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ILLINOIS POLLUTION CONTROL BOARD

ANTHONY and KAREN ROTI,)	
PAUL ROSENSTROCK and)	
LESLIE WEBER,)	
)	
Complainants,)	
)	
vs.)	No. PCB 99-19
)	(Citizens Enforcement -
LTD COMMODITIES,)	Air)
)	
Respondent.)	

The following is a transcript held
in the above-entitled cause before HEARING
OFFICER BRADLEY F. HALLORAN, taken
stenographically before MARY ELLEN KUSIBAB,
Certified Shorthand Reporter and Notary
Public in and for the County of Cook, State
of Illinois, at 118 West Cook Road, 2nd
Floor, Libertyville, Illinois, commencing at
10:00 a.m. on the 9th day of December, A.D.,
2002.

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1 HEARING OFFICER HALLORAN: Good
2 morning. My name is Bradley Halloran.
3 I'm a hearing officer with the Illinois
4 Pollution Control Board. I'm also
5 assigned to this matter -- PCB 99-19 --
6 entitled, Anthony and Karen Roti, Paul
7 Rosenstock and Leslie Weber,
8 Complainants, versus LTD Commodities,
9 Respondent. It's Citizen Enforcement
10 Action.

11 Today is -- it is approximately
12 10:00 o'clock on December 9th, 2002. I
13 want to note for the record that there
14 are no members of the public here. But
15 if there were, they would be allowed to
16 testify and subject to cross-examination.

17 We're going to run this hearing
18 pursuant to Section 103.212 and Section
19 101, Subpart F, under the Board's general
20 provisions. I'll also note that this was
21 noticed up again. I believe our last
22 meeting was on October 16th, 2002.
23 However, we didn't quite get done with
24 some of the testimony -- Mr. Thunder's

1 testimony.

2 I also want to note for the record
3 that Mr. Anand Rao is here, who is
4 technical personnel from the Pollution
5 Control Board.

6 With that said, I think Mr. Thunder
7 will take the stand. Mr. Kolar will
8 continue with direct and clear up some of
9 the issues with the Exhibit J.

10 BY MR. KOLAR:

11 Q. Will you state your name for the
12 record again?

13 HEARING OFFICER HALLORAN: Can the
14 court reporter swear him in?

15 (Whereupon, the witness was duly sworn.)

16 THOMAS D. THUNDER,
17 called as a witness herein, having been first
18 duly sworn, was examined and testified as
19 follows:

20 DIRECT EXAMINATION (Resumed)

21 BY MR. KOLAR:

22 Q. Please state your name for the
23 record, please.

24 A. Thomas D. Thunder.

1 Q. Mr. Thunder, you recall that you
2 testified -- I think it was on October 15th,
3 2002, right?

4 A. Yes, I did.

5 Q. And we went -- or discussed in part
6 this Respondent's Exhibit J, correct?

7 A. Correct.

8 Q. All right. I think you had
9 testified that that was a -- you read that,
10 and it was accurate?

11 A. Correct.

12 Q. Relative to your opinions?

13 A. Yes.

14 Q. Okay. I want to ask you a few more
15 questions regarding the content of Exhibit J
16 that pertains to you, and it starts on
17 page 2.

18 A. Okay.

19 Q. Now, it says here all original
20 discussions regarding building a wall on the
21 LTD property centered around providing a
22 basic level of protection to the
23 complainants.

24 Do you see that?

1 A. Yes.

2 Q. Can you explain what you mean by
3 basic level of protection?

4 A. Well, essentially, basic level of
5 protection would pertain to ground level
6 receiver positions, namely first floor
7 receiver positions.

8 Q. Basic level of protection, is that
9 a phrase that you have used historically in
10 your practice in terms of noise walls?

11 A. Essentially, yes.

12 Q. A basic level of protection, does
13 that provide protection to the second story
14 of homes?

15 A. Not as much, no.

16 Q. Now, when you say all original
17 discussions, what are you talking about?
18 What discussions did you have with whom
19 regarding type of protection to be afforded
20 the complainants?

21 A. Just general discussions with
22 LTD -- that that was common practice to look
23 at first floor protection; that when you go
24 to a second floor protection, that

1 necessitates a barrier that's significantly
2 taller and possibly even wider.

3 Q. But in your original discussions,
4 did you also have discussions with
5 Dr. Schomer?

6 A. I don't recall specifically that.
7 Our discussions were more generic, saying
8 that a barrier that would need to be
9 absorptive was the primary element of those
10 discussions, because of at the time with the
11 barrier being so close to the warehouse wall,
12 that we both agreed that it would have to be
13 a very special type of material to use.

14 Q. Okay. I'm just trying to get a
15 better scope for the phrase all original
16 discussions. You had discussions regarding
17 remedies for the LTD noise with Greg Zack
18 many years ago, right?

19 A. With the LTD wall?

20 Q. Regarding LTD, you had discussions
21 with Greg Zack?

22 A. I don't recall specifically talking
23 with Greg Zack about the LTD issue.

24 Q. You had discussions with -- you

1 exchanged correspondence with Dr. Schomer as
2 I recall, right?

3 A. Yes. Not directly.

4 Q. All right. Now, on page 2, here,
5 you have the opinion that the wall proposed
6 by Dr. Schomer is unreasonable, and then you
7 list the reasons, right?

8 A. Correct.

9 Q. That is still your opinion -- that
10 the wall proposed by Dr. Schomer is
11 unreasonable?

12 A. Yes.

13 Q. Now, let me take A and B together.
14 What about those two points -- A and B --
15 make Dr. Schomer's wall unreasonable, in your
16 mind?

17 A. That is providing -- having to
18 provide pedestrian openings in the wall?

19 Q. No, on page 2. LTD is not a
20 24-hour operation.

21 A. Oh, at the bottom.

22 Q. At the bottom, sorry.

23 A. Well, LTD is not a 24-hour
24 operation. It's a seasonal nighttime type of

1 operation, so it's not a round-the-clock type
2 of operation. So the impact --

3 MR. KAISER: Objection; foundation.

4 HEARING OFFICER HALLORAN: Mr. Kolar?

5 MR. KOLAR: I think we probably had
6 foundation when he testified originally.

7 HEARING OFFICER HALLORAN: I don't
8 recall him testifying about seasonal
9 or --

10 MR. KOLAR: I'll lay some
11 foundation.

12 HEARING OFFICER HALLORAN: Okay.
13 Thank you, sir.

14 BY MR. KOLAR:

15 Q. Mr. Thunder, as part of your work
16 for LTD, did you try to acquaint yourself
17 with the nature of LTD's operation?

18 A. Yes, I did.

19 Q. Did you go out to the site?

20 A. Yes, I did.

21 Q. How many times were you at the LTD
22 property?

23 A. I can't recall offhand. Maybe
24 almost a dozen times.

1 Q. And did you have discussions with
2 Jack Voigt regarding the nature of LTD's
3 business?

4 A. Yes.

5 Q. And did you meet Michael Hara?

6 A. Yes, I did.

7 Q. Did you have discussions with him
8 regarding the nature of LTD's business?

9 A. Yes, I did.

10 Q. And in your discussions, did you
11 try to determine how many hours a day LTD was
12 open?

13 A. I asked for them to characterize
14 the operation for me.

15 Q. Right. And in your meetings with
16 Mr. Hara and Mr. Voigt, did you try to
17 determine what points in the year LTD had a
18 second shift?

19 A. Yes. I tried to get an
20 understanding as to what months were the
21 months that were operating at night.

22 Q. And based on your meetings with
23 Mr. Hara and Mr. Voigt and visiting the LTD
24 property, did you come to understand the

1 nature of LTD's business in that truck dock
2 area?

3 A. Yes, I did.

4 Q. You came to understand when they
5 have a second shift?

6 A. Yes.

7 Q. You came to understand when they
8 have a busy season?

9 A. Correct.

10 Q. All right. So what -- your opinion
11 here that Dr. Schomer's wall is unreasonable
12 for the following reasons, and you note LTD
13 is not a 24-hour operation, correct?

14 A. That's one element, yes.

15 Q. And then you note that LTD operates
16 at night from mid-July to late December?

17 A. Correct.

18 Q. So what about those two -- let's
19 take them together. What about those two
20 leads you to conclude that Dr. Schomer's wall
21 proposal is unreasonable?

22 A. Well, from a relative basis, if the
23 operation is seasonal as opposed to all year
24 round, on a relative basis, that's less

1 impact.

2 MR. KAISER: I'm going to object.

3 Mr. Halloran, I think Mr. Thunder's
4 opinion is attempting to go to the
5 ultimate issue here that's reserved for
6 as to whether construction is reasonable
7 or unreasonable. I would think if
8 Mr. Thunder had opinions about
9 effectiveness of the wall, size of the
10 wall, location of the wall, that those
11 would be things the Board could hear
12 testimony about. But they haven't --
13 Mr. Thunder opine about what is or isn't
14 reasonable in light of all the
15 circumstances, I think, is inappropriate.

16 HEARING OFFICER HALLORAN: Mr. Kolar?

17 MR. KOLAR: I think this goes
18 directly to the Section 33C factors -- in
19 fact, that one about reasonableness and
20 practicability.

21 HEARING OFFICER HALLORAN: I'm
22 going to overrule it. I think, you know,
23 if it is as Mr. Kaiser alleges, I think
24 the Board, in its wisdom, will take

1 Mr. Thunder's testimony, but will make
2 its own decisions.

3 So you may proceed.

4 BY MR. KOLAR:

5 Q. Can you -- let me ask a different
6 question. In your experience in acoustics
7 and working with businesses that create
8 noise, have you ever had a situation where
9 the noise source was seasonal?

10 A. Yes. There can be some seasonal
11 operation, but the 24-hour aspect of it, the
12 seasonal aspect of it is germane to taking a
13 look at relative impact. Obviously, those
14 companies that are operating around the clock
15 around the year are going to be more of an
16 impact to receiving positions than companies
17 that have just seasonal operations.

18 Q. And for trucking operations in
19 particular, have you ever worked on a case
20 similar to this one where you have nighttime
21 trucking operations only half the year?

22 A. No, not seasonal like this.
23 Trucking operations I've been involved in
24 have been nighttime all year 'round.

1 Q. Now, paragraph C at the bottom of
2 page 2, you mention the Weber house. And you
3 touched on this a little bit in your direct
4 exam before, but maybe you can explain. What
5 about the Weber -- what about affording
6 protection to the Weber house, in your
7 opinion, makes Dr. Schomer's noise wall
8 proposal unreasonable?

9 A. Well, they're certainly one of the
10 three homes that are in the proximity of that
11 operation, and, certainly, they're one of the
12 people that have complained. Our
13 measurements have never focused at the Weber
14 house. All of our measurements were made
15 near Roti and Rosenstock's house on their
16 receiving land, knowing full well that the
17 Weber house was significantly further away
18 and that their impact would be less than
19 experienced by Rotis' location.

20 And so any kind of design criterion
21 was not to take Weber's into account, but,
22 rather, to take those homes that were in
23 closest proximity. And if a noise reduction
24 could be achieved at the closer, more

1 proximate homes, there would also be some
2 corresponding, although less, reduction at
3 that home of Weber's, which is further away.

4 Q. And maybe you can explain. How is
5 it that the sheer distance of the Weber home
6 from the noise source makes it less impacted
7 by noise?

8 MR. KAISER: Objection; misstates
9 the record.

10 The Weber home, in fact, is not
11 further away from certain noise sources.
12 And there is extensive testimony during
13 Dr. Schomer's examination that, in fact,
14 noise sources centered around the ramp
15 leading into and out of LTD's dock area
16 are closer to the Weber home and impact
17 the Weber home more than those noise
18 sources that impact the Roti home. So
19 it's simply a misstatement of the record
20 established to-date.

21 HEARING OFFICER HALLORAN: Mr. Kolar?

22 MR. KOLAR: I think that's
23 something he can do on cross-examination.
24 But it's right here in Subparagraph C at

1 the bottom of page 2. And I think the
2 aerial photo shows that the Weber home is
3 farther away from LTD than any other
4 homes. So if he wants to cross-examine
5 him on that, that's fine, but I don't
6 think it's a proper objection.

7 HEARING OFFICER HALLORAN: You know
8 what? And also looking at Mr. Thunder's
9 previous testimony on -- I believe it was
10 October 15th, there is some testimony
11 regarding the Webers' home being farther
12 away. I don't see where there was an
13 objection. And so I would agree with
14 Mr. Kolar. You can take that up on
15 cross, Mr. Kaiser.

16 So objection overruled. The
17 witness may answer.

18 BY MR. KOLAR:

19 Q. Do you recall the question, or do
20 you want me to restate it?

21 A. Restate it, please.

22 Q. All right. In your Opinion C, you
23 note that the Weber house is twice as far
24 away as the other two homes. Can you

1 explain, so the record is clear, what about
2 the distance of the Weber home away from the
3 noise source in the truck dock area makes it
4 less affected by the noise, less impacted by
5 the noise?

6 A. That's just a common acoustical law
7 called wave divergence -- w-a-v-e -- where
8 sound attenuates at six decibels per doubling
9 of distance as a minimum. And so if you have
10 a source that's, say, 400 feet compared to
11 200 feet away, the 400-foot source is going
12 to be at least six decibels lower. There
13 were no measurements made at the Weber house
14 because of that. And in our early
15 discussions with Paul Schomer, there was no
16 discussion at all as to making measurements
17 at the Weber house. The idea was to make the
18 measurements of those homes that were most
19 impacted and closest to the trucking dock
20 operations.

21 Q. When you say no measurements,
22 you're talking about noise measurements?

23 A. Correct.

24 Q. In fact, in your testimony last

1 time we were here, I think the transcript
2 says weight -- w-e-i-g-h-t -- divergence.
3 That should be wave divergence?

4 A. Correct.

5 Q. And that phrase means exactly what?

6 A. It means that as a wave spreads
7 from its source, it gets thinner and thinner
8 and more reduced in intensity. So those
9 sources twice as far will have a reduction of
10 six decibels, at least.

11 Q. And the reduced intensity of the
12 wave, how does that -- what does that mean in
13 terms of its noise or its decibel level?

14 A. It's just simply reduced impact
15 simply because the noise levels are lower.

16 BOARD MEMBER RAO: Mr. Kolar, could
17 you please tell us what page number
18 you're referring to for the record?

19 MR. KOLAR: From the transcript?

20 BOARD MEMBER RAO: The transcripts,
21 yes.

22 MR. KOLAR: If this is accurate,
23 I've got it on page 260 of his testimony.

24 HEARING OFFICER HALLORAN: That's

1 what I have. 260 is the testimony, I
2 believe, on October 15th.

3 MR. KOLAR: Line 3, he mentions
4 because of wave divergence.

5 BOARD MEMBER RAO: Thank you.

6 BY MR. KOLAR:

7 Q. Now, on page 3, there's an opinion
8 at the bottom that if any wall were required,
9 you would recommend a property line wall
10 between -- property line noise wall, correct?

11 A. That should be a viable
12 alternative, yes.

13 Q. All right. Can you explain why a
14 property line noise wall would be a viable
15 alternative in this situation?

16 A. In general barrier design, the most
17 effective walls are those that are either
18 close to the source or the receiver, so that
19 if you can't get one close to the source,
20 then rather moving it away from the source,
21 the next best location is close to the
22 receiver.

23 Q. There's been some testimony in the
24 hearing that in order to get outside the zone

1 of influence of the support fabric for the
2 retaining wall, the wall would have to go
3 into the parking lot. Would a wall running
4 through the parking lot be less effective
5 than a property line noise wall?

6 A. All things being equal and that the
7 height of the wall staying the same, yes,
8 because it's further from the source, and
9 it's not close enough yet to the receiver to
10 truly maximize its effectiveness.

11 Q. All right. When you testified
12 before -- and this is on page 264 of the
13 transcript -- you use the phrase acoustic
14 shadow zone.

15 A. Yes.

16 Q. Okay. And I think you used that
17 regarding noise hitting a wood wall on the
18 Roti property line. Can you -- so we can
19 clarify this, can you explain this concept of
20 acoustic shadow, relative to the LTD
21 situation, if we had a wood wall on the
22 property line?

23 A. Well, it wouldn't necessarily need
24 to be a wood wall. We're talking about any

1 barrier of solid, dense construction. But
2 there's three paths of sound. One path, when
3 it encounters a barrier, will be completely
4 reflected in the opposite direction. A
5 second path is sound goes over the top of the
6 barrier and continues on. The third path is
7 the one of that sound that would normally go
8 over the top of the homes, but because of
9 diffraction, which is a bending of the sound
10 waves, some of that wave gets bent back down
11 toward the receiving locations. That's what
12 results in noise reduction, and we call that
13 casting an acoustic shadow.

14 So homes that are within that
15 acoustic shadow zone are those that are
16 provided with the greatest mitigation of the
17 noise. Those that are at quite a distance
18 are not in that shadow and are
19 correspondingly less protected by the wall.

