

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.

1

2 APPEARANCES:

3

4 ILLINOIS POLLUTION CONTROL BOARD,

5 100 West Randolph Street

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7 Chicago, Illinois 60601

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9 BY: MR. BRADLEY P. HALLORAN, Hearing Officer

10

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16 BY: MR. ARES G. DALIANIS

17 Appeared on behalf of the Respondent.

18

19 Mr. Robert and Yvonne Gardner,

20 the Complainants, appeared pro se.

21

22

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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 photograph. This house was purchased by the
2 board of education five years ago, has since
3 been removed and is now bus parking up at this
4 front south corner, so, the board owns this now.

5 Our football stadium, soccer stadium
6 is here, tennis courts as we move further north,
7 and the back property line on the north edge is
8 also residential, baseball and softball for boys
9 and girls across most of the north acreage.
10 This site is about 30 acres. As you can see
11 from the striping here, this is also used as
12 soccer and football practice areas.

13 HEARING OFFICER HALLORAN: Mr.
14 Dalianis, if any of this is at all relevant to
15 this matter, we're going to have to have Mr.
16 East mark it somehow.

17 MR. DALIANIS: Maybe we ought to take
18 a break and you can get that felt tip marker?

19 HEARING OFFICER HALLORAN: Let's go
20 off the record.

21 (Off the record.)

22 HEARING OFFICER HALLORAN: We're back
23 on record.

24 I found a pen. Hopefully, it will

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
License No. 84 - 2661

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16

Subscribed and sworn to before me
this day of , 2001.

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Notary Public

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