                                   CROSS-EXAMINATION

19 BY MR. GARDNER:

20           Q.       Mr. Davis, the points that you --  
21 where were you standing when you made these  
22 measurements along the property line, were you  
23 next to the fence or --

24           A.       I tried to get as close to the fence

1 as I could, basically tried to be exactly in  
2 line of sight between the measurement point and  
3 the chillers.

4 Q. Were you standing next to the storage  
5 sheds that are at the back of the property --  
6 that were on the property line when you made the  
7 measurements?

8 A. No, I tried to line up with the back  
9 of the house itself and not with any out  
10 buildings or anything like that.

11 Q. With the measure -- you said the  
12 measurements were made between 9:00 o'clock and  
13 10:00 a.m. in the morning, from 9:00 a.m. to  
14 10:00 a.m., and did you have -- were the  
15 measurements just made by yourself or was there  
16 a team of people that you came out with?

17 A. No, just myself.

18 Q. Just yourself.

19 Okay. So did you go in and verify the  
20 operator panel in the high school that all the  
21 units, all the chillers were running at full  
22 power before you made your measurements?

23 A. I didn't verify it myself, but I asked  
24 Mr. Weller to make sure that they were up full

1 and then to make sure they were completely off  
2 for the other measurements.

3 Q. Did you -- if the measurements had  
4 been taken at 6:00 a.m., would the -- is it --  
5 is it -- from your knowledge of sound -- of  
6 doing sound measurements, is it possible that at  
7 different times of the day, with the chillers on  
8 at full power, that there would be different  
9 measurements at different times of the day due  
10 to other noises such as noise from Higgins Road  
11 or the tollway?

12 A. The noise could vary from the road and  
13 from airplane fly overs but as much as we could,  
14 or as much as I could, I tried to avoid the peak  
15 noise that was present at that time so that I  
16 could get a truer reading of the chiller noise  
17 itself.

18 Q. Had you ever been asked to monitor  
19 noise on a 24 hour basis in any of your tests?

20 A. Yes, we frequently do that.

21 Q. Monitor it for 24 hours?

22 A. Yes, sometimes for a week.

23 Q. Okay. Do you certify that your sound  
24 measurements are in accordance with the Illinois

1 Pollution Control Board?

2 A. That's correct.

3 Q. You certify that they -- that the  
4 measurements are in accordance with the board's  
5 standards?

6 A. Yes.

7 Q. The -- let's see.

8 MR. GARDNER: I have no more further  
9 questions. Thank you.

10 HEARING OFFICER HALLORAN: Thank you,  
11 Mr. Gardner.

12 Mr. Dalianis, any redirect?

13 MR. DALIANIS: No, none.

14 HEARING OFFICER HALLORAN: Thank you,  
15 you may step down. Thank you.

16 Off the record.

17 (Off the record.)

18 HEARING OFFICER HALLORAN: We're back  
19 on the record. Took a short break,  
20 approximately 12:45, we're going to try to  
21 finish this up before we take a break, or lunch  
22 break or whatever.

23 So in any event, Mr. Dalianis, call  
24 your next witness.

1 MR. DALIANIS: Paul Connor.

2 (Witness first duly sworn.)

3 PAUL CONNOR,

4 called as the witness herein, having been first

5 duly sworn, was examined and testified as

6 follows:

7 DIRECT EXAMINATION

8 BY MR. DALIANIS:

9 Q. Please, state and spell your name for  
10 record, Mr. Connor?

11 A. Paul Connor, P-A-U-L C-O-N-N-O-R.

12 Q. Are you employed?

13 A. Yes.

14 Q. By whom are you employed?

15 A. Amsco Engineering.

16 Q. How long have you been with Amsco?

17 A. Thirteen years.

18 Q. And what services does Amsco provide?

19 A. We are consulting engineers. We  
20 design mechanical, heating ventilation, air  
21 conditioning, plumbing, electrical, fire  
22 protection systems for buildings.

23 Q. What are your current responsibilities  
24 at Amsco?

1           A.       I am the vice president at Amsco  
2           Engineering, and what that means is I would be  
3           project manager for these type of projects.