20 Q. Would this acoustic shadow have any
21 impact, in your opinion, on the Rotis and the
22 Rosenstocks if we have a property line noise
23 wall?

24 A. Well, it would have a reduced

1 impact for the noise, if that's what you're
2 speaking of.

3 Q. That's okay. I'm not following
4 here. You mentioned that if this is the
5 noise wall, that some noise hits the wall
6 directly and then would be bounced back
7 towards the south to Route 22, correct?

8 A. Correct.

9 Q. Some noise, if we had a property
10 line noise wall, would go right over the top
11 of the wall and right over the top of the
12 Roti, Rosenstrock homes?

13 A. Correct.

14 Q. And then there's a third
15 situation -- this acoustic shadow -- right?

16 A. That's correct.

17 Q. So you're saying some noise sort of
18 leaks over the top of the wall onto the Roti
19 and Rosenstrock homes? Or am I not
20 understanding this correctly?

21 A. Yes. Some of the noise leaks over,
22 and that causes a lower reduction in
23 intensity. If there was no sound that leaked
24 over that barrier, if there was no

1 diffraction, then all barriers would be
2 perfectly effective. There would be no
3 sound. But we know that that's not true, and
4 that's the basis of the engineering
5 calculations -- is the reality is that not
6 all sound is reflected back, and not all
7 sound goes directly over the tops of the
8 homes. Some of that sound, through
9 scattering and diffraction effects, leaks
10 over into the receiving positions, but at a
11 greatly reduced -- or substantially reduced
12 intensity.

13 Q. So even if there was a wall at the
14 red line location proposed by Dr. Schomer,
15 there would be acoustic shadow with that
16 situation?

17 A. Sure. There would be some acoustic
18 shadowing, but because the source now is
19 further from that wall, you're not yet enough
20 close enough to the receiver for it to be
21 effective. So if you take the same height
22 wall and you move it away from the source in
23 the middle of the parking lot, then it
24 becomes less effective than its original

1 design.

2 Q. All right. But just generally
3 speaking, you have this acoustic shadow
4 principle with any noise wall?

5 A. Absolutely.

6 Q. And in this case, the acoustic
7 shadow from a noise wall on the property
8 line, in your opinion, would not have a
9 significant impact on the Rotis and the
10 Rosenstocks?

11 A. I'm not sure I follow the question.
12 Would not have a significant impact?

13 Q. If I understand you correctly --
14 maybe I don't -- the acoustic shadow, again,
15 is some noise that leaks over the top of the
16 wall, but at a reduced intensity?

17 A. Right.

18 Q. So if that noise that leaks over
19 all walls in this situation, is that noise
20 going to have any significant impact on the
21 Rotis and the Rosenstocks if we have a
22 property line noise wall?

23 A. Let me try to clarify it a little
24 bit. A wall on the receiving property line

1 will cast a shadow that will reduce the
2 impact of the noise to the Rotis and the
3 Rosenstocks, and, to a lesser degree, the
4 Webers, because they're further away from
5 that home.

6 Q. So -- maybe I'm following. Is a
7 wall designed with the acoustic shadow in
8 mind?

9 A. Well, all barriers are. What I'm
10 trying to say is even the wall that Paul
11 Schomer had prescribed right up at the source
12 still casts a shadow because it's so close to
13 the source. You can cast the same equivalent
14 kind of shadow -- in other words, reduced
15 intensity of trucking operations -- with
16 essentially the same wall, but as close to
17 the receiver as it is to the source. You
18 take either wall and move them toward the
19 middle, and you put that wall, say, in the
20 middle of that parking lot, now you've
21 reduced the performance, you've reduced the
22 level of noise reduction that you want to try
23 to achieve at the receiving location.

24 Q. Maybe the best way to put it, it's

1 your opinion that a wall built of wood or
2 nonacoustic materials on the property line
3 would be an effective means of mitigating
4 noise to the Roti and Rosenstock homes?

5 A. Yes, that would be effective.

6 Q. Let me ask you a question about
7 Dr. Schomer's report, and then I'm done.

8 Do you recall in Dr. Schomer's
9 report that he identified the height of two
10 noise sources, one being 12 feet and one
11 being four feet?

12 A. Correct.

13 Q. And the 12-foot noise source, if
14 you recall, was what?

15 A. That's the exhaust stack of most
16 trucks.

17 Q. And the four-foot noise sources
18 that he identified?

19 A. That would pertain more to the
20 impact sounds of, say, the air brake of the
21 trucks backing into the dock and of the fifth
22 wheel being positioned.

23 Q. And the wall that Dr. Schomer
24 proposed for that red line, that was designed

1 based on a 12-foot-high noise source?

2 A. Yes. For conservatism, he based it
3 on a 12-foot-high noise source.

4 Q. And the 12-foot-high noise
5 source -- the truck idling -- what type of
6 noise is that?

7 A. Truck noise, combustion noise from
8 the engine that comes through exhaust is
9 primarily low frequency noise, similar to the
10 frequency of the noise that trucks traveling
11 along any road in that area.

12 Q. And did you read the Board's
13 initial decision in this case from February
14 of 2001?

15 A. I've looked at it, yes, when I got
16 a copy of it.

17 Q. And you read it?

18 A. Yes.

19 Q. In your opinion, is the wall
20 proposed by Dr. Schomer, is its design
21 consistent with the Board's findings in terms
22 of the type of noise that affects the
23 complainants during the nighttime hours?

24 A. I believe the Board had mentioned

1 that the greatest impact to the neighbors was
2 air brake noise, air release, the impacts
3 from the fifth wheel and impacts against the
4 dock. Those are -- all tend to be higher
5 frequency sources that have a four-foot
6 source height.

7 Q. So is his -- back to the question.
8 Is his wall that he proposes in his report
9 consistent with the Board's findings of the
10 type of noise that bothers the complainants?

11 A. No, that wouldn't be consistent
12 with it.

13 MR. KOLAR: I don't have any other
14 questions.

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

17 Mr. Kaiser?

18 MR. KAISER: Thank you,
19 Mr. Halloran.

20 CROSS-EXAMINATION

21 BY MR. KAISER:

22 Q. Now, Mr. Thunder, by way of
23 background, I understand you have a bachelor
24 of science degree in communication

1 disorder -- disorders and audiology; is that
2 correct?

3 A. That's correct.

4 Q. And you received that from which
5 university?

6 A. I received the bachelor's and
7 master's from Northern Illinois University
8 and the doctorate in audiology from PCO
9 School of Audiology.

10 Q. And where is that school located?

11 A. In Pennsylvania.

12 Q. Did you attend classes, or was that
13 correspondence courses?

14 A. They were online classes,
15 specifically meant for those that were
16 already licensed audiologists with a master's
17 degree.

18 Q. And do you have a Ph.D. in
19 acoustical engineering?

20 A. No. I'm board certified by the
21 Institute of Noise Control Engineering.

22 Q. Do you have a Ph.D. in physics?

23 A. No.

24 Q. Do you have a -- are you a licensed

1 engineer in the state of Illinois?

2 A. Licensure in engineering has no
3 relevance for noise control engineering.
4 There's no --

5 Q. So I take it you're not a licensed
6 engineer --

7 A. No, I'm not.

8 Q. -- in the state of Illinois?

9 A. No.

10 Q. Now, the name of your firm is what?

11 A. Acoustic Associates.

12 Q. And what percentage of your time do
13 you spend on audiology and environmental --
14 what percentage of your time do you spend on
15 work related to audiology?

16 A. The line is blurred when you say
17 audiology. When we're talking about
18 acoustics and environmental acoustics and so
19 forth, is that what you're trying to --

20 Q. No. I mean, do you fit people for
21 hearing aids? Is that part of what you do?

22 A. I have, correct.

23 Q. How much of your work is taken up
24 with that kind of practice?

1 A. Probably for the first ten years in
2 my 15-year practice, I would say half was
3 spent in that area and half was spent in the
4 area of environmental acoustics and
5 occupational noise.

6 Q. And by that -- occupational
7 noise -- you're talking about principally
8 noise inside work areas, correct?

9 A. That's correct.

10 Q. And how much of your time when you
11 were dealing with work inside work
12 environments had to do with measurement of
13 noise within those environments?

14 A. I'm not sure. Restate your
15 question. How much time --

16 Q. Did you spend in work environments
17 measuring noise within those environments?

18 A. I've done that my whole career. I
19 don't know what you mean by how much time.

20 Q. Well, I want to know -- could you
21 break it down on a percentage basis? How
22 much of your time was spent in industrial
23 engineering with respect to noise reduction
24 inside workplaces?

1 A. On the grand scheme of the things
2 that I do, occupational noise is probably
3 about currently 30 -- maybe a third of my
4 practice.

5 Q. And what's the other third of your
6 practice?

7 A. I would say the other two-thirds of
8 my practice, now the last five years, is
9 environmental sound issues.

10 Q. And when you say environmental
11 sound issues, what do you include within
12 that?

13 A. Anything that creates environmental
14 sound, from traffic to trucking operations to
15 car wash operations to industrial plants to
16 power plants to pecker plants, et cetera.

17 Q. And that's been over the last five
18 years, then, that you've spent approximately
19 two-thirds of your practice in environmental
20 noise issues?

21 A. That's correct.

22 Q. And with respect to LTD, you've
23 been working for LTD for how many years now?

24 A. Oh, I think five years.

1 Q. And do you know how much you billed
2 them in total over the five years you've
3 worked for them?

4 A. I have not added it up --

5 Q. You don't have a clue how much
6 you've billed them in the five years?

7 A. I can only imagine right now.

8 Q. Why don't you imagine for the Board
9 and tell us your best imagining of what you
10 billed and collected from LTD over the last
11 five years?

12 MR. KOLAR: I'm going object to the
13 speculative answer.

14 HEARING OFFICER HALLORAN: He may
15 answer if he's able.

16 Overruled.

17 BY THE WITNESS:

18 A. Nobody has asked me that directly,
19 but my guess would probably be in the 15 to
20 20,000.

21 BY MR. KAISER:

22 Q. Fifteen to 20,000?

23 A. Perhaps, yes.

24 Q. And how much are you billing them

1 per hour here today?

2 A. Billing per hour today for
3 testimony is 430 an hour.

4 Q. 430 an hour? That's \$430 an hour?

5 A. For testimony only, correct.

6 Q. How much did you bill them for your
7 travel time?

8 A. We bill travel and consultation
9 time at 215 an hour.

10 Q. And when you sat for deposition,
11 how much were you billing LTD?

12 A. As testimony, it was 430 again.

13 Q. And when you testified at hearing
14 last time, what was the rate you were
15 charging LTD for your testimony back in the
16 first part of the hearing?

17 A. Same as I just stated.

18 Q. \$430 an hour?

19 A. Like I would for all our clients,
20 yes.

21 Q. And I take it LTD has been paying
22 your bills, haven't they?

23 A. Of course.

24 Q. Now, I have in hand what I believe

1 has been marked as Respondent's Exhibit -- is
2 it J?

3 HEARING OFFICER HALLORAN: The one
4 that was --

5 MR. KAISER: Expert disclosure.

6 HEARING OFFICER HALLORAN: Correct.
7 I believe it was J.

8 MR. KAISER: You have that in front
9 of you.

10 BY MR. KAISER:

11 Q. And these are essentially -- you've
12 seen this. Do you have a copy of this in
13 front of you, Mr. Thunder?

14 A. I think this is it, yes.

15 Q. All right. And that's a summary of
16 your opinions?

17 A. That's correct.

18 Q. In connection with Dr. Schomer's
19 report, correct?

20 A. Correct.

21 Q. And did I understand you correctly,
22 you received a copy of Dr. Schomer's report
23 from Mr. Kolar -- LTD's attorney?

24 A. Correct.

1 Q. And then you looked it over and
2 e-mailed him -- Mr. Kolar -- some comments
3 with respect to Dr. Schomer's report?

4 A. I responded, and we discussed it,
5 yes.

6 Q. All right. Now, I want to walk you
7 through this step by step. And you say the
8 wall proposed by Dr. Schomer is considerably
9 more expensive than conventional barrier
10 walls.

11 Now, what did you understand to be
12 the height of the wall proposed by
13 Dr. Schomer?

14 A. The height of the wall averaged 25
15 feet high.

16 Q. And what did you understand to be
17 the length of the wall proposed by
18 Dr. Schomer?

19 A. I believe that it approached 600
20 feet.

21 Q. And when you say conventional
22 barrier walls, what was it about
23 Dr. Schomer's proposed wall that, in your
24 view, was unconventional?

1 A. The use of metal panel absorptive
2 type walls.

3 Q. That's unconventional?

4 A. I wouldn't say -- maybe I can
5 restate the definition of unconventional.
6 It's uncommon, and, therefore,
7 unconventional.

8 Q. You've never seen those types of
9 walls here in northern Illinois?

10 A. I've prescribed them myself.

11 Q. You've prescribed them yourself?

12 A. Absolutely.

13 Q. As effective barriers for reducing
14 the migration of noise, right?

15 A. Effective, but on the expensive
16 side.

17 Q. Have you made any inquiry as to
18 whether LTD is not able to afford a \$600,000
19 wall?

20 MR. KOLAR: Objection; not
21 relevant.

22 LTD --

23 HEARING OFFICER HALLORAN: Mr. Kaiser?

24 I'm sorry. Go ahead, Mr. Kolar.

1 Explain.

2 MR. KOLAR: I think the Board has
3 recently said that that's, like, LTD's
4 affirmative defense basically, its
5 inability to pay for a wall. So I don't
6 think it's relevant of this witness.

7 HEARING OFFICER HALLORAN: Mr. Kaiser?

8 MR. KAISER: I'll withdraw the
9 question.

10 HEARING OFFICER HALLORAN: Sustained.

11 BY MR. KAISER:

12 Q. I'd like to show you what's
13 previously been marked, for purposes of
14 identification, as Complainants' Exhibit A1.
15 It's Dr. Schomer's report dated April 26th,
16 2002. I'm going to put a copy of that in
17 front of you, Mr. Thunder.

18 (Document tendered.)

19 BY MR. KAISER:

20 Q. Have you seen this -- you've seen
21 this report, right?

22 A. Yes.

23 Q. And this is what you reviewed and
24 commented on, right?

1 A. Correct.

2 Q. All right. I want to direct your
3 attention to page 5. Do you see that?

4 A. Yes, I do.

5 Q. And do you see that -- where
6 that -- well, what's shown on that figure on
7 page 5?

8 A. The site layout of the northeast
9 corner of the LTD property, showing the
10 location of the loading dock and the parking
11 area.

12 Q. And I'm going to substitute now --
13 I'm going to give you an original copy with
14 Dr. Schomer's diagram. And you see that red
15 line there in the original?

16 A. That's correct.

17 Q. And what did you understand that
18 red line to indicate?

19 A. Proposed location for the barrier.

20 Q. And, in fact, hadn't you early on
21 proposed construction of the noise barrier
22 along that exact same line?

23 A. Not that wide, but, yes.

24 Q. I'm sorry. Not that wide?

1 A. No, not that long.

2 Q. Not that long?

3 A. Not that long.

4 Q. And which way was your originally
5 proposed wall shorter in length than the wall
6 proposed by Dr. Schomer in his April 26th,
7 2002 report?

8 A. I think our original one was
9 something around 250 feet long. And then
10 with discussions with Jack Voigt, we thought
11 that it ought to be extended somewhat further
12 than that still.

13 Q. And you did then propose a second
14 wall that was extended further to the west;
15 did you not?

16 A. That's correct.

17 Q. And you showed Jack Voigt, who's
18 here today as LTD's representative, a wall
19 that also boxed off the west end of LTD's
20 dock area; did you not?

21 A. I'm not sure what you define as
22 boxing off.

23 Q. Closing or having a section of wall
24 that ran perpendicular to the north wall of

1 LTD's -- the north end of LTD's warehouse
2 building, running -- the wall running north
3 and south to join, then, the length of wall
4 that spanned the dock area east to west?

5 A. No, that would be wrong.

6 Q. You never proposed placing a
7 wall -- a noise wall -- at the west end of
8 LTD's dock area?

9 A. Well, along the west end, but it
10 ran parallel. There was no section of the
11 wall that would run perpendicular -- in other
12 words, in a north-south direction, no.

13 Q. All right. So if there's something
14 in the record that shows a wall running
15 perpendicular, then that was not a wall that
16 you proposed?

17 A. That would not have been mine, no.

18 Q. All right. And in addition, now
19 you see that Dr. Schomer has included in this
20 dashed line on page 5 of his April 26th
21 report a proposed wall that would run further
22 to the south on the east end of LTD's dock
23 area. Do you see that?

