

COMMONWEALTH OF PENNSYLVANIA
PUBLIC UTILITY COMMISSION

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Amended Application of Duquesne Light : Docket No.
Company. For the siting and construction:
of a 138 kV line in Hampton, McCandless: A-110150
and Ross Townships, Allegheny County. : F0031
-----x
Mark R. Janosko v. Duquesne Light :
Company. : Docket No.
:
Further hearing. : C-20065987
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Hearing Room 2
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Pittsburgh, Pennsylvania

Wednesday, July 12, 2006

Met, pursuant to notice, at 9:07 a.m.

BEFORE:
FRED R. NENE, Administrative Law Judge

APPEARANCES:

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* * *

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P R O C E E D I N G S

1
2 ADMINISTRATIVE LAW JUDGE FRED R. NENE: This is July
3 the 12th and its about 9:07 and we're going to resume the
4 acceptance of testify. Ms. Sestak, we completed testify of
5 Dr. Fugate and we are ready for your next witness.

6 MS. SESTAK: Yes, Your Honor. As we discussed
7 in our off Record discussion, Duquesne Light Company had
8 planned to call William Bailey next. However, to
9 accommodate Mr. Janosko, who is unable to be present at this
10 time and who was particularly interested in Mr. Bailey's
11 testimony, Duquesne Light Company will now call Thomas
12 Schmitt.

13 JUDGE NENE: Very well. Mr. Schmitt, have you
14 been sworn?

15 MR. SCHMITT: Yesterday.

16 JUDGE NENE: Yesterday. That's good today,
17 too.

18 THOMAS B. SCHMITT,
19 having been previously duly cautioned and sworn, testified
20 as follows:

D I R E C T E X A M I N A T I O N

21
22 BY MS. SESTAK:

23 Q Mr. Schmitt, would you state your name and spell your
24 name for the benefit of the Court Reporter.

25 A Thomas B. Schmitt, T-h-o-m-a-s, S-c-h-m-i-t-t, that's

1 two t's.

2 Q And did you prepare written testimony for this
3 hearing?

4 A Yes, I did.

5 Q And is the written testimony identified as Duquesne
6 Light Statement No. 6, your written testimony?

7 A Yes, it is.

8 Q And if you were to testify here today, would your
9 testimony be substantially the same as it appears in the
10 written testimony?

11 A Yes, it would.

12 Q Did you also prepare Exhibits TS 1, a topographical
13 map of the proposed line and TS 2, a compilation of
14 rights-of-way that Duquesne Light Company possesses
15 concerning the proposed line?

16 A Yes, I did.

17 Q I'm going to ask you some additional questions beyond
18 your written testimony to respond to matters that were
19 raised at the public input hearings. One thing I think
20 would help -- it would help to clarify, who made the
21 decision to use Route E?

22 A That would be myself, Paul Cass and our Supervisor,
23 Robert Stojanovic.

24 Q I believe you may have to spell Stojanovic.

25 A S-t-o-j-a-n-v-i-c, Stojanovic -- S-t-o-j-a-n-o-v-i-c.

1 Q Thank you. Now, there was a suggestion made by
2 several witnesses at the public input hearing that Duquesne
3 Light Company simply picked the cheapest route. Is that how
4 you made your decision?

5 A No.

6 Q Did you, in fact, do a cost comparison between the
7 routes?

8 A No.

9 Q Did you determine the costs of various routes?

10 A We determined the successful route because that was
11 part of the application --

12 JUDGE NENE: The successful route?

13 THE WITNESS: The route we selected.

14 JUDGE NENE: The preferred?

15 THE WITNESS: The preferred route because that
16 was part of the application and we estimated Route C last
17 week per the Judge's request.

18 BY MS. SESTAK:

19 Q Okay. But did you at any time sit down and think
20 about comparatively how the various routes would stack up
21 economically?

22 A No.

23 Q What did you consider in determining the route?

24 A There's three factors that we considered, major
25 factors, the environment, the constructability and

1 reliability.

2 Q Okay. Could you expand on what you mean by the
3 environment.

4 A PUC mandates that to route a new transmission line
5 that you have to do an environmental assessment study, which
6 we contracted GAI to perform and GAI came up with seven
7 possible routes for the study.

8 After they did the study, they came up with four
9 viable routes, Route E, E-1, C and A.

10 Q Okay. And which of those routes did you choose
11 initially?

12 A Initially we chose Route E-1.

13 Q There was testimony at the public input hearing that
14 suggested that Duquesne Light Company chose to amend its
15 application to provide for following Route E rather than E-1
16 because of people who filed protests with the Public Utility
17 Commission.

18 Is that accurate?

19 A No.

20 Q Were you aware that anyone had filed written protests
21 with the Public Utility Commission at the time that the
22 decision was made to change from E-1 to E?

23 A No.

24 Q In fact, when did you become familiar -- or become
25 aware that people had filed written complaints to the

1 Commission?

2 A That was probably not more than six months ago.

3 Q Would it have been around the time of the prehearing
4 conference in March?

5 A That is true.

6 JUDGE NENE: In when?

7 MS. SESTAK: March of this year.

8 BY MS. SESTAK:

9 Q Now, what were your reasons for changing from E-1 to
10 Route E?

11 A Reliability was the biggest problem. We had the
12 Vegetation Management Department look at Route E-1 as far as
13 Ferguson Road goes where we do not have private property
14 right-of-way, we have road permit, and we do not have the
15 ability to trim the trees adequately beyond the road
16 right-of-way because we do not have the right to do that and
17 Vegetation Management felt that that was not a reliable line
18 there and they urged us to move the line to any route that
19 would be more reliable.

20 Q Now, you also mentioned the term constructability.
21 What do you mean by that?

22 A Constructability includes what we have the right to
23 build and how permanent are those rights.

24 Q Okay. And what about reliability?

25 A There are two factors in reliability, trees are one

1 of the biggest problems causing outages and so we prefer a
2 line that we could trim the trees adequately so that we do
3 not have reliability problems.

4 Q Now, when we're talking about right-of-way, there was
5 testimony at the public input hearing that suggested the
6 term 100 foot right-of-way means that nothing can be built
7 within a hundred foot -- or a hundred feet of a line. Is
8 that your understanding of the term?

9 A No.

10 Q What does the term 100 foot right-of-way mean to you?

11 A A 100 foot right-of-way means we have the right to
12 maintain that right-of-way, access that right-of-way and to
13 check, if anybody wants to build in the right-of-way, we
14 will check it with the National Electric Safety Code to make
15 sure they meet it.

16 Q And the hundred foot, is that 100 feet on either side
17 of the proposed line?

18 A No, that would be the total width. It would be 50
19 feet on either side.

20 Q Now, you were present at the public input hearing
21 when Ms. Zaun presented a series of pictures, aerial
22 photographs, that she indicated shows the entire route of
23 the proposed line. Does this, in fact, show the entire
24 route?

25 A I do not --

1 Q Let me hand you the copy.

2 A Let me see that.

3 Q It begins at Shady Oak Circle and continues down to
4 the North Substation.

5 A It does begin at Shady Oak, I don't see Shady Oak on
6 Exhibit A.

7 Q No, I said it begins and ends -- probably I should
8 have qualified that by saying but not in order. It begins
9 at the mid point on Thompson Run and continues down to North
10 Substation and then it picks up in the middle and goes to
11 Shady Oak Circle.

12 But perhaps it would be easier if I asked you to go
13 to the Exhibit that's hanging on the board there, that's the
14 Figure 3-2 from Exhibit RH 2. Could you show me on that
15 Exhibit where Shady Oak Circle would be located.

16 A Shady Oak Circle would be right approximately here --
17 is right here.

18 Q So there's a substantial amount of the line between
19 Shady Oak Circle and the Wildwood Substation; is that
20 correct?

21 A About a third of the line between Shady Oak and
22 Wildwood.

23 Q Okay. And just generally, what type of area does
24 that third of the line pass through?

25 A This is North Park and a golf course here, I don't

1 know the name of the golf course, but the line is on the
2 North Park property there.

3 JUDGE NENE: Wildwood Country Club, I think.

4 THE WITNESS: Wildwood Country Club, yes.

5 A (Continuing) And the North Park -- I'm not sure what
6 they call it -- ski area. I don't know if they ski there.
7 I believe they do.

8 Q Thank you. There was testimony here yesterday
9 concerning tapping the proposed line at North Substation as
10 opposed to tapping an existing high voltage line.

11 At the time this project was planned, did Duquesne
12 Light Company specify anything about tapping into the
13 substation rather than the line?

14 A No.

15 Q In fact, did Route E initially tap into that same
16 high voltage line?

17 A Route E tapped into Z-20, which is a different
18 transmission line than the other six.

19 Q Okay. But was it one of the two parallel lines going
20 into North Substation that Mr. Zucconi drew yesterday?

21 A Z-20 is on the other side of North Substation.

22 Q Okay.

23 A Its on the west side of North Substation, as opposed
24 to the other circuit which is on the east side of North
25 Substation.

1 Q To your knowledge, if Duquesne Light Company tapped
2 either of those higher voltage lines, was it your intention
3 to continue on to the substation at some point?

4 A Originally we had felt that within a seven to ten
5 year time frame that we would have to extend those lines to
6 the North Substation, but later on we had discussions with
7 Transmission Planning and they stated that there would not
8 be, within a ten year time limit, time frame, which is the
9 only thing they can possibly predict, that we would not need
10 to extend to the North Substation.

11 JUDGE NENE: I'm confused. There was too many
12 negatives in there.

13 THE WITNESS: Right.

14 JUDGE NENE: Would you state it in the
15 affirmative, if you could.

16 THE WITNESS: We do not have to -- there is no
17 plans to extend the other alternative routes to North
18 Substation.

19 JUDGE NENE: And you don't anticipate that
20 there would be?

21 THE WITNESS: We do not anticipate that at
22 this time.

23 JUDGE NENE: Okay.

24 BY MS. SESTAK:

25 Q How significant was it in your choice of Route E that

1 it able to go directly into the North Substation?

2 A Could you repeat that.

3 Q How significant was it in your choice of Route E that
4 it's able to go directly into North Substation?

5 A It is just another reliability factor. A line
6 directly from one substation to another substation is
7 inherently more reliable due to the exposure to outages,
8 which would be the length of the line that would be exposed
9 to a possible outage, would only be the length of a line,
10 which would be five miles in this case.

11 If you tap an existing line, then your exposure to
12 outages is the length of the line you build and the length
13 of the circuit that you tap. I think Homer explained that
14 you could have an outage on the circuit or the line you
15 build and that circuit is about 20 miles long, so the other
16 alternatives would have a 25 mile exposure as opposed to
17 five miles.

18 Q Now, subsequent to the last hearing, did you
19 participate in a review of Route C?

20 A Yes, I did.

21 Q At this point, are you prepared to testify concerning
22 that or would you prefer that Mr. Cass testify concerning
23 that?

24 A I could answer some questions.

25 Q Okay. First, let me ask you why did you review Route

1 C again?

2 A We reviewed Route C again to do an estimate per the
3 Judge's request.

4 Q Okay. And what did you do in terms of putting
5 together an estimate?

6 A Well, we did a cursory design of the line to see
7 where the poles would fall and any problems that you would
8 have with access.

9 Q Is that something you did sitting in your office
10 relying on Duquesne Light Company data?

11 A No. We were out in the field for a day-and-a-half.

12 Q Okay. What did you do while you were out in the
13 field?

14 A We walked the whole line.

15 Q And by we, who are you including?

16 A Paul Cass for half a day, Paul Cass and myself and
17 the second day we took a GAI person.

18 Q Would you identify that person?

19 A I can.

20 Q Would you prefer to defer to Paul Cass on that?

21 A Oh, I know his name.

22 JUDGE NENE: Is he in the courtroom?

23 THE WITNESS: No, he's not.

24 A (Continuing) I'll defer that to Paul.

25 Q Okay. Based upon your review of Route C, was there a

1 determination made as to whether or not it would be suitable
2 for a transmission line?

3 A It would be buildable, not suitable.

4 Q Okay. And are you able to explain in detail why that
5 would be or would you prefer that Mr. Cass do that?

6 A Well, there would be reliability problems with Route
7 C. We would have to be at the edge of the railroad
8 right-of-way and we would have no rights to trim adequately
9 to ensure reliability.

10 Also, due to the terrain, there are vertical
11 hillsides with trees and the possibility a tree could take
12 out a line and possibly a structure.

13 Q Are there access problems as well?

14 A There are access problems. We would have to build a
15 number of bridges over the stream.

16 Q Does Duquesne Light Company typically build bridges?

17 A We can. We sometimes do.

18 Q I have no further questions unless you have something
19 you would like to add to clarify your testimony here today.

20 A May I check? No.

21 Q Okay. Thank you.

22 A Thank you.

23 JUDGE NENE: Will you move the statements and
24 the Exhibits that you described into the Record.

25 MS. SESTAK: Yes, Your Honor. I move that Mr.

1 Schmitt's testimony and Exhibits be admitted into evidence.

2 JUDGE NENE: Is there any objection? They
3 will be admitted subject to Cross-Examination. I trust that
4 we have adequately admitted all the prior statements, but do
5 you want to make an omnibus motion?

6 (Thereupon, the documents were
7 marked as Statement No. 6 and
8 Exhibits TS 1 and TS2 for
9 identification and were admitted
10 into evidence.)

11 MS. SESTAK: I would appreciate that, Your
12 Honor. I move that the testimony and Exhibits of Duquesne
13 Light Company witnesses Homer Zucconi, David W. Fugate and
14 Robert J. Houston be admitted into evidence if they have not
15 already been so.

16 JUDGE NENE: I believe they have, but we're
17 going to make sure and they will be admitted into evidence.

18 We'll start with the Nypavers again. Terrence
19 Nypaver, do you have any questions of Mr. Schmitt?

20 (Thereupon, the documents marked as
21 Statements No. 1, 3 and 5 and
22 Exhibits HZ1, 2 and 3, DWF 1 and 2
23 and RJH 1, 2, 3 were admitted into
24 evidence).

25 MR. NYPAVER: Yes, I do, Your Honor.

CROSS-EXAMINATION

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BY MR. NYPAVER:

Q Are you the gentleman I should be asking about what is the current rating in the line that's going to be feeding the substation on any of the proposed routes, this ampacity, a-m-p-a-c-i-t-y?

A I could answer that. Its 20 amps.

JUDGE NENE: Is that in your testimony?

THE WITNESS: No.

BY MR. NYPAVER:

Q The cable is only capable of carrying 20 amps?

A No. The cable could carry more.

Q Okay. Ampacity is the maximum amount of current that can pass through that cable going to the substations.

A We would install a 53 conductor, which I believe is capable of carrying 200 amps.

Q Are you sure of that, or is this -- I mean --

A I am not sure. That is our standard 138 conductor.

Q Would somebody else know that better than yourself?

A Homer Zucconi.

Q Okay.

MR. NYPAVER: I can't remember if I asked him that question.

JUDGE NENE: We're going to continue in an orderly fashion.

1 MR. NYPAVER: I just said I didn't know if I
2 asked him that question.

3 MS. SESTAK: Actually, Your Honor, I believe
4 that Mr. Zucconi was asked what type of line was to be
5 installed on this line and he indicated that he did not know
6 and it was our understanding that the appropriate witness
7 would be asked that question, which is why I did not object
8 that this went beyond the scope of Direct, because it was
9 understood that somebody would be asked about what specific
10 type of line would be installed.

11 JUDGE NENE: Do you have someone to answer
12 that question?

13 THE WITNESS: I answered the type of line,
14 Your Honor.

15 JUDGE NENE: The standard type?

16 MR. NYPAVER: Every cable has a certain
17 capacity that it can carry current. If it exceeds that
18 current, it can destroy the cable. Obviously they're going
19 to design any system not to exceed that current, but I would
20 like to know what that current is.

21 JUDGE NENE: Are you satisfied you have an
22 answer?

23 MR. NYPAVER: No, I'm not, Your Honor.

24 MS. SESTAK: Your Honor, I believe that in the
25 original application it was specified what type of line. I

1 don't know if that would be helpful --

2 MR. NYPAVER: Its a special type of cable,
3 Your Honor, for overhead cables. I have the National
4 Electric Safety Code here which has ampacity of cables. You
5 can look in here, I'm sure you're welcome to find it. Its
6 the 1999 edition, so its not the current edition, but that
7 at least would be satisfied if he could find it in this
8 book.

9 BY MR. NYPAVER:

10 Q Do you want to defer that to --

11 A Yes, I would defer that to Mr. Zucconi.

12 MS. SESTAK: Your Honor, if I may, I have just
13 been passed a note by Duquesne Light Company witness Robert
14 Houston that reads I know this -- I'm sorry, Paul Cass.

15 MR. CASS: Me.

16 JUDGE NENE: You are going to testify, so
17 we'll move along now. Thank you.

18 MR. NYPAVER: Good idea.

19 MS. SESTAK: I apologize.

20 MR. CASS: Okay.

21 BY MR. NYPAVER:

22 Q Now, in your testimony on the right-of-way, you
23 mentioned twice on page 3 that the line is located almost
24 entirely on existing property right-of-way. Can you define
25 what you mean by the word almost?

1 A Page 3?

2 Q Page 3. Let's see which tab that is.

3 JUDGE NENE: Line 23.

4 THE WITNESS: Page 3 line 23.

5 Q Yes, line 23 and also on line 1.

6 THE WITNESS: If I may go to the map?

7 JUDGE NENE: Yes.

8 A At North Substation, we will be on Duquesne Light
9 property and not private property right-of-way and in this
10 area (indicating) there is -- near the gas station at
11 Thompson Run and Duncan Avenue, there is a spot there where
12 we do not have right-of-way that would have to be put on the
13 road by permit, maybe two poles.

14 JUDGE NENE: Otherwise?

15 THE WITNESS: Otherwise we have private
16 property rights-of-way and license agreements.

17 JUDGE NENE: For the remaining part of the
18 route?

19 THE WITNESS: Correct.

20 MR. NYPAVER: I would like to go to the board,
21 Your Honor, and actually go to Homer Zucconi's display on
22 the bottom of that sheet that he drew yesterday. Its
23 underneath that.

24 JUDGE NENE: All right.

25 BY MR. NYPAVER:

1 Q Now, you mentioned reliability of the line and the
2 exposure to tree falls and other faults.

3 A Yes.

4 Q And you're saying if you tap off of here you expose
5 this whole line. Are these two -- this point is North
6 Substation. Do you know where the nearest breaker is down
7 on the other end of the line?

8 A I believe that's Cheswick.

9 Q So the line is coming from Cheswick. Is that the
10 only feed to this substation from Cheswick?

11 A No.

12 Q Is this not another loop that goes to Cheswick?

13 A That's another one that goes to Cheswick.

14 Q So if a fault occurs on this line, it does not
15 necessarily mean that there's going to be a loss of power?

16 A It wouldn't be a problem for North Substation. It
17 would feed from the other circuit. There would be a loss of
18 power at North Substation, there would be a loss of power at
19 Wildwood Substation.

20 Q You're saying if the fault occurred up here, you
21 still expose this, but this would still be out of power?

22 A Correct.

23 Q Okay. And if the -- what you're saying is if the
24 fault occurs down here, you would actually lose Wildwood
25 Substation; is that correct?

1 A Correct.

2 Q Okay. Basically you are showing -- I'm assuming this
3 is going the other direction away from Cheswick, this half?

4 A Yes, it is.

5 Q And these breakers, this is -- this would be at North
6 Substation and this one, the other breaker, would be on the
7 far end. Is there another breaker at the other end of the
8 line?

9 A Yes.

10 Q So you have breakers between power stations and
11 substations?

12 A There would be breakers at the substations.

13 Q Is there a breaker at Pine Creek Substation?

14 A I believe so.

15 Q Does it -- does the breaker tap off of the
16 substation; I mean, does it drop down into a breaker and
17 come back out or is it a tap to the substation?