4           Q.       Okay.  And how long have you had the  
5           responsibility of VP at Amsco?

6           A.       About 11 years.

7           Q.       Okay.  Can you tell us about your  
8           educational background?

9           A.       I have a bachelor of science in  
10          mechanical engineering from the University of  
11          Illinois, Champaign.

12          Q.       Okay.  Have you taken any additional  
13          course work, undergone any professional  
14          education or in-house training over the years  
15          related to HVAC?

16          A.       Yes.  We have to keep up-to-date with  
17          the current equipment and standards.  We take  
18          classes from the suppliers.  We also take --  
19          I've had classes in temperature control work, in  
20          piping systems, pumping design classes.

21          Q.       Anything on noise or vibration  
22          control?

23          A.       No, not particularly noise or  
24          vibration control.

1 Q. Do you have any licenses,  
2 certifications or professional memberships?

3 A. Yes. I am a licensed professional  
4 engineer in the State of Illinois and also in  
5 Indiana.

6 Q. What does it mean to be a licensed  
7 professional engineer?

8 A. To practice engineering and to seal  
9 drawings and certify that they're designed to  
10 meet the codes, standards. You have to pass  
11 tests. There is two parts to it. It is similar  
12 to being an architect.

13 Q. Okay. Are you generally familiar with  
14 the history of the design, selection and  
15 installation of the new HVAC at Hoffman Estates  
16 High School?

17 A. Yes. I was responsible for that  
18 project in our office.

19 Q. Can you tell us about the old system  
20 that was in place prior to the summer of '99?

21 A. The original system, which we  
22 replaced, was installed when the building was  
23 built. It consisted of -- they had gas fired  
24 units that were located in mechanical rooms.

1           There are a few basic parts of the building.  
2           The classroom portion of the building has four  
3           mechanical towers, basically one in each corner.  
4           There are units located on each level of the  
5           building and they would serve the quadrants of  
6           the classroom wing. There is also a large  
7           mechanical room that is central to the building  
8           and that serves the core areas, the auditorium  
9           and those portions of the building. Then there  
10          are also mechanical rooms located in the gym.

11           Q.       Okay. How did that older system  
12          operate?

13           A.       That system they were having problems.  
14          It was approximately 30 years old when we  
15          replaced it. It's -- it was gas fired  
16          equipment. And all mechanical equipment has a  
17          life to it. And what happens -- what happened  
18          was they were having problems with the equipment  
19          failing. It wasn't reliable. They were  
20          spending a lot of money just to keep it  
21          operating.

22           Q.       What type of equipment was on the roof  
23          with the old HVAC system?

24           A.       The old system had air cooled

1           condensing units located on the roof.

2           Q.       Can you show on our Exhibit A what  
3           you're referring to and where they were located?

4           A.       You can actually, I think, see them  
5           because this is an older picture.  But they're  
6           actually located on the tops of the towers.  
7           That's what these units -- actually four units  
8           we can see.

9           Q.       And would those units had been visible  
10          from the street level or standing in a field or  
11          from Higgins Road, et cetera?

12          A.       They're actually slightly above the  
13          top of the roof here.  And you probably could  
14          see them but you'd have to stand back a little  
15          ways to do it.

16          Q.       Okay.  Why was that system in need of  
17          replacement?

18          A.       I think the main portion of the system  
19          that they were having failures of the heating  
20          sections of the units, temperature controls were  
21          failing.  And with those systems, they were  
22          packaged pieces of equipment, it's not something  
23          that you can easily repair.  A lot of this  
24          equipment they're not even manufactured any

1 more, so you couldn't even get parts. They had  
2 to weld things back together again.

3 Q. In relation to the School Life Safety  
4 Code, were there changes in that code that  
5 required some changes to the school's HVAC  
6 system?

7 A. Yes.

8 What happens is you have to design --  
9 when we do modifications or renovations to the  
10 systems, we have to design it to the code that  
11 is in effect at the time when we're doing the  
12 work.