24 A. I see that.

1 Q. And that's -- you had never
2 proposed a wall in that area, had you?

3 A. No, I never did.

4 Q. That's something new, isn't it?

5 A. It's new. I looked at the primary
6 activity being the loading dock area and not
7 the ingress and egress.

8 Q. And you were at the location --
9 LTD's facility -- I think you told us this
10 morning a dozen times, right?

11 A. Probably.

12 Q. Over the last five years, right?

13 A. Probably.

14 Q. And how many hours did you spend
15 out there in the dock area watching trucks go
16 in and out?

17 A. I can't venture a guess.
18 Obviously, it would be part of every visit
19 that I did and part of the description and
20 characterization that LTD gave me as to dock
21 activities.

22 Q. My question, Mr. Thunder, was how
23 many hours did you spend out there watching
24 trucks go in and out of the dock area and

1 maneuver within the dock area?

2 MR. KOLAR: Objection; asked and
3 answered.

4 He said something like I can't
5 venture a guess.

6 BY THE WITNESS:

7 A. I can't tell you the exact number
8 of hours. I can tell you that each time I
9 went out there, that it was part of my
10 observations because I would have to drive
11 into that parking lot and observe while I
12 walked in and walked out.

13 BY MR. KAISER:

14 Q. Do you remember telling me at your
15 deposition in October of 2002, that you spent
16 less than an hour watching the dock area and
17 observing dock activities?

18 A. That might be --

19 MR. KOLAR: Objection; improper
20 impeachment.

21 HEARING OFFICER HALLORAN: Excuse
22 me, Mr. Thunder.

23 Mr. Kolar?

24 MR. KOLAR: Objection; improper

1 impeachment.

2 HEARING OFFICER HALLORAN: Mr. Kaiser?

3 MR. KAISER: I just asked him does
4 he remember telling me that.

5 HEARING OFFICER HALLORAN: Sustained.

6 BY THE WITNESS:

7 A. I don't remember telling you that
8 that --

9 MR. KOLAR: Objection.

10 HEARING OFFICER HALLORAN: Mr. Thunder.

11 BY MR. KAISER:

12 Q. Directing your attention to the
13 diagram on Dr. Schomer's report on page 5,
14 what did you understand these dots or --
15 identified as P1, 2, 3; P1 through 10; and
16 then R1 through 10. What did you understand
17 those to mean?

18 A. That's just a distribution of
19 potential locations for noise sources,
20 recognizing that a noise source could be
21 virtually anywhere in the back there. But
22 for the purposes of this calculation, they
23 were chosen.

24 Q. All right. And, yeah, noise could,

1 in fact, and your observations confirm, don't
2 they, that noise does originate and emanate
3 from all areas within LTD's dock?

4 A. Well, it's focused more in one
5 area, but, yes to either side --

6 Q. What's the basis of your opinion
7 that it's focused more in one area?

8 A. Descriptions, characterizations --

9 Q. From whom?

10 A. Talking with LTD.

11 Q. In your observations, again, do you
12 remember making your own observations about
13 where the activity was focused?

14 A. Well, if we're splitting hairs,
15 we're talking about activity that could
16 happen all up and down that dock area. But
17 the times that I've been there, the focus is
18 yard -- moving trucks in and out of the
19 immediate loading dock area.

20 Q. Well, where does that activity
21 occur?

22 A. Primarily where the sunken areas
23 where the retaining wall is on the, we'll say
24 the east half of the loading dock as a main

1 focus. I'm not denying that there couldn't
2 be any activity on either side of that.

3 Q. You're not denying that there could
4 be activity at the west end of the dock area?

5 A. Oh, no, not at all.

6 Q. You're not denying that there could
7 be activity on the ramp leading in and out of
8 the dock area?

9 A. Not at all.

10 Q. You're not denying that there could
11 be activity on Lakeside Drive to the east of
12 LTD?

13 A. No.

14 Q. Now, you proposed initially a wall
15 of a certain height as a means of stopping
16 noise from migrating to the Roti home; did
17 you not?

18 A. To mitigate the noise, yes.

19 Q. Yeah. To mitigate or reduce the
20 migration of noise, correct?

21 A. Correct.

22 Q. Not stop it a hundred percent,
23 right?

24 A. Correct.

1 Q. But to reduce it, correct?

2 A. Correct.

3 Q. And you had chosen as a reasonable
4 target for reducing it an approximately
5 ten-decibel reduction in the thousand hertz
6 octave band as measured at the Roti home,
7 correct?

8 A. Compared to Class B limits and the
9 noise measurements that were made out there,
10 we looked at achieving a ten-decibel noise
11 reduction.

12 Q. And you understand that Dr. Schomer
13 elected to establish as a target for noise
14 reduction a ten-decibel reduction in the
15 1,000 hertz octave band, correct?

16 A. Only at the Webers', though, which
17 is much further away, which would result in
18 almost a 20-decibel noise reduction for the
19 Rotis and the Rosenstocks.

20 Q. Well, is it your opinion that the
21 Webers are not entitled to a reduction in
22 noise?

23 A. Never said they would be entitled,
24 just that they were less impacted by it

1 because of their distance.

2 Q. How do you know that?

3 A. By general acoustical law.

4 Q. General acoustical law? What
5 general acoustical law tells you that the
6 Webers are less impacted than the Rotis?

7 A. Because all things being equal,
8 they are at a position that is probably about
9 5 or 6 dB lower than what we measured near
10 the Rotis'.

11 Q. What things need to be equal for
12 the Webers to experience less noise than the
13 Rotis?

14 A. I'm saying all things being equal
15 in terms of attitudes and style and size of
16 homes and things of that sort, they are
17 further away, so there's numerically a less
18 decibel level of their homes.

19 Q. How far are the Webers from the
20 ramp area leading into the LTD dock?

21 A. From the aerial view, I don't need
22 to know how far away, I just need to look at
23 the aerial view and say that they're
24 approximately almost twice the distance as

1 the measurement locations we made at the
2 Rotis.

3 Q. Have you ever taken a ruler and
4 tried to scale that out and determine how
5 many feet the Webers are from the LTD dock
6 area?

7 A. I don't remember specifically
8 recalling doing that, because our focus was
9 for the homes closest, feeling that if we
10 could reduce the impact at their homes, there
11 would be a corresponding reduction of impact
12 for the Webers.

13 Q. Do you still stand by that? You
14 think that's sound theory?

15 A. What's sound theory?

16 Q. Just what you said -- that if you
17 can reduce the noise at the Rotis, you would
18 then have an impact at the Webers?

19 A. There would be a reduction at the
20 Webers, too, if you extended it over to that
21 side, sure. If the source -- the barrier was
22 close to the source as we originally proposed
23 it, there would be a reduction at their place
24 as well.

1 Q. Well, where are you assuming the
2 sources are?

3 A. As I mentioned, in the focus of the
4 activity, in the loading dock area.

5 Q. But didn't you just tell the Board
6 that there's also noise sources along the
7 ramp leading into and out of the dock?

8 A. Those are noise sources of ingress
9 and egress, not the primary focus of the
10 activities.

11 Q. They're not noise sources that
12 affect the Webers?

13 A. I didn't say they weren't noise
14 sources. I said they occurred there a lot
15 less frequently than the primary
16 activities --

17 Q. How do you know that?

18 MR. KOLAR: Objection; he keeps
19 cutting him off.

20 HEARING OFFICER HALLORAN: I agree,
21 Mr. Kaiser. Let him finish his answer.

22 BY MR. KAISER:

23 Q. How do you know that the noise
24 sources on the ramp occur less frequently

1 than the noise sources in the dock area?

2 A. Through, as you say, my limited
3 observations, but also my discussions of
4 characterizations with LTD as to the
5 activities on the dock --

6 Q. And in terms of the people you
7 talked with at LTD, is one of those people
8 Jack Voigt?

9 A. Yes.

10 Q. Who's here today?

11 A. Correct.

12 Q. The guy who pays your \$430 an hour
13 testimony fees?

14 A. Correct.

15 Q. And you also spoke to Mike Hara,
16 right?

17 A. Not so much about characterizing
18 the dock, no.

19 Q. Who else did you speak to at LTD?

20 A. Primarily Jack Voigt.

21 Q. Did you talk to any of the people
22 who actually work in the dock area?

23 A. No, I did not.

24 Q. Did you talk to the guy who doesn't

1 even work for LTD who drives that yard
2 tractor?

3 A. No, I did not.

4 Q. Did you stand out there at the ramp
5 area for any period of time and take any
6 measurements of the number of trucks going in
7 and out?

8 A. No, I didn't count trucks.

9 Q. Did you ever observe how often the
10 yard tractor had to venture out from behind
11 the recessed area of the dock to pick up or
12 drop off trailers on the ramp leading into
13 and out of the LTD dock area?

14 A. No, I did not count those times.

15 Q. Did you ever count how many times
16 the yard tractor had gone out onto Lakeside
17 Drive to pick up a trailer that had been
18 parked on Lakeside Drive?

19 A. I wasn't there for that long a
20 period to make those kind of consistent
21 observations.

22 Q. So you didn't make those kinds of
23 observations?

24 A. We did not, no.

1 Q. So what data do you have to present
2 to the Board to back up your opinion that the
3 noise source on the ramp is less frequent
4 than the noise sources within the dock area?

5 A. Primarily characterizations from
6 LTD.

7 Q. That you rely on -- Jack Voigt's --

8 A. Correct.

9 Q. -- information that he provided
10 you?

11 A. Correct.

12 Q. Did you ever interview Leslie
13 Weber?

14 A. No, I did not.

15 Q. Did you ever go over to Leslie
16 Weber's house?

17 A. No.

18 MR. KOLAR: Objection.

19 I don't think he'd be allowed to
20 even do that. Improper --

21 HEARING OFFICER HALLORAN: Sustained.

22 BY MR. KAISER:

23 Q. Did you ever talk with Paul
24 Rosenstock?

1 A. No, I haven't.

2 MR. KOLAR: Same objection.

3 HEARING OFFICER HALLORAN: Sustained.

4 BY MR. KAISER:

5 Q. Now, you'd admit, wouldn't you,
6 Mr. Thunder, that if noise -- if you're
7 trying to solve for noise on the ramp leading
8 into and out of the LTD dock area, you'd have
9 to design a barrier -- or that -- a designed
10 barrier would be one way to eliminate the
11 migration of noise from the ramp area to the
12 Roti home, correct?

13 A. Restate that.

14 MR. KAISER: Could you read it
15 back, please?

16 (Whereupon, the record was
17 read as requested.)

18 MR. KOLAR: Objection; vague.

19 HEARING OFFICER HALLORAN: You want
20 to restate that question, please?

21 MR. KAISER: Sure.

22 BY MR. KAISER:

23 Q. When you testified in October,
24 2002, the first phase of your direct

1 examination, do you recall telling the Board
2 that if LTD were required to build a noise
3 wall along the property line separating LTD
4 from the complainants, that to design to
5 protect the Weber home, a noise wall would
6 have to be constructed in an "L" shape, and
7 that there would have to be a barrier that
8 took into account the position of the Weber
9 home to the northeast of the LTD dock area?

10 A. I vaguely remember that, yes. Are
11 you saying that the receiver property line
12 barrier, that there would have to be a wall
13 running along the east side of their
14 property?

15 Q. I'll pose another question. Noise
16 from the ramp area would not go -- noise
17 doesn't travel in a straight line, does it?

18 A. No.

19 Q. No. It travels in a wave, correct?

20 A. Correct.

21 Q. And as it moves out from its noise
22 source, that wave expands, correct?

23 A. Correct.

24 Q. And if you had noise originating in

1 the ramp area, that noise would fan out
2 essentially in a 360-degree radius; would it
3 not?

4 A. That's correct.

5 Q. So some of the noise from the ramp
6 area would travel towards the Roti home,
7 correct?

8 A. That's correct.

9 Q. And some of the noise in the ramp
10 area would travel towards Paul Rosenstock's
11 home; would it not?

12 A. Yes.

13 Q. And some of the noise in the dock
14 area would migrate towards the Webers,
15 correct?

16 A. Yes.

17 Q. And, again, do you know the
18 distance in feet that separates the ramp area
19 from the Weber home?

20 MR. KOLAR: Objection; asked and
21 answered.

22 HEARING OFFICER HALLORAN: Sustained.

23 BY MR. KAISER:

24 Q. Do you know the distance in feet

1 from LTD's ramp area to the Rosenstock home;
2 yes or no?

3 A. I don't recall offhand. I'm just
4 looking at the picture. I don't need to know
5 the distance --

6 Q. Excuse me. The question was do you
7 know how many feet the distance is from LTD's
8 ramp to Paul Rosenstock's home --

9 A. No --

10 Q. -- yes or no? As you sit here
11 today, do you know that number?

12 A. Not offhand.

13 Q. Did you bring anything with you
14 that you could refer to that might refresh
15 your recollection or allow you to figure that
16 out?

17 A. No.

18 Q. As you sit here this morning, do
19 you know the distance from LTD's ramp to the
20 Roti home, in feet?

21 A. No.

22 Q. As you sit here today, do you know
23 the height of LTD's north wall?

24 A. I believe that was stated somewhere

1 around 25 feet or so.

2 Q. Well, is that what you understand
3 it to be? I mean, do you know how high LTD's
4 north wall is?

5 A. How close do you want me to be?
6 Within the nearest inch?

7 Q. To the nearest foot.

8 A. To the nearest foot?

9 Q. Yes.

10 A. I don't know it to the nearest
11 foot. I just know that it's a tall wall.

12 Q. Do you know within the nearest foot
13 the height of the retaining wall in LTD's
14 dock area?

15 A. I remember that to be something on
16 the order of six or seven feet.

17 Q. Do you know within the nearest foot
18 the width of LTD's north parking lot?

19 A. Not offhand, no.

20 Q. Do you know within a foot the
21 distance between the LTD property line and
22 the south face of the Roti home?

23 A. No.

24 Q. Do you know within a foot the

1 distance between LTD's north property line
2 and the south face of Paul Rosenstock's
3 home?

4 A. No.

5 Q. Do you know within a foot the
6 distance between LTD's northeast corner
7 property line and the Weber home?

8 A. No.

9 Q. Do you know the height above sea
10 level of LTD's dock area?

11 A. Is that relevant to anything? I do
12 not know.

13 Q. If it isn't, your counsel will
14 object. Do you know it or no?

15 A. No.

16 Q. Do you know the height above sea
17 level of LTD's north parking lot?

18 MR. KOLAR: Objection; relevance.

19 HEARING OFFICER HALLORAN: Mr. Kaiser?

20 MR. KAISER: It was very clear from
21 Dr. Schomer's report that these heights
22 are essential to a good design, an
23 effective design, a reliable design of a
24 noise wall.

1 HEARING OFFICER HALLORAN: I'll

2 allow him to answer if he's able.

3 BY MR. KAISER:

4 Q. Do you know the height above sea
5 level of LTD's north parking lot?

6 A. The relative height counts, not
7 above sea level. I do not know what it is
8 above sea level.

9 Q. Do you know what the height of
10 LTD's property line is above sea level?

11 A. Not above sea level.

12 Q. Do you know what the height of the
13 foundation of the Roti home is above sea
14 level?

15 A. Not above sea level.

16 Q. Well, what height do you know with
17 respect to the Roti house?

18 A. That it's on the order of a few
19 feet above the height of the retaining wall,
20 which the retaining wall is seven feet or so
21 above the platform or ground level of the
22 dock area.

23 Q. And so it's a few feet above --
24 what did you say? The Roti home is a few

1 feet above what?

2 A. I believe it was on the order of a
3 couple feet above the parking lot elevation.

4 Q. And when you say a few feet, how
5 many feet do you mean?

6 A. Two, three feet.

7 Q. Do you know what the height above
8 sea level is for the second story -- the top
9 of the second story windows at the Roti home?

10 A. Not precisely. Most of the them
11 are on the order of ten feet.

12 Q. Ten feet above what?

13 A. Above -- one window above the next.
14 In other words, from the first floor window
15 to a second floor typical window.

16 Q. Do you know the height of the
17 second story window at the Rosenstrock
18 residence above the ground level at the
19 Rosenstrock residence?

20 A. I believe it was on the order of 18
21 feet above ground level at that house.

22 Q. Do you know what the top of the
23 second story window at the Weber home is
24 above ground level?

1 A. I think that was comparable.

2 Q. Comparable to what?

3 A. Comparable to 18 feet, maybe 19
4 feet, 20 feet.

5 Q. Now, you're recommending or
6 suggesting as an alternative to the wall that
7 Dr. Schomer designed that LTD construct a
8 wooden wall along the property line. Did I
9 understand your opinion correctly?

10 A. That's an alternative, yes.

11 Q. And that wall located along the
12 property line, how high would that wooden
13 wall be?

14 A. It would be comparable if you're
15 trying achieve the same reduction that Paul
16 Schomer has said as a criteria. It would be
17 comparable in height -- 25 foot or so.

18 Q. Twenty-five foot or so?

19 A. Correct.

20 Q. And you would agree with the
21 general principle that in order to reduce
22 sound from a source to a receiver, that you
23 have to interrupt the line of sight between
24 the source and the receiver, wouldn't you?