18 A No, it drops down to the breaker.

19 Q I guess what I'm trying to think is, does it go
20 through a breaker and then come back out and then go out to
21 North Substation? Because you mentioned you had a breaker
22 in North Substation and there was a breaker at Cheswick.
23 I'm just wondering if there is another breaker between those
24 two lines that would isolate the line further.

25 A No.

1 Q Okay. You also mentioned, okay, like you said,
2 reliability issues. I can understand why that would be the
3 case. But if a fault occurred here (indicating) then you
4 would just lose Wildwood Substation; correct?

5 A Correct.

6 Q Now, most of these systems are showing a redundant
7 system.

8 A Correct.

9 Q Why do I not see a redundant system in the north to
10 Wildwood Station?

11 A That is a tap, not part of the ring system.

12 Q You're saying a tap off of this line here?

13 A Well, its a tap off the substation. Its not part of
14 the ring system that Homer explained yesterday.

15 Q Correct.

16 A It would just be a single feed to a single
17 substation.

18 Q So if something happened to this line, that
19 substation would still be out of power, there would be no
20 way to back feed it like here where it actually is fed back
21 through this system?

22 A Correct.

23 Q Are there plans for Duquesne Light Company to do that
24 in the future?

25 A No.

1 Q To me that is a reliability issue, would you not
2 agree?

3 A You can't build -- you wouldn't build another line
4 just -- you maintain the line reliability, you don't need to
5 build another second circuit to a tap substation.

6 Q I work with a lot of control systems and a lot of
7 times if everything is critical you always have a redundant
8 system.

9 A Well, I think our Planning Department, Homer Zucconi,
10 could better answer this question.

11 Q Okay. But I believe in Duquesne Light Company's Web
12 site it said that there were no plans at this time.

13 A There are no plans.

14 Q The National Electric Safety Code states that you
15 must adjust for a change in land use under a power line; is
16 that correct?

17 A Pardon?

18 Q Well, okay, are you familiar with this book at all?

19 A Yes, I am.

20 Q Do you have this book, by chance?

21 A Not with me.

22 Q But you do have a copy of it?

23 A Yes, we do.

24 Q So this book is a valid --

25 A Yes, it is.

1 Q -- Exhibit. Can I ask you to read page 162 what I
2 have highlighted in yellow.

3 JUDGE NENE: Would you identify the name of
4 the book again.

5 MR. NYPAVER: Oh, yes.

6 JUDGE NENE: You can.

7 THE WITNESS: Its the National Electric Safety
8 Code. Its the code we use to design our transmission lines.

9 MR. NYPAVER: Before you start -- Your Honor,
10 I do have a copy for her, if she wants to type it up instead
11 of reading it.

12 JUDGE NENE: That would be helpful. We're not
13 going to enter this into the Record. This is just to
14 support it. Thank you.

15 BY MR. NYPAVER:

16 Q Could you read it out loud, please.

17 A This is a small rule with big implications.
18 Clearances and spacing must be maintained forever. Per rule
19 010, the National Electric Safety Code applies during
20 installation, operation and maintenance of supply and
21 communication lines, not just during the initial
22 installation. Several changes can occur that force a
23 utility to be active in maintaining clearances. One is a
24 change in land use under the power line. Two is a change in
25 structures under or adjacent to the power line. Another is

1 excessive sagging due to a major ice or wind storm.

2 In each of these cases, it is the responsibility of
3 the utility to maintain clearances.

4 Shall I read this part?

5 Q Is it highlighted?

6 A Yes.

7 Q If its highlighted, yes.

8 A A utility must correct a code clearance problem even
9 if the line was originally built with the proper code
10 clearances.

11 Q Thank you. So when the line was first -- when
12 right-of-way was obtained and the land was first -- when the
13 line was first built, what would you say the property would
14 be at this time? I know its -- what would be -- what would
15 you say the property would be, considering the number of
16 right-of-way agreements you have here and drawings you show
17 me?

18 A I don't understand your question.

19 Q What would the land be; would it be land -- what
20 would the land use be? Would it be residential at the time
21 you put this line in?

22 A What was the land like back in --

23 Q 1930s

24 A -- 1930? I suppose it was less densely populated,
25 but I can't answer.

1 Q Right. If I told you that the Park Nettles Plan was
2 built in 1955 or started in 1955, would you agree it wasn't
3 residential?

4 A Yes.

5 Q So when it was built in 1955, it became residential
6 as the houses were being built?

7 MS. SESTAK: Objection, Your Honor. The
8 question is setting up a false assumption that because of --
9 because a particular plan was initiated in a particular year
10 that there could not have been residences on the land prior
11 to that and this assumption is unsupported, from what I can
12 understand. I believe its being imposed solely to confuse
13 the witness into making statements that are not otherwise
14 supported by fact.

15 MR. NYPAVER: All right. Let me just --

16 JUDGE NENE: Well, counsel is right. I mean,
17 if you want to make a hypothetical, you can make a
18 hypothetical question.

19 MR. NYPAVER: Okay. Actually, this one
20 diagram here does show a barn and Wildwood Country Club.
21 Actually, there is the area --

22 JUDGE NENE: Don't just --

23 BY MR. NYPAVER:

24 Q Let's say that the land was farm use, given the fact
25 that there had probably been a few farm houses and now it is

1 built up as a, would you say, residential?

2 A Yes.

3 Q Okay. What --

4 A Maybe if I answer the question, I think I know what
5 it is, referring to what we just read from the code and what
6 that means is that if somebody were to build a structure
7 without your knowledge, you would have to maintain
8 clearances. When somebody wants to build near our lines,
9 they come to Duquesne Light and they ask us to do a study in
10 accordance with the National Electric Safety Code to ensure
11 that they meet the code.

12 Q Okay. Part of my exhibit I guess, Nypaver 8, that I
13 passed out at the public hearing, the first page, is a --

14 JUDGE NENE: You're referring to a document
15 that has been identified?

16 MR. NYPAVER: Yes, Nypaver 8.

17 JUDGE NENE: Very well. Does the witness have
18 a copy of that?

19 THE WITNESS: No.

20 MS. SESTAK: Your Honor --

21 THE WITNESS: I think he's going to show me.

22 MR. NYPAVER: Here's a copy. You can have
23 that.

24 JUDGE NENE: All right.

25 THE WITNESS: Okay. Thank you.

1 BY MR. NYPAVER:

2 Q Now, as far as the second question -- the second --
3 No. 2 here that you had read before, 2 is a change in
4 structure under or adjacent to the power line, would you say
5 that that had probably been changed?

6 A Yes. These houses were built after that
7 subtransmission line was there, but they meet National
8 Electric Safety Code requirements.

9 Q What does it do to your right-of-way?

10 A I don't understand the question.

11 Q How does it affect your right-of-way; is there
12 anything changing your right-of-way?

13 A The only thing we would be concerned with is that it
14 does not interfere with our access to the line, beyond
15 meeting Code clearances.

16 Q So, its not in violation of your right-of-way?

17 A It is not.

18 Q Are you responsible for outages -- would you say you
19 are responsible for outages -- are you the person I should
20 ask about outages on the line, concerning tree falls or ice
21 storms, or would that be another gentleman?

22 A I would refer that to Paul Cass.

23 Q Thank you. How did you -- did you select the route
24 based on the numbering, the point value assigned to each
25 route?

1 A No. The study identified four routes. We could pick
2 any of the four. As I stated before, it was
3 constructability and reliability were the two factors that
4 we based our choice on.

5 Q Can you explain what -- can you explain why -- did
6 you discuss Route A corridor and the Route 8 corridor?

7 A Did we consider Route A?

8 Q Yes.

9 A Yes.

10 Q And why was that not chosen?

11 A Well, both constructability and reliability. We do
12 not have -- as far as constructability, we do not have the
13 right to build steel or wood, we would have to build wood
14 poles only, not a major factor, but we would not have the
15 right beyond the road right-of-way to install the required
16 anchors and as far as reliability, we would not have the
17 right to trim the trees adequately because we cannot trim
18 beyond the road right-of-way to ensure reliability.

19 Q Is that different than what is on Thompson Run and
20 Peebles?

21 A That is different than what is on Thompson Run and
22 Peebles.

23 Q Why is that?

24 A We have the right to trim the trees on Thompson Run
25 and Peebles. We also have the right to install anchors.

1 Q But there is an existing line there now?

2 A Correct.

3 Q On Route 8. How did you -- how is that being used
4 now?

5 A I'm not sure -- Route 8 is pretty straight -- whether
6 there are anchors on Route 8. We may not require anchors on
7 Route 8. I'm sure we may have some and probably on a
8 distribution line, its a shorter line, therefore, the anchor
9 does not have to be as far away from the pole to hold that
10 line. Therefore, if we have anchors, they might still be on
11 road right-of-way. If you have a tall line like a
12 transmission line, you need a much longer distance between
13 the pole and the anchor, which would put us off of the road
14 right-of-way.

15 Q Can you explain --

16 A Especially also on Wildwood, which is part of Route
17 8.

18 Q But you do not have to have the -- is it the same
19 problem on Wildwood Road as it is on Route 8, some parts of
20 Route 8?

21 A Yes.

22 Q When do you actually need to put anchors?

23 A When the land has an angle in it, when its not a
24 straight line, then the conductors are pulling the pole
25 over, so you have to anchor it back.

1 Q Is route --

2 MR. NYPAVER: May I go to the map, Your Honor?

3 JUDGE NENE: Yes.

4 BY MR. NYPAVER:

5 Q Look at the route there, I mean. There are bends in
6 any road.

7 A Yes. That --

8 Q Would it look like you would need anchors on that
9 route?

10 A Yes.

11 Q Can you show me where?

12 A As you said, in the bend.

13 Q Well, right there is one major bend.

14 A Not major bends. Those curves we would not anchor,
15 and Mr. Paul Cass could probably discuss that further.

16 Q Okay. Because as I look at this road, it looks sort
17 of the same. I know there is some trees in there.

18 A Yes. And on that scale you wouldn't really see
19 smaller bends that we would probably have to anchor.

20 Q Now, on the routes -- may I see this, please?

21 A Uh-huh.

22 Q I would now like to look at Exhibit Nypaver B, C and
23 D.

24 MS. SESTAK: Your Honor, I don't believe I
25 have a B, C and D.

1 THE WITNESS: We did yesterday.

2 MR. NYPAVER: I do have one extra copy.

3 MS. SESTAK: I apologize. I was looking --

4 MR. NYPAVER: It was passed out the other day.

5 MS. SESTAK: Oh, it was passed out yesterday.

6 BY MR. NYPAVER:

7 Q Now, when I was looking at -- Exhibit B is an aerial
8 view of Wildwood Substation.

9 A Correct.

10 Q There are -- there is a line that goes from North
11 Substation over toward these industrial buildings and then
12 down toward Hardies Road. It may be more visible on Nypaver
13 Exhibit B and the pictures and it shows the pictures -- can
14 you tell me why that was not selected as existing
15 right-of-way? I believe Route A goes across Wildwood Road
16 and then down toward -- down Wildwood Road and ties into a
17 tap near Wildwood Sample Road versus coming out of the
18 substation and going down.

19 A I believe you asked this question of Bob Houston
20 yesterday and I could not answer further than what Mr.
21 Houston had to say.

22 Q Were you the one, the gentleman, who gave Mr. Houston
23 the right-of-way -- no, not the -- yes, the rights-of-way?

24 A Yes.

25 Q Did he not ask for this particular location?

1 A I do not recall.

2 MR. NYPAVER: Your Honor, as far as the Route
3 C that Mr. Schmitt had presented earlier about his studies,
4 can I postpone that until later on and question him on that?

5 JUDGE NENE: I think most of the --

6 THE WITNESS: If I may inject?

7 JUDGE NENE: Yes.

8 THE WITNESS: If he wants to ask it later on,
9 Paul Cass would be --

10 JUDGE NENE: It sounds like Paul Cass --

11 MR. NYPAVER: I'll ask Paul Cass.

12 JUDGE NENE: If you can't get it from that,
13 we'll address it at that time.

14 MR. NYPAVER: I'm done, Your Honor.

15 JUDGE NENE: Mrs. Nypaver, do you have any
16 questions?

17 MRS. NYPAVER: I have a few questions.

18 CROSS-EXAMINATION

19 BY MRS. NYPAVER:

20 Q I understand, Mr. Schmitt, that the route was not
21 changed because of complaints, public complaints; is that
22 what you said?

23 A That is correct.

24 Q So, in your opinion would Duquesne Light consider
25 changing the route in response to public complaints?

1 A That would be a legal question, better asked of our
2 legal person.

3 JUDGE NENE: Maybe we could rephrase that
4 question. Are you still convinced that this is the
5 preferred route and the best route?

6 THE WITNESS: Yes, I am.

7 JUDGE NENE: Is that what you were getting at?

8 MRS. NYPAVER: I would like to know if public
9 input has no bearing on the decision to change the line.

10 THE WITNESS: Yes. That's a legal question
11 and we do have a witness.

12 BY MRS. NYPAVER:

13 Q Another witness?

14 A Yes.

15 Q Who is that witness?

16 A Jody Noble.

17 Q Jody Noble.

18 JUDGE NENE: She can respond to that question?

19 THE WITNESS: Yes.

20 JUDGE NENE: Okay. Can you hold it?

21 MRS. NYPAVER: Is she here or is she coming?

22 THE WITNESS: She's coming.

23 MS. SESTAK: Your Honor, she's the woman --

24 MRS. NYPAVER: Can she respond to that now?

25 JUDGE NENE: No.

1 MRS. NYPAVER: I have no further questions.

2 JUDGE NENE: Mr. Kalinski.

3 MR. KALINSKI: I have several questions, Your
4 Honor. May I approach the visual aids?

5 JUDGE NENE: Yes.

6 CROSS-EXAMINATION

7 BY MR. KALINSKI:

8 Q Mr. Schmitt, you mentioned that the width of the
9 right-of-way is 50 feet?

10 A We have no right-of-way width in that -- on Ringeisen
11 Road. It is an unspecified width. Its a center line
12 right-of-way.

13 Q Center line right-of-way. How can you tell -- how
14 tall was the original poles --

15 JUDGE NENE: Repeat that.

16 BY MR. KALINSKI:

17 Q Can you tell us what was the original poles --

18 JUDGE NENE: Original?

19 MR. KALINSKI: Original.

20 JUDGE NENE: What kind of poles?

21 Q -- poles supporting the 4 kV line for which you
22 obtained right-of-way in the 1930s?

23 A They are 50 foot poles, which would be a 43 foot high
24 pole and there's also 45 foot poles which would be
25 approximately a 39 foot pole.

1 Q Am I correct when I keep the figure more or less
2 where the original height was?

3 A That pole is 50 percent taller on that photo than
4 exists in the field.

5 Q So now we have 23kV line, which are more or less
6 here; right?

7 A Yes.

8 Q Original 4 kV line was the same height or was it
9 lower?

10 A I believe that's the original height.

11 Q Original height?

12 A We don't tend to lower the lines.

13 Q So you are going to -- that is the addition?

14 A That is the addition.

15 Q So let's assume that this is a tree, the tree is 30
16 foot -- sorry, 50 foot tall, which is 50 foot away from the
17 newly proposed 70 foot actual line, would you consider
18 removing it for reliability issue, safety issue?

19 A I would defer that to Andy Berchin from the
20 Vegetation Management Department, who is a witness.

21 Q Okay. Do you think -- well, the taller those poles
22 become there is a chance that you would like, okay, to
23 remove the trees which are either lower or coming closer?

24 A Again, I would defer that to Andy Berchin.

25 Q So do you think that there is an enhanced

1 intervention on your side on the properties -- on both sides
2 of the line depending on the height of the line and on the
3 existing load of the line?

4 A A 138 kV line does require more clearance to trees
5 than the 23 line.

6 Q Thank you. When you were building the original 4 kV
7 line, was there an environmental assessment performed?

8 A I wasn't there, but I would not think there would
9 have been.

10 Q When you were upgrading this 4 kV line up to the
11 existing 23 kilovolt line, was there any environmental
12 assessment performed?

13 A Again, I wasn't there, but I would not think there
14 would have been.

15 Q Can you tell us in which year was this change, do you
16 know, 4 kV to 23 kV upgrade?

17 A I don't know if I have it.

18 Q I think that's something I couldn't find.

19 A No, I cannot answer that.

20 Q Another question then, from whom did you negotiate in
21 1930s the right-of-way; who was the owner of this land, if
22 can you tell us?

23 A There were many owners and they are on Exhibit TS 2,
24 are the drawings, the right-of-way drawings, which show all
25 the names of the property owners and all to the property

1 owners name are in Exhibit TS 3, the actual right-of-way
2 agreement documents.

3 Q At that moment, okay, when you were negotiating the
4 right-of-way, how many 178 kilovolt lines did you have in
5 the neighborhood?

6 A I would say zero.

7 Q So is it reasonable to say if I say that the people
8 with whom you negotiated that right-of-way didn't have a
9 clue that some time in the future there may be something
10 which would look like this, okay, with this -- reasonable to
11 say that in says 1930s the people with whom you negotiated
12 the right-of-way couldn't have imagined that there would be
13 this height of poles and there would be wide impact on both
14 sides of the line?

15 A I can't --

16 MS. SESTAK: Objection.

17 JUDGE NENE: I sustain the objection. That's
18 speculative.

19 MR. KALINSKI: Okay.

20 JUDGE NENE: I don't feel comfortable with you
21 behind me.

22 MR. KALINSKI: All right. I'm sorry. I'm not
23 -- sorry.

24 BY MR. KALINSKI:

25 Q In 1930s, when the right-of-way was obtained, were

1 there any published reports about potential health concerns
2 of high voltage lines?

3 A I don't know.

4 Q Okay. I believe that the first reports were put out
5 in the '70s.

6 MS. SESTAK: Objection, Your Honor. The
7 witness -- I'm sorry, Mr. Kalinski is testifying.

8 MR. KALINSKI: I put it in the testimony
9 later.

10 BY MR. KALINSKI:

11 Q So, do you believe, okay, that the environmental
12 impact of 138 kV line maybe different than 4 kV line,
13 removal of the trees and --

14 A Well, there would be more tree removal.

15 Q I believe so, too. So what would be the rationale
16 for eliminating the study of the environmental impact on the
17 distance of the 138 kV line which has never been evaluated
18 on that distance before?

19 MS. SESTAK: Objection, Your Honor. This
20 question goes beyond the scope of Direct Examination. Mr.
21 Schmitt at no time indicated that he was involved with
22 conducting any environmental impact studies on this line.

23 JUDGE NENE: Mr. Kalinski.

24 MR. KALINSKI: My argument here is that we are
25 discussing rights-of-way. Rights-of-way have been the key

1 argument brought up in the previous testimony in support of
2 lack of inclusion of the 85 percent of the distance which
3 runs along the existing right-of-way. So, I think the issue
4 is relevant to --

5 JUDGE NENE: Yes, but I don't think that this
6 witness has testified concerning those matters and he's not
7 the proper person to cross-examine on that. That's not his
8 direct testimony.

9 MR. KALINSKI: I thought I can ask these
10 questions to someone, previous witness didn't tell us
11 anything about rights-of-way. I think there -- those two
12 issues are very tightly interrelated. Right-of-way is --
13 the only witness that is discussing right-of-way is the
14 current witness. The right-of-way was the key issue brought
15 up by GAI as the reason why, okay, they didn't include the
16 distance -- they didn't value it in the environmental
17 impact. So I would like to ask this question to one of you
18 gentlemen.

19 THE WITNESS: I believe I can answer the
20 question. We did include trees in the study.

21 BY MR. KALINSKI:

22 Q What about people who live alongside, those 138
23 households?

24 A We did do a residential study, also.

25 Q Do you think that impact on the residential --

1 MS. SESTAK: Objection. Your Honor, I'm not
2 certain where this line of questioning is going and Mr.
3 Kalinski is slipping data into his question that is not
4 supported by evidence of Record. I have no idea where he
5 got the number 138 households.