13 When these systems were originally  
14 installed, they had different ventilation  
15 requirements. The code actually changed from --  
16 from the 1970s until the -- the current code, it  
17 was originally 5 CFM, current code is now 15  
18 CFM. So there is three times as much --

19 Q. What is a CFM?

20 A. Cubic feet per minute. If you can  
21 picture 1 foot by 1 foot by 1 foot square that  
22 air permit is what you have to --

23 Q. Per person, right?

24 A. Yes.

1           Q.       For a school like this, the code makes  
2           an average of how many people are working in the  
3           building at any given time, is that how it goes?

4           A.       No.  It actually goes -- we have to do  
5           calculations and total up each space and we have  
6           to design to provide the code required air to  
7           each space that is occupied.

8           Q.       You can sit down, too, if you want.

9                     And how does the new system work?

10          A.       The new system, we use hot water for  
11          the heating section and there is chilled water  
12          for the cooling.  Instead of having the packaged  
13          units like they had before they're basically  
14          large air handling units with fans in them.  
15          There is a heating coil and a cooling coil  
16          inside of the unit.  And to provide heat, hot  
17          water is circulated into the coil, and to  
18          provide cooling, chilled water is circulated  
19          through the coils.

20          Q.       What new equipment was installed for  
21          the new HVAC system in 1989?

22          A.       In each of those mechanical rooms we  
23          took out the original equipment that was there  
24          and we replaced units, any place there was a

1 unit we put a new air handling unit in there  
2 with hot and chilled water. Each tower also has  
3 boilers located in it to provide heat and each  
4 tower and mechanical room has a chiller  
5 associated with it.

6 Q. What new equipment was installed on  
7 the roof of the high school?

8 A. There are five new chillers that were  
9 installed and there is also some other smaller  
10 pieces of equipment but those are the main  
11 pieces of equipment.

12 Q. Were there any changes made to the  
13 building to accommodate the new equipment?

14 A. Yes.

15 In order to get the mechanical -- the  
16 old equipment out and the new equipment in, each  
17 of the towers -- there was basically a slice  
18 taken out of the center of the wall and old  
19 equipment came out, new equipment was installed,  
20 and new louver was installed where we took out  
21 the concrete and that became the fresh air  
22 intake. . .

23 Q. Any structural redesigning to the roof  
24 or the center portion of the building?

1           A.       Yes.

2                       Where all the new chillers were  
3       located, there was additional structural steel  
4       added to support the weights of the new  
5       chillers.

6           Q.       Okay.  Would you consider the HVAC  
7       design at Hoffman Estates High School to be  
8       typical of buildings of this type, scope, use,  
9       et cetera?

10          A.       Yes, that every building is a little  
11       bit different in how it is configured and how  
12       the mechanical systems are placed, but this is a  
13       typical system that we would use for a high  
14       school, hot and chilled water.

15          Q.       Has your firm provided similar design  
16       solutions for other projects of this type as  
17       well?

18          A.       Yes.

19          Q.       Are you familiar with the millennium  
20       YCAS air cooled liquid chiller manufactured by  
21       York?

22          A.       Yes.  Those are the chillers that  
23       we're using for this project.

24          Q.       Those are the ones installed at

1 Hoffman Estates High School?

2 A. Yes.

3 Q. Let me show you a photo that was  
4 previously put into evidence.

5 Showing you Group Exhibit G1 through  
6 5. And tell me if those are the millennium  
7 chillers that you're familiar with?

8 A. Yes.

9 Q. That picture is an accurate depiction  
10 of the millennium model?

11 A. Yes.

12 Q. Is the millennium model widely in use,  
13 as far as you know?

14 A. Oh, yes. We've used them on some  
15 other projects as well.

16 Q. Are you familiar with the complaint  
17 raised by the Gardners about the sound from the  
18 chillers?

19 A. Yes.

20 Q. And what did you suggest to the  
21 district as a possible solution?

22 A. There were several things that we did  
23 to try to reduce the noise. You could actually  
24 see them in some of these pictures.