1 A. Yes.

2 Q. That's pretty fundamental in
3 design, isn't it?

4 A. Correct.

5 Q. And if one sought to reduce noise
6 at the second floor of the Roti residence,
7 the wall would have to be tall enough to
8 interrupt the line of sight between the
9 source -- LTD's dock area -- and the
10 receiver, which I'm positing is the second
11 story of the Roti home, correct?

12 A. That would be correct.

13 Q. And with respect to the Rosenstock
14 home, similarly, you would have to build a
15 wall on the property line tall enough to
16 break the line of sight between LTD's dock
17 area? And if you wanted to solve the problem
18 at the second story of the Rosenstock
19 residence, the top of the second story window
20 at the Rosenstock home, correct?

21 A. That's correct.

22 Q. And with respect to the Webers, the
23 same thing: You'd have to interrupt the line
24 of sight between the noise source and the top

1 of the second story window at the Weber home,
2 right?

3 A. That's correct.

4 Q. Now, did you bring any drawings
5 here to show the Board the type of wall that
6 you're proposing as an alternative to
7 Dr. Schomer's wall?

8 A. No, I don't have any drawings.

9 Q. Do you have any specification
10 sheets from any contractor showing the types
11 of materials that would be used to construct
12 the wooden wall you're positing as an
13 alternative to Dr. Schomer's wall?

14 A. I didn't say wooden wall. I said
15 other conventional materials.

16 Q. And by that you mean it could be a
17 wood wall, a concrete wall or what other type
18 of wall?

19 A. Brick wall. You could use glass.
20 You could use berming. It could possibly be
21 partly berm, partly wood wall.

22 Q. Did you bring any drawings showing
23 a partly bermed, partly wood wall on the
24 property line?

1 A. No, I didn't.

2 Q. Did you bring any drawings showing
3 a partly bermed, partly glass or brick wall
4 at the property line?

5 A. No, I didn't.

6 Q. Have you prepared any drawings of
7 that sort?

8 A. No, I don't.

9 Q. Do you have any materials from
10 vendors of brick or glass wall material?

11 A. I have materials in my office, yes.

12 Q. You didn't bring those to the
13 hearing today?

14 A. No.

15 Q. Did you review those in order to
16 determine whether a wall of these other
17 materials -- wood, brick, glass, concrete --
18 would be effective?

19 A. I wouldn't need to bring them.

20 Q. You wouldn't need to?

21 A. No. In acoustics, we don't care
22 what actual material it's made out of, only
23 that it has a certain density and if that
24 density can be met.

1 Q. And how dense would the wood have
2 to be at the property line?

3 A. I don't recall offhand. I just
4 usually recommend that it be wood that be
5 dense and without air gaps.

6 Q. Well, does that suggest to you any
7 width -- any particular width -- of the wall
8 if it were constructed of wood?

9 A. Well, typically, a four-inch type
10 of wood wall.

11 Q. Four-inch thick?

12 A. Would be plenty sufficient to
13 reduce the transmission through it.

14 Q. Have you designed four-inch thick
15 wood walls?

16 A. I don't usually design them in that
17 sense. I recommend to our clients that as
18 long as it meets the dense and heavy weight
19 aspect acoustically, that they can get a
20 contractor that does the actual design and
21 artwork and estimation.

22 Q. Did you recommend to LTD any
23 particular contractors who could do that
24 design work and estimation?

1 A. Well, something that the Huff
2 Company could do, of course, but when you get
3 to conventional materials in those
4 situations, most any fence contractor
5 certainly has the skills to be able to
6 construct such a fence.

7 Q. Now, do you remember telling the
8 Board during the first phase of your
9 testimony that you thought a wood wall could
10 be built for less per square foot than
11 Dr. Schomer's wall?

12 A. Yes.

13 Q. And I understood that you thought a
14 wood wall could be built in the range of 30
15 to \$35.00 per square foot. Is that what you
16 recall your testimony to be?

17 A. That's what I estimated, yes.

18 Q. And what did you -- you based that
19 on a magazine article you'd read at some
20 point in time?

21 A. No. It was based on a noise
22 barrier report put out by the Department of
23 Transportation in 2000, that compared
24 construction costs of various types of

1 walls -- all the conventional materials that
2 I just explained, in addition to the special
3 absorptive type of barrier.

4 Q. Did you bring a copy of that
5 article or report with you this morning?

6 A. Yes.

7 Q. May I see it?

8 HEARING OFFICER HALLORAN: We're
9 going to go off the record here for a
10 minute.

11 (A short break was had.)

12 MR. KOLAR: Can I raise an issue?
13 I just told Steve that I wanted to call
14 Jack --

15 HEARING OFFICER HALLORAN: Are you
16 on the record now?

17 MR. KOLAR: Yes. I think she was
18 typing.

19 HEARING OFFICER HALLORAN: Well,
20 no. I normally start --

21 MR. KAISER: All right. You're the
22 one who's supposed to go on the record.
23 Okay.

24 I told Steve that I wanted to call

1 Jack Voigt just to testify that since he
2 testified on October 15th or 16th, that
3 he only had two nights -- this was what
4 Jack told me -- two nights when they had
5 any nighttime operations -- any nighttime
6 trucking operations. And there were only
7 a couple trucks on -- a few trucks on
8 each of those two nights. If we're here
9 talking about a remedy to take care of
10 nighttime noise and that we've already
11 had testimony in the record back in
12 October that they weren't doing any
13 nighttime as of that Friday, this would
14 be sort of an update on where -- what
15 they've done in the last six weeks.

16 HEARING OFFICER HALLORAN: Mr. Kaiser?

17 MR. KAISER: The Board reopened the
18 hearing to hear information about a
19 remedy. I don't think that pertains to a
20 remedy. It seems like they want to
21 relitigate the nuisance issue. I think
22 it's beyond the scope of these
23 proceedings, and I'd object.

24 HEARING OFFICER HALLORAN: Mr. Kolar?

1 MR. KOLAR: It's already in the
2 record. This is sort of, like,
3 clarification as to the situation. And
4 it's completely relevant to a remedy
5 because it goes to what you're trying to
6 remedy.

7 HEARING OFFICER HALLORAN: I would
8 agree, and I think I will let him testify
9 briefly. And I think the Board, to make
10 an informed decision, would love to have
11 everything in front of them. I mean,
12 this hearing has been going -- what is it
13 now? The 9th? Today, all total,
14 something like that. So again, if, you
15 know, you can appeal my ruling,
16 Mr. Kaiser.

17 Also, Mr. Kaiser, if you could just
18 slow up a little bit.

19 MR. KAISER: Okay. I'll do that.

20 MR. KOLAR: Mr. Voigt has to leave
21 at quarter-to to go to a meeting in
22 Indiana, so -- Steve said he had no
23 objection if you granted my motion to
24 putting him out of order. But if Steve's

1 going to move along so that we'll be done
2 by that time anyway...

3 HEARING OFFICER HALLORAN: This
4 sounds like deja vue from the last time.

5 MR. KOLAR: Okay. I would have two
6 questions -- I mean, one question for
7 him, just -- you told us this last
8 time --

9 HEARING OFFICER HALLORAN: Okay.
10 You want to finish your cross,
11 Mr. Kaiser?

12 MR. KAISER: I mean, I don't want
13 to feel pressured to finish Mr. Thunder's
14 cross.

15 HEARING OFFICER HALLORAN: We don't
16 want you to.

17 MR. KAISER: Right. And we brought
18 him back for that purpose. So if you're
19 willing, I would have no objection to
20 taking Mr. Voigt out of turn and then
21 picking up the cross of Mr. Thunder and
22 be done.

23 MR. KOLAR: Can he just sit right
24 here and be sworn in? Does that work?

1 HEARING OFFICER HALLORAN: No. I'd
2 rather have Mr. Voigt take the stand for
3 that.

4 (Whereupon, the witness was duly sworn.)

5 JACK VOIGT,
6 called as a witness herein, having been first
7 duly sworn, was examined and testified as
8 follows:

9 DIRECT EXAMINATION

10 BY MR. KOLAR:

11 Q. Can you state your name for the
12 record, please?

13 A. Jack Voigt.

14 Q. And refresh our memory. What's
15 your position at LTD Commodities?

16 A. I'm vice president of distribution
17 operations.

18 Q. All right. And when you testified
19 in October, you told the Pollution Control
20 Board that as of that Friday of that week,
21 there would no longer be a second shift at
22 LTD Commodities. Do you recall that?

23 A. That's correct, yes.

24 Q. Did that occur?

1 A. Yes. Although, this evening, we
2 will have a couple trucks. And it could be
3 happening for the next three to four days.

4 Q. Okay. But since October 16th or
5 15th -- whenever you testified -- or since
6 that Friday, how many times, up until today,
7 have there been trucks in that second shift
8 delivering or picking up?

9 A. As far as I know, we've had none
10 to-date. It's just that we're starting this
11 week.

12 Q. Okay. And how many trucks this
13 week do you expect?

14 A. We figure about two per evening
15 that will be leaving -- leaving the site.

16 Q. All right. How about trucks coming
17 in?

18 A. The last truck is coming in at
19 around 5:00 o'clock, so it's hard to say that
20 it's first or second shift, you know, because
21 they would be working overtime for that.
22 There might be --

23 Q. 5:00 p.m.?

24 A. Yes.

1 Q. All right. I'm talking -- let's
2 say 10:00 p.m. After 10:00 p.m., do you
3 expect that you would have a couple trucks
4 going out and no trucks coming in?

5 A. That's correct.

6 MR. KOLAR: I have no further
7 questions.

8 HEARING OFFICER HALLORAN: Mr. Kaiser?

9 MR. KAISER: Very briefly.

10 CROSS-EXAMINATION

11 BY MR. KAISER:

12 Q. And I take it, Mr. Voigt, if
13 business picks up and it becomes necessary,
14 then LTD would resume a full second shift at
15 its Bannockburn facility?

16 A. It would not be this year, no.

17 Q. But in the future?

18 A. That is a possibility, yes.

19 Q. And in addition to the trucks that
20 come in and out, LTD contracts with -- does
21 it still contract with CTC Corporation to
22 operate the yard tractor?

23 A. No. Actually, it's a different
24 firm. I don't recall the name of the firm,

1 though.

2 Q. All right. But that's a sub --
3 that's someone who doesn't work for LTD?

4 A. Right.

5 Q. And have you observed that the
6 entity that operates the yard tractor
7 sometimes moves the trailers around, even
8 after LTD's shifts have ended?

9 A. With the first shift operation,
10 yes. It might spend half an hour after the
11 first shift is done.

12 Q. And with the second shift
13 operation, if there's some clean up that
14 needs to be done, the trailer is pulled out
15 of the bays and parked or pulled in to be
16 loaded, then that might happen even after LTD
17 employees have wrapped up their shift,
18 correct?

19 A. Yes.

20 MR. KAISER: Thank you.

21 No further questions.

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

24 Mr. Kolar, any redirect?

1 REDIRECT EXAMINATION

2 BY MR. KAISER:

3 Q. The subject of your meeting, is
4 that proprietary information?

5 A. No.

6 Q. Why are you going to a meeting in
7 Indiana?

8 A. We're going to Indiana to look
9 at --

10 MR. KAISER: Objection; beyond the
11 scope.

12 HEARING OFFICER HALLORAN: Mr. Kolar?

13 MR. KOLAR: He asked him about if
14 they would possibly go back to the second
15 shift if business picks up. And I think
16 this meeting in Indiana relates to if
17 business picks up.

18 HEARING OFFICER HALLORAN: Well,
19 I'll allow it, but let's wrap it up,
20 please.

21 BY MR. KOLAR:

22 Q. You're going to Indiana to do what?

23 A. Look at a site for further
24 expansion.

1 Q. All right. Of LTD's operations?

2 A. That's correct. Distribution
3 operations.

4 Q. Including trucking operations?

5 A. Yes.

6 MR. KOLAR: No further questions.

7 HEARING OFFICER HALLORAN: Mr. Kaiser?

8 MR. KAISER: If I may briefly?

9 RECROSS-EXAMINATION

10 BY MR. KAISER:

11 Q. How many square feet are you
12 looking at over there in Indiana?

13 A. Approximately 700,000 square feet.
14 It's not built yet, but part of it is.

15 Q. And is that property that LTD is
16 looking to acquire or lease?

17 A. Probably lease, but we would look
18 at a purchase also.

19 MR. KAISER: Nothing further.

20 HEARING OFFICER HALLORAN: Thank
21 you.

22 MR. KOLAR: Nothing further.

23 HEARING OFFICER HALLORAN: You may
24 step down, Mr. Voigt.

1 MR. KOLAR: Thanks for letting me
2 take him out of order.

3 (Whereupon, Mr. Voigt
4 was excused.)

5 HEARING OFFICER HALLORAN: Mr. Thunder,
6 you're still under oath.

7 THE WITNESS: Yes.

8 MR. KOLAR: Mr. Voigt has to leave.

9 HEARING OFFICER HALLORAN: Have a
10 safe trip it Indiana, sir.

11 MR. VOIGT: Thank you.

12 HEARING OFFICER HALLORAN: You may
13 proceed.

14 MR. KAISER: Thank you,
15 Mr. Halloran.

16 (Whereupon, Mr. Thunder
17 returned to the witness stand.)

18 CROSS-EXAMINATION (resumed)

19 BY MR. KAISER:

20 Q. Mr. Thunder, before we took the
21 break, we were talking about the relative
22 costs of a wood, brick, cement, glass barrier
23 wall, in comparison with the barrier wall
24 proposed by Dr. Schomer and Steve Mitchell

1 with the Huff Company. And I asked you
2 whether you had any -- where you had gotten
3 your information about costs of a wooden
4 wall, and you had said it was a U.S.
5 Department of Transportation Federal Highway
6 Administration document. I asked you whether
7 you had it; you said yes. And, in fact, am I
8 now holding the document that you had relied
9 on?

10 A. That's correct.

11 Q. And this is dated April, 2000,
12 correct?

13 A. That sounds right.

14 Q. Do you need to see it?

15 A. I can't see that far. April, 2000.

16 Q. All right. And this is the
17 document you relied on in terms of finding
18 your cost comparisons of the different noise
19 barrier materials?

20 A. From a relative standpoint, yes.

21 Q. What does that mean -- from a
22 relative standpoint?

23 A. Well, this document already is two
24 years old, so you can't necessarily rely on

1 the absolute costs, but you can rely on the
2 relative costs.

3 Q. And this is a document that
4 describes costs of building highway traffic
5 noise barriers, correct?

6 A. Correct.

7 Q. And has it been your experience
8 that highway noise barriers, they can be many
9 miles in length, correct?

10 A. They could be, yes.

11 Q. And, in fact, it would be an
12 unusual highway traffic noise barrier that
13 would be 600 feet in length; would it not?

14 A. Generally speaking, yes.

15 Q. I mean, that would be a small wall
16 for a highway, right?

17 A. Yes.

18 Q. And do you know in the comparison
19 of these costs how much of the costs related
20 to just the cost of getting materials in
21 place and costs of getting workers on-site
22 and costs of getting equipment to the proper
23 location, how much those types of start-up
24 costs affected the relative cost of a wood

1 wall as compared to an acoustically
2 absorptive panel wall?

3 A. No. That's why I used a relative
4 analysis, not an absolute.

5 Q. And after reviewing this
6 document -- the U.S. Department of
7 Transportation document -- did you make any
8 calls to local vendors of wall materials to
9 find out costs?

10 A. No, I did not.

11 Q. Did you make any telephone calls or
12 send any letters to contractors who actually
13 build walls to get costs comparisons of a
14 wood wall with an acoustically absorptive
15 metal panel wall?

16 A. No.

17 Q. Did you do any computer modeling to
18 determine the effectiveness of a noise wall
19 built on the property line?

20 A. Not on the proper line, no, because
21 Paul Schomer had submitted some computer
22 modeling estimates.

23 Q. Did you review Dr. Schomer's
24 modeling estimates?

1 A. You had shared them with me, yes.

2 Q. I showed you those at his
3 deposition; did I not?

4 A. That's correct.

5 Q. And those have previously been
6 marked and admitted into evidence as
7 Complainants' Exhibits C1, 2 and 3. I want
8 to show you those documents, Dr. Thunder.

9 (Documents tendered.)

10 BY MR. KAISER:

11 Q. Do you see those?

12 A. Yes, I do.

13 Q. And you sat through Dr. Schomer's
14 testimony, didn't you?

15 A. No, I didn't.

16 Q. Did you review the transcript of
17 his testimony before today's hearing?

18 A. No.

19 Q. Did you sit in at his deposition
20 this fall?

21 A. No.

22 Q. Do you have any quarrel with the
23 figures that Dr. Schomer has generated in his
24 Exhibits C1, 2 and 3?

1 A. Not on the sight of it, no. It's
2 just -- these are worksheet printouts that he
3 obviously knows a lot better than anybody
4 else because it's a worksheet. But I'm not
5 surprised with the conclusions that would say
6 that the wall height would be comparable to
7 the wall height that he had proposed.