6 MR. KALINSKI: I think that was the number
7 mentioned yesterday.

8 JUDGE NENE: There was testimony to that, an
9 Exhibit referred to that number.

10 MS. SESTAK: Your Honor, there was testimony
11 from Mr. Houston that 116 residence were along Route A.

12 JUDGE NENE: Can you rephrase your question.

13 MR. KALINSKI: Sorry. I made a mistake.

14 BY MR. KALINSKI:

15 Q Did you take into -- what about the impact of 4 kV
16 line versus the impact of 138 kV line on this 116
17 households; do you think it may be different?

18 A Again, that would be not my testimony. That would be
19 Bob Houston.

20 Q Okay. And you mentioned that your existing
21 right-of-way is unlimited?

22 A It is limited to the property.

23 Q If someone asked you -- hypothetical question I would
24 like to ask it -- if someone would ask you in 1950 when the
25 -- or any time earlier whenever the 4 kV line did exist, do

1 you agree with building of the residential properties 30
2 feet away from existing 4 kV line, do you think that would
3 be acceptable to build a residential property 30 feet away
4 from a 4 kV line?

5 A Is it acceptable?

6 Q Is it acceptable to build a residential property 30
7 feet away from the 4 kV line?

8 A Yes, it is.

9 Q Would you agree to someone building a few years from
10 now such a property at the same distance from the newly
11 proposed 138 kV line?

12 A Yes, it is. If it meets -- it would probably meet
13 National Electric Safety Code if it was 30 feet from the
14 wind blown conductors.

15 Q Do you think that there might be any differences in
16 your decision with regard to any construction -- with regard
17 to any activity within the proximity of 4 kV line and 138 kV
18 line?

19 A Yes, because the clearances for 138 are larger than
20 the clearances for 4 kV. So, there would be a difference.

21 Q So do you think that there would be additional impact
22 with regard to well-being for the people in proximity of 4
23 kV line compared to 138 kV line?

24 A I don't understand that question.

25 Q Which part?

1 A Would there be an impact?

2 Q Do you think that there would be any impact,
3 differential impact of 4 kV line and 138 kV line on the
4 well-being, on the economic activities, on the way -- how
5 people can spend their time so they can enjoy their
6 properties if they are -- how much they are restricted by
7 your right-of-way depending whether its 4 kV line or whether
8 it is 138 kV line?

9 A No.

10 Q I don't understand the last one. You just told me
11 that --

12 A Except for they could not build near the -- there is
13 a further clearance to a 138 line than there is to a 4 kV
14 line.

15 Q Right. So you mentioned that you may not be allowed
16 to build certain structures as close, they may need -- or
17 have removed some of the trees, that would be different?

18 A Correct. The building line would keep them away from
19 either line regardless.

20 Q Do you think there is more chances more trees will
21 need to be cleared when you build new high voltage line;
22 right?

23 A Yes.

24 Q So, do you think that different lines will have any
25 different level of socioeconomic impact, especially the

1 impact on property values along the line?

2 A I think I should refer that to the legal witness.

3 Q Thank you. You mentioned in response to previous
4 questions that at this moment you do not have plans to
5 upgrade the existing Wildwood Substation; is that correct?

6 A We have plans to upgrade it now.

7 Q Now. You don't -- you say that the capacity of the
8 Wildwood Substation is unlikely, okay, to be increased in
9 the near future; right?

10 A Very unlikely.

11 Q There is a lot of talk about a potential merger or
12 acquisition of Duquesne Light. Do you think that you can
13 predict what will happen to the existing and to the future
14 grid, power grid ten years from now will be --

15 A I can say --

16 Q -- who will be making decisions?

17 A I can say the acquisition by the Australian company
18 will have no factor on future upgrades.

19 Q If you will be upgrading Wildwood Substation, would
20 this need to be approved by the PUC or is it going to be
21 just your decision?

22 A I can't answer a hypothetical question. I don't
23 believe -- its not going to happen.

24 Q So, can you --

25 A I don't know --

1 Q Sorry.

2 A -- the answer.

3 Q So can you provide us with any assurances that in the
4 next 20 years you will not exceed the load of 20 or 30 MVA
5 along the proposed 138 kV line?

6 A I can't speak to assurances. Homer Zucconi, I think,
7 already answered that question yesterday and if you want to
8 redirect that to Homer.

9 Q So are you saying that there is a chance that such a
10 change will happen?

11 A I'm not saying. I don't know. I'm saying I don't
12 know.

13 MR. KALINSKI: Thank you. Thank you, Your
14 Honor. That's all of my questions.

15 JUDGE NENE: Mr. Lapets is not here. Mr. --
16 Dr. Janosko is not here. Ms. Zaun, do you have any
17 questions?

18 MS. ZAUN: I do, and Mr. Schmitt, you're going
19 to have to forgive me because they are not all in sequential
20 order.

21 THE WITNESS: Okay.

22 CROSS-EXAMINATION

23 BY MS. ZAUN:

24 Q I would like to begin with this question for my own
25 reference, because the question of right-of-way continues to

1 come up and I have heard right-of-way from the center line,
2 I have heard unlimited and then I have heard limited to
3 property.

4 So, given the four scenarios that the GAI said were
5 environmentally suitable, could you please explain to me the
6 current right-of-way that you have for Route A, for Route C,
7 for E-1 and E. And if we could begin with Route A, if you
8 could explain that to me.

9 A Route A we are on the roads by road permit. Does
10 that answer A?

11 Q Well, with road permit then that means that with the
12 permit, that permits you to do what? You have permission to
13 do --

14 A To build poles on the right-of-way.

15 Q And how large is the right-of-way? That is my
16 question.

17 A On Wildwood Road its 50 and 45 and 33.

18 Q And when you say that its 50, would that be the 25
19 feet on each side?

20 A No, the road itself has a 50 foot.

21 Q From the center line of the road --

22 A 25.

23 Q -- 25 on each side?

24 A Yes.

25 Q So you have permission to build within that 25 feet;

1 is that correct?

2 A Correct.

3 Q And then along with that do you have that same 25
4 feet permission to -- I think I used the word maintain the
5 area under that, or do you have permission to go beyond that
6 25 feet to maintain?

7 A We do not have any rights to go beyond the road
8 right-of-way.

9 Q Okay. So its 25 feet on each side of the center
10 line?

11 A Where its a 50 foot right-of-way.

12 Q Where it is a 50 foot right-of-way. And that is on
13 Wildwood Road?

14 A Wildwood has 50, 45 and 33 and those rights would not
15 be permanent. If the road is widened, we would have to
16 relocate our line.

17 Q Okay. Or could that be renegotiated, a larger
18 right-of-way or --

19 A Well, if the --

20 Q If the road is widened, I understand. Okay. I
21 understand. And for the rest of Route A that would not be
22 on Wildwood Road?

23 A I'm not sure what the road right-of-way width is on
24 Route 8 of Route A.

25 Q Okay. For Route C, along the railroad, what is the

1 current situation of that regarding right-of-way?

2 A Currently we have no rights at all.

3 Q Okay.

4 A We would have to negotiate a license agreement.

5 Q Okay. In negotiating a license agreement, could you
6 give me some information on what you would hope to agree
7 upon with the railroad; what would you -- what would be
8 acceptable to Duquesne Light?

9 A Well, with a license agreement, the railroad has the
10 right with a 30 day notice to us to force us to remove our
11 line.

12 Q Do they have to give justifiable cause?

13 A They have to relocate or add another track.

14 Q With your agreement, what type of right-of-way would
15 you hope to have with the railroad company as far as
16 establishing your pole and then maintaining the land around
17 it?

18 A I would hope to have a permanent right, but we cannot
19 get a permanent right.

20 Q I understand that. But as far as land use -- the
21 permanent right I understand. But in that permanent right,
22 permanent right to 50 feet or 100 feet or --

23 A Well, we're limited to the width of the railroad
24 right-of-way.

25 Q Which would be?

1 A We believe its 65 feet and we would have to build on
2 the edge of that right-of-way and we would not have the
3 right to clear beyond the right-of-way to adequately insure
4 the reliability of the line.

5 Also on Route C -- Paul Cass may speak to this -- due
6 to the terrain, there are vertical hillsides that would be
7 along side our pole line with large trees, I believe I said
8 this before --

9 Q You did.

10 A -- that if they fell --

11 Q You did. Well, that leads -- let's finish with the
12 other possibilities.

13 With Route -- with the Route E-1.

14 A Route E-1 would be on private property right-of-way
15 where it parallels Route E, but where it turns onto Ferguson
16 and Lindwood, it would be on road permit.

17 Q So, the right-of-way associated with Route E that you
18 currently have, what is the width of that right-of-way?

19 A That is a center line right-of-way.

20 Q And what does that mean exactly?

21 A It means there is no set width. It is -- we have the
22 right to do whatever is required on the property that the
23 right-of-way is on.

24 Q So, if I understand you correctly, if its a center
25 line right-of-way, you could go out 50 feet, 100 feet, 300

1 feet, its -- there is no end to the right-of-way?

2 A Legally. Only on the property.

3 Q On the property?

4 A The property would be the end.

5 Q So if blueprints show a 30 foot right-of-way from
6 center line, then that would not be correct?

7 A Which blueprint?

8 Q I was looking at blueprints that I have at home and
9 I'm not an expert at all on that issue, that is why I'm
10 asking you, so I understand.

11 A There is a 50 foot right-of-way in North Park -- I'm
12 sorry -- to which she's referring. Its the fourth drawing
13 in Exhibit TS 2.

14 Q Okay. I believe you on that because my --

15 A A 50 foot right-of-way through Wildwood Park.

16 Q A 50 foot right-of-way through Wildwood Park?

17 A Right.

18 Q But as far as the residential area -- and if you
19 could, either by looking at one of your graphs, if it would
20 be easier to look at one of my Exhibits, A through I,
21 showing Thompson Run Road, for example, what would be your
22 current right-of-way? You say it would be a central line?

23 A Central line, right.

24 Q And that would be a proposed Route E?

25 A Correct.

1 Q Along with the center line right-of-way you would
2 have a right to clear as much as you see fit?

3 A Correct.

4 Q No matter what?

5 A Correct.

6 Q So if my house is 47 feet from your pole, which it
7 is, my front porch, if I had a tree on the side of my house
8 equivalent with that front porch that was very tall, you may
9 deem it necessary to take out the tree if you thought it
10 would be a hazard to the line?

11 A Unlikely. Its very far from the line, its very
12 unlikely that that tree would be in the way.

13 Q But that would be in your right to do that?

14 A Legally we would have the right.

15 Q Legally you would have the right?

16 A Again, legal questions should be referred to the
17 legal witness.

18 Q Okay. Okay. I appreciate you sharing with me the
19 explanation for the rights-of-way -- rights-of-way because I
20 get confused on that.

21 Yesterday, the man with the GAI studies gave
22 testimony that E-1, E, C and A were deemed to be
23 environmentally suitable.

24 A Correct.

25 Q And today you stated that you spent a half day at the

1 location with Mr. Cass and another person from the GAI in
2 request to -- response to the Judge's request for an
3 estimate on line C and you said that line C would be
4 buildable, but it is not suitable.

5 A Reliable.

6 Q You said suitable.

7 A Well, I was referring to reliability.

8 Q Could you explain the difference to me.

9 A Well, if its not reliable, its not suitable. When I
10 say suitable --

11 JUDGE NENE: One at a time.

12 A -- I'm not referring to environmentally when I say
13 suitable. I was referring to the reliability.

14 Q Okay. So if it is reliable, then to you it is
15 suitable?

16 A Reliability speaking, it also has to be
17 environmentally acceptable an constructible.

18 Q So the GAI studies were solely to be environmentally
19 suitable, it had nothing to do with reliability?

20 A Correct.

21 Q If you look at the Exhibits that I showed -- and I
22 had Exhibits A through S, which --

23 A This book?

24 Q I'm not sure which book it is. Thank you. If you
25 look at A through I -- and I submitted those showing the

1 residential areas of the proposed line E. Looking through A
2 through I, would you agree that you see house after house
3 and it is a residential area?

4 A That's correct.

5 Q And then in looking at K through S -- and I'm
6 eliminating J because J is panned out a little bit further
7 and that includes part of the one commercial area, which is
8 Duncan Avenue -- if you look at K through S, would you agree
9 that it is also house after house and I will use the word
10 highly residential, only as it pertains to suburban areas,
11 I'm not comparing McCandless with Bloomfield, but for a
12 suburban area that would be the residential part of proposed
13 E; is that correct, that all of that is, in fact,
14 residential?

15 A I can't comment as to the study, but, yes, there are
16 homes there. It is residential.

17 Q Early on you mentioned -- first of all, I do have a
18 question. When did you say that the proposed study was
19 amended from E-1 to E?

20 A I don't have the application.

21 MS. SESTAK: Your Honor --

22 JUDGE NENE: October. You filed it in
23 October.

24 MS. SESTAK: October 6 of 2005.

25 JUDGE NENE: The amended application was filed

1 in October.

2 MS. ZAUN: I thought I heard March this
3 morning. That's why I --

4 MS. SESTAK: If I can correct?

5 JUDGE NENE: Yes, you can.

6 MS. SESTAK: March is the date that Mr.
7 Schmitt testified that he became aware that written protests
8 had been filed with the Public Utility Commission, March of
9 2006.

10 BY MS. ZAUN:

11 Q In your mentioning early on reliability -- and you
12 were saying, of course, trees can cause outages and you said
13 the necessity of trimming them, would that also include
14 possible removal of trees?

15 A Yes, it would.

16 Q You said -- I believe you said within 100 foot you
17 have the right to maintain that and that there would be a
18 right-of-way 50 feet on each side?

19 A No. I said it was a center line right-of-way, so we
20 have the right to maintain it.

21 Q Okay. I had written -- what all is included in
22 maintenance?

23 A Tree trimming and checking the equipment, the
24 insulators, conductors.

25 Q And tree removal?

1 A Tree removal.

2 Q You said that you did a -- did you do a cost estimate
3 for Route C?

4 A There is a cost estimate for Route C.

5 Q Are we going to find out how that -- later on from
6 someone else how that differs?

7 A Mr. Paul Cass.

8 Q Mr. Paul Cass. Did you also do a cost estimate for
9 Route A?

10 A We did a cost estimate for the application, yes.

11 Q Not recently?

12 A Not recently.

13 Q That has already been done?

14 A Yes.

15 Q I'm only asking that --

16 MS. ZAUN: And, Your Honor, excuse me, if
17 in my notes from the Ross evening meetings, I thought that
18 you had asked for cost estimates and time lines for both and
19 A and c.

20 JUDGE NENE: I did, and counsel said that they
21 have them.

22 MS. ZAUN: They have them. Okay. Thank you.

23 MS. SESTAK: Your Honor, I don't believe that
24 -- at one point I believe that you may have mentioned Route
25 A, but at the end of the hearing when you directed Duquesne

1 Light Company to provide a cost estimate, I believe it was
2 limited to Route C.

3 JUDGE NENE: Unfortunately, I think I was
4 reviewing the transcript, that it was. Do you have anything
5 on A?

6 MS. ZAUN: Excuse me, Your Honor, with my
7 notes that I have is that you had asked for cost estimates
8 and time lines for the alternate routes.

9 JUDGE NENE: No, I didn't --

10 MS. ZAUN: And then you did, you did mention
11 Route C.

12 JUDGE NENE: I believe he can comment on Route
13 A, as far as costs.

14 BY MS. ZAUN:

15 Q You mentioned that some poles would need anchored?

16 A Yes.

17 Q That would be where you have a bend in the road or
18 what else is there for an anchor? You mentioned a couple
19 reasons why an anchor would be necessary.

20 A It depends on the pole strength there, but
21 occasionally if you put all three phase conductors on one
22 side of the pole, that would tend to pull the pole over and
23 sometimes you would put an anchor in.

24 Q You mentioned to Mr. Kalinski that the new poles will
25 probably be 80 to 90 feet?

1 A No.

2 Q I'm saying that only because you were saying that the
3 current pole is 43 feet and that the new ones were 50
4 percent larger.

5 A The new pole would be 50 percent larger.

6 Q About 70 feet?

7 A About 65 feet.

8 Q Sixty-five feet.

9 A There is confusion. When we talk about poles, we use
10 the total pole length. Its a 75 foot pole.

11 Q Sixty-five above ground?

12 JUDGE NENE: We can only take down one person
13 at a time. You're both talking at the same time.

14 BY MS. ZAUN:

15 Q Given the height of the proposed new poles, can you
16 give me an idea of the size of the anchors, what they would
17 be and how much footage or ground is necessary in which to
18 place those anchors?

19 A You mean how far from the pole would the anchor be?

20 Q Yes.

21 A I believe I would refer that to Mr. Paul Cass.

22 Q Paul Cass. Just a few more. Would you please
23 explain to me, when you said that 30 feet from wind blown
24 conductors that is what the safety required.

25 A That is the National Electric Safety Code that

1 requires that you have clearance to the conductor under wind
2 conditions.

3 Q Thirty feet from any and all structures?

4 A Thirty feet is not the code clearance number. For
5 138 it is 9.6 feet.

6 Q You had mentioned 30 feet, that's why --

7 A Somebody else brought that number up.

8 Q I believe you said 30 feet from --

9 A I believe Mr. Kalinski brought up the 30 foot. That
10 is not --

11 Q I have just one last question. Does Duquesne Light
12 -- does Duquesne Light follow prudence avoidance in
13 establishing a line and certainly given the percentage of
14 residences on a given route, or are you not the person to
15 can?

16 A I can't answer the question. I don't know.

17 Q Do you know of someone who could answer?

18 A I'm unsure what it means, so I don't know who could
19 answer that.

20 MS. ZAUN: Okay. Thank you. I have no more
21 questions.

22 JUDGE NENE: Mr. Krist is not here. Do you
23 have any Redirect?

24 MS. SESTAK: Yes, Your Honor, I do.

25 REDIRECT EXAMINATION

1 BY MS. SESTAK:

2 Q Mr. Cass, I have --

3 A Mr. Schmitt.

4 Q I'm sorry, Mr. Schmitt, Mr. Cass is here.

5 MS. SESTAK: May I see the book that --

6 MR. NYPAVER: You want the page?

7 MS. SESTAK: -- that Mr. Schmitt was reading
8 from. No, I just want to --

9 MR. NYPAVER: Use the book?

10 MS. SESTAK: Yes.

11 BY MS. SESTAK:

12 Q Mr. Schmitt, looking at this book, its titled
13 National Electric Safety Code Handbook, that conforms to the
14 2002 NESC.

15 Is this the National Electrical Safety Code itself?

16 A No.

17 Q What is this?

18 A That is a further explanation of the Code.

19 Q Thank you. Now, you testified that you had
20 established an estimate of the cost of Route E; is that
21 correct?

22 A Correct.

23 Q Is that the \$2.9 million cost that is contained in
24 Duquesne Light Company's Amended Application, Paragraph 22?

25 A Correct.

1 Q Do you have anything else you would like to say to
2 clarify anything you have said in answer to any questions
3 that have been asked of you here today?

4 A No.

5 MS. SESTAK: I have no further questions.

6 JUDGE NENE: Thank you. Does anybody want to
7 Recross on the issues of the National Safety Code or Route E
8 costs?

9 MS. ZAUN: May I ask one question, Your Honor?

10 JUDGE NENE: Ms. Zaun.

11 RE-CROSS-EXAMINATION

12 BY MS. ZAUN:

13 Q If Mr. Schmitt is giving Route E costs, are you also
14 able to give the costs of the other proposed routes, or are
15 you not --

16 A I'm not.

17 Q -- you are not giving the costs at this time?

18 A I'm not.

19 Q Who will give those costs?

20 A Paul Cass, of C and A.

21 MS. ZAUN: Thank you, Your Honor.

22 JUDGE NENE: Thank you. You're going to slow
23 down if you want to ask a question of this witness.

24 MR. KALINSKI: No. No.

25 JUDGE NENE: Let's let Mr. Schmitt step down

1 and you want to -- now, you know, I'm running the
2 proceedings here. Does it -- what does your question
3 pertain to?