1                   The first thing that we tried  
2                   originally was to get sound blankets. The  
3                   bottom portion of the chillers house the  
4                   compressors and there is blankets, which are --  
5                   they look like large gray pieces of vinyl but  
6                   they're actually sound absorbing blankets that  
7                   were installed around the bottom of the chillers  
8                   to try to muffle the noise from the chillers.

9                   And then also in these pictures you  
10                  could see there was actually screen walls that  
11                  were created to surround the chillers to try to  
12                  attenuate the noise.

13                Q.       Okay. And then the district accepted  
14                your suggestions as a possible solution?

15                A.       Yes.

16                Q.       And then who designed the screen  
17                system?

18                A.       That was designed by Arcon, the  
19                architectural firm.

20                Q.       And then that solution was  
21                implemented, right?

22                A.       Yes.

23                Q.       Did you make any additional  
24                recommendations to the district for the

1 district's consideration?

2 A. No. Those were the recommendations  
3 that we had made.

4 MR. DALIANIS: No further questions on  
5 direct for Mr. Connor.

6 HEARING OFFICER HALLORAN: Thank you.  
7 Mr. Gardner?

8 MR. GARDNER: Yes.

9 CROSS-EXAMINATION

10 BY MR. GARDNER:

11 Q. Mr. Connor, did your firm make the  
12 selection of York chillers?

13 A. What we do typically because this is  
14 public work, we select three manufacturers and  
15 that is part of the bid process for the  
16 installation of the equipment.

17 Q. And York was one of them?

18 A. Yes.

19 Q. Who were the others that were  
20 recommended?

21 A. The other ones I believe were Trane  
22 and Carrier.

23 Q. Did you know about the sound level --  
24 the sound levels generated by the York units?

1 A. Did we know in what -- in what way?

2 Q. Do you -- in the -- I'm assuming you  
3 looked at the specs or did you know that the --  
4 did you take into consideration the sound  
5 measurements that York has made on their units  
6 in going through the selection process of York,  
7 Trane and Carrier -- you said Carrier?

8 A. Correct.

9 We have -- we have specs for maximum  
10 sound levels that the chillers are supposed to  
11 generate, yes.

12 Q. Did the Trane and Carrier units  
13 generate the same amount of sound or --

14 A. I would have to -- I'm -- I don't  
15 have -- we'd have to have all three  
16 manufacturers in front of me. I'm not sure.

17 Q. Okay. Did you involve any of the  
18 residents or -- I'm sorry. Were any of the  
19 residents around Hoffman Estates High School  
20 consulted by your firm in putting together your  
21 design?

22 A. No, we did not.

23 We don't typically consult for that  
24 type of installation.

1 Q. And did I correctly hear that you have  
2 no background in noise or vibration control?

3 A. Correct, that is not my specialty.  
4 Mine is heating ventilation, air conditioning.

5 Q. Okay. Would it be from your knowledge  
6 of the systems that are on the roof at Hoffman  
7 Estates High School, is it possible to remove  
8 them, all of the four units that are on top of  
9 the classroom area, is it possible to move them  
10 to the front of the school, if -- is that a  
11 possibility, and still maintain the comfort  
12 level in the classrooms?

13 A. To the front of the school you mean --

14 Q. On the ground in front of the school,  
15 and you're -- if you were to actually take all  
16 five units and mount them here in front of the  
17 school on the ground, could they be installed on  
18 the ground in front of the school?

19 A. We would have to -- I mean,  
20 physically -- I don't know that they would fit  
21 because for one thing there are -- they have  
22 space constraints. They have to be a certain  
23 distance apart. There has to be air circulation  
24 through the units. If they would fit, it would

1       be -- it would be a pretty difficult feat  
2       because what would have to happen is we have to  
3       get piping from those units all the way back to  
4       where the mechanical equipment sits. And if  
5       they're on the ground, we'd have to actually get  
6       it up into the building and all the way back to  
7       the back of the building and there are some  
8       rather large lines that serve those units. And  
9       then besides the piping, there is also  
10      electrical feeds that have to come to those  
11      units and those are good size electrical feeds  
12      that come to each of those units.