8 Q. All right. And let me just --

9 A. But that does not surprise me.

10 Q. Let me break this down. With
11 respect -- now, he's titled this "Weber
12 Thunder," so this is his analysis of your
13 proposal that a wall be built on the property
14 line. And he says typical barrier height for
15 the Weber residence to achieve a 9.9
16 reduction in the thousand kilohertz octave
17 band would have to be 33 feet high.

18 Do you see that?

19 A. Yes.

20 Q. And that doesn't surprise you that
21 he would calculate a wall height of 33 feet,
22 does it?

23 A. No.

24 Q. And with respect to the Rosenstock

1 calculation, Dr. Schomer calculated a wall
2 height of 28 feet in order to get a 10.1
3 reduction in the thousand kilohertz octave
4 band. A wall height of 28 feet wouldn't
5 surprise you, would it?

6 HEARING OFFICER HALLORAN: Mr. Kaiser,
7 could you clarify what exhibits you're
8 pointing --

9 MR. KAISER: Yes. I had first
10 pointed at Complainants' Exhibit C1, and
11 now I'm showing Mr. Thunder Complainants'
12 Exhibit C2.

13 BOARD MEMBER RAO: Mr. Kaiser,
14 while you're at it, can you identify the
15 other document -- the cost estimate
16 document -- for the record? You didn't
17 give the name of the document and when it
18 was published, other than, I think maybe
19 you mentioned 2000.

20 MR. KAISER: Let me --

21 BOARD MEMBER RAO: It's not entered
22 as an exhibit, right?

23 MR. KAISER: No, it's not.

24 I'm open to suggestions,

1 Mr. Halloran, as to how we might identify
2 this.

3 HEARING OFFICER HALLORAN: We can
4 go off the record.

5 (Discussion held off the record.)

6 (Whereupon, said document was
7 marked as Complainants' Exhibit H,
8 for identification, as of
9 12-9-02.)

10 HEARING OFFICER HALLORAN: All
11 right. We can go back on the record.

12 Mr. Kaiser?

13 MR. KAISER: Yes, Mr. Halloran,
14 thank you.

15 For purposes of identification,
16 we've marked the Highway Traffic Noise
17 Barrier Construction Trends as
18 Complainants' Exhibit H.

19 BY MR. KAISER:

20 Q. Now, with respect to Complainants'
21 Exhibit C3 -- Dr. Schomer's analysis of the
22 Thunder property line barrier -- he
23 calculates that to obtain a 10.1 decibel
24 reduction in the thousand hertz octave band,

1 the barrier would have to be 23 feet in
2 height. That doesn't surprise you -- a
3 barrier that tall -- does it?

4 A. No, not to protect a second story,
5 no.

6 Q. And you did read the Board's order
7 of February, 2001; did you not?

8 A. Awhile ago, yes.

9 Q. And you recognized in that order
10 that some of the noises about which the Rotis
11 complained, Mr. Rosenstock complained and
12 Ms. Weber complained were noises up in the
13 second story of their home, right?

14 A. Correct.

15 Q. And, in fact, the first wall that
16 you proposed -- the 13-foot-high wall running
17 along the north end of LTD's dock area --
18 when you designed that wall, you weren't
19 designing it to achieve substantial noise
20 reduction as measured at the second story of
21 the Roti residence, were you?

22 A. No.

23 Q. You were trying to build a wall or
24 design a wall that would reduce noise as

1 measured essentially at what? About four,
2 five feet above ground level in the Rotis'
3 backyard?

4 A. No. Six to eight feet receiver
5 height is what we call it, or first floor.

6 Q. All right. First floor. And while
7 a wall of that height might reduce, to some
8 degree, noise going to the second story of
9 the Roti home, it would have -- it
10 wouldn't -- well, that wasn't your design
11 criteria; you weren't trying or targeting
12 noise and seeking to reduce noise as
13 experienced on the second story of the Roti
14 home, correct?

15 MR. KOLAR: Objection; asked and
16 answered.

17 HEARING OFFICER HALLORAN: Mr. Kaiser?

18 MR. KAISER: I withdraw the
19 question.

20 BY MR. KAISER:

21 Q. Your initial design did not seek to
22 achieve noise reduction at the second story
23 of Paul Rosenstock's home, did it?

24 A. No, not the second story.

1 MR. KOLAR: Objection; asked and
2 answered.

3 HEARING OFFICER HALLORAN: All
4 right. If he can answer it, I'll allow
5 him.

6 BY THE WITNESS:

7 A. No, not the second story.

8 BY MR. KAISER:

9 Q. And with respect to the Weber home,
10 your initial design did not seek to reduce
11 noise migration from LTD's dock area to the
12 second story of the Weber residence, did it?

13 A. No.

14 Q. Did you at any time review
15 Dr. Schomer's analysis as set forth in his
16 April 22nd, 2002 report, where he calculated
17 the noise reduction achieved by an
18 approximately 25-foot-tall noise wall at the
19 Weber residence?

20 A. In his Table 1, he has three
21 columns for each home, and I had reviewed
22 that, yes.

23 Q. And that's Table 1 on page 6 of
24 Dr. Schomer's report?

1 A. Correct.

2 Q. And you noted above Table 1 that
3 Dr. Schomer states the attenuation values are
4 different at each residence because each is
5 in a different location with respect to LTD,
6 each is at a different elevation and each is
7 a different height.

8 Do you see that Dr. Schomer wrote
9 that?

10 A. I remember that, yes.

11 Q. And do you have any reason to think
12 that Dr. Schomer, in his calculations, did
13 not take into consideration the fact that the
14 Weber home is located to the northeast, and
15 the Roti home is located due north of LTD's
16 dock area?

17 A. Repeat the question.

18 MR. KAISER: Could you read it
19 back, please?

20 HEARING OFFICER HALLORAN: Mr. Kaiser,
21 in the future, you can ask me, and I'll
22 ask the court reporter.

23 MR. KAISER: Oh, I'm sorry.

24 HEARING OFFICER HALLORAN: Thank you.

1 (Whereupon, the record was
2 read as requested.)

3 BY THE WITNESS:

4 A. No.

5 BY MR. KAISER:

6 Q. Now, the wood wall that you're
7 proposing along the property line, what is
8 the length of that wall that you're
9 proposing?

10 A. I don't know the exact length of
11 it. I'm sure it will run five, 600 feet
12 along that end of the property. But I don't
13 know the exact length of it.

14 Q. And you understand that LTD does
15 not share a common property line with the
16 Webers?

17 A. Yes, I do.

18 Q. And where do you propose LTD
19 construct a noise wall in order to mitigate
20 and reduce the migration of noise from LTD's
21 dock area and LTD's ramp and Lakeside Drive,
22 as experienced at the Weber residence?

23 A. It would have to come down and run
24 north-south along the eastern side of LTD's

1 property line, essentially the area that
2 separates the two parking lots -- LTD's
3 versus their commercial neighbors.

4 Q. And have you on any diagram or
5 sketched out anywhere the approximate
6 location of that wall?

7 A. No.

8 Q. Do you know approximately how many
9 feet that wall would have to be on the east
10 end of LTD's property line to afford
11 protection to the Weber residence?

12 A. No.

13 Q. Now, you were talking with
14 Mr. Kolar and exploring that idea of a --
15 that the noise wall creates a noise shadow;
16 do you remember that?

17 A. Yes, I do.

18 Q. And in my mind, I understood that
19 to be -- it's similar to like a boulder in a
20 stream. The boulder causes the noise to go
21 around it, and there's kind of a quiet, just
22 downstream of the boulder. Can you picture
23 what I'm talking about?

24 A. Yeah, that's a reasonable analogy.

1 Q. And if you put the microphone --
2 for instance, if this aerial photograph was
3 the noise wall, and I sought to -- and Brad
4 Halloran was the noise source, and I sought
5 to measure the noise and put the microphone
6 right five inches behind the wall, I would be
7 within the shadow of that noise wall,
8 correct?

9 A. Well within it.

10 Q. Well within it?

11 And then as you move further away
12 from the wall, at some point, you move out of
13 the shadow of the wall, correct?

14 A. Yes.

15 Q. And I understood that what you
16 thought was one of the benefits of putting
17 the wall at the property line was that you
18 thought at least the Roti home might be
19 within the shadow of the wall; is that right?

20 A. Well, they're all within a shadow.
21 It's just a question of degree.

22 Q. Right. I mean, none of them --
23 unless the wall were built within a few feet
24 of the south face of the Roti home, they

1 wouldn't be deep in the shadow, right?

2 A. I think I see what you mean. But
3 all three homes are in a shadow area. It's
4 just those that would be closer to that
5 barrier receive more attenuation, more
6 benefit.

7 Q. And as you can see from the aerial
8 photograph, the Roti home is closer to the
9 property line than is Paul Rosenstock's
10 home?

11 A. Yes. They are closest to the
12 property line and closest to noise sources,
13 which means the noise levels would be higher
14 at that location.

15 Q. And, in part, what I believe
16 Dr. Schomer attempted to do in his
17 calculations is determine -- for instance, he
18 estimates that if a wall were built on the
19 property line, a wall to protect the Roti
20 home would have to be 23 feet high; you
21 understood that, right?

22 A. Yeah. I don't know what he means
23 by criteria for protection. I mean, if
24 you're looking -- if he's looking at the same

1 level of protection, he's looking at --
2 trying to achieve a ten-decibel reduction?

3 Q. That's right. Ten-decibel
4 reduction in the thousand hertz octave
5 band --

6 A. Correct.

7 Q. -- that the Roti home is measured
8 at the second story window.

9 A. All right, yes.

10 Q. So he's saying in part because of
11 the fact that the Roti home is closer to the
12 property line, the wall would only have to be
13 23 feet to protect the Roti home; you
14 understood that, right?

15 A. Yes.

16 Q. And in part to take into
17 consideration the fact that Paul
18 Rosenstock's home is further north --
19 further from the property line -- and higher
20 in relation to the noise source, the wall at
21 the property line would have to be 28 feet
22 high, correct?

23 A. Right.

24 Q. And with respect to the Webers,

1 who, again, are even further from the
2 property line, even higher in relation to the
3 noise source, the wall would have to be 33
4 feet?

5 A. If you wanted to achieve a
6 ten-decibel reduction at the second story,
7 yes.

8 Q. As measured in the thousand hertz
9 octave band?

10 A. Correct.

11 Q. Right. Now, one of the things
12 you -- one of the points you made or
13 suggestions that you posited during your
14 direct testimony was that because the Weber
15 home was further away, the noise might not be
16 as intense at the Weber home, right?

17 A. Correct.

18 Q. Now, part of the attenuation
19 comes -- well, attenuation, based on
20 distance, depends on the type of surface
21 between the noise source and the receiver,
22 correct?

23 A. Essentially, yes.

24 Q. For instance, grass has greater

1 potential for attenuating noise than does a
2 paved parking lot, correct?

3 A. Correct.

4 Q. I mean, a paved parking lot is a
5 reflective surface, right?

6 A. Yes.

7 Q. It offers very little attenuation
8 or -- through absorption?

9 A. Correct. Excess absorption
10 beyond --

11 Q. Distance --

12 A. 6 dB per doubling of distance.
13 6 dB per doubling of distance, I stated
14 before, was a minimum level of reduction.
15 When you have absorptive ground, then you can
16 add to that even further.

17 Q. And did you bring with you today
18 the calculations that you did to establish
19 the actual reduction as experienced at the
20 second story of the Weber residence because
21 of the distance and relative location of the
22 Weber residence to the LTD dock area?

23 A. Well, I don't need calculations.
24 I'm just stating that because of the extra

1 distance, there would be more wave
2 divergence, so the noise level is going to be
3 on the order of 6 dB lower than that
4 experienced at the closer homes.

5 Q. And you took into consideration in
6 your analysis the fact that the Weber home is
7 quite a bit higher than the source areas in
8 the LTD dock area?

9 A. No. But I didn't take into
10 consideration that they have more greenery
11 and absorptive areas between them and the
12 property line as well.

13 Q. And did you -- and Dr. Schomer
14 relied on International Organization for
15 Standardization, ISO document
16 No. 9613-2-1996, entitled,
17 "Acoustics-Attenuation of Sound During
18 Propagation Outdoors-Part 2 --"

19 HEARING OFFICER HALLORAN: Mr. Kaiser,
20 could you slow down a little, please, for
21 the court reporter?

22 MR. KAISER: On page 2 --

23 Did you get that?

24 THE COURT REPORTER: Yes, I did.

1 Thank you.

2 BY MR. KAISER:

3 Q. Do you see that on page 2,
4 Mr. Thunder?

5 A. Yes, I saw that.

6 Q. That's the type of standard you
7 would rely on, wouldn't you, in making the
8 types of calculations Dr. Schomer made?

9 A. That's the type of standard, yes.

10 Q. And that standard has a value to
11 determine the effective greenery and the
12 extent to which trees and grass attenuate
13 noise migration; does it not?

14 A. Yes. That standard specifies how
15 to rate the absorptivity of the ground near
16 the receiver. And the greater the distance
17 and the greater the absorptivity, the greater
18 the noise reduction beyond the 6 dB per
19 doubling of distance.

20 Q. Do you have any reason to think
21 that Dr. Schomer didn't take into
22 consideration the greenery on the south end
23 of the Weber residence in making his
24 calculations?

1 A. I couldn't tell you for sure if he
2 did it specifically to that standard, but I
3 would say he did. But I don't know for sure
4 if he did that or not.

5 Q. All right. You don't see any
6 place -- you didn't find any place in his
7 work where you think he omitted that?

8 A. No.

9 Q. Do you think it's reasonable that
10 the Rotis should not be able to comfortably
11 fall asleep in their bedrooms on the second
12 story of their home between -- for the second
13 half of July, August, September, October,
14 November and December of any given calendar
15 year? Do you think that's reasonable?

16 MR. KOLAR: Objection; goes beyond
17 the scope of this hearing on remedies.

18 HEARING OFFICER HALLORAN: Mr. Kaiser?

19 MR. KAISER: He stated that he
20 thought one of the reasons a noise wall
21 was unreasonable was that they only
22 operated seasonally and less than 24
23 hours a day. So I want to explore his
24 concepts of reasonableness.

1 HEARING OFFICER HALLORAN: Mr. Kolar?

2 MR. KOLAR: This sounds like going
3 into the nuisance issue as opposed to the
4 remedy issue.

5 HEARING OFFICER HALLORAN: Again, I
6 think the Board might want to have any
7 and all information before it, and I find
8 it somewhat relevant. So I'll give you a
9 little latitude, Mr. Kaiser.

10 Mr. Thunder, you may answer, if you
11 still remember the question.

12 BY THE WITNESS:

13 A. It's reasonable to want to fall
14 asleep, if that's the goal that the Board
15 would like to achieve in a second story.

16 BY MR. KAISER:

17 Q. And you never sought to obtain
18 measurements at Paul Rosenstock's home?

19 MR. KOLAR: Objection; asked and
20 answered exhaustively.

21 HEARING OFFICER HALLORAN: Mr. Kaiser?

22 MR. KAISER: I think --

23 MR. KOLAR: He asked about every
24 measurement you can imagine in terms of

1 height and distance relative to the three
2 homes.

3 MR. KAISER: I don't know if I
4 asked him whether he asked to measure.

5 HEARING OFFICER HALLORAN: I don't
6 remember the noise measurement question.

7 MR. KOLAR: I thought he meant
8 ruler measurement.

9 MR. KAISER: No.

10 HEARING OFFICER HALLORAN: Overruled.
11 You may answer.

12 BY THE WITNESS:

13 A. Paul Schomer and I never thought
14 we'd need to make additional measurements.
15 We just located at the one location in the
16 receiving area.

17 BY MR. KAISER:

18 Q. And you never sought permission
19 from Paul Rosenstock to take measurements at
20 the second story of his home?

21 A. No.

22 Q. You never sought permission from
23 Leslie Weber to take measurements in the
24 second story of her home?

1 A. No.

2 Q. Now, you described -- well, you'd
3 agree that the placement of the wall dictates
4 its effectiveness?

5 A. That's one of the relevant
6 parameters, yes.

7 Q. I mean, you told the Board that one
8 of the rules of thumb is the closer you can
9 put it to the noise source, the better,
10 correct?

11 A. Correct. Or the receiver.

12 Q. Or, alternatively, the closer to
13 the receiver, right?

14 A. Correct.

15 Q. And with that idea in mind, you
16 initially proposed construction of a noise
17 wall right along the upper edge of LTD's dock
18 facility, correct?

19 A. Early on, yes.

20 Q. And it wasn't until this phase of
21 the hearing that you ever suggested that the
22 wall be moved back to the property line,
23 right?