4 MR. KALINSKI: About the sequence of the
5 witness data presentation. I was hoping --

6 JUDGE NENE: We'll go off the Record for this.

7 (Discussion off the Record).

8 (Thereupon, a recess was taken).

9 JUDGE NENE: Back on the Record after a
10 morning break and we will continue with -- do you have
11 another witness, Ms. Sestak?

12 MS. SESTAK: Yes, Your Honor. I have four
13 additional witnesses. We have been asked to reserve the
14 testimony of Dr. Bailey pending the arrival of Dr. Janosko.
15 I have Paul Cass, whose testimony is likely to be very
16 protracted because he seems to be the person that everyone
17 has said, ask Paul Cass.

18 I also have two witnesses who are likely to have
19 shorter testimony who I could present while we await the
20 arrival of Dr. Janosko. So I would like to propose that I
21 present those two shorter witnesses.

22 JUDGE NENE: Very well. That testimony would
23 not have been predistributed?

24 MS. SESTAK: Right. That is not prewritten
25 testimony. This would be testimony in response to matters

1 that arose at the public input hearing and through requests
2 from yourself.

3 JUDGE NENE: Right. But I want to comment on
4 that, too. Mr. Lapets made a point that indicated at the
5 conclusion of yesterday's hearing that he didn't think it
6 was fair that Duquesne Light was producing testimony from
7 witnesses who had not filed or submitted prewritten
8 testimony and I indicated to Mr. Lapets -- and I'll put it
9 on the Record now -- that rebuttal testimony is perfectly
10 proper and that one party was -- found themselves surprised
11 by testimony and that they're entitled to an opportunity to
12 rebut something that they didn't anticipate and that's why
13 we are allowing these witnesses that you are calling now as
14 rebuttal witnesses.

15 MS. SESTAK: Thank you.

16 JUDGE NENE: Your first witness is?

17 MS. SESTAK: I call Andrew Berchin.

18 JUDGE NENE: Were you sworn, Mr. Berchin?

19 MR. BERCHIN: Yes, sir. Yesterday.

20 JUDGE NENE: Yes.

21 ANDREW D. BERCHIN,
22 having been previously duly cautioned and sworn, testified
23 as follows:

24 DIRECT EXAMINATION

25 BY MS. SESTAK:

1 Q Mr. Berchin, would you please state your name for the
2 Record and spell your last name for the benefit of the Court
3 Reporter.

4 A Andrew, A-n-d-r-e-w, D. Berchin, B-e-r-c-h-i-n.

5 Q By whom are you employed?

6 A Duquesne Light.

7 Q How long have you worked for Duquesne Light?

8 A I have worked for Duquesne Light for two years and as
9 a subcontractor for Duquesne Light for five years.

10 Q What is your present job title?

11 A Supervisor of Forestry.

12 Q And very briefly, what are your duties in that
13 position?

14 A Management of vegetation in and around Duquesne
15 Light's transmission and distribution electric lines.

16 Q Do you have any specialized education or training for
17 that position?

18 A I have a degree in environmental conservation from
19 California University, a BS degree, and I also am a
20 certified arborist, a-r-b-o-r-i-s-t, and a certified utility
21 arborist.

22 Q Have you had occasion during the course of your
23 employment to become familiar with vegetation issues along
24 the route that has been labeled Route E on the map?

25 A Yes.

1 Q Have you become familiar with vegetation issues on
2 any of the other routes?

3 A No.

4 Q At the public input hearing Barbara Zaun testified
5 that she had been told that the trees would -- along Route E
6 would have to be cleared within the right-of-way.

7 Is that your understanding of Duquesne Light's
8 intentions along Route E?

9 A Along Route E, from what I understand, there is an
10 existing right-of-way and that it is not Duquesne Light's
11 intention to remove all of the trees along that
12 right-of-way.

13 Q Will Duquesne Light Company be trimming or removing
14 any of the trees along that right-of-way?

15 A In a typical situation where we have a new line
16 installation, we review all of the properties on that line
17 and then we review every single tree on that line and we
18 make our determinations whether the trees will be removed or
19 trimmed after that determination.

20 Q Would it be fair to say that its a tree by tree
21 assessment?

22 A That's an absolutely true statement, its a tree by
23 tree assessment.

24 Q Do property owners have any input into that?

25 A Yes, they do. Normally in this case we have myself

1 or a person that works -- there's four foresters with
2 Duquesne Light and we will review the line with our
3 subcontractor that's going to perform the tree work and then
4 we do contact each individual property owner and review the
5 trees that are on that property.

6 Q Does Duquesne Light Company attempt to work with
7 property owners about vegetation removal?

8 A Yes.

9 JUDGE NENE: Would you keep your voice up.
10 Some people are straining.

11 MS. SESTAK: I apologize.

12 BY MS. SESTAK:

13 Q The question was, does Duquesne Light Company attempt
14 to work with property owners about vegetation removal?

15 A Yes.

16 MS. SESTAK: I have no further questions.

17 JUDGE NENE: Very good. Before we ask the
18 protestants, what sort of input do the affected tree owners
19 -- property owners have? Do you discuss it with them?

20 THE WITNESS: Uh-huh.

21 JUDGE NENE: And what kind of a -- can they
22 affect your decision?

23 THE WITNESS: Yes. Property owners do affect
24 decisions. We review the trees on their property. We look
25 for defects, we -- in the trees that are existing, we look

1 for the amount of clearance that is needed and then we relay
2 that to the property owners and in some cases where trees
3 are directly underneath the lines, we do give the option of
4 trimming and/or removing that tree.

5 So, its a working process with the property owner.

6 JUDGE NENE: Just as a general rule, we had a
7 photograph here of Ringeisen Road -- and its not an Exhibit,
8 but it indicates on the right-hand side the pole at
9 approximately the level -- the height that now exists and on
10 the left-hand side of the road the poles as they might
11 appear after this project was completed if it were
12 completed.

13 THE WITNESS: Yes.

14 JUDGE NENE: I'm wondering if the poles were
15 increased to the size of the 138 kV requirements, would
16 vegetation in some instances be allowed to grow higher than
17 they are over here on the right-hand side?

18 THE WITNESS: On the right-hand side?

19 JUDGE NENE: Yes.

20 THE WITNESS: Such as the large evergreen
21 that's on the right-hand side, that's pretty much the
22 highest tree there. Would that be allowed to stay?

23 JUDGE NENE: No, I mean some trees over here
24 existing under the present configuration, they might be
25 trimmed to a certain height. If the poles were increased,

1 would those trees be allowed to grow to a larger height or
2 would they be required to -- the clearance be required
3 different?

4 THE WITNESS: Additional clearances would be
5 needed for -- as you can see, there's like a white
6 transformer where the -- above the second pole down.

7 JUDGE NENE: Yes.

8 THE WITNESS: Additional clearances would be
9 needed on those evergreen trees where that existing line
10 would be and some of the trees that are near to that may
11 need to be crown reduced.

12 JUDGE NENE: Crown reduced and trimmed back in
13 the line?

14 THE WITNESS: Back from the side, yes.

15 JUDGE NENE: Okay. Mr. Nypaver, do you have
16 questions?

17 CROSS-EXAMINATION

18 BY MR. NYPAVER:

19 Q How low below the line would the tree have to be
20 cleared? You said crown it -- how low would it be -- or I
21 should say how high would it be?

22 A What you first have to look at is the species of the
23 tree. Different tree species grow at a different rate. So,
24 what we usually do is look at what type of species. Your
25 faster growing tree species would be your silver maples,

1 certain types of elms, poplar trees. They grow very
2 quickly.

3 Your spruce trees grow somewhat of a medium slow
4 rate, but normally if we would crown reduce a tree in that
5 case, if you would like me to use that case in point, if you
6 would say hypothetically, if the spruce trees were moved
7 underneath of the white transformer that you can see we
8 would still have to crown reduce those trees down below,
9 there would be a neutral line that's right underneath of the
10 transformer which would already be crown reduced because of
11 the 4 kV. We would have to trim it below the 4 kV line.

12 JUDGE NENE: Trim it or --

13 THE WITNESS: Crown reduction, yes.

14 JUDGE NENE: In that case you would --

15 THE WITNESS: If the tree was directly
16 underneath or off to the side to the point where the newer
17 conductor from the new transmission line, if the tree would
18 be right against that point, it would have to be crown
19 reduced and lowered. Now, if that's -- I might be able to
20 draw it easier.

21 JUDGE NENE: No, I think I understand. But in
22 some cases that would be the end of the tree?

23 THE WITNESS: In some cases. But in some of
24 those cases we do give the option to the property owner to
25 remove that tree if they so wish, if its going to be

1 drastically trimmed.

2 BY MR. NYPAVER:

3 Q You would have to clear the phases. Would you have
4 to clear the ground wire -- the wire that was below that?

5 A Yes. We do keep that neutral line also clear. Yes.

6 Q So you would have to clear at least down to the
7 neutral wire, then?

8 A Below the neutral wire.

9 Q If the tree was in the falling distance of the
10 neutral, which is lower than the neutral, would you?

11 A Define falling distance.

12 Q The tree fell, it falls and misses the mast, but hits
13 the neutral wire, would it have to be cleared or reduced?

14 A If you look on the opposite side of the road, you
15 have a line of trees. We would just investigate those trees
16 along that area just to make sure there are no hazardous
17 defects, maybe one has got hit by a car. Those trees are
18 healthy trees. As long as they are healthy on the
19 right-hand side and don't have an ability to have a
20 dangerous spot in those trees to fall over and hit the line,
21 then we normally do not address trees that are healthy that
22 would be on the opposite side of the road, in that case,
23 right there.

24 Q If there was a slope going down and the line was low
25 as it was coming down -- I guess the instance they mentioned

1 there are a few places that it can happen.

2 A Right.

3 Q Would you actually clear beyond the 50 foot?

4 A Beyond the -- in some cases on slopes there are trees
5 per se up at the top of the hill, on a slope, and if that
6 tree is deemed hazardous or appears to have hard leaning
7 that it may uproot, yes, we do address trees.

8 Q But if its a healthy tree?

9 A If its a healthy tree and it does not overhang the
10 line, then we would attempt to leave that tree.

11 MR. NYPAVER: That's all.

12 JUDGE NENE: Mrs. Nypaver.

13 CROSS-EXAMINATION

14 BY MRS. NYPAVER:

15 Q You said that you discussed the trimming or removal
16 of trees with the homeowner?

17 A Yes.

18 Q Do you do that with existing poles as well or just
19 with newly installed poles?

20 A No, we do that with all of our -- every year we do so
21 many miles per year and we notify all of the customers and
22 we are mandated by the PUC to notify customers about prior
23 pruning.

24 Q Do you notify in writing?

25 A We mostly leave door hangers, writing, and it will

1 have different information, that we need to trim your tree,
2 we need to remove your tree and there's also a box that if
3 the property owner wants to discuss any of the vegetation
4 activities on that property, that they can check that box
5 and we will get back to them.

6 MRS. NYPAVER: Thank you. No further
7 questions.

8 JUDGE NENE: Thank you. Mr. Kalinski.

9 MR. KALINSKI: Yes, I do have one question.

10 CROSS-EXAMINATION

11 BY MR. KALINSKI:

12 Q You mentioned that you would be discussing with
13 property owners each individual tree. I'm a property owner
14 of some of the trees on actually this Exhibit. Can we
15 discuss it now what would be options for some of those trees
16 presented on the -- may I approach?

17 JUDGE NENE: I don't know whether that's
18 proper. I think you could discuss that off the Record. I
19 don't know that that's of general --

20 MR. KALINSKI: It was just an example.

21 THE WITNESS: Its very hard to do with a
22 picture. You can get a generalized idea but one of those
23 trees might have a big hole or cavity in it and might be
24 dangerous. I can't tell from a picture.

25 JUDGE NENE: I think it might be more

1 appropriate if you discussed that off the Record.

2 MR. KALINSKI: Okay. I was going to use it as
3 an example. Withdraw my question then.

4 JUDGE NENE: Okay. Thank you. Ms. Zaun?

5 MS. ZAUN: Yes.

6 CROSS-EXAMINATION

7 BY MS. ZAUN:

8 Q Mr. Berchin, what is the height of the neutral wire?

9 A I have to defer that to one of the engineers for the
10 actual height.

11 Q Okay. I have pictures of -- and they are of my home,
12 but they are typical of the homes in the area of Thompson
13 Run where I live and I was wondering, given your expertise
14 as an arborist, I was told yesterday from the man from GAI
15 that I should ask you concerning the proximity of these
16 trees.

17 MS. ZAUN: So I would like to offer
18 a few of these.

19 JUDGE NENE: Well, I don't know why. That's
20 pretty much the same thing that Mr. Kalinski --

21 MS. ZAUN: Its very similar to what he asked,
22 yes.

23 JUDGE NENE: I don't know that we want to get
24 into each specific -- I would prefer general questions
25 concerning the hypothetical situation and you can discuss
your individual cases maybe with -- I mean, Duquesne has

1 indicated that they would be glad to offer witnesses or some
2 assistance. It might be so specific to your case that it
3 wouldn't -- let's try to keep the questions general.

4 MS. ZAUN: Okay. I will try to ask then just
5 one general question.

6 BY MS. ZAUN:

7 Q If there are pin oak trees six feet from telephone
8 poles, lower branches are somewhat coming through the
9 existing lines, pin oaks being approximately 30 feet tall.

10 A I'm going to write this down as you tell me.

11 Q I'm guessing on the height, maybe they are larger
12 than that 40 feet, but you are familiar with pin oak trees
13 and how they look?

14 If there are pin oak trees six feet from power lines,
15 what would you suggest being done to those trees? These are
16 established pin oaks that are 40 year old trees, 42 year old
17 trees.

18 A Forty-two years old?

19 Q Yes.

20 A Well, No. 1, pin oak trees of that age should be a
21 little bit taller. I'm just going on -- you have to start
22 with the health of the trees first and then go from there.

23 Normal pin oak trees, they max out around 100, 110.
24 Your trees seem to be growing a little slower.

25 Q That's because they are --

1 JUDGE NENE: One at a time, please.

2 A So they have been trimmed in the past?

3 Q They have been trimmed modestly, yes.

4 A You want to know if these trees will be --

5 Q Eliminated.

6 A -- eliminated?

7 Q Yes.

8 A Its hard to say right here without actually seeing
9 the trees.

10 Q Given your expertise, given the proximity of six
11 feet, can you make any general conclusions about a certain
12 footage of safety from the pole, from which you as an
13 arborist --

14 JUDGE NENE: What is six feet? What is six
15 feet, the center of the trunk?

16 MS. ZAUN: From the pole to the tree or from
17 the wire to the tree trunk.

18 JUDGE NENE: So that would put the branches
19 under the wire?

20 MS. ZAUN: Some of the branches.

21 A Right now, when they finish trimming your tree just
22 for the lines that are there, does it have a slope back
23 appearance or a benched appearance like this?

24 Q Some have a bench appearance, some have been sloped,
25 so I think to your use your word, crowned.

1 A Just getting -- or what would need to be done there
2 could be two approaches, either to crown reduce the tree
3 totally because of the new lines that may be coming in --
4 and this is purely subjective --

5 Q I understand.

6 A -- because its hard to explain to someone what is
7 actually going to happen without looking at it. We may be
8 able to crown reduce your tree so that the branches that are
9 on the upper side of the higher bench, crown reduce those
10 down, or in cases if the tree is going to be really
11 disfigured and, you know, its not going to be a good tree to
12 have in that location, we would look to removal of that tree
13 and sometimes in those cases -- and what we have done in the
14 past with another similar line that we recently did, we
15 upgraded a line -- in cases -- I don't know if that's going
16 to be the case for this line -- but we have offerred tree
17 vouchers for people for trees that we have removed. We have
18 replaced them with one by one. If we remove a tree we'll
19 give you one tree voucher and that was to go -- and you can
20 go and purchase a low growing tree species to replace it
21 with that would hopefully grow only up to 20, 25 feet. So
22 hopefully we would never even have to prune that tree for
23 the distribution line. So if ever it would need pruning, it
24 would need very minimal pruning and you wouldn't lose the
25 natural shade of the tree.

1 That's what Duquesne Light would like to have, is the
2 small growing trees instead of the really tall growing
3 trees. Every time we have to prune them, they look out of
4 shape and out of whack because we are trimming for just the
5 lines.

6 I hope I'm answering somewhat your question.

7 Q You're answering very clearly. How does the crowning
8 of an oak tree, for example -- because most of the trees
9 along Thompson Run are oak trees -- how does the crowning
10 affect the health? I have been told some can be
11 successfully crowned, some they recommend not crowning.

12 A I can give you -- I know of a few cases where we have
13 problems with crown reduced pin oaks. They're crown reduced
14 about five feet below the neutral line, as we discussed in
15 the picture there, and when you crown reduce those trees it
16 invigorates the whole top of the tree to put on plush new
17 growth and they actually grow really, really well and they
18 are very invigorated. They are almost considered a cycle
19 busting tree. What a cycle busting tree is, they grow
20 faster than the normal trees on a circuit.

21 Say you have a four year circuit, that tree is
22 getting up into the primary wires before that time, maybe
23 three years. They do grow very vigorously probably 90
24 percent of the time, if they are declining or something
25 wrong with the root system that they won't respond well, but

1 we do have a lot of problematic pin oak trees that are crown
2 reduced along the line.

3 Q And then you would have to --

4 A We would have to trim them every four to five years.

5 Q As far as vouchers for new trees, in your opinion, it
6 would take 10, 15 years for a new tree to become a full
7 grown tree if the new tree -- and I'm not naming the
8 species, you would have a better idea of a tree that would
9 go to a height of 25 feet -- that takes time.

10 A Yes, it does.

11 Q One does not go out and buy a 25 foot tree.

12 A No. The normal trees that I see people getting with
13 our tree vouchers, these are trees that are about eight foot
14 in height and about an inch-and-a-half BHD, that's breast
15 height diameter, take a measurement right here. Those are
16 about the biggest tree a home owner can plant without heavy
17 equipment.

18 Q And how long would an eight foot tree take to become
19 full grown?

20 A It takes a couple -- you know, over five years, five
21 to ten years. A lot of people are getting a lot of the
22 ornamental crab apples and, you know, trees that as soon as
23 you plant them, you're going to get something back, you're
24 going to get some flowers or fruit for the birds. That's
25 what they're looking for. Its something that adds a little

1 bit more because you can actually get some flowering species
2 and species that are beneficial to the property.

3 Q Would you agree there's a very different appearance
4 between a lengthy row of full grown oaks and a lengthy row
5 of eight foot trees?

6 A Yes. That's definitely a different.

7 MS. ZAUN: I don't have any other questions.
8 I thank you.

9 JUDGE NENE: Thank you, Ms. Zaun. Do you have
10 any Redirect, Ms. Sestak?

11 MS. SESTAK: No, Your Honor.

12 JUDGE NENE: Thank you, Mr. Berchin.

13 MR. NYPAVER: Your Honor, Mr. Moorehead.

14 JUDGE NENE: Mr. Moorehead, questions?

15 MR. MOOREHEAD: Yes, I just had a couple. The
16 visualization, Duquesne Light has brought in pictures of the
17 after affect of these lines, but there are no -- I mean,
18 should they be presented into evidence if they don't show
19 the true affect of those lines, given that those trees will
20 probably be, as you indicated, be cut, or is that -- I'm
21 just asking the question.

22 Is it proper for those to be in evidence?

23 JUDGE NENE: They are not in evidence.

24 MR. MOOREHEAD: Okay.

25 JUDGE NENE: They were used as guides, visual

1 guides to discuss different things.