13           Q.       I've seen the pipes you're talking  
14      about. Could the pipes that are up there --  
15      there is already piping up there, is that -- let  
16      me -- the piping that is in existence now could  
17      be used if we -- if it is possible to move the  
18      units to the front of the school, the piping  
19      that is up there already could be used, you  
20      wouldn't have to repipe the whole -- or would  
21      you have to repipe the whole unit to get to the  
22      back?

23           A.       I mean, we'd have to take them to a  
24      certain point.

1           Q.       To get to the north end of the  
2           classroom?

3           A.       Right. Right now the lines run across  
4           the roof and down into each of the towers and in  
5           each of those towers, there is pumps that  
6           circulate water from the air handling equipment  
7           up to the chiller and then back down again. In  
8           order to move the chillers, we'd have to extend  
9           the piping, which I don't know necessarily --  
10          we'd have to see if -- if -- theoretically, if  
11          you can extend it all the way across the roof  
12          and down and into where this new chiller  
13          location would be, there would be a lot of  
14          things. We'd have to redesign the pumping  
15          systems because they're not designed to handle  
16          that much -- that long of a pipe.

17          Q.       From your knowledge of doing this kind  
18          of design work, then would it be -- how possible  
19          would it be to mount or to enclose these units  
20          in sound muffling boxes, I guess is the term?

21          A.       To put -- I mean, they've already --  
22          you know, screens have been erected around the  
23          chillers already. You're talking about actually  
24          going beyond what is already there?

1           Q.       I'm talking -- yes, I'm talking kind  
2           of and -- again, I don't know how familiar you  
3           are with the area, there is a Dominick's grocery  
4           store at the intersection of Golf and Barrington  
5           Roads, which has gone through a major -- they  
6           turned it into this new fresh store they call  
7           them and they had to put -- I noticed over the  
8           summer they put new air conditioning unit on it,  
9           and that store backs up to an apartment complex.  
10          And this -- it's -- I would say it's -- it looks  
11          like the size of maybe 3 mobile homes, it's --  
12          the air condition is enclosed in it, it's  
13          very -- it looks like it's some kind of foil  
14          backed insulation type building that is  
15          surrounding these units, and that is the kind of  
16          enclosure I'm talking about.

17                        Would that be -- would it be possible  
18          to enclose the five chillers in such a  
19          structure, would that be more viable than moving  
20          the units to the front of the school based on  
21          your knowledge of --

22          A.        And it gets into other issues that  
23          aren't really my area of expertise, but I know  
24          even constructing these screens and when they

1       talked about how big of a screen they had to  
2       create, it got into problems of just supporting  
3       the screen itself.  If it's on the ground, it's  
4       a little bit easier to support.  When it's on  
5       the top of the building, the building has to be  
6       able to take the loads from that screen and it  
7       has to take wind loads and I know they -- they  
8       also take into account snow loading and all  
9       other kinds of things.  So when you start to put  
10      a large wall up on the roof, the building  
11      structure itself is effected and I know that  
12      was -- that was part of the -- part of the  
13      problem, just to create the screens that they  
14      have there and to create a bigger screen would  
15      require -- I'm sure would require more  
16      structure.

17           Q.       Those screens -- would you agree those  
18      screens were -- the purpose of those screens was  
19      purely visual?  Are those screens designed to  
20      be --

21           A.       Well, I know that even these screens  
22      that would also deflect noise because it is  
23      up -- it's covering the whole chiller itself.  
24      Again, I'm not an acoustical engineer.  We do

1 get into acoustics with this -- with these type  
2 of equipment, and the noise that is generated by  
3 these chillers, if you had -- if there was a  
4 screen wall in front of it, it does attenuate  
5 the noise.

6 Maybe -- can I look at the -- can I  
7 point out to you the -- this is --

8 Q. When you say screen, can you point out  
9 to me what you're saying? What are you --

10 A. Like this.

11 Q. -- define as a screen?

12 HEARING OFFICER HALLORAN: For the  
13 record, the witness is pointing at -- what is  
14 it?

15 MR. DALIANIS: Exhibit G5, Group  
16 Exhibit G5.

17 HEARING OFFICER HALLORAN: Thank you.

18 BY MR. GARDNER:

19 Q. Can you use this and pin -- point out  
20 to me the screen?

21 A. This is the wall that I was talking  
22 about, because this is the -- like a full height  
23 wall.

24 Q. And that is the unit that is on top of

1 the auditorium?