24 A. When the wall grew to its proposed

1 height and scope, as Paul Schomer had
2 indicated, and, in addition, the
3 ramifications of parking lot difficulties and
4 the zone of influence difficulties with
5 construction, I had proposed the alternative
6 of a receiver-oriented noise control.

7 Q. Now, one of the consequences of
8 putting a wall out at the property line is --
9 well, one of the benefits of putting the wall
10 close to the LTD facility is the entire LTD
11 facility operates a bit as a wind break; does
12 it not?

13 A. I'm not sure I follow you.

14 Q. Well, if you've got your noise
15 source in the dock area and the ramp area,
16 right?

17 A. Correct.

18 Q. That's where the noise sources are,
19 right?

20 A. Correct.

21 Q. And if you had, for instance, a
22 wind from the south or southwest, the LTD
23 building would block the wind and suppress
24 migration of noise -- air-borne and

1 wind-borne migration of noise to the north,
2 correct?

3 A. Well, you'd be on sketchy grounds
4 to calculate something like that. I think I
5 see what you're saying -- that the wind
6 coming off the roof might tend to bend the
7 sound downward, if that's what you're asking?

8 Q. Wouldn't there, in fact, be a whole
9 shadow? Isn't this in the shadow of the LTD
10 building -- the dock area? And wouldn't wind
11 travel around it and --

12 A. Well, now you're confusing a wind
13 shadow with acoustic shadow, and I don't know
14 much about the wind aspect of it.

15 Q. You don't know? You haven't
16 analyzed that aspect?

17 A. Not the wind, no.

18 Q. Have you analyzed the impact of
19 wind on a noise wall constructed at the
20 property line?

21 A. No, and that's not included in the
22 ISO standard that Paul Schomer uses, either.

23 Q. Do you have those standards with
24 you today?

1 A. No, I don't.

2 Q. Would you agree that if a wall were
3 to be built on the property line, the fact
4 that it's no longer shielded from the wind by
5 the LTD building would have to be taken into
6 consideration --

7 MR. KOLAR: Objection; foundation.

8 BY MR. KAISER:

9 Q. -- in designing a wall?

10 HEARING OFFICER HALLORAN: Mr. Kolar?

11 MR. KOLAR: Foundation.

12 I don't think there's any evidence
13 from the foundation that the building
14 would shield a wall from the wind.

15 HEARING OFFICER HALLORAN: Mr. Kaiser,
16 I don't recall any, either, but proceed
17 with your response to Mr. Kolar's
18 objection.

19 MR. KAISER: I think there was
20 some -- there was discussion, whether it
21 was Dr. Schomer or Mr. Mitchell -- I
22 think it was probably Dr. Schomer -- that
23 if you have a wall right out in the
24 middle of a field with no -- where the

1 wind blows freely, that the wall is less
2 effective and that it has to be designed
3 for and that -- I had recalled that there
4 was some testimony in the record about
5 the fact that if it's in the wind shadow
6 of the LTD building, it's more effective.
7 And as you move it further to the north,
8 the wall becomes -- has to be higher to
9 be equally effective. I guess that's the
10 point I'm trying to make.

11 HEARING OFFICER HALLORAN: If he
12 can answer -- if he's able to answer, he
13 may answer.

14 Objection overruled.

15 BY THE WITNESS:

16 A. Steve, I think qualitatively, I
17 might agree with you that there would be that
18 aspect. But quantitatively, I know of no
19 standard that allows you to actually analyze
20 that effect. And, secondly, that would only
21 pertain to winds coming directly from the
22 south. If there were winds that were coming
23 from virtually any other direction, that
24 wouldn't even be a consideration.

1 BY MR. KAISER:

2 Q. Right. South or southwest;
3 wouldn't you agree?

4 A. If it came from the south, that's
5 the foreseeable thing qualitatively. But as
6 I said, quantitatively, I don't know of any
7 analysis scheme that would take that into
8 consideration, particularly not at those
9 short distances that are involved. And,
10 certainly, there would be no reason to take
11 that into consideration for wind directions
12 from anything other than south.

13 Q. All right. For instance, winds
14 from the north actually suppress noise
15 migration from the dock area to the Roti,
16 Weber and Rosenstock homes, correct?

17 A. To a small degree, yes.

18 Q. Now, I wasn't clear. At one point,
19 it seemed that you had suggested that a
20 property line wall would not have to be a
21 continuous wall, and that it might be -- that
22 there might be openings along the property
23 line. What is your current position? Would
24 a property line noise wall be continuous or

1 intermittent?

2 A. Well, I would believe that it would
3 have to be continuous, but it wouldn't
4 necessarily be at the heights that you're
5 talking about, based on the fact that people
6 on the ground could virtually be anywhere on
7 the ground, but people at the second story
8 are only going to be in their bedrooms. With
9 that in mind, the very highest portions of
10 that barrier could be focused to protect just
11 those second story windows. So it would be a
12 multiheight barrier, but it would be
13 continuous.

14 Q. All right. So no -- you've dropped
15 that idea that there might be openings in the
16 property line wall, and it would be
17 continuous, though not necessarily of a
18 uniform height. Is that what I understand
19 you to say?

20 A. Correct.

21 Q. And have you done any calculations
22 to determine at what points it would have to
23 be the height Dr. Schomer calculated and at
24 what point you think the wall could be lower

1 than the height Dr. Schomer calculated?

2 A. No, that would be subject to more
3 detail design in looking at specifically the
4 radiation to those windows.

5 Q. All right. You haven't done that
6 work, yet?

7 A. No.

8 Q. Now, I understood that you were
9 criticizing Dr. Schomer's analysis because
10 you said he selected noise points at a
11 four-foot height and a 12-foot height. Did I
12 understand your criticism correctly?

13 A. He had used a 12-foot height and
14 indicated in the report that that was the
15 limiting factor.

16 Q. Can you point out in his report
17 where he makes that statement?

18 (Witness perusing document.)

19 BY MR. KAISER:

20 Q. I'm going to help you out. I think
21 it's on page 4.

22 MR. KOLAR: Page 2 as well.

23 BY THE WITNESS:

24 A. Well, page 2 is where he itemizes

1 the different heights, the different sources.
2 I'm looking specifically where he had
3 indicated the 12-foot height was the limiting
4 factor here or the -- I should say the
5 overall riding or dominant factor.

6 BY MR. KAISER:

7 Q. And then on page 4, where he's got
8 the schematic sound sources on trucks are
9 four feet and 12 feet per an exhaust above
10 ground level.

11 A. Correct.

12 Q. The controlling source is sound
13 from the exhaust reflecting off the LTD wall
14 to the second floor of the house?

15 A. Yes. The critical path of sound,
16 as he indicates in Figure 2, is from the
17 12-foot-high source. He indicates that as
18 the critical path, so that's the design
19 point, in other words, that he indicates and,
20 for his calculations, not a four-foot source.
21 It certainly would protect any noise sources
22 below 12 feet.

23 Q. Now, in reviewing for today's
24 hearing, do you recall Dr. Schomer's

1 testimony where he likened a semitrailer to
2 the body of a violin?

3 A. I think I remember that, yes.

4 Q. And do you recall Dr. Schomer
5 expanding on that metaphor and saying that
6 the coupling -- when the tractor couples with
7 the trailer and there's that impact when the
8 pin drops into the fifth wheel? You've heard
9 that sound at the LTD dock area; have you
10 not?

11 A. Yes.

12 Q. And that occurs at the four-foot
13 level, approximately; does it not?

14 A. Correct.

15 Q. That dropping of the weight of the
16 trailer onto the fifth pin, that's at about a
17 four-foot height above grade; is it not?

18 A. That's correct.

19 Q. But as I understood it -- and
20 there's a mechanical vibration that is
21 initiated when the pin and the fifth wheel
22 engage, correct?

23 A. Correct.

24 Q. And that mechanical vibration does

1 not remain fixed at the four-foot height,
2 does it?

3 A. No. It can spread upward,
4 depending on the impact.

5 Q. And, in fact, if it's an empty
6 trailer, the entire trailer itself can
7 resonate as a result of that impact, correct?

8 A. That's a possibility. I don't have
9 any direct measurements on that.

10 Q. Well, you doubt that happens?

11 MR. KOLAR: Objection; asked and
12 answered.

13 HEARING OFFICER HALLORAN: Sustained.

14 BY MR. KAISER:

15 Q. It's only a possibility?

16 A. Well, what I'm saying, it's a
17 possibility that if it's empty, depending on
18 the construction of the truck, that that
19 could happen. But I don't have any
20 measurements to know to what extent that
21 happens.

22 Q. Did you observe that when you were
23 out there at LTD's dock area?

24 A. How would I observe it? I mean, I

1 observed the fifth wheel coming to action,
2 and I definitely heard that. And there are
3 some -- some resonance for sure.

4 Q. Well, under what circumstances
5 would there be no resonance when the pin
6 engages with the fifth wheel?

7 A. Under what circumstances?

8 Q. Yeah.

9 A. Depending on the loading that's in
10 the trailer itself, depending on the material
11 that disrupts the resonance.

12 Q. There would be no or less resonance
13 if it was a full trailer?

14 A. Well, probably less, because you
15 disrupt the resonance action of that trailer.

16 Q. I mean, isn't it just an aspect of
17 physics that when you have two large, heavy
18 objects like that colliding, that there's a
19 resonance, and the only question is how
20 quickly it gets absorbed?

21 A. Yes, and a very narrow band of
22 frequency as a resonance can occur. So what
23 you've got is you've got the fifth wheel
24 impact, which is a high frequency phenomenon.

1 And that part of whatever low frequencies is
2 consistent in that action, the resonance of
3 the truck can take over. And it would be a
4 low frequency sound. That's probably why you
5 hear kind of a thud type of sound.

6 Q. And you hear that sound, and then
7 you hear it echo and reverberate. Hasn't
8 that been your experience when you've been
9 out there at the LTD dock area? You see the
10 action, the engagement of the tractor and the
11 trailer, and then you hear the sound for some
12 time afterwards? Didn't you observe that?

13 A. Yes.

14 Q. And that sound that one observes,
15 after a coupling of a tractor and a trailer,
16 is not isolated at the four-foot height, is
17 it?

18 A. Not strictly at the four-foot
19 height, by it's not strictly at the 12-foot
20 height, either.

21 Q. No. It's dispersed between --

22 A. Right.

23 Q. -- the four-foot and the 12-foot;
24 is it not?

1 A. And so acoustical consultants would
2 take a look at what's called the acoustic
3 center, and, generally, that would be some
4 point between four feet and 12 feet, but not
5 12 feet.

6 Q. Well, what's the height of a
7 semitractor?

8 A. Well, I'm saying it's 12 feet, but
9 you've got sound that's radiated at the
10 four-foot level too.

11 Q. Well, that's my point. Do you know
12 it's 12 feet?

13 A. On that order.

14 Q. Could be higher, right?

15 A. A little bit, perhaps.

16 Q. Fourteen, 16 feet is not unusual
17 for the height of a semitrailer, is it?

18 A. Right.

19 Q. Can you identify for the Board any
20 noise walls that you're aware of that have
21 been built of wood in northern Illinois?

22 A. Not specifically. I see them
23 commonly driving around the area. For
24 example, the tollways commonly have wood --

1 at least some of the earlier ones.

2 Q. But the later ones tend to be built
3 of acoustically designed materials, not just
4 dense wood, right?

5 A. No, I wouldn't say that. I think
6 because of some maintenance issues, then we
7 began to see some more concrete or masonry
8 type of walls appear, prefab --

9 Q. A concrete or masonry wall might be
10 appropriate at the property line rather than
11 a wooden wall?

12 A. Possibly, yeah.

13 Q. But you can't, as you sit here this
14 morning, direct the Board's attention to a
15 wooden wall that you proposed to be built to
16 mitigate the migration of noise?

17 A. I can't think of anything offhand,
18 no.

19 Q. You're familiar with the reputation
20 of the Industrial Acoustics Company -- the
21 manufacturer of the noise panels that Steve
22 Mitchell proposed?

23 A. Yes.

24 Q. And you recognize that they have a

1 good reputation in their field; do they not?

2 A. Correct.

3 MR. KAISER: Let me just have a
4 minute, Mr. Halloran.

5 (Brief pause.)

6 BY MR. KAISER:

7 Q. You would agree, wouldn't you, that
8 if LTD hired a human spotter to work during
9 the nighttime hours to direct traffic in the
10 dock area, that that human spotter would have
11 little ability to reduce the impact noise
12 generated when a trailer and tractor engage,
13 correct?

14 A. I'm not sure that I can answer that
15 question, not being a trucker. I can't
16 answer that for sure. I just know that
17 impulsive sound tends to be the carelessness
18 of a lot of people in an area, and you can
19 reduce that by taking more care in putting
20 those together. Something falls in height,
21 for example, the greater sound it produces.
22 So my suggestion was that if they reduced the
23 height that anything has to fall, it would
24 reduce the impact sound.

1 Q. But then wasn't there the other
2 concern that if it doesn't fall from a great
3 enough height that it might not fully engage,
4 and you may drop the trailer off the back end
5 of the tractor? Isn't that a real concern?

6 A. I've heard of that as a concern,
7 yes.

8 MR. KAISER: Thank you.

9 Mr. Halloran, I have no further
10 questions.

11 HEARING OFFICER HALLORAN: Thank
12 you, Mr. Kaiser.

13 Mr. Kolar, redirect, please.

14 MR. KOLAR: Thank you. Just a few.

15 REDIRECT EXAMINATION

16 BY MR. KOLAR:

17 Q. Mr. Thunder, when you were
18 originally working with LTD and looking at
19 noise walls along the retaining wall, were
20 you doing so under the possibility that LTD
21 might have to meet the Class B to Class A
22 regulations?

23 A. Generally, yes.

24 Q. And you read in the decision that

1 the Board found LTD to be a Class C use?

2 A. Yes.

3 Q. As part of the opinion disclosure
4 relative to this remedy hearing, you had read
5 the Pollution Control Board's February 15th,
6 2001 decision, correct?

7 A. Yes.

8 Q. And then you read Dr. Schomer's
9 report, correct?

10 A. Correct.

11 Q. Let me show you the February 15th,
12 2001 decision.

13 (Document tendered.)

14 BY MR. KOLAR:

15 Q. You read the sentence that states,
16 complainants did not strongly object to the
17 noise of trucks on Lakeside Drive. They
18 primarily objected to the noise of the trucks
19 at the LTD docks and in the LTD staging area.

20 A. Correct.

21 MR. KAISER: Page, please?

22 MR. KOLAR: Twenty-two.

23 BY MR. KOLAR:

24 Q. Was that at least one source of

1 your information regarding the noise that
2 bothered complainants as you analyzed what
3 would be an appropriate remedy?

4 A. It was consistent with, again, the
5 characterization of that dock and my
6 observations, however limited you might feel
7 they are.

8 Q. I mean, that was a factor that
9 played a part in your analysis of this remedy
10 situation: What's the noise that the
11 complainants are most complaining about?
12 Correct?

13 A. That's correct.

14 Q. When Mr. Kaiser asked you all of
15 the questions about truck activity on
16 Lakeside Drive here this morning, you
17 understood that to be activity that did not
18 significantly impact the complainants?

19 MR. KAISER: Objection; leading.

20 HEARING OFFICER HALLORAN: Could
21 you read back the question, please?

22 MR. KOLAR: I'll restate it. I'll
23 withdraw the question.

24

1 BY MR. KOLAR:

2 Q. When you read Dr. Schomer's report,
3 did you also read in there his information
4 regarding the elevation of the truck dock
5 area and the elevation of the parking lot?

6 A. Yes, that was contained in there.

7 Q. Then, finally, the 6 dB reduction
8 based on the distance of the Weber home from
9 the LTD area, if I understand, that is a
10 minimum regardless of the absorptive nature
11 of the ground?

12 A. Yes.

13 Q. So if you have more absorptive
14 ground between the source and the receiver,
15 you may get more than 6 dB?

16 A. Correct.

17 Q. Although we have some parking lot
18 initially, there is grass and trees as you
19 get closer to the Weber home?

20 A. Yes. That would be over and above
21 the 6 dB per doubling of distance.

22 Q. Grass and trees on the ground are
23 more absorptive than asphalt?

24 A. Correct.

1 Q. I think Mr. Kaiser had a good
2 analogy, if I understand correctly. Now, the
3 acoustic shadow is like the quiet area in the
4 stream behind the boulder?

5 A. Correct.

6 Q. Where the fish like to be?

7 A. That's a good analogy. And if you
8 made the boulder bigger in size all
9 directions, it makes for an even larger
10 quiescent area behind that boulder.

11 Q. So it's quieter in the acoustic
12 shadow than beyond the acoustic shadow?

13 A. Yes. There gets a point when
14 you're so far away from that boulder that you
15 don't even know that you're behind it, if
16 you're using that analogy.