2 CROSS-EXAMINATION

3 BY MR. MOOREHEAD:

4 Q Were cost estimates used in the tree trimming
5 process; were there cost estimates for the alternate routes
6 of A, B --

7 JUDGE NENE: Would you approach the table. We
8 are having difficulty making a record here.

9 MR. MOOREHEAD: Sure.

10 BY MR. MOOREHEAD:

11 Q I was just wondering whether cost estimates were
12 included for tree trimming, clearing maintenance on all the
13 proposed routes including E?

14 A I have to refer that to Tom Schmitt and Paul Cass. I
15 did not myself give them an estimate on the tree trimming,
16 so I don't know if --

17 JUDGE NENE: That's all. You have asked. We
18 are cross-examining this witness now.

19 MR. MOOREHEAD: Yes, I just wanted to know if
20 he had performed --

21 JUDGE NENE: He said no.

22 MR. MOOREHEAD: That's fine. I thought there
23 was reference that he had performed it on this route, on
24 Route E.

25 THE WITNESS: I was just familiar with the

1 route, that was all.

2 MR. MOOREHEAD: Okay.

3 BY MR. MOOREHEAD:

4 Q In your opinion, given the vegetation clearing that
5 would be required for this route, is it -- would you say
6 that this is more, less or the same concern with a 23
7 kilovolt line as a 138 kilovolt line?

8 A The question is --

9 Q In terms of --

10 A -- will we obtain more clearance with the 138 kV?

11 Q Yes.

12 A Yes.

13 Q Is there -- is that clearance outlined anywhere in
14 terms of what that means?

15 A Like I said, it depends on tree species, location of
16 the conductor, how fast the tree is going to grow, how fast
17 the tree is going to respond from pruning. Each tree is
18 going to be done individually. There's no set distance.

19 Q Okay. With the vegetation that grows along this
20 route and the trees that grow along this route, would you
21 say that this -- in your opinion -- would it be safer to
22 have this line along Route E versus Route C, a rail line, or
23 Route A, Route 8?

24 A I did not inspect all of the lines. The only thing I
25 reviewed was route -- I think that's E.

1 Q Okay.

2 A Is that E?

3 JUDGE NENE: E.

4 BY MR. MOOREHEAD:

5 Q Let me ask it a different way then. In general -- a
6 route such as route -- excuse me, Your Honor, A or C, which
7 is Route 8 -- such as Route 8, which is a major corridor
8 with no trees on it, would it be safer -- in your opinion is
9 it better to place this line or is there more of a risk in
10 placing a line that would be prone to knocking a phone wire
11 -- or a wire down on this route versus a route as I just
12 indicated such as Route 8 or any corridor that did not have
13 trees?

14 A Like I said, I didn't look at all of the routes.

15 Q Example -- I'm sorry, I didn't mean to interrupt you.

16 A Route 8, though, just from my experience, does have a
17 lot of trees on that, in that area, but that's --

18 Q Along the Route 8 corridor, the traffic corridor?

19 A Yes. We do have trees that are along Route 8, but
20 like I said, I didn't look at the whole route.

21 Q Okay.

22 A So I can't explain that route. What I can answer on
23 that question you're trying to ask me, is having a route
24 through a residential area more reliable than a route in a
25 nonresidential area?

1 Q Yes. Basically.

2 A Is the non-residential area a roadside right-of-way
3 such as E?

4 Q Uh-huh.

5 A So they're both roadside rights-of-way and they're
6 both -- its hard for me to differentiate between what you're
7 asking me.

8 Through a residential area, you're going to have a
9 variety of different trees that are in there. We can manage
10 those through selective pruning of those trees. On a less
11 dense populated right-of-way, that may be -- usually when
12 they're less dense, you have a higher tree density and its
13 harder to manage a higher tree density area because you do
14 have more trees.

15 Q Right.

16 A And that eventually gives you more trees that can hit
17 the line. If I had my choice to put a line between a
18 heavily treed roadside right-of-way or a residential area, I
19 would go for the residential area.

20 Q Heavily treed area or a residential area, you would
21 go for a residential area?

22 A Yes.

23 Q From a safety standpoint -- and again I know you're
24 not a safety expert -- but a corridor such as Route 8, you
25 have said you're generally familiar with it, you haven't

1 inspected it, but is -- in your opinion would -- and you're
2 familiar with E generally -- are there guard rails along
3 Route E to protect the vegetation, the trees from being
4 struck by say a car to knock a line down?

5 A On Route E? That's a long portion of that roadway.
6 I know some on Thompson Run Road does have a guardrail and
7 then other portions further up don't have a guardrail.

8 Q So Thompson Run -- the highest traveled route of
9 Route E, I would think, would be Thompson Run, I would
10 venture to say?

11 A That's correct.

12 Q Are there guard rails along Route E for the most part
13 that would protect the vegetation that we're referring to,
14 are you aware?

15 A I can't say that I was looking for guard rails when I
16 was --

17 Q Okay.

18 A I'm sorry.

19 Q That's okay.

20 A I can't answer the question.

21 Q There aren't. I know the answer. There are not
22 guard rails. I live on Thompson Run Road and there are no
23 guard rails.

24 What I was really after, you have indicated its
25 better to place it through a residential area which has

1 varying degrees of trees or varying species of trees that
2 grow to different heights and, therefore, require greater
3 maintenance; correct?

4 A They do require greater maintenance, but what we do
5 when we do have areas with greater maintenance is we shorten
6 the time period that we go through that area on the cycle.

7 Q Okay. And just to confirm, the cost estimates would
8 be better addressed to some other individual and these cost
9 estimates will include items such as tree trimming; correct?

10 MS. SESTAK: Objection, Your Honor. This goes
11 beyond the scope of Direct.

12 JUDGE NENE: This witness --

13 BY MR. MOOREHEAD:

14 Q You also said you were a subcontractor?

15 A Yes, sir.

16 Q Are subcontractors hired for such as this?

17 A Such as?

18 Q Tree trimming maintenance.

19 A We do have subcontractors that do do our tree
20 trimming.

21 Q Are you responsible for oversight of those people?

22 A I am very responsible for the whole entire project.

23 Q Do you obtain quotes for those type of projects for
24 the subcontractor?

25 A Not me personally. That would be my Supervisor.

1 Q And would your Supervisor be involved in the quoting
2 or getting obtaining of quotes for clearing?

3 A Yes. Yes.

4 Q So then any cost estimates that would have been done,
5 you would have obtained them via a quote, meaning you or
6 your boss would have obtained a quote for items such as
7 that?

8 A Yes, sir.

9 Q Okay. Along -- I would assume then in order to make
10 a determination from a cost standpoint that all the routes
11 would be considered and they would have gone through you or
12 your supervisor?

13 MS. SESTAK: Objection, Your Honor. This
14 question assumes facts not in evidence and, in fact, are
15 contrary to evidence because Mr. Schmitt just testified that
16 no cost estimates on the other routes were performed until
17 we were requested to do so by Your Honor.

18 MR. MOOREHEAD: I just thought from the
19 subcontracting standpoint that he might have been involved.

20 JUDGE NENE: Okay. Its not --

21 MR. MOOREHEAD: He has not ordered any --

22 BY MR. MOOREHEAD:

23 Q There has been no subcontracting request for -- or
24 proposals submitted -- RFPs for tree trimming around Route E
25 or any of the other routes that you're aware of?

1 MS. SESTAK: Objection, Your Honor. This also
2 misstates the prior testimony.

3 JUDGE NENE: He asked if he was aware of and
4 he said, no, he is not aware of.

5 MS. SESTAK: I believe his prior testimony was
6 that he believed there may have been estimates on Route E
7 that may have gone to his Supervisor, but the way the
8 question was stated, it asked whether there were any at all
9 on any routes including E. I believe the question has been
10 asked in several different ways solely in an attempt to
11 confuse the witness and obtain statements that are not
12 accurate.

13 JUDGE NENE: Well, he answered it that he
14 wasn't aware of any.

15 MR. MOOREHEAD: Okay. That's all I have.

16 JUDGE NENE: Thank you Mr. Berchin.

17 THE WITNESS: Thank you.

18 JUDGE NENE: Mr. Moorehead, I have been
19 informed that your protest has been received in Harrisburg.
20 It hasn't been docketed yet.

21 MR. MOOREHEAD: Thank you.

22 JUDGE NENE: There are a number of others, six
23 that I'm going to hand you, Ms. Sestak.

24 MS. SESTAK: Thank you, Your Honor.

25 JUDGE NENE: We have about -- maybe we can get

1 one more witness before lunch.

2 MS. SESTAK: Okay, Your Honor.

3 JUDGE NENE: All right.

4 MS. SESTAK: I call Joann Noble.

5 JUDGE NENE: Have you been sworn, Ms. Noble?

6 MS. NOBLE: I have.

7 JOANN NOBLE CHODER,

8 having been previously duly cautioned and sworn, testified
9 as follows:

10 DIRECT EXAMINATION

11 BY MS. SESTAK:

12 Q Would you please state your full name and spell it
13 for the Court Reporter.

14 A Its Joann J-o-a-n-n, Noble, N-o-b-l-e, Choder,
15 C-h-o-d-e-r, but my nickname is Jody, J-o-d-y.

16 Q By whom are you employed?

17 A Duquesne Light.

18 Q How long have you worked for Duquesne Light?

19 A I have worked there approximately three years as a
20 full-time employee and prior to that time I worked there for
21 approximately six months as a contract attorney.

22 Q Okay. What is your present job title?

23 A I am Assistant General Counsel. .

24 Q Very briefly, what are your job duties in that
25 position?

1 A I'm a general corporate lawyer, I do contracts, I'm
2 responsible for real estate, including right-of-way issues,
3 I also do a little bit of acquisition and divestiture work.

4 Q And do you have any specialized education or training
5 for that position?

6 A I have a law degree from the Duquesne University, I
7 have a JD, and I have an undergrad from the University of
8 Pittsburgh, I have a Bachelor of Science degree in business.

9 Q Are you licensed to practice law in the State of
10 Pennsylvania?

11 A I am.

12 Q Ms. Noble, during the course of your employment did
13 you become familiar with matters related to the Wildwood
14 Project?

15 A I did.

16 Q There was a public input hearing held on this matter,
17 three sessions, and a gentleman by the name of Jim Balik,
18 B-a-l-i-k, testified that he spoke with CSX which denied any
19 contact with Duquesne Light Company.

20 To the best of your knowledge, had Duquesne Light
21 Company contacted CSX Railroad to discuss the possibility of
22 acquiring a license on Route C?

23 A Duquesne Light did. I personally had conversations
24 with Leah Wilder at CSX -- I think she's no longer with them
25 -- and my old E mails indicate that I had conversations in

1 approximately the first quarter of '04 and at that point CSX
2 advised that they would not give us permanent rights. I
3 asked if we would purchase property or get permanent rights
4 and CSX advised that they would not do so.

5 Q What type of right could Duquesne Light Company
6 obtain from CSX?

7 A They would grant us a license agreement and the
8 license agreement would be subject to relocation in the
9 event they decided to expand the railroad corridor.

10 So they would give us a license, it would be a
11 perpetual license agreement. They would work with us to,
12 you know, locate the facilities on the right-of-way, but we
13 would be subject to a 30 day relocation notice.

14 Q Okay. And a 30 day relocation notice, would that
15 mean that this line would no longer be able to operate on
16 the railroad after 30 days?

17 A Correct. We would have to find some place else to
18 go.

19 Q Now, Mr. Balik also testified that it was his
20 understanding that CSX was about to abandon the railroad and
21 that its likely to be abandoned in the near future and
22 converted to Rails to Trails.

23 Do you have any knowledge of this matter?

24 A In response to those comments, I had some additional
25 discussions with both CSX and the Allegheny Valley Railroad.

1 The Allegheny Railroad is a short line railroad that's
2 currently operating in that Route 8 corridor. Allegheny
3 Valley has a 20 year lease with CSX for the corridor. I
4 believe they have 17 years left on the lease and Allegheny
5 Valley Railroad assures me that they have no plans to
6 abandon the corridor.

7 When I spoke with CSX, I asked CSX, again in response
8 to the public hearing, I went back to CSX and again asked
9 them if they would be interested or if they would sell us
10 the property. They indicated that they would not. They are
11 -- the railroad company is selling non-operating railroad
12 corridors. So then we had a discussion about if CSX wasn't
13 operating in that railroad corridor, is it still considered
14 an active railroad corridor, because Allegheny Valley is
15 there and CSX indicated, yes, it was an active rail
16 corridor, therefore, they would not be interested in selling
17 it.

18 Q Are you aware of any plans to perform work on that
19 particular railroad corridor or install an additional track
20 on that particular rail corridor?

21 A Allegheny Valley, as I mentioned, is currently
22 leasing the line from CSX. Allegheny Valley received a \$3.4
23 million grant from the federal government to upgrade the
24 track. They had had some problems in -- I think that was
25 September of '03, I'm not quite sure of the year when we had

1 the flooding in Etna and Millvale and the track was washed
2 out there, so they're planning to upgrade and rehab the
3 track.

4 They're planning to rehab the track in place, but my
5 understanding is that that's a two rail corridor. Currently
6 there's only one rail there and both CSX and Allegheny
7 Valley Railroad have advised that they wouldn't abandon the
8 right to have the second track there and that they would
9 keep that option open so that at some future point they
10 could install a second parallel track in the corridor.

11 Q Thank you. Did you obtain a cost of acquiring a
12 license from CSX Railroad?

13 A Yes. They would -- the current fee is \$40.00 a
14 linear foot and that's for -- that would be for a
15 longitudinal line, anything under a mile is at \$40.00 a
16 lineal foot. Anything over a mile they would come out and
17 do an assessment and they would cost it accordingly for
18 anything longer than a mile.

19 Q Are you aware of any specific rules that CSX would
20 impose on a utility with a parallel line on a railroad
21 right-of-way?

22 A Yes. They have, on the Internet, they have their
23 wire line crossing guidelines and for -- railroads don't
24 like to do the parallel kind of sitings because it impacts
25 more of their facilities and, you know, they really

1 discourage utilities from doing a parallel siting and they
2 do have more stringent rules for a parallel siting than they
3 do with like a crossing, if we would do a crossing just
4 across a track generally.

5 Q Do you have copies of any of that information with
6 you?

7 A I do.

8 Q We need two for the Court Reporter and one for each
9 of these individuals.

10 JUDGE NENE: Should this be marked?

11 MS. SESTAK: Yes, Your Honor. I ask that this
12 be marked JNC 1.

13 JUDGE NENE: So marked.

14 (Thereupon, the document was marked
15 as Exhibit JNC 1 for
16 identification).

17 BY MS. SESTAK:

18 Q Ms. Noble, what is this document?

19 A This is a copy of -- well, its selected pages from
20 CSX Wire and Installation Guidelines off their Web site.

21 Q Is there any particular portion of this that relates
22 to your testimony here today?

23 A If you take a look, I copied just the cover sheet so
24 you can generally see the wire line instructions and then if
25 you take a look at the second page, Section 4, it talks

1 about parallel occupancies and if you look at parallel
2 occupancies, that first paragraph, it talks about -- in the
3 second sentence, first paragraph -- parallel occupancy shall
4 only be constructed within the CSX right-of-way where there
5 is no other practicable alternative, and the underlining is
6 CSX underlining not my underlining.

7 Q And anything else?

8 A Also when you get further back, I have some of the
9 CSX design and construction standards for wire line
10 occupancies. Again, we have a lot of wire line occupancies
11 with the railroads, but generally they are at rail highway
12 crossings where you have a street crossing, a railroad
13 tracks and those rail highway crossings are governed by the
14 PUC and that's generally where the utilities run their
15 lines.

16 You can see in the wire line occupancy guidelines
17 here, page 6, above ground and area wire lines, paragraphs A
18 and C, talk about how some of these sitings need to be done.
19 It talks about -- in paragraph A it talks about poles and
20 towers should be located outside of the right-of-way and --
21 I'm sorry, if that's not possible, the side clearance to the
22 poles to the nearest track rail shall be not less than 25
23 feet.

24 So, in other words, if we're going to put a tower
25 there, we have to be -- if we can't be outside of the CSX

1 railroad right-of-way, then the closest we can get to their
2 track -- to the rail is 25 feet with our tower.

3 The second paragraph of note is paragraph C that
4 talks about wires and cables running longitudinally along
5 the CSX right-of-way shall be constructed as close to
6 property line as possible, except in cases where doing so
7 will interfere with the railroad operations, surface
8 drainage and soil stability.

9 So, in my conversation with CSX what they told us is
10 looking take the Route 8 corridor what they would want us to
11 do is put our poles on either side of the railroad
12 right-of-way corridor and my understanding is -- I mean, if
13 you're looking north up Route 8, on the right-hand side of
14 the corridor you have a stream, on the left-hand side where
15 it would be more beneficial to put our poles, you have a
16 steep cliff area and that was kind of the area that we were
17 talking about, possibly installing the poles along that
18 portion of the track.

19 Q You're speaking of Route C, the railroad corridor?

20 A Yes.

21 Q If Duquesne Light wanted to put this line here and
22 the PUC agreed, would the PUC have the right to grant
23 Duquesne Light a right to be here under the eminent domain
24 powers that are set forth in the Public Utility Code?

25 A No, because railroads are governed by federal law and

1 Duquesne Light and the PUC are state law and the federal
2 railroad regulations would trump our state property law and
3 our state PUC requirements.

4 Q Now, are you familiar with the right-of-way issues
5 concerning Route E?

6 A Route E is the preferred route? Yes.

7 Q Yes.

8 A Yes.

9 Q There's been some talk about the right-of-way running
10 very close to some homes on Shady Oak Circle. Are you
11 familiar with that situation?

12 A Yes.

13 Q What has been your involvement with that situation?

14 A In response to concerns and issues raised by the
15 homeowners, we looked at the Shady Oak Circle properties and
16 the rights-of-way that we had there and we decided that we
17 would offer the Shady Oak homeowners an option where we
18 would relocate our facilities from their currently existing
19 right-of-way to the back of the property provided we could
20 get all of the Shady Oak property owners to agree to such a
21 relocation and PUC approval of the transmission line and our
22 construction drawings.

23 Q Okay. Robert Watkins testified at the public input
24 hearing that he had received a certified letter concerning
25 this. Would that letter have come from you?

1 A It would.

2 Q Thank you. Do you have anything else to add to help
3 explain your testimony or the status of the legal or
4 right-of-way issues?

5 A I wanted to follow-up on some questions, I believe --
6 I think it was from Ms. Zaun to Tom about -- questions about
7 right-of-way on the various routes, Route 8 corridor, the
8 railroad corridor and the preferred route.

9 On the Route 8 corridor, which is Route A, anything
10 that Duquesne Light would install there would be installed
11 under the common law. Utilities have the right to install
12 in road rights-of-way, but our rights are limited. We would
13 have something called a defensible privilege, which means we
14 can put our facilities there for free, but because we are
15 there for free, we can be ordered to relocate. In the event
16 they would widen Route 8 or do some work, we would have to
17 relocate at our expense.

18 I believe Route 8 is a state road, so we would have
19 to follow the PennDOT guidelines about construction there
20 and there has been some recent case law in Pennsylvania --
21 and generally what would happen is we would get an order to
22 relocate and we would have to relocate at our expense.

23 There has been some case law in recent years where
24 the PUC can order that maybe the expenses are shared. So,
25 let's say that they get some federal money to widen Route 8

1 and maybe a portion of that money could be used to assist
2 Duquesne Light with some of its relocation costs. But
3 again, the bulk of the costs would be at our expense to
4 relocate. So, we wouldn't have permanent rights. We could
5 be ordered out.

6 The railroad corridor, again, I think I talked about
7 how at the railroad corridor we don't get permanent rights.
8 We can get a permanent license agreement, but again that
9 would be subject to relocation upon 30 day notice by the
10 railroads.

11 The selected or preferred route, we do have
12 right-of-way agreements for the bulk of that and our
13 right-of-way agreements are all valid and current case law
14 in Pennsylvania is that we can reasonably expand the use in
15 that right-of-way and case law supports what Duquesne Light
16 is planning to do that.