2 A. This is the -- right, at the  
3 center they call it. Right.

4 Q. And what would you define this as,  
5 that structure there?

6 A. That is also a screen and, I mean, it  
7 does -- it's covering the bottom portion of the  
8 unit, which is where the compressors are.

9 Q. But you don't know if that was for  
10 visual or for sound? Do you know if those --

11 A. I don't know. And I guess I shouldn't  
12 assume, but I assumed it was for both, for  
13 visual and sound.

14 MR. GARDNER: That's all I have.  
15 Thank you.

16 MR. DALIANIS: No redirect, Mr.  
17 Connor.

18 HEARING OFFICER HALLORAN: Thank you.  
19 You may step down.

20 Go off the record for a second.

21 (Off the record.)

22 HEARING OFFICER HALLORAN: Back on the  
23 record.

24 We're back on the record. We've been

1 discussing post-hearing briefing schedule, and,  
2 also, before we go into that any further, Mr.  
3 Dalianis wanted to go through the exhibits and I  
4 will do that.

5 MR. DALIANIS: I'd also like to move  
6 that they be admitted into evidence to the  
7 extent that hasn't already occurred, so.

8 HEARING OFFICER HALLORAN: Okay. We  
9 basically have Respondent's Exhibit A through O.

10 Mr. Gardner, do you have any objection  
11 to Respondent's A through O --

12 MR. GARDNER: No.

13 HEARING OFFICER HALLORAN: -- being  
14 moved into evidence?

15 MR. GARDNER: No, I do not.

16 HEARING OFFICER HALLORAN:  
17 Respondent's Exhibits A through O are admitted  
18 into evidence.

19 Mr. Dalianis, you wanted to go through  
20 these specifically, as far as a couple of them  
21 have -- say Group H has 1 and 2.

22 MR. DALIANIS: Through 1 through 5 and  
23 H1 through 2, if you want to do it on the  
24 record, if you don't, we can wait afterwards and

1 do it. It's up to you.

2 HEARING OFFICER HALLORAN: I don't  
3 think it's necessary.

4 Also, before I forget, I'm supposed to  
5 make a credibility determination regarding the  
6 witnesses that testified today and based on my  
7 legal knowledge, experience and observations,  
8 there is no credibility issue in this matter.

9 With that said, we've decided on a  
10 post-hearing briefing schedule. Hopefully, the  
11 record will be in by January 5th, 2002. The  
12 Complainant's post-hearing brief is due on  
13 February 4, 2002. Respondent's post-hearing  
14 brief is due on March 5th, 2002. Complainant's  
15 response, if any, is due on March 12th, 2002.  
16 And also the public comment period, if any,  
17 public comment is due to be filed by January  
18 22nd, 2002.

19 The parties have opted to reserve  
20 their closing argument for post-hearing briefs,  
21 and unless anybody has any other questions, I  
22 want to thank you for your civility and your  
23 professionalism today.

24 Okay. Thank you very much.

1 MR. DALIANIS: Thank you.

2 MR. GARDNER: Thank you.

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1 STATE OF ILLINOIS )  
 )SS:  
2 COUNTY OF DU PAGE )

3 I, ROSEMARIE LA MANTIA, being first  
4 duly sworn, on oath says that she is a court  
5 reporter doing business in the City of Chicago;  
6 that she reported in shorthand the proceedings  
7 given at the taking of said hearing, and that  
8 the foregoing is a true and correct transcript  
9 of her shorthand notes so taken as aforesaid,  
10 and contains all the proceedings given at said  
11 hearing.

12  
13 -----  
14 ROSEMARIE LA MANTIA, CSR  
15 License No. 84 - 2661

16 Subscribed and sworn to before me  
17 this day of , 2001.

18 -----  
19 Notary Public

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21  
22  
23  
24