17 MR. KOLAR: I don't have any other
18 questions.

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

21 Recross, Mr. Kaiser, please.

22 MR. KAISER: Thank you,
23 Mr. Halloran.

24

1 RE-CROSS-EXAMINATION

2 BY MR. KAISER:

3 Q. With respect to noise at the second
4 story of the Weber residence, you don't know
5 how many decibels the Webers are receiving at
6 the second story of their home as measured in
7 the 31 hertz octave band, do you?

8 A. No.

9 Q. And you don't know how much noise
10 the Webers receive in the second story of
11 their home as measured at the 63 hertz octave
12 band, do you?

13 A. No measurements were made at the
14 Weber house at all.

15 Q. And you don't know how much noise
16 they receive at the thousand hertz octave
17 band?

18 A. No.

19 Q. You've reviewed portions of the
20 record where it's clear that the noise from
21 LTD's dock activities substantially interfere
22 with Leslie Weber's use and enjoyment of her
23 home? You've read those portions, haven't
24 you?

1 A. Yes.

2 Q. Between -- do you recall when you
3 were given a copy of the Board's February
4 15th, 2001 opinion?

5 A. I don't recall when I actually
6 received it, no.

7 Q. Do you recall when you were given a
8 copy of Dr. Schomer's April 26th, 2002
9 report?

10 A. I don't recall the date, no.

11 Q. Can you tell the Board what work,
12 if any, you did on LTD's behalf between the
13 time you received a copy of the Board's
14 February 15th, 2001 order, and Dr. Schomer's
15 report of April 26th, 2002?

16 MR. KOLAR: Objection; beyond the
17 scope of redirect.

18 HEARING OFFICER HALLORAN: Mr. Kaiser?

19 MR. KAISER: Well, he asked him
20 about the opinion, and he asked him about
21 what he did in terms of reviewing it.

22 HEARING OFFICER HALLORAN: Even
23 though it's arguable, but you did ask him
24 about the opinions, and I'll allow him to

1 answer if he's able.

2 Objection overruled.

3 BY THE WITNESS:

4 A. The work was primarily to look at
5 an alternative location in the source,
6 because, again, as I said, our location
7 intention all along was near the loading
8 dock. But when it became apparent that there
9 would be some construction difficulties,
10 which I found out later with the going into
11 the parking lot and violating that zone of
12 influence, that's when I had suggested the
13 alternative of a receiver-oriented type of
14 barrier to get around those difficulties.

15 BY MR. KAISER:

16 Q. All right. And you got that
17 information about the difficulties of
18 building a wall where you'd first suggested
19 it? You got that information in the summer
20 of 2002; did you not? Late spring, early
21 summer of 2002?

22 A. Yes, I think that's about right.

23 Q. All right. So my question to you
24 is what did you do from -- on LTD's behalf

1 between, roughly, February 15th, 2001, and
2 the receipt of Dr. Schomer's report in the
3 late spring of 2002? What did you do for LTD
4 during those almost 14 months?

5 A. Not a great deal; just to confirm
6 that that was the difficulty. And, then, to,
7 therefore, consider using conventional
8 materials for a receiver line property line
9 noise barrier.

10 Q. And that conventional materials --
11 your so-called conventional materials -- that
12 was an inquiry you began in the spring and
13 summer of 2002?

14 A. That sounds about right.

15 Q. And until you began that inquiry,
16 you did very little for LTD between the
17 conclusion of the first phase of the hearing
18 and the receipt of Dr. Schomer's report; is
19 that fair?

20 A. Yeah. There would be nothing else
21 to do, other than to say this is a barrier
22 that could be built at the receiver line;
23 this is a barrier that does not need to have
24 the absorptive properties that we originally

1 envisioned, therefore, the square footage
2 cost would be substantially lower if you
3 could use conventional materials.

4 MR. KAISER: Move to strike.

5 HEARING OFFICER HALLORAN: I'm
6 sorry, Mr. Kaiser?

7 MR. KAISER: I said move to strike
8 that answer as nonresponsive.

9 HEARING OFFICER HALLORAN: I'll
10 allow it to stand.

11 Objection overruled.

12 BY MR. KAISER:

13 Q. All right. So you began that work
14 in the summer of 2002?

15 A. About that.

16 Q. All right. So once LTD got the
17 order telling them that they were a nuisance
18 and that they substantially and significantly
19 interfered with the Roti, Weber and
20 Rosenstock's use and enjoyment of their
21 property, you did nothing for them, right?

22 A. The next step would have gone to
23 IAC and Steve Mitchell.

24 Q. Did you take that next step?

1 A. That would have been LTD's
2 responsibility, because that would have been
3 a more detailed engineering design to confirm
4 the projections.

5 Q. I'm just asking you what you did.

6 A. No, I did nothing.

7 Q. Did you do that?

8 A. No.

9 Q. You did nothing, right?

10 A. Correct.

11 Q. Now, you have now, just in your
12 last -- second to last answer, told the Board
13 that one of the conclusions you reached is
14 that we don't need sound absorptive material
15 on a property line noise wall. That's your
16 opinion, isn't it?

17 A. At that distance, correct.

18 Q. At that distance, meaning the
19 distance from the noise source to the
20 property line?

21 A. That's correct.

22 Q. All right.

23 MR. KOLAR: Objection.

24 This is beyond the scope of my

1 redirect.

2 HEARING OFFICER HALLORAN: Mr. Kaiser?

3 MR. KOLAR: And I don't think his
4 answer relating to absorptive material
5 had anything to do with his opinion. I
6 think he was just asking what did you do
7 during this time period, and he gave a
8 general answer of the things he did. Now
9 he's thinking back and opening it up.

10 HEARING OFFICER HALLORAN: Mr. Kaiser?

11 MR. KAISER: He hadn't touched on
12 that absorptive material issue, and I had
13 intended to let it lie and just argue
14 that Dr. Schomer believes it's important.

15 When he tried to come up with some
16 things he had done at some point in time,
17 he said, oh, and I concluded that
18 absorptive material wasn't necessary.

19 HEARING OFFICER HALLORAN: I agree.
20 Mr. Thunder did rather open a door, so
21 I'll give Mr. Kaiser a little leeway in
22 his cross-examination.

23 BY MR. KAISER:

24 Q. All right. Now, that's your

1 opinion, now, isn't it, Mr. Thunder --

2 A. I don't know.

3 Q. -- that if they build it at the
4 property line, you don't need absorptive
5 material on the south face of the wall?

6 A. That's correct.

7 Q. And, again, what calculations did
8 you bring with you today to demonstrate the
9 difference between a property line wall with
10 sound absorptive materials and a property
11 line wall without sound absorptive materials
12 on the south face?

13 A. Again, it's general engineering
14 practice.

15 Q. Excuse me.

16 MR. KOLAR: Objection --

17 BY MR. KAISER:

18 Q. What materials --

19 HEARING OFFICER HALLORAN: Excuse
20 me, Mr. Kaiser.

21 Mr. Kolar?

22 MR. KOLAR: I object; his answer
23 was responsive. It was asked and
24 answered as well.

1 MR. KAISER: The question was what
2 materials did he bring, and I didn't get
3 an answer to that.

4 HEARING OFFICER HALLORAN: Okay.

5 MR. KAISER: It's a yes or no, you
6 know, a descriptive of the materials, not
7 a justification for why I didn't bring
8 any materials. If he wants that --

9 HEARING OFFICER HALLORAN: You
10 know, I have to agree with Mr. Kaiser.
11 Mr. Thunder is somewhat going afield. If
12 he can just answer Mr. Kaiser's question,
13 that would be appropriate.

14 MR. KOLAR: May I have the question
15 restated?

16 HEARING OFFICER HALLORAN: Can we
17 get the question restated, I guess?

18 MR. KAISER: Sure.

19 Do you think you have it?

20 Does she --

21 MR. KOLAR: Just restate it.

22 MR. KAISER: Should I restate it?
23 I could restate it.

24 HEARING OFFICER HALLORAN: Mary

1 Ellen, could you read it back, please?

2 (Whereupon, the record was
3 read as requested.)

4 HEARING OFFICER HALLORAN: Mr. Thunder,
5 can you answer that?

6 BY THE WITNESS:

7 A. They're not calculations. They're
8 general engineering principles.

9 BY MR. KAISER:

10 Q. So is your answer, Mr. Thunder,
11 that you didn't bring any calculations to
12 show the difference between a property line
13 noise wall with sound absorptive materials
14 and a property line noise wall without sound
15 absorptive materials?

16 A. No, there are no calculations to
17 that.

18 Q. There are none in the world that
19 could be generated, or you didn't generate
20 any?

21 A. I didn't generate it, because it's
22 general engineering principle. I take a look
23 at how close the barrier is.

24 Q. Are you a licensed engineer in the

1 state of Illinois?

2 A. Do you know what a barrier
3 calculation involves?

4 HEARING OFFICER HALLORAN: Excuse
5 me, Mr. Thunder.

6 Mr. Kolar?

7 MR. KOLAR: Beyond the scope.

8 HEARING OFFICER HALLORAN: I think
9 it was asked and answered as well.

10 Sustained.

11 BY MR. KAISER:

12 Q. All right. So you, the
13 nonengineer, are telling the Board what
14 standard engineering practice is; is that
15 correct?

16 A. I am a board certified member of
17 the Institute of Noise Control Engineering,
18 which is the same standard that Paul Schomer
19 goes. And in the ISO standards, there's no
20 calculations that account for a reflective
21 barrier. The general engineering principle
22 is to diminish the sound that may be
23 reflected within close base as to put
24 absorption up. But when the barrier itself

1 is quite a distance from the reflecting
2 source, i.e., two or three times the height
3 of the barrier, absorptivity on that side is
4 negligible.

5 Q. All right. What book or standard
6 do you rely on for that?

7 A. I think last time I read it was
8 even in the U.S. Department of Highway
9 Problems and Responses issue, if I remember
10 right.

11 Q. Did you bring a copy of that today?

12 A. It may be in one of these that I've
13 seen. I don't remember exactly where it's
14 at. As I say, general engineering principle.

15 Q. All right. But you did no
16 calculations -- site-specific calculations --
17 to demonstrate that point?

18 A. No, not for a reflective aspect of
19 it. All barrier --

20 Q. How about for absorptive aspects?

21 A. Well, all barrier calculations, as
22 I said, don't consider the reflectivity
23 (sic.) aspect of it. There's research that
24 shows that some reflection can help enhance a

1 barrier performance to a certain degree, but
2 there are no calculations --

3 Q. Did you bring copies of that with
4 you --

5 A. No.

6 Q. -- those reports?

7 A. No.

8 Q. Who wrote -- who authored those
9 reports?

10 A. I believe it was in some papers
11 that I read in the Journal of the Institute
12 of Noise Control Engineering.

13 Q. What issue?

14 A. I don't remember what issue.

15 MR. KOLAR: Objection --

16 BY MR. KAISER:

17 Q. When did you read --

18 HEARING OFFICER HALLORAN: Excuse me.

19 Mr. Kolar?

20 MR. KOLAR: That's well beyond the
21 scope of my redirect now.

22 HEARING OFFICER HALLORAN: Mr. Kaiser?

23 MR. KAISER: He opened the door.

24 HEARING OFFICER HALLORAN: Yes, I

1 believe he did, Mr. Kolar.

2 Mr. Thunder --

3 MR. KOLAR: But he definitely
4 opened the door. Now, he's --

5 MR. KAISER: He's opening it and
6 opening it wider and running through it
7 and...

8 MR. KOLAR: He said it's general
9 engineering principle, and he gave his
10 explanation. He's seen things, and now
11 Steve wants to know everything in the
12 world -- what's the volume and what's the
13 page.

14 HEARING OFFICER HALLORAN: I agree
15 with Mr. Kolar -- excuse me.

16 I will sustain your objection.

17 Mr. Kaiser -- excuse me -- I will
18 overrule your objection, Mr. Kolar, if --

19 Are you going to be able to wrap
20 this up?

21 MR. KAISER: Yeah.

22 HEARING OFFICER HALLORAN: You do
23 seem to be going farther and farther and
24 there's a black hole.

1 So anyway, you may proceed,
2 Mr. Kaiser.

3 MR. KAISER: Thank you. I
4 appreciate it.

5 BY MR. KAISER:

6 Q. Did you bring your notes in which
7 you analyzed the cost comparison between a
8 wall -- property line noise wall -- with
9 reflect -- with absorptive materials and
10 without absorptive materials?

11 A. As I said, we looked at that
12 earlier --

13 Q. Excuse me --

14 HEARING OFFICER HALLORAN: Mr. Thunder,
15 will you just answer the question,
16 please?

17 BY THE WITNESS:

18 A. I don't have notes on that. That
19 is in the document that you showed me -- U.S.
20 Department of Transportation.

21 BY MR. KAISER:

22 Q. Did you make any notes of your own?
23 Did you perform any analysis of the
24 comparative costs of a wall with absorptive

1 face and without?

2 A. The cost may very well be about the
3 same --

4 MR. KOLAR: Objection.

5 BY MR. KAISER:

6 Q. Yes or no? Yes or no, Mr. Thunder?

7 A. No.

8 HEARING OFFICER HALLORAN: Excuse
9 me.

10 Mr. Kolar, I have to try to coax
11 the witness. They're clearly yes or no
12 answers. And you can go ahead on any
13 further direct to try to rehabilitate or
14 whatever.

15 MR. KOLAR: The reason I objected
16 is because he started with do you have
17 any notes, and then Steve added to the
18 end of his question did you make any
19 analysis. So my objection is it's also
20 compound. And he answered he has no
21 notes, but he did make an analysis.

22 HEARING OFFICER HALLORAN: Mr. Kaiser,
23 you want to restate your question, if you
24 recall it, and Mr. Thunder give his

1 answer to your question?

2 BY MR. KAISER:

3 Q. All right. Did you bring any notes
4 today in which -- showing your analysis of
5 the comparative costs of a property line
6 noise wall with absorptive material and
7 without?

8 A. No.

9 Q. Did you analyze the cost of a wood
10 wall without an absorptive south face?

11 A. No.

12 Q. Did you analyze the cost of a glass
13 wall without an absorptive south face?

14 A. No.

15 Q. Did you analyze the cost of a
16 concrete wall without an absorptive south
17 face?

18 A. No.

19 MR. KAISER: Thank you.

20 I have no further questions.

21 HEARING OFFICER HALLORAN: Thank
22 you, Mr. Kaiser.

23 Further direct, Mr. Kolar?

24

1 FURTHER REDIRECT EXAMINATION

2 BY MR. KOLAR:

3 Q. Could the nonconventional walls
4 that you described -- wood, et cetera --
5 generally include absorptive material?

6 A. Not at all.

7 Q. The cost figures you gave for the
8 nonconventional materials were without
9 absorptive materials?

10 A. That's correct.

11 MR. KOLAR: I have no further
12 questions.

13 HEARING OFFICER HALLORAN: Mr. Kaiser?

14 FURTHER RECROSS-EXAMINATION

15 BY MR. KAISER:

16 Q. And, again, the sole document that
17 you relied on for your cost figures is that
18 Complainants' Exhibit H -- that document
19 published by the U.S. Department of
20 Transportation?

21 A. That's the most recent one, yes.

22 Q. And you didn't make any calls to
23 any vendors to get comparison prices between
24 a wall with absorptive properties and one

1 without, correct?

2 A. No.

3 Q. And you didn't send out any written
4 requests for information from vendors to get
5 information about the costs of an absorptive
6 wall and a wall without absorptive panels,
7 correct?

8 A. No.

9 MR. KAISER: Nothing further.

10 MR. KOLAR: Nothing further.

11 HEARING OFFICER HALLORAN: Mr. Rao,
12 any questions of this witness?

13 Off the record.

14 (Discussion held off the record.)

15 HEARING OFFICER HALLORAN: Back on
16 the record.

17 The respondent wishes to submit
18 Respondent's Exhibit J into evidence.

19 Mr. Kaiser, any objection?

20 MR. KAISER: No.

21 HEARING OFFICER HALLORAN: Respondent's
22 Exhibit J is admitted into evidence.

23 (Whereupon, Exhibit J was
24 admitted into evidence.)

1 HEARING OFFICER HALLORAN: We were
2 also talking about posthearing and briefing
3 schedule. We surmise that the record -- the
4 transcript -- will be ready by December 20th
5 on the website. With that as a given, the
6 complainants' posthearing opening brief is
7 due January 31st. Respondent's opening brief
8 is due March 7th. And complainants' reply,
9 if any, is due March 21st. And, again, based
10 on my legal experience and judgment and
11 observations, I find that there are no
12 credibility issues with the witness,
13 Mr. Thunder, who testified here today.

14 The parties indicated that they
15 wish to present a brief closing argument,
16 approximately five minutes each. But please
17 feel free to run longer if you feel so
18 inclined.