17 Q Now, under Public Utility Commission Regulation
18 57.76, the authorization to locate a line such as this, a
19 high voltage transmission line, implies the authority for
20 the utility to locate the line within 500 feet of either
21 side of the route shown in the application that is approved.

22 Let me first look at the Shady Oak Circle situation.
23 If this line is approved as shown on the map of Route 8,
24 will the proposed place to which Duquesne Light would move
25 its line upon agreement with the Shady Oak Circle residents,

1 would that be within 500 feet of the present location of the
2 line?

3 A My understanding is yes. Currently what we offered
4 to do at Shady Oak is you kind of have a little circle and
5 cul-de-sac and our line bisects the property and we offered
6 to relocate the line to the very edge of those properties so
7 that we skim the back edges.

8 JUDGE NENE: Could you show that on --

9 THE WITNESS: You know what, I'm afraid I
10 can't.

11 MS. SESTAK: Your Honor, Mr. Cass can explain
12 that.

13 BY MS. SESTAK:

14 Q Ms. Noble, still thinking of that 500 foot
15 relocation, if the government, the state, PennDOT or whoever
16 rules Route 8 would tell Duquesne Light to move its
17 facility, would it be practical to move the facilities into
18 some additional road right-of-way within 500 feet of where
19 the Duquesne Light lines are now; would you anticipate that
20 that would be practical or possible?

21 A I'm not sure. I'm not sure. I guess it -- I'm not
22 sure, Regina. I don't know.

23 Q I apologize for asking confusing questions.

24 Let me rephrase it. If Duquesne Light were told
25 tomorrow move your poles from the right side of Route 8,

1 could Duquesne Light Company relocate the poles on the left
2 side of Route 8?

3 A Are we talking transmission or distribution? I mean,
4 probably we could. You know, I mean, if its distribution,
5 we could easily do it. If its transmission, we're going to
6 have to go through another transmission line siting.

7 Q What I'm talking about is if this -- if we have the
8 authority to site this line and the authority to have it
9 within 500 feet of that authority that we have, could it be
10 moved within 500 feet of its location if PennDOT or the
11 other agency tells us to move it, tells Duquesne Light to
12 move it?

13 A Yes.

14 Q On the railroad corridor, could the line be located
15 within 500 feet of that -- the Route C if the railroad tells
16 Duquesne Light to move it?

17 A Well, not really. I mean, it could be, but we would
18 have to -- in the railroad corridor, we would have to get
19 private property right-of-way to install it. It would be --
20 in addition, even if we would, with the Route C, because of
21 the way the railroad wants us to site the land, we would
22 still have to get private property right-of-way.

23 But if the railroad gives us a vacation notice, then
24 we're going to have to go on private property. There's no
25 place to go.

1 MS. SESTAK: Okay. I have no further
2 questions.

3 JUDGE NENE: Okay. Now we'll see if anybody
4 else has questions. Mr. Nypaver?

5 MR. NYPAVER: Yes, I do, Your Honor.
6 Actually, do you want to keep ongoing until I finish?

7 JUDGE NENE: Are you going to go --

8 MR. NYPAVER: Oh, no. Okay.

9 CROSS-EXAMINATION

10 BY MR. NYPAVER

11 Q My Nypaver Exhibit, if you open --

12 JUDGE NENE: Off the Record.

13 (Discussion off the Record).

14 JUDGE NENE: Sorry to interrupt you. Please
15 cross-examine.

16 BY MR. NYPAVER:

17 Q Nypaver Exhibit A -- Nypaver -- excuse me, that is a
18 lot and block number from Allegheny County. What is the
19 right-of-way that the railroad actually has down in that
20 area? Do you know what the approximate width of the
21 right-of-way is? Its obviously going around the railroad
22 tracks.

23 A You know what, I really don't know. I think from my
24 discussions with the engineers and my discussions with the
25 railroad, it varies. I think it can be as much as 65 and as

1 -- and I'm not sure in the tight spots, they did indicate
2 that there were tight spots where we would have to go on
3 private property.

4 Q And do you see a problem if you had to go through
5 private property to achieve a right-of-way?

6 A You're asking me?

7 Q I would like to ask you that question.

8 A Yes, I do. I see a big problem with doing that.

9 You know, I mean, its very difficult, you know -- I
10 mean as you can see from your experience, its very difficult
11 for us, it would be -- I think it would be very difficult
12 for us to get right-of-way under these circumstances.

13 Q Its not residential, its not commercial, there's a
14 stream going through it. I was just wondering maybe the
15 owners there might be glad to make some money on their
16 property. Just a point on that one there.

17 A You know, that's certainly an option and, you know,
18 we would try and also Duquesne Light is a public utility, we
19 have condemnation powers, too, so that's something that we
20 can always fall back on.

21 Q Were the existing rights-of-way that were submitted
22 into evidence -- and you can make reference to them --

23 JUDGE NENE: I'm sorry.

24 Q (Continuing) The existing rights-of-way that were in
25 evidence by Tom Schmitt --

1 A Yes.

2 Q -- were they ever recorded in the Recorder of Deeds?

3 A Quite frankly, I'm not sure. I'm not sure.

4 Q So if the resident bought a house, other than knowing
5 there was a line like on Thompson Run in front of their
6 house, they wouldn't know that they actually could move the
7 line because of the center line right-of-way?

8 A When a homeowner -- generally our practice is we
9 record underground and transmission lines right-of-way, but
10 we generally do not record distribution right-of-way --
11 above ground distribution right-of-way and the reason we
12 don't record above ground distribution right-of-way is
13 because as a homeowner, when you purchase your property, you
14 can readily see the facilities, so you're on notice that
15 someone has rights on your property.

16 JUDGE NENE: Or is trespassing.

17 THE WITNESS: Or is trespassing. Well, no,
18 actually not, because if you purchase -- if we would be
19 trespassing and you purchase and we are already on there, we
20 would have an easement by prescription.

21 JUDGE NENE: Immediately?

22 THE WITNESS: Uh-huh.

23 BY MR. NYPAVER:

24 Q You mentioned something -- you said -- she had asked
25 -- one of her answers to Duquesne Light, she had mentioned

1 something about reasonably expanding the use of the
2 right-of-way. I don't -- I can't remember the exact
3 question, but do you remember that context?

4 A Yes.

5 Q Can you expand on that a little more and what do you
6 mean by reasonably? Because we realize in this case we are
7 going from a subtransmission line which is 23kV to a high
8 voltage transmission line which is 138 kV.

9 A Its under -- and that's a decision that would be made
10 by the courts and its like on an individual basis about, you
11 know, what reasonably expand is. But when you look at
12 reasonable expansion, the Court cases support that the
13 utility can expand. I mean, because we're trying to use it
14 under the terms of the right-of-way, we were given the
15 right-of-way for the installation, maintenance, repair and
16 finally the removal of electrical facilities.

17 So, we're continuing to use it for those purposes.
18 We're continuing to use it for the transmission and
19 distribution of electricity. So the use remains the same.

20 Reasonably expand -- and again, as the engineers have
21 testified and Andy testified, you know, there is a further
22 expansion, but its reasonable, its within the original
23 intent of the right-of-way.

24 Now, some property owners have, you know, said, well,
25 you know, there's a burden to my property, but that's

1 something that the Court needs to decide and that's not
2 something that the PUC would decide.

3 MR. NYPAVER: I have no more further
4 questions.

5 JUDGE NENE: Thank you. Mrs. Nypaver?

6 MRS. NYPAVER: I have no questions.

7 JUDGE NENE: Mr. Kalinski?

8 MR. KALINSKI: No questions.

9 JUDGE NENE: Mrs. Zaun?

10 MS. ZAUN: No questions.

11 JUDGE NENE: Mr. Moorehead, we'll allow you to
12 ask some questions because you might be a formal protestant
13 and we hope that we find the paperwork. Go ahead.

14 CROSS-EXAMINATION

15 BY MR. MOOREHEAD:

16 Q Is it always preferable to use existing
17 rights-of-way?

18 A I think it is.

19 Q You said its for the courts to decide the affect on
20 property values. PUC, DQE has no -- what -- in your opinion
21 what does --

22 JUDGE NENE: Keep your voice up.

23 Q -- in your opinion, what is Duquesne Light's posture
24 on that matter of residential value?

25 A I don't think Duquesne Light has a posture. I mean,

1 well, I mean we've had studies and we've been in positions
2 -- we had another transmission line -- and this is the
3 reason why we like to get permanent rights for a
4 transmission line -- we have a transmission line that is on
5 a license agreement and back in the '20s and '30s when the
6 steel businesses were in their heydays it wasn't unusual for
7 Duquesne Light to get a license from a steel company because
8 the steel companies were going to be there forever and
9 Duquesne Light was going go to be there forever, but that
10 didn't happen.

11 So we have a case in the Hays section of town where
12 we have a license agreement and a developer purchased the
13 property and wanted to have us relocate our towers because
14 they said that it affected the value -- they were planning
15 to build some homes and they said that it affected the value
16 of the homes and so we needed to relocate our towers.

17 We had an expert, he was a world renowned expert that
18 had done studies that demonstrated that the transmission
19 lines had no impact on the property values and we were
20 prepared to present that, but then the development fell
21 through.

22 Q And so that's Duquesne Light's posture, it has no
23 affect on property values, period, is that really your
24 answer?

25 A (Witness nods head in the affirmative).

1 Q So -- okay. All right. You said you have indicated
2 that you spoke with the PUC -- with the railroad in the
3 first quarter of '04?

4 A Uh-huh.

5 Q Subsequent contacts -- I know you said you made
6 subsequent contacts. When were those approximately?

7 A You mean on this specific project?

8 Q Yes.

9 A It was after our public input hearings.

10 Q So after the public --

11 A Right.

12 Q Would there have been any other conversations with
13 CSX prior to your conversation in the first quarter of '04
14 and prior to the hearing regarding rights-of-way?

15 A Right. Not about this project. But yes, I have had
16 a lot of conversations with the railroads about
17 right-of-way.

18 Q But not on this particular project?

19 A Correct. I talked to the railroad -- I mean, my
20 notes and my E mails indicate that I talked to the railroad,
21 CSX, in the first quarter of '04 and then the next time I
22 talked to them about this project was in response to the
23 public input hearings.

24 Q So when did you rule out CSX as a possibility,
25 concerning rights-of-way?

1 A It was -- once we found out we couldn't get permanent
2 right -- they told us they wouldn't give us permanent rights
3 and --

4 Q That was the first quarter of '04?

5 A (Witness nods head in the affirmative).

6 Q When was the feasibility study performed, do you
7 know?

8 A I don't.

9 Q May of '04. So that would have -- why would that
10 have even been included in there if you discounted that?

11 JUDGE NENE: I can't hear you.

12 BY MR. MOOREHEAD:

13 Q I said why would GAI -- Duquesne Light would have
14 commissioned a study to include a route that was never in
15 consideration in the first place?

16 A I never talked to GAI and GAI was doing its study and
17 then we were also having other discussions internally and
18 one of the discussions that we were having internally is
19 could we get rights in the railroad.

20 Q Okay.

21 A If we could have gotten permanent rights with the
22 railroad, I think we would have gone. That would have been
23 in serious contention.

24 Q And even since the flooding -- you indicated the
25 flooding down there and there's a grant for the railroad and

1 their position has not changed on that matter?

2 A They consider it to be an operating railroad
3 corridor.

4 Q Right. Right.

5 A Because of the Allegheny Valley Railroad and again I
6 talked with CSX and the railroad business is on the upswing,
7 both Norfolk -- I have had conversations about other
8 projects with Norfolk Southern and CSX. The railroads say
9 their business is booming with the price of gasoline and
10 they are looking to -- Norfolk Southern is looking to expand
11 on the South Side, CSX is looking to expand their railroad
12 corridors and at this point they're not interested in
13 selling off any property.

14 Q Did you have conversation with Allegheny Railroad?

15 A Yes.

16 Q You did. Okay. I'm sorry, I may be confusing CSX
17 with Allegheny in your testimony, but what --

18 A Allegheny Valley Railroad leases from CSX, who owns
19 it. That's another discussion of what CSX owns, because
20 there have been some class actions about what railroads own
21 or don't own, whether they own something in fee or what
22 their property rights are and there have been some
23 successful class actions against the railroad for giving
24 utilities the permission to install stuff in their
25 corridors.

1 I'm sorry, what was the question?

2 JUDGE NENE: I think you answered it.

3 MR. MOOREHEAD: Yes, I think you did.

4 BY MR. MOOREHEAD:

5 Q Does the right-of-way give you the right to install
6 towers along that right-of-way? Maybe more specific, as a
7 property owner that is directly impacted by this, along
8 Thompson Run Road, which is a residential corridor, does
9 that right-of-way give you the ability to install a metal
10 tower?

11 A You know what, I would have to look at it. Let me
12 look at -- I believe it does, yes.

13 Q Okay.

14 A And see, I mean --

15 Q And --

16 A I'm just looking -- I found one on Thompson Run.
17 Yes, it does.

18 Q And so my question is, as it relates to this -- and
19 while I understand its convenient and in any study you do
20 when you decide to include the existing right-of-way or
21 don't include it in the values with any existing
22 rights-of-way, I think -- my concern is that you always --
23 you will have the ability to do -- once this is granted and
24 taking it from 23 to 138 to take it to the next level --
25 because you always have the ability with existing

1 rights-of-way to justify your case.

2 Is it -- maybe its been -- maybe this is not for you
3 to answer, but has it been determined whether along this
4 route metal poles will be installed, along this
5 right-of-way?

6 A That's something that Paul can answer.

7 Q Yes. Along the crossing and around the bend, I have
8 heard that.

9 A You can ask Paul that.

10 Q That's fine. I would just say with those
11 rights-of-way -- was it expected that with those
12 rights-of-way that were granted in some cases back in the
13 1930s, was it reasonable to expect at the time that those
14 were granted 138 kilovolt line going through this route?

15 MS. SESTAK: Objection, Your Honor. This
16 question calls for speculation.

17 JUDGE NENE: Quite a bit of speculation. I
18 don't know whether they expected to be on the moon. You
19 just can't say.

20 MR. MOOREHEAD: Okay. I agree. I'm sorry.
21 Where I'm going is that the concern by granting this is that
22 it takes it to the next level, which is towers along the
23 residential corridor.

24 JUDGE NENE: I understand your concern, sir,
25 your view.

1 MR. MOOREHEAD: That's all I have.

2 JUDGE NENE: Redirect?

3 MS. SESTAK: Very brief.

4 REDIRECT EXAMINATION

5 BY MS. SESTAK:

6 Q Ms. Noble, you spoke in reference to questions asked
7 by both Mr. Nypaver and Mr. Moorehead about courts deciding
8 the affect of facilities on property value. Could you
9 elaborate.

10 In other words, if, speaking hypothetically, Duquesne
11 Light Company were given the right to construct this line,
12 Duquesne Light did construct the line and it did, in fact,
13 impact property values negatively, would the property owners
14 have any remedy at law?

15 A Arguably -- well, okay. So Duquesne Light gets
16 permission and they install the poles and then the property
17 owners say that its been -- by installing the poles and the
18 expanded burden on the easement on their property, there's
19 been a de facto taking and they should be compensated for
20 adverse -- adverse impact or perceived impact on their
21 property, the property owner would have the burden of
22 demonstrating that there had been some adverse impact, you
23 know, some diminution in value to their property and then
24 that would be something that the Court of Common Pleas would
25 take a look at.

1 MS. SESTAK: Thank you. No further questions.

2 MR. MOOREHEAD: Your Honor, may I follow that?

3 JUDGE NENE: In order. Mr. Nypaver, do you
4 have anything? Just the two of you, Kalinski and Moorehead.

5 MR. NYPAVER: I will defer to them.

6 JUDGE NENE: Mr. Kalinski.

7 RE-CROSS-EXAMINATION

8 BY MR. KALINSKI:

9 Q Ms. Noble, with regard to the property values, are
10 you aware of a paper published by the Southwestern Legal
11 Foundation, the proceedings of the Institute on Planning,
12 Zoning and Emanate Domain, Municipalities Study Center,
13 Dallas, Texas, November 19 - 20, 1998, and you being a
14 lawyer -- they are Exhibits No. 1 and No. 2 in my testimony,
15 they have been submitted to the Court beforehand.

16 JUDGE NENE: They haven't been admitted into
17 evidence or identified for the Record yet.

18 MR. KALINSKI: I submitted them before.

19 JUDGE NENE: You provided them, but they have
20 not been submitted into evidence yet.

21 MR. KALINSKI: Can I submit them now?

22 JUDGE NENE: I don't think so on
23 Cross-Examination. You can --

24 MR. KALINSKI: Okay. I'll do it later. So I
25 would have to specify the name then --

1 JUDGE NENE: Repeat that.

2 MR. KALINSKI: So I will need to specify the
3 whole name of publications in this case? I thought I would
4 make it easier for the Court Reporter if I could just refer
5 to Exhibits, but in this case --

6 THE WITNESS: If it helps, I'm not familiar
7 with it.

8 BY MR. KALINSKI:

9 Q Are you familiar with the papers?

10 A No.

11 Q Any papers that state five to ten percent average
12 loss of property value in the vicinity of high power lines
13 identified as the lines above 60 kilovolt?

14 A No.

15 MR. KALINSKI: Thank you.

16 JUDGE NENE: Mr. Moorehead?

17 RECROSS-EXAMINATION

18 BY MR. MOOREHEAD:

19 Q As an attorney, what do you estimate the cost would
20 be for -- to litigate against Duquesne Light for -- and to
21 show the burden? Do you have any idea?

22 A I really don't.

23 Q What about cost per hour for an attorney?

24 A I really -- I wouldn't even begin to speculate. I
25 mean, you know --

1 Q Does it happen very often that consumers successfully
2 sue Duquesne Light after the fact?

3 A In my tenure at Duquesne Light we have never had a
4 lawsuit like that.

5 Q And you have answered the question you wouldn't
6 proffer a guesstimate, but --

7 JUDGE NENE: It was very narrow
8 Cross-Examination -- Redirect.

9 MR. MOOREHEAD: I understand, but if we could
10 use a hypothetical \$200,000.00 property value, studies have
11 said one to ten percent decline in property value --

12 MS. SESTAK: Objection, Your Honor. There is
13 nothing in evidence that says one to ten percent decline in
14 property value.

15 JUDGE NENE: We can't speculate on that.

16 MR. MOOREHEAD: Okay. I was going to give her
17 the -- give the benefit of the doubt by assuming a lower --
18 some impact on proper value of --

19 JUDGE NENE: She said that you could seek
20 relief and I don't think that we are in a position to
21 determine what that relief might be at this point.

22 MR. MOOREHEAD: I just was trying to get, from
23 a cost standpoint, meaning to show burden and an approximate
24 range of 50,000, 10,000 -- of a cost to sue or to seek --

25 JUDGE NENE: That's why its in the courts and

1 not here.

2 MR. MOOREHEAD: Right. I think we know the
3 answer.

4 JUDGE NENE: Yes. Thank you, Ms. Noble.

5 MS. SESTAK: Your Honor, I move for admission
6 of Respondent Exhibit JNC -- Duquesne Light Company's JNC 1.

7 JUDGE NENE: It will be made part of the
8 Record.

9 (Thereupon, the document marked as
10 Exhibit JNC 1 was admitted
11 into evidence).

12 MS. SESTAK: I apologize, I'm used to being
13 here as the Respondent rather than the applicant.

14 JUDGE NENE: Right, but you sit on the same
15 side of the table.

16 MS. SESTAK: Your Honor, I was trying to be
17 able to have enough room for all of our witnesses and we
18 expected more people to appear on behalf of the participants
19 and so I thought that the bench over there would give them
20 additional room.

21 JUDGE NENE: Okay.

22 MS. SESTAK: There's no jury here so its hard
23 to figure out which side I'm supposed to be on.

24 JUDGE NENE: I understand. We are going to
25 break for lunch and we will break now and then we will talk

1 about housekeeping. Thank you.

2 (Thereupon, a recess was taken).