19 With that said, Mr. Kaiser?

20 MR. KAISER: Thank you,
21 Mr. Halloran.

22
23
24

1 CLOSING ARGUMENT ON BEHALF OF THE COMPLAINANTS

2 BY MR. KAISER:

3 MR. KAISER: Members of the Board,
4 I think what shocks me, and, more
5 importantly, shocks my clients, is that
6 between February 15th of 2001, when the
7 Illinois Pollution Control Board found in no
8 uncertain terms that LTD's dock operations
9 constituted a nuisance, and substantially and
10 repeatedly interfered with the Roti, Weber
11 and Rosenstock's use and enjoyment of their
12 property, that for the next 14, 15 months,
13 LTD did essentially nothing to respond to my
14 clients' concerns and the Board's opinion and
15 order. They made no effort on their own to
16 refine or come up with a solution to this
17 noise situation. They waited until the
18 Rotis, Webers and Rosenstocks, at
19 considerable expense to themselves, hired
20 Paul Schomer to analyze the information
21 within the record, to analyze the manner in
22 which noise is generated at the LTD dock
23 facility and the manner in which that noise
24 then migrates beyond the LTD property lines

1 onto and into the homes of the Rotis, Webers
2 and Rosenstrocks.

3 And it was only after Dr. Schomer
4 then came up with a thoughtful and thorough
5 analysis of the situation and proposed
6 construction of a 25-foot-tall noise wall and
7 proposed its location where Tom Thunder
8 several years before had suggested that the
9 wall could and should be built, that it was
10 only after that 15 months had gone by and the
11 expenses had been incurred and the Rotis,
12 Webers and Rosenstrocks had endured another
13 season of first- and second-shift noise,
14 almost round-the-clock noise from LTD, that
15 LTD then looked seriously at whether such a
16 wall could be built. And then concludes
17 that, well, no, you know, after Dr. Schomer
18 has done all this work and after we've done
19 nothing, let us just tell you that it can't
20 be built where you'd like, where it would be
21 most effective. And while we haven't done
22 any analysis to figure out what type of wall
23 might also be effective or how tall or how
24 long a noise wall on the property line should

1 be, we think no wall is necessary. But if a
2 wall must be built, then it should be built
3 on the property line.

4 And it was again the complainant --
5 the Roti, Weber and Rosenstock's expert,
6 Paul Schomer, who spent the time and the
7 complainants' money to figure out, well, if
8 you put a barrier on the property line, how
9 tall would it have to be. And, of course,
10 Tom Thunder came in here and casually said in
11 his first disclosure -- in his Exhibit J
12 disclosures -- that maybe no need for the
13 barrier that extends continuously for the
14 length of the property. And maybe you could
15 get away with a slightly lower wall because
16 it would be built on the elevated property
17 line. And maybe you can build a slightly
18 cheaper wall without absorptive material.
19 And I think a wood wall or maybe a glass or
20 brick wall would work. And LTD did nothing.
21 Their expert did nothing to back up any of
22 those opinions or suggestions, did no
23 analysis, talked to no vendors, got no
24 information, didn't take any soil samples in

1 the vicinity of the property line, did
2 nothing to materially move forward the search
3 for a solution.

4 Essentially, they sat back and shot
5 at Dr. Schomer's approach. They were willing
6 to spend money to shoot down Dr. Schomer's
7 suggestions. They spent no money on their
8 own trying to propose an effective solution.
9 And I think that lack of effort, that total
10 disregard for the feelings and experience of
11 the Rotis, Webers and Rosenstocks and the
12 total disregard for the Board's order of
13 February 15th, 2001, warrants the imposition
14 of substantial civil penalties.

15 One of the issues that we've
16 discussed in the course of this hearing is
17 LTD's ability to pay. We know that they
18 purchased an expensive piece of property up
19 there in Bannockburn. We know that they
20 spent millions of dollars to expand their
21 operations at Bannockburn. We know that
22 whenever it's in LTD's interest to spend
23 money, they will, but they won't spend money
24 on a solution to this problem.

1 I think the Board needs to send a
2 message to large affluent companies like LTD
3 that they have a responsibility to their
4 neighbors, and that that responsibility is to
5 promptly move to solve problems like the ones
6 the Rotis, Webers and Rosenstrocks have
7 brought to the Board. And I think the only
8 way to bring that message home is to impose a
9 substantial civil penalty on LTD for their
10 delay and their total lack of effort in
11 fashioning a solution.

12 Now, let me talk a little bit about
13 the solution that we think is most
14 appropriate and that Dr. Schomer developed
15 and defended during his testimony. LTD needs
16 to build a noise wall. The noise wall needs
17 to be at least 25 feet high, and the noise
18 wall should be built as close as possible to
19 the dock activities. There's no question
20 that, from a design point of view, it's
21 better to build the wall either closer to the
22 receiver or closer to the source -- the noise
23 source -- or closer to the receiver. And the
24 original design had been to build it as close

1 to the noise source as possible. It doesn't
2 follow that because it can no longer be built
3 for the cost -- and it could be built. And
4 LTD could reconfigure their dock area and
5 could build a wall right by the receiver.

6 Do we know how much it would cost?
7 Not really. Why don't we know? Because LTD
8 didn't tell us. They didn't do any analysis.
9 Their engineer, Mr. Anderson, had opinions,
10 but, again, really nothing to back them up.
11 Did he do any cost estimates? Did he put
12 anything down on paper to show the Board what
13 a wall would cost if it were built where
14 originally proposed if the existing retention
15 wall were reinforced or if the existing
16 retention wall were rebuilt from the ground
17 up? Not really. He gave us a ballpark
18 estimate, and I think it might be a million,
19 maybe a-million-five. Did he put anything
20 down on paper? No. So let's not rule out
21 that possibility. If that's impossible, if
22 that's not economically practicable or
23 reasonable, that was LTD's burden. They
24 didn't meet their burden. They didn't show

1 the Board that that -- one, that they can't
2 afford it, and, two, that that's too high of
3 a figure.

4 It's still our position that the
5 best place for the wall is where Dr. Schomer
6 proposed, where Tom Thunder had proposed it
7 four years earlier. And that a cost of even
8 a-million-five, in light of LTD's apparent
9 affluence, is entirely reasonable. What do
10 we know about LTD's affluence? They're going
11 to look at a seven -- an additional 700,000
12 square feet of warehouse space that they
13 might buy, they might lease -- whatever --
14 whatever, you know, suits their needs. When
15 it suits their purposes, they have the money.

16 Build it where it's originally
17 designed; that's where it can be most
18 effective. Is it going to be most effective
19 at the property line? No. There is
20 testimony in the record about what happens to
21 a wall when it's put out in the middle of a
22 field. Dr. Schomer talked about the
23 consequences of wind gradient and how wind
24 gradient compromises the wall's

1 effectiveness. And I would direct the Board
2 to -- on the web page, I believe it shows up
3 as page 227. I think -- in the text, I think
4 that's roughly pages 112 and 113, where the
5 Board can look for Dr. Schomer's testimony in
6 that regard.

7 Dr. Schomer's testimony, as I
8 recall it, is that even if you had to move
9 the wall back 16 feet from where it was
10 proposed, that that would be better than
11 putting it at the property line -- that you
12 do gain by having the wall closer to LTD's
13 warehouse facility; that the warehouse
14 facility does block winds from the south and
15 southwest; and that by blocking those winds,
16 it enhances the effectiveness of the wall;
17 and that the wall works best when located
18 closest to LTD's facility. The testimony is
19 that when you get a wall out on the property
20 line, the wall has to grow beyond 25 feet to,
21 in some instances, I believe that the Weber
22 property to, in the 32-, 33-, 34-foot height
23 to offer the Webers protection at their
24 second story window.

1 Is it appropriate to protect in the
2 second story window? Absolutely. The
3 Board's finding was that it was a nuisance
4 principally at night, principally when people
5 were trying to go asleep, stay asleep;
6 testimony that they were awakened early by
7 noise from LTD's dock operations; testimony
8 that quiet activities in the evening, like,
9 reading, carrying on a conversation, watching
10 TV -- they couldn't do those things because
11 they were disturbed by LTD. Those activities
12 occur on the second story of their homes.
13 That's where the protection needs to be.

14 Dr. Schomer's testimony was that a
15 wall built along the property line wouldn't
16 be as effective because it's out exposed to
17 the winds. And I believe that testimony was
18 unrebutted by Mr. Thunder.

19 A problem with the property line
20 noise wall: LTD doesn't share a property
21 line with the Webers. Where would you put a
22 wall that could protect the Webers from the
23 noise originating at the east end of LTD's
24 dock facility? We don't know. Dr. Schomer

1 told us, well, we could build it and bend it
2 around the corner. Did LTD show us an
3 alternative? No. Did they provide the Board
4 with a single sketch, showing where the wall
5 would be? No. Did they give the Board a
6 single credible cost estimate? No. Could
7 Tom Thunder tell you how tall the wall had to
8 be? No. Could he tell you how long it had
9 to be? No. Could he tell you what materials
10 it needed to be built of? No. Could he tell
11 you how much it would cost? Absolutely not;
12 he couldn't do that. Did he ask anybody? He
13 has the opinion noise absorptive materials,
14 we don't need those anymore. Why? Well,
15 it's a standard engineering practice; we
16 don't need them when it's further away like
17 that. What articles say that? None that I
18 brought with me.

19 LTD failed in their burden. Their
20 burden was to provide a solution to this
21 problem. They haven't done that. The
22 respondents -- the Webers, the Rosenstocks,
23 the Rotis -- have reached into their pocket,
24 have brought to you a man with impeccable

1 credentials who spent hours looking at this
2 problem in devising a solution to the
3 problem. The solution is to build a noise
4 wall where proposed in Dr. Schomer's report
5 of April 26th, 2002. And we ask the Board to
6 so order. Thank you.

7 HEARING OFFICER HALLORAN: Thank
8 you, Mr. Kaiser.

9 Mr. Kolar?

10 MR. KOLAR: Yes, thank you.

11 CLOSING ARGUMENT ON BEHALF OF THE RESPONDENTS

12 BY MR. KOLAR:

13 MR. KOLAR: The record
14 demonstrates -- and I think the Pollution
15 Control Board needs to keep in mind when
16 deciding on a remedy in this case -- that LTD
17 came to this Bannockburn site long before any
18 of these people came to this site; that every
19 one of those truck docks was there before any
20 of these people came to this site. The only
21 thing that happened after these people came
22 there is that you had the warehouse
23 expansion. You had nighttime trucking
24 operations since the late 1980s.

1 So we have a situation similar to
2 people moving to the airport and then
3 complaining about the airport noise bothering
4 them. But LTD has taken steps to try to be a
5 good neighbor, and this was before the
6 February, 2001 decision. There's a lot of
7 testimony about all the things LTD did to try
8 to quiet operations and reduce the noise
9 migrating to the complainants' properties to
10 the north.

11 But since February, 2001, LTD
12 hasn't sat on its hands, as Mr. Kaiser
13 indicated. We heard Jack Voigt testify back
14 in October that they now have a 400,000
15 square foot facility in Naperville, in
16 addition to the ones he testified to way back
17 in 1999 or 2000, when he first testified.
18 And what has happened with that Naperville
19 facility? Well, he told you in October that
20 starting that Friday of that week, they
21 weren't going to have nighttime operations at
22 LTD anymore. And then he told you here today
23 that since he testified on October 15th or
24 16th, there's only been a couple days when

1 they had any activity at night, and there
2 were only a couple out-going trucks on those
3 particular nights. And he told you here
4 today that now there's going to be possibly a
5 700,000 square foot facility added to its
6 portfolio to handle its truck traffic, to
7 handle its distribution. The record would
8 show that's nearly twice the size of the
9 Bannockburn facility.

10 So the whole purpose of coming here
11 in October and then coming back here today
12 was to try to determine a remedy to take care
13 of the noise that occurs after 10:00 o'clock
14 at night. And now we know the evidence to be
15 that LTD isn't even operating a nighttime
16 shift in this season to any substantial
17 degree at all -- to a very de minimis degree,
18 in fact.

19 And Dr. Schomer, if I can comment a
20 few seconds on his report, that the Pollution
21 Control Board decision regarding remedies, at
22 the end, it indicated very clearly that it
23 was concerned about a wall that might cost
24 \$300,000, and it wanted to know if there

1 could be less expensive noise walls, because
2 Greg Zack indicated a wood wall would be a
3 less costly alternative. And what do we get
4 from Dr. Schomer? We get a wall that costs,
5 at a minimum, \$623,000. And then if we bend
6 it around to Lakeside Drive, we're talking
7 about a wall that costs \$900,000. I think
8 it's clear in this particular case that what
9 happened is the complainants said to
10 Dr. Schomer, we need a really expensive noise
11 wall that's just going to sock it to LTD. We
12 have to up the ante here. Instead of looking
13 at something that's more reasonable --

14 HEARING OFFICER HALLORAN: Excuse
15 me. Mr. Kaiser?

16 MR. KAISER: I mean, there's just
17 nothing in the record to support that
18 statement.

19 MR. KOLAR: It's argument.

20 HEARING OFFICER HALLORAN: Sustained.

21 MR. KOLAR: The Pollution Control
22 Board decision also emphasizes a very
23 important point here in the case -- that the
24 two nuisance provisions at issue, I think

1 they're on page 23 of the decision, the first
2 one, Section 24, no person shall emit beyond
3 the boundary of his property. That's the
4 operative language, and how you become a
5 nuisance if you emit noise beyond the
6 boundary of your property.

7 Section 900.102 has similar
8 language that you have noise pollution if
9 you're emitting sound beyond the boundaries
10 of the property. So I think the Pollution
11 Control Board has to -- in fact, LTD has a
12 right to be as noisy as possible. I'm not
13 saying LTD is exercising that right. But LTD
14 is operating its business, and in operating
15 its business, it can emit noise all over its
16 property and it's not creating a nuisance
17 until the noise leaves the property. So that
18 gives LTD a right, if it's required to build
19 a wall, to have a property line noise wall.
20 It should not have to ruin its parking lot to
21 build a noise wall in a location where
22 Dr. Schomer and Mr. Thunder who had stated
23 it's not as effective. You put the wall
24 outside the zone of influence, you're putting

1 it in the parking lot; you're putting it in
2 the midway point where it's the least
3 effective location; and you're taking away,
4 by Jack Voigt's testimony, I think another 40
5 parking spaces, when LTD is already leasing
6 spaces off-site because they have
7 insufficient parking.

8 The purpose here isn't to ruin
9 LTD's business by putting a noise wall in
10 their parking lot and taking away valuable
11 parking. They have a right, if a wall is
12 required, to make the decision that we put it
13 on the north property line. I'm not saying
14 LTD agrees that a noise wall is necessary,
15 especially given the change in their business
16 since the Naperville facility opened up. But
17 what the complainants clearly have not
18 answered here, clearly have not indicated --
19 and, in fact, I think have withheld from the
20 Pollution Control Board -- is would they be
21 satisfied with a wall on the north property
22 line. And I think it's very clear the Rotis,
23 they don't want a noise wall on their north
24 property line because they don't want to have

1 to look at it.

2 MR. KAISER: Objection; that's not
3 supported by anything in the record.

4 MR. KOLAR: Well, I would --

5 HEARING OFFICER HALLORAN: I'll
6 allow Mr. Kolar to briefly continue.

7 MR. KOLAR: Just in wrapping up, I
8 would state to Mr. Kaiser and his clients, I
9 think they owe it to the Pollution Control
10 Board to state whether they would agree to a
11 wall on the north property line of the
12 heights indicated by Dr. Schomer in Exhibits
13 C1, 2 and 3. And if they're not willing to
14 have a wall on the north property line, then
15 they're not in this to reduce noise coming to
16 their property. They're in it just to try to
17 hurt LTD.

18 Thank you.

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

21 For the record, I also wanted to
22 clarify Complainants Exhibit No. H that was
23 introduced, for the purposes of
24 identification, was never offered; is that

1 correct, Mr. Kaiser?

2 MR. KAISER: That's correct.

3 HEARING OFFICER HALLORAN: Okay.

4 With that said, thank you very much. This
5 concludes this hearing. And have a great day
6 and a safe trip home. Thanks.

7 (Which were all the proceedings
8 had in the above-entitled cause on
9 this date.)

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1 STATE OF ILLINOIS)
) SS.
2 COUNTY OF C O O K)

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4 I, MARY ELLEN KUSIBAB, CSR, a
5 notary public within and for the County of
6 Cook and State of Illinois, do hereby certify
7 that heretofore, to-wit, on the 9th day of
8 December, A.D., 2002, at 118 West Cook Road,
9 2nd Floor, in the City of Libertyville,
10 County of Lake and State of Illinois, I
11 reported in shorthand the proceedings held in
12 the above-entitled cause, and the foregoing
13 is a true and correct transcript of the
14 hearing.

15 In testimony whereof, I have
16 hereunto set my hand and affixed my notarial
17 seal this 19th day of December, A.D., 2002.

18

19

20

21 Mary Ellen Kusibab, CSR
22 Notary Public, Cook County, IL
Illinois License No. 084-004348

23

24