3 AFTERNOON SESSION

4 JUDGE NENE: We have concluded with the
5 testimony of Joann Noble and the Cross-Examination of that
6 witness and, Ms. Sestak, do you have another witness?

7 MS. SESTAK: Yes, Your Honor, I have two more
8 witnesses. Are the individuals present, Mr. Janosko and Mr.
9 Kalinski?

10 JUDGE NENE: Mr. Janosko is here. Mr.
11 Kalinski is here.

12 MR. KALINSKI: I just changed --

13 MR. JANOSKO: Do you need me to sign in again?

14 JUDGE NENE: No. I'm using the same sheet so
15 you are on.

16 MS. SESTAK: May I also ask, since there are a
17 lot of people here and the testimony Mr. Bailey is going to
18 give is somewhat complex that anybody asking questions move
19 up to counsel table and speak clearly.

20 JUDGE NENE: From the proper order and at the
21 proper time we'll do that.

22 MS. SESTAK: Thank you.

23 JUDGE NENE: Okay.

24 MS. SESTAK: I call William Bailey.

25 JUDGE NENE: Have you been sworn, sir?

1 MR. BAILEY: Yes, I have, sir.

2 JUDGE NENE: Thank you.

3 WILLIAM H. BAILEY,

4 having been previously duly cautioned and sworn, testified
5 as follows:

6 DIRECT EXAMINATION

7 BY MS. SESTAK:

8 Q Would you please state your full name and spell your
9 name for the benefit of the Court Reporter.

10 A William H. Bailey, B-a-i-l-e-y.

11 Q Mr. Bailey, did you prepare written testimony for
12 this matter here today?

13 A Yes, I did.

14 Q And is your written testimony the document identified
15 as Duquesne Light Company Statement No. 4?

16 A Yes, it is.

17 Q And did you also prepare the Exhibit to that
18 statement known as WHB 1, which consists of multiple pages
19 of what looks like a fairly impressive CV?

20 A Yes.

21 Q Mr. Bailey, I would like you to address in addition
22 to your written testimony some specific issues that were
23 raised at the public input hearings on this matter. Now,
24 just to summarize, your testimony indicates that you're
25 expert on the health impact of EMF; is that correct?

1 A Yes.

2 Q Are you familiar with an article by the name of
3 Childhood Cancers in Relation to Distance From High Voltage
4 Power Lines in England and Wales?

5 A Yes, I am.

6 Q At the public input hearing, Mr. Janosko testified
7 that that article shows a significant risk of leukemia in
8 children that live within 600 meters of high voltage lines.

9 Is that your understanding of what that article
10 shows?

11 A All that the article really studied was the
12 relationship between the distance at birth between a group
13 of children with various types of cancer and the control
14 group of children, as to how far they lived from high
15 voltage transmission lines.

16 The authors report that compared to residents living
17 more than 600 meters away that there appeared to be, just
18 for the case of childhood leukemia, these children appeared
19 to live closer to the transmission lines than the control
20 children or children with other types of cancers. They did
21 not, however, have measurements of magnetic fields and they
22 made no specific attempt to relate this study to magnetic
23 fields or electric fields from transmission lines.

24 JUDGE NENE: Excuse me. Did the report
25 pertain to any specific size of transmission line?

1 THE WITNESS: This was a study that was done,
2 I believe, of 200 and 400 kV transmission lines in the UK
3 and some selected areas of the country.

4 JUDGE NENE: 200,000 volts?

5 THE WITNESS: 200,000 volts and 400,000 volt
6 transmission lines.

7 JUDGE NENE: You can cross-examine.

8 BY MS. SESTAK:

9 Q Mr. Bailey, at the public input hearing --

10 JUDGE NENE: I don't want that comment to just
11 hang. I was referring to Mr. Kalinski, who was waiving a
12 piece of paper when I said you can cross-examine. You may
13 continue to Direct.

14 MS. SESTAK: Thank you.

15 BY MS. SESTAK:

16 Q Mr. Kalinski -- I'm sorry, Mr. Bailey, at the public
17 input hearing Mr. Kalinski testified that EMF is classified
18 as a class 2 B carcinogen and that -- is that your
19 understanding?

20 A The International Agency for Research in Cancer in
21 this review process, as a result of a long review of the
22 literature, did classify alternating current magnetic fields
23 in the 2 B category based upon the statistical associations
24 that have been reported between childhood leukemia and
25 estimates of exposure to EMF.

1 They did not, however, classify it as a probable
2 carcinogen or a known carcinogen. So, the classification of
3 2 B just means that its possible or conceivable that there
4 could be a relationship, but no assessment as regarding
5 causality should be imputed to that.

6 Q You mentioned that that related to the magnetic field
7 only?

8 A Yes.

9 Q Okay. Are you familiar with an article to be
10 published in the International Journal of Cancer in August
11 of 2006 concerning lymphoblastic and myelocytic leukemia
12 elevated in children whose bedrooms were exposed to EMF of
13 -- that were exposed to EMF?

14 A I don't know about the specific dates. There was an
15 article that was published in the International Journal of
16 Cancer in February of this year, of 2006. It was performed
17 in Japan and I am familiar with that study.

18 Q Would you please state for the Record what your
19 understanding of what that study shows is.

20 A The investigators had assumed that because of the
21 dense living conditions in Japan and frequent overhead lines
22 that there would be an opportunity to look at a population
23 of children who might have higher exposures to magnetic
24 fields because of living in close proximity to transmission
25 lines. So, they set about to compare the exposures of two

1 groups of children, one group of children with leukemia and
2 one group of control children. They estimated their
3 exposure by taking spot measurements in the home and also by
4 a week long recording of the magnetic field in the
5 residence.

6 What they reported is that overall there was no
7 statistically significant association between the level of
8 the magnetic field recorded in the home and childhood
9 leukemia. But they found that for one major type of
10 leukemia that there did appear to be an association when
11 calculated a level of 4 milligauss or above. However, there
12 are issues relating to the study, including this
13 computation, based upon just a handful of cases and
14 controls. I think it was six cases and three controls. So,
15 they themselves raised the possibility that chance may have
16 accounted for this association.

17 Perhaps equally limiting to the conclusions that can
18 be drawn from the study is the fact that when they selected
19 the groups of children for study, they got a very poor
20 response, so of the potential cases that could be assembled
21 from their database, I think only 39 percent of those cases
22 actually participated in the analysis and of the controls it
23 was even less. I think it was about 16 percent.

24 So, when you have such a low sampling of these two
25 populations, one is concerned that you may have sampled some

1 unusual aspect of those populations and so when you make
2 comparisons between these groups, it may not provide a valid
3 comparison of the differences in their exposures. Typically
4 in these types of epidemiology studies we would like to see
5 response rates of over 80 percent and high quality studies
6 get close to that. So that is a drawback of this particular
7 study.

8 Q At the public input hearing Jean Brown testified that
9 studies conclude that HV lines are likely to cause leukemia
10 in children. Is that your understanding of what the studies
11 of this matter have concluded?

12 A Over the past 30 or 40 years there have been many
13 reviews of those scientific literature on the question about
14 whether electric or magnetic fields might have adverse
15 health affects including affects on cancer. None of the
16 scientific reviews have concluded, in fact, that there is a
17 causal relationship between exposure to electric and
18 magnetic fields and any type of cancer, including sources of
19 these fields from transmission lines.

20 Q You have heard the term used here by some of the
21 participants, prudent avoidance. Are you familiar with that
22 term?

23 A Yes, I am.

24 Q What does that mean to you?

25 A The term prudent avoidance is a term of art that was

1 coined by Granger Morgan at Carnegie Mellon University and
2 he developed this term many years ago to describe the
3 situation particularly associated with electric and magnetic
4 fields initially where the question was how much money
5 should one spend to avoid an unknown or speculative risk and
6 so he gave examples of prudent avoidance that if a homeowner
7 was concerned about magnetic fields and they wanted to
8 reduce their exposures, they could take low cost or no cost
9 simple actions in their daily lives to reduce their
10 exposures.

11 So if they have an alarm clock near the bed and some
12 of these alarm clocks may put out at the surface dozens to
13 hundreds of milligauss, they could take that alarm clock and
14 move it to the other side of the room and within five feet
15 the exposure would be almost nullified. He gave other
16 examples where the utilities would take no or low cost
17 actions in designing lines to reduce the magnetic fields.

18 The term prudence doesn't refer to a regulatory
19 attitude toward health risks, it refers to physical
20 expenditures, how much money would one spend, and he
21 originated this concept because there was concern that
22 people might be pushed to spend more money to avoid or
23 reduce exposures to a speculative risk like EMF and wind up
24 spending more money than we do on known health risks, for
25 instance, putting seat belts in school buses to protect our

1 children from accidents.

2 So, that is the context in which prudence avoidance
3 was developed.

4 Q Thank you. At my request did you review a series of
5 articles that had been provided by other participants in
6 this matter?

7 A Yes, I have.

8 Q I would like to ask you briefly about those articles.
9 I believe we have already discussed the childhood cancer in
10 England and Wales. Did you have anything to add concerning
11 that study?

12 A No.

13 Q Are you familiar with an article titled Science
14 Commentary: Power to Confuse, which indicates it was
15 downloaded from BMJ.com?

16 A Its -- let me just check to make sure that its in the
17 material I have here. The first author is --

18 Q Watts, W-a-t-t-s.

19 A Watts. Yes, I have read that.

20 Q What is your assessment of that article?

21 A Dr. Watts is the editor of the British Medical
22 Journal and this is an editorial that was published in a
23 journal in conjunction with the study you asked me about
24 earlier, by Draper, et al, entitled Childhood Cancer in
25 Relation to Distance From High Voltage Power Lines in

1 England and Wales, A Case Controlled Study.

2 He discusses the controversy that had been going on
3 for many years about whether this -- there maybe health
4 affects associated with fields and power lines and he
5 attempts to place this in perspective by commenting about
6 the few number of cases of childhood cancer -- childhood
7 leukemia that would be expected even if there were a causal
8 relationship and puts this into context with other risks
9 that children face. A particular example is injuries to
10 children and deaths in road accidents.

11 Q Thank you. Did you also review an article, Childhood
12 Leukemia and Magnetic Fields in Japan, A Case Control Study
13 of Childhood Leukemia and Residential Power Frequency
14 Magnetic Fields in Japan with a lead author Kabuto,
15 K-a-b-u-t-o?

16 A Yes. This is the study that we just discussed a few
17 moments ago that had been raised by one of the intervenors
18 and this also was cited in my testimony.

19 Q Did you review an article entitled Do You Want Your
20 Children Playing Under Those Things -- I'm sorry, I withdraw
21 that question. I'm not going to deal with that article.

22 Did you review an article in the American Journal of
23 Epidemiology, Magnetic Fields and Cancer in Children
24 Residing Near Swedish High Voltage Power Lines, lead author
25 is Feychting, F-e-y-c-h-t-i-n-g?

1 A Yes, I have.

2 Q And what can you say concerning this article?

3 A This is one of the earlier studies that had been
4 conducted to evaluate a possible association between
5 exposure to magnetic fields and childhood leukemia and other
6 types of cancers and the study was constructed like the
7 other ones we had discussed, comparing the exposures of two
8 groups of children, one group of children with cancer and
9 one group of children without cancer and they restricted
10 their study to those children living in a corridor around
11 high voltage transmission lines throughout the whole country
12 of Sweden over about a 20, 25 year period.

13 What they report is that there was an association
14 based upon a few number of cases and controls with childhood
15 leukemia and that attracted a lot of attention. However,
16 during that whole period of time, there were only 38 cases
17 of childhood leukemia studied and the vast majority of those
18 subjects -- in fact, all but seven -- had exposures below
19 the upper level where they saw an association.

20 So, again, its one of the pieces of evidence that we
21 look at in this area, but in evaluating public health risks
22 we don't draw conclusions based upon single studies and so
23 this is considered part of the literature on this topic.
24 But even at the time that came out, there were numerous
25 questions that were raised: Why was it that when they

1 calculated exposure based upon the current -- historical
2 currents flowing in power lines that they saw this
3 association, but when they took measurements of the magnetic
4 fields in the residences, the association weakened or
5 disappeared. In further analysis, this association was only
6 present during one half of the time period that they studied
7 and not throughout the whole period.

8 Also, the association was present in areas outside of
9 Stockholm, the main city, but when they analyzed those cases
10 and controls within the city of Stockholm, the association
11 disappeared.

12 So, when you compute thousands of estimates of the
13 statistical associations, taking in all of these different
14 kinds of factors, multiple aspects of magnetic fields,
15 multiple aspects of children studied by chance, one in every
16 20 times that one calculates an association, by chance alone
17 you can have a statistically significant association.

18 So, again, this is -- this study is one part of the
19 evidence that scientists have looked at in answering
20 questions about electric and magnetic fields, but by itself
21 its not at all definitive.

22 Q One further thing concerning the Swedish study, I
23 draw your attention to the abstract at the beginning of the
24 article, the fourth line. Are you able to tell what voltage
25 of power line was studied based upon this information?

1 A Its 220 and 400 kV transmission lines.

2 Q Thank you. Did you also review an article titled An
3 Evaluation of the Possible Risks From Electrical and
4 Magnetic Fields (EMFs) From Power Lines, Internal Wiring,
5 Electrical Occupations and Appliances, of which the lead
6 author is Neutra, N-e-u-t-r-a?

7 A Yes, I am.

8 Q What can you tell us in relation to this article?

9 A This is a review of the article that Dr. Neutra and
10 two of his employees prepared at the time. All three of
11 them were employed by the California Department of Health
12 Services and they decided to conduct a review of the
13 literature and view it as a risk assessment and it was
14 published. The report was accepted by the department, but
15 this report as to all appearances, had no influence on the
16 recommendations of their health agency or other agencies
17 that are concerned with transmission lines.

18 Basically what this report looked at is the evidence
19 for and against a relationship between exposures to magnetic
20 fields principally and 13 types of disease. For the
21 majority of these, they found the evidence insufficient to
22 suggest a relationship. For several of the others,
23 including childhood leukemia, as many other organizations
24 have found, they felt that the evidence suggested the
25 possibility that there was a relationship. But that review

1 does not determine what the basis for that relationship is.

2 Q Now, are you also familiar with a document titled
3 Electromagnetic Fields and Public Health, Extremely Low
4 Frequency Fields and Cancer, Fact Sheet No. 263 from the
5 World Health Organization dated October of 2001?

6 A Yes, I am.

7 Q What is your familiarity with this document?

8 A If I recall, its one of the fact sheets that has been
9 published by the World Health Organization to address
10 questions from the public and national governments about
11 electric and magnetic fields. They have more recent
12 guidance, which is out in 2006.

13 Q Okay. Would the recent guidance maintain the same
14 classification for electric and magnetic fields?

15 A The World Health Organization does not per se do
16 classifications in terms of classifications like 2 B. That
17 is a classification system that is used by the International
18 Agency for Research in Cancer, which is a subdivision of the
19 World Health Organization.

20 So, when the World Health Organization discusses
21 these classifications, they make reference to the
22 classifications of this related agency and its the position
23 of the World Health Organization that even though there is
24 a classification by IARC of magnetic fields being a possible
25 human carcinogen, that there is not a need to take special

1 precautions regarding electric and magnetic fields at the
2 level that we encounter in our everyday life and so they
3 recommend that the guidelines for exposures recommended by
4 the International Committee on Non-Ionizing Radiation
5 Protection be followed and for the general public that
6 organization recommends upper exposure limit at 60 hertz,
7 which is the frequency of our power lines, of 833 milligauss
8 and for workers higher exposure limits of 4,000 milligauss
9 are recommended by this organization.

10 The World Health Organization does not recommend that
11 agencies that they recommend and provide this information to
12 take steps to set guidelines or take special actions other
13 than the type of prudent avoidance actions that we had
14 discussed earlier, that that would not be necessary.

15 Q Thank you. Do you have personal knowledge of the
16 workings of the World Health Organization?

17 A I have been an advisor to a number of the agencies of
18 the World Health Organization. I participated in the review
19 of the scientific evidence with a group of scientists from
20 ten other countries and we published our review of the
21 assessment of the potential cancer causing properties of
22 electric and magnetic fields in 2002.

23 I have been advisor to the World Health Organization
24 and the International Committee on Non-ionizing Radiation
25 Protection regarding scientific aspects of information

1 needed to set guidelines for exposures and also for
2 communicating about public health issues including EMF.

3 Q Is there anything you would like to add to clarify
4 anything that you have testified to here today or that's
5 contained in your written testimony?

6 A I have a small add to my -- small edit to my
7 testimony.

8 On page 8 line 5 it should read of the National
9 Electrical Safety Code and on page 17 line 22, the same edit
10 should be made, it should read National Electrical Safety
11 Code.

12 MS. SESTAK: Your Honor, I offer the written
13 testimony of Mr. Bailey and the exhibits appended thereto
14 into evidence.

15 (Thereupon, the documents were
16 marked as Statement No. 4 and
17 Exhibit WHB No. 1 for
18 identification).

19 JUDGE NENE: It will be made part of the
20 Record subject to Cross-Examination.

21 MS. SESTAK: Thank you.

22 (Thereupon, the documents marked as
23 Statement No. 4 and Exhibit WHB
24 No. 1 were admitted into
25 evidence).

1 JUDGE NENE: Do the Protestants wish to have
2 someone -- they waited for you Dr. Janosko.

3 MR. JANOSKO: Dr. Kalinski and --

4 MR. KALINSKI: We can go one after the other.

5 JUDGE NENE: Would the other protestants allow
6 these two to represent them on this issue?

7 MRS. NYPAVER: Yes.

8 JUDGE NENE: Rather than have everybody
9 cross-examine?

10 MR. LAPETS: I would like to ask two
11 questions.

12 MR. NYPAVER: I would like to ask one or two
13 but not related -- it was previous testimony.

14 JUDGE NENE: Mr. Kalinski.

15 CROSS-EXAMINATION

16 BY MR. KALINSKI:

17 Q Dr. Bailey, if I may ask, have you been in anyway
18 involved in the work of IARC that led to the recommendations
19 that EMFs are considered class 2 B carcinogen?

20 A Yes.

21 Q So can I conclude that you agree with that
22 recommendation?

23 A Yes. These recommendations were based upon a review
24 of the scientific evidence and the requirements of the IARC
25 classification system.

1 Q Right.

2 A That same review of the evidence when performed using
3 other guidelines may be worded somewhat differently.

4 So, for instance, the National Institute of
5 Environmental Health Sciences, which also convened a large
6 review of literature --

7 Q I'm sorry, that wasn't my question.

8 A -- uses a different guideline.

9 Q Okay. But you agree that IARC, whose report you
10 refer in your testimony from 2002 -- published in 2002,
11 recommended EMFs are considered possible carcinogen?

12 A Yes, that's the way we classified it.

13 Q Does that mean that already in 2001 there was some
14 evidence that resulted in the serious concerns enough which
15 precluded elimination of the possibility that EMFs are a
16 carcinogen? Sorry for too many nos.

17 A I don't understand your question as worded.

18 Q Okay. So well you couldn't conclude safely that EMFs
19 are not a carcinogen?

20 A We concluded that it was not impossible, that it was
21 possible, but the evidence did not warrant the conclusion
22 that they were a probable carcinogen or a known carcinogen.

23 Q So coming back to my question, in terms of yes or no,
24 you admit that you couldn't exclude the possibility four
25 years ago that it is a carcinogen?

1 A And that's, since the time that questions have been
2 asked about electric and magnetic fields, that's been the
3 case.

4 Q So I know it sounds funny, but do you believe in
5 progress in science?

6 A In a general sense, yes.

7 Q So based on your testimony, I believe you have
8 published extensively in scientific journals; right?

9 A Yes.

10 Q Can you tell me is it accepted practice by editorial
11 boards of the scientific journals that each scientific paper
12 has to be reviewed by at least two independent specialists
13 in the field?

14 A Most reputable scientific journals have that minimum
15 requirement.

16 Q So-called peer review process. Do you consider the
17 International Journal of Cancer and British Journal as peer
18 reviewed respective journals?

19 A Yes, I do.

20 Q So you do believe that following recommendation by
21 IARC in 2001 there had been a series of papers, two of them
22 most recent, that concluding the paper of Kabuto and
23 colleagues and the paper of Draper published in British
24 Medical Journal, that have been peer reviewed before the
25 publication by other specialists in the field?

1 A That's correct.

2 Q So do you believe, okay, if the reviewers of a paper
3 find some serious flaws in the paper, believe, okay, that
4 the conclusions of the -- reached by the authors are not
5 supported by the data, do they usually recommend rejection
6 of the paper and the paper is not accepted?

7 A The paper maybe rejected outright, it may be rejected
8 with requirements that major or minor revisions be made.

9 Q And apparently those papers were not rejected
10 following the peer review process because they were
11 published in the International Journal of Cancer and in the
12 British Medical Journal, right?

13 A For the case in the British Medical Journal paper,
14 I'm not sure, but there may have been a submission to a
15 previous journal that was turned down and in the paper that
16 appeared in the International Journal of Cancer, I
17 understand that there were multiple journals that that
18 manuscript was submitted to and rejected before it was
19 publish by this journal.

20 Q How do you know that?

21 A I was told this by colleagues in the field who were
22 reviewers of the manuscript.

23 Q Can we have their statement on the Record -- I mean,
24 I don't know whether I can accept, okay, this answer. Its a
25 hearsay. All right. It was passed over from one person to

1 another. Normally review process is confidential, so I
2 don't think this alleged source of information --

3 A I'm not making a point of this. You asked if I had
4 any knowledge of this and this is just the hearsay that I
5 have about this.

6 Q I understand. All right. Is it true that if papers
7 are rejected its not necessarily on the scientific merit but
8 impact factor, belief of the editors that sufficient --

9 MS. SESTAK: Objection. Your Honor, I'm
10 attempting to be patient because I realize that the
11 participants in this matter are not represented by counsel,
12 they are not experienced attorneys and they cannot be held
13 to the same level of courtroom decorum and knowledge as an
14 experienced attorney would be, but Mr. Kalinski is clearly
15 asking for speculative answers based on generalities that he
16 then attempts to tie to specific actions by specific editors
17 or specific reviewers for specific articles and this is just
18 well beyond the scope of any proper Cross-Examination.

19 JUDGE NENE: You can respond.

20 MR. KALINSKI: I strongly disagree with this
21 one. I'm trying to establish the generally accepted review
22 process of presenting scientific data, which is extremely
23 important for the conclusions, comparing the previously
24 published data which led to the 2001 recommendation --

25 JUDGE NENE: I'm having difficulty

1 understanding you.

2 MR. KALINSKI: I'm trying to establish the
3 relation of the newly published data to the old published
4 date which led to the 2001 recommendation of IARC that EMFs
5 are possible carcinogen.

6 I think I'm not asking about speculation, I'm asking
7 about established practice that I'm sure Dr. Bailey is very
8 well aware of. He published extensively in at least 50
9 scientific journal papers. He published --

10 JUDGE NENE: I'm going to overrule the
11 objection and this is out of a deference to the situation
12 that protestors find themselves in, but we can't spend --

13 MR. KALINSKI: I understand. I will try to
14 hurry up, Your Honor.

15 JUDGE NENE: All right.

16 MR. KALINSKI: I appreciate your patience.

17 BY MR. KALINSKI:

18 Q So, you mentioned that you are aware of those two
19 papers which were published after the recommendation of
20 IARC.

21 In your experience does it ever happen that IARC
22 changes classification of a substance, of a product or
23 anything from one classification to another; can possible
24 carcinogen become possible -- does it ever happen that the
25 classification of carcinogens can change?

1 A I can't recall the specific instances, but there are
2 several instances where the classification has been
3 increased and I believe there's one case where it was
4 decreased.

5 Q For example, would you agree with me that tobacco
6 smoke was not considered carcinogen at the beginning of last
7 century?

8 A It certainly wasn't and we did not have the
9 scientific mechanisms in place to make those determinations
10 or to take public health actions.

11 Q Would you agree that at this moment its generally
12 accepted that it is a carcinogen, tobacco smoke?

13 A Yes.

14 Q So you agree that, okay, our improvement in
15 scientific methods can lead to the development of --
16 development of research models, scientific models that may
17 result in switching the classification from possible
18 carcinogen into something else?

19 A Yes.

20 Q Coming -- I would like to come back to the study of
21 Kabuto that was discussed, okay, beforehand -- and I
22 apologize for the confusion. This study is August 1st
23 National Journal of Cancer. It was published on line
24 already and made available to the readers in February, so
25 that's -- that explains the difference in timing.

1 MS. SESTAK: Your Honor, I apologize for
2 interrupting. May I make a suggestion? Mr. Kalinski, may I
3 suggest that Mr. Kalinski be directed to speak slowly and
4 that if someone questions what he said, rather than
5 rephrasing in equally difficult to understand words, that he
6 simply repeat very slowly what he has just said.

7 JUDGE NENE: Okay. Well, he has been aware of
8 that request, so the need to be understood is why we're here
9 and sometimes you do run on at a pace that makes that
10 impossible.

11 MR. KALINSKI: I apologize to everyone
12 involved. When I speak Polish only my sister can understand
13 me, even my mother has a problem, so I will try my best.

14 BY MR. KALINSKI:

15 Q I think I have heard that when you refer to the
16 number of cases that were analyzed in the paper of Kabuto
17 you mentioned there was only six case of leukemia.

18 A I was talking about a -- if you go to table 4 on page
19 647, they tabulate the number of cases and controls that had
20 exposures above four milligauss and they also tabulate the
21 numbers that had exposures at different levels, including
22 those down below one milligauss.

23 Q All right.

24 A And what I had in mind there is that above four
25 milligauss for all types of leukemia considered, there were

1 six cases and five controls and for acute lymphocytic
2 leukemia, there were only six cases and three controls.

3 Q All right. Looking at the same table, can you tell
4 us what was the total number of cases that were reviewed in
5 the study?

6 A For all types of leukemia there were 312 cases.

7 Q And how many controls?

8 A And 603 controls.

9 Q Can you tell us --

10 A And for the acute lymphocytic leukemia a smaller sub
11 group, there were 251 cases and 495 controls.

12 Q Thank you. So in the group that -- of cases called
13 exposed to more than 0.4, I believe their unit should be
14 microtesla or --

15 A Or four milligauss.

16 Q However, can you tell us how many controls -- sorry,
17 how many cases above 0.1 microtesla were used in the study?

18 A You would add up the cases, there's like 36.

19 Q Thirty-six?

20 A Of all types.

21 Q Thank you.

22 A And a smaller number among acute lymphocytic
23 leukemia.

24 Q Thank you. It was, in fact, a much larger number of
25 cases that they looked at.

1 Do you know what the prevalence of occurrence of ALL
2 and AML, acute lymphoblastic leukemia and acute myositic
3 leukemia?

4 A The, in round numbers, the rates of leukemia are in
5 the order of 1 in 10,000 or 1 in 14,000 new cases each year.

6 Q Okay. So in order to get those 36 cases, how many
7 thousands of people would need to be analyzed?

8 A One would need to collect data on a population over a
9 long period of time, such as was done in the Swedish study
10 or in a large geographical area.

11 So, for instance, the National Cancer Institute, when
12 it conducted its study of looking at the relationship
13 between childhood leukemia and magnetic fields, collected
14 data over a number of years from nine midwestern states,
15 including Pennsylvania.

16 Q So in some of your early -- in your statement you
17 mentioned that some of the problems with the early studies
18 before 2001 was the small samples, small study numbers.
19 Now, the --

20 JUDGE NENE: I'm sorry, you're trailing off
21 there.

22 BY MR. KALINSKI:

23 Q Some of your citations of the early studies led to
24 recommendation of EMFs as possible human carcinogen, your
25 line of arguing that it couldn't be considered anything

1 stronger than that was that the study sizes were small.

2 I'm trying to figure out whether this was a small
3 study, because in my opinion basically they were looking at
4 312 cases of combined ALL and AML. They needed to probably
5 study several hundred thousands of people -- probably
6 several million people. Each occurrence is one in 10,000,
7 then basically 312 times 10,000, that would be at least 3
8 million. Is it yes or no?

9 MS. SESTAK: Objection.

10 JUDGE NENE: Just a minute. There's an
11 objection.

12 MS. SESTAK: Objection. The question as
13 stated makes suppositions that are not in evidence,
14 specifically the supposition that if one out of every 14,000
15 people is likely to get leukemia that anybody who studies
16 that one individual must have also studied the remaining
17 13,999 and I don't believe that there's any support for that
18 statement, yet that is the basis of the question that's
19 being asked of this witness.

20 MR. KALINSKI: Actually I agree with that.
21 I'll ask this one.

22 BY MR. KALINSKI:

23 Q That, however, has been addressed in the second
24 paper. I was trying to establish that in order to have such
25 high number of patients -- sorry.

1 Do you think that a study covering 300 cases of ALL
2 and AML and the controls is a small study or is a large
3 study?

4 A It depends upon your frame of reference. Some of the
5 earlier studies might only have a few dozen cases and so
6 they were much smaller. But in terms of what information
7 these studies were able to provide us, its not just the
8 number of cases, the number of controls that's important.
9 Its a question of what proportion of those cases and
10 controls had very high exposures and if there were very few
11 children who had these high exposures, then in spite of the
12 fact that there maybe hundreds or even a thousand cases in
13 the population under study, it will provide little
14 information to us.

15 What these studies tell us is that below this area of
16 four milligauss -- and this is an estimate, not a point in
17 time measurement such as a measurement at the edge of the
18 right-of-way or a measurement just at someone's front door,
19 but an estimate of their long-term exposure -- that below
20 four milligauss these studies provide little evidence as the
21 previous studies for there being statistical association
22 between estimated magnetic field exposure and childhood
23 leukemia.

24 However, regarding the question about is there an
25 association above four milligauss, there is some evidence

1 for that association, and yet there is still so few cases
2 and controls that have that type of exposure that its very
3 difficult to make strong recommendations based upon that
4 small number of children.

5 So, I agree with you, this is a larger study than
6 what we had in some of the earlier studies, but still in
7 terms of the number of cases and controls that have these
8 exposures at the higher levels, they're still a handful of
9 individuals.

10 Q All right. Thank you. You mentioned in one of the
11 statements, I think we might like to correct, is I think
12 your reference that frequency of responders were only less
13 than 16 or 6 percent, I can't remember what was exactly the
14 answer.

15 Could you read actually the following part explaining
16 this issue? I marked in yellow what was the frequency of
17 responders in the control case.

18 A This is from the Kabuto et al study?

19 Q Right.

20 A On page 644 and in the page it reads, in total, 3,833
21 candidates in the catchment area were requested to
22 participate and 1,0097, 28.6 percent agreed.

23 Now, when I -- if I can read on further, it says
24 among them interview and magnetic field measurements were
25 completed on 634 subjects. We excluded 23 controls due to

1 incomplete magnetic field measurements. Furthermore, we did
2 not review -- interview the remaining 440 control candidates
3 since the number of controls to be interviewed was reduced
4 to two for each case later in the study because of the
5 difficulty arranging interview schedules --

6 JUDGE NENE: Slow down a little bit.

7 THE WITNESS: Sure.

8 A (Continuing) For a set of one case and three match
9 controls within a short study period.

10 Now, rather than just accepting the number that was
11 here, I computed my own rates, which had the same
12 denominator of total number of candidates at the beginning,
13 3,833, but I took that the number was 603, which is 634
14 subjects minus the people that were not interviewed, and
15 that comes out to 16 percent, slightly lower percent.

16 Q But you agree that 16 percent is not the number of
17 responders, which could be biased, its the number of people,
18 okay, that's eventually --

19 A Eventually participated --

20 JUDGE NENE: One at a time.

21 Q Okay. So --

22 A Its the number of controls that eventually
23 participated in this study.

24 Q All right. Now, do the authors of the study
25 acknowledge that they were concerned about and did they do

1 the proper study analysis to check whether this lower
2 participation, okay, numbers might have affected their
3 results? And if you don't remember, I highlighted that
4 part. Its the last part in the discussion.

5 A I understand. They were -- the authors were
6 concerned about the very low participation rate of the
7 people that they were attempting to study because this
8 participation rate is vastly lower than what a high quality
9 epidemiology study would look for. We're talking about
10 participation rates at the minimum of 60, 70, 80 percent and
11 here, using your numbers, 28.6 percent.

12 Q Right.

13 A And the problem is that we don't know that that small
14 percentage of persons from the population is truly
15 representative of the entire group of people.

16 Q Dr. Bailey, you're not answering my question.

17 A All right.

18 Q My question was did they acknowledge --

19 A Yes.

20 Q -- that they were concerned about it, and did they --

21 A Yes.

22 Q -- do anything about it to make sure that it does not
23 affect the results?

24 A If I could continue my answer. So what they
25 attempted to do was determine how many more cases or

1 controls would have had to be classified differently among
2 this group if they had continued this, how much it would
3 have affected the results.

4 They presented analysis in the appendix to the paper
5 which suggests that there would have to be a number of
6 changes in the numbers that they actually got. There have
7 been substantial amount of bias from this source. However,
8 their analysis could not address another source of selection
9 bias and that is when they attempted to collect data on all
10 of the cases of childhood leukemia in the population, they
11 only got a response from 39 percent of those potential
12 participants.

13 That is, they asked the physicians who were treating
14 these patients at the hospitals, would you ask this patient
15 to participate in the study. Of those people that were
16 potentially available to participate in the study, only 39
17 percent participated.

18 So, you could have a situation where, because of the
19 publicity about power lines, concern about magnetic fields,
20 we don't have here information about how these patients were
21 approached or what they were told about the study. You
22 could have a situation where those parents whose child had
23 leukemia and lived near a power line were more likely to
24 participate in the study because of their interest in the
25 topic than a parent who lived far away from a line, in which

1 case you would have a biased sample and that you would be
2 just studying those people who live near transmission lines
3 and not people in the whole population area.

4 So that is a very serious issue that they could not
5 address.

6 Q Would you read what they did address basically and
7 what do they state at the end of the discussion, because I
8 think they do refer to the exclusion of bias. I think --
9 next page. Its a big paragraph, but probably the last
10 sentence is a summary.

11 I agree that, Doctor, we do not always have to agree
12 with the authors of the paper, but I would like to just
13 establish what the authors say.

14 A As we expected at the study outset, the participation
15 rate for the mailed questionnaire surveys was low, 28.6
16 percent, and this maybe an important source of concern.
17 That's --

18 Q Would you read all of it, please.

19 A Its very long.

20 Q I asked you -- okay. Specifically the last sentence,
21 I think, summarizes the whole paragraph. The last sentence
22 on the right-hand column.

23 A Yes, but there's more to this issue than --

24 Q Then probably you need to read all of it then.

25 A So I prefer to read all of it. Since -- I'm

1 continuing on from the last point.

2 Since people seldom encounter mail surveys for real
3 scientific studies, people may be weary of commercial direct
4 mailings that pretend to be mailed surveys. Whatever the
5 reason for the poor participation rate, the question is
6 whether the differential participation led to significantly
7 biased results regarding the relation with exposure and
8 hence the rigorous analysis of selection bias -- and hence a
9 rigorous analysis of selection bias was performed in the
10 study.

11 We found no difference in participation proportion
12 between those controls living close to the power line and
13 those living not close to the power line by GIS based
14 analysis. Unfortunately -- and this is not highlighted in
15 your text -- the same analysis could not be conducted for
16 cases that did not participate because the information was
17 not available for cases that did not participate in the
18 study. However, as shown in the results, low participation
19 rates in cases, 0.49, was not due to the cases intentional
20 rejection of the study --

21 Q Thank you.

22 A -- but to the low accessibility of patients through
23 physicians. Although the low accessibility may still be
24 related to the exposure level, our sensitivity analysis OR
25 -- standing for odds ratio -- for subjects with 0.4 plus

1 microtesla, FM -- for magnetic field -- is 2.32 and the
2 maximum true odds ratio under the hypothesis is 2.04 if
3 selection bias is taken into consideration.

4 Although the actual odds ratio, OR, suffers from
5 random variation, this calculation shows that selection bias
6 per se cannot fully explain our positive finding.

7 Q Thank you. So in the same paper, okay -- well, I
8 think is it right to say, okay, that they explained the fact
9 of their low participation of controls, people who didn't
10 have any increase in leukemia, to be only 30 percent because
11 Japan population receives plenty of junk mail and they tend
12 simply to discard it; is that correct, that they address the
13 issue?

14 A They, if you recall what I read, they said they do
15 not have an explanation and I think that the discussion
16 about peoples response to mailed questionnaires was more of
17 a hypotheses or possible explanation.

18 Q Right.

19 A But even, you know, having a good attempt to do a
20 study is not the same thing as achieving a valid study.

21 Q Right. But do you think that they -- do you agree
22 with me that they have addressed the question whether this
23 low participation may create a bias in their studies and
24 response to the questions they provide is negative, they
25 cannot explain those increased incidents of leukemia in the

1 proximity of high power lines by bias between the people who
2 responded and didn't respond?

3 A They have attempted -- and I commend them for their
4 attempt to try and address this serious concern about
5 potential collection bias in controls, but I don't think
6 that that after the fact attempt gives the study the same
7 weight as if they had made more strenuous attempts to
8 recruit the controls by multiple means or other means and
9 achieve the higher participation rate.

10 Q So I understand, okay -- please correct me if I'm
11 wrong -- that you personally do not agree with those
12 conclusions, but would you admit that both editors and the
13 reviewers of this paper did agree with this conclusion since
14 this paper was published?

15 MS. SESTAK: Objection, Your Honor. Unless
16 Mr. Kalinski can demonstrate that this witness has actual
17 knowledge of what the editors of this journal thought, I
18 don't believe that this witness can testify to that.

19 JUDGE NENE: The witness has testified that
20 its been printed and he asked a lot of questions about how
21 things come to be printed and that's part of the Record and
22 I don't think that the witness needs to further comment on
23 that.

24 MR. KALINSKI: Okay. I will proceed.

25 BY MR. KALINSKI:

1 Q Can you tell us from this paper what was the odds
2 ratio, reported odds ratio for combined AML and ALL and what
3 was the odds ratio --

4 JUDGE NENE: What is that?

5 Q I can explain -- sorry -- whether the witness should
6 explain what is odds ratio. Sorry. First I'm getting as
7 well -- could you please tell us what the odds ratio is?

8 A An odds ratio is a way of expressing this association
9 between an exposure and a disease and its basically the
10 ratio of the probability that a case was exposed, in this
11 case to magnetic fields, to the probability that a control
12 was exposed.

13 So, if the odds ratio is one, the portion of subjects
14 who are exposed -- considered exposed in the cases and the
15 controls is the same so we would say there is no
16 association.

17 If the odds ratio was less than one, say 0.5, that
18 would represent that fewer cases were exposed relative to
19 the controls. If the odds ratio is greater than one, that
20 would mean that more cases were exposed than the controls
21 proportion.

22 Q So in perhaps more plain language, if I read them
23 correctly, they say that odds ratio for acute lymphoblastic
24 leukemia was 4.7. Am I correct if I would say that the
25 chances, okay, of acquiring this nasty disease were 4.7

1 times higher for the population that lived in the vicinity
2 of high power transmission lines compared to the population
3 which was exposed to low dose EMF?

4 A You can't conclude that from this data.

5 Q So how would you explain that? So can you tell us
6 basically what's the interpretation of that odds ratio which
7 are 2.6 for all of the combined leukemias and 4.7 for acute
8 lymphoblastic leukemia?

9 A Yes.

10 Q How do you --

11 A What the odds ratio mean is that the cases of --
12 considering a group of all types of leukemia they were 2.6
13 times more likely to have had an exposure at the residence
14 than a control and for the sub group of cases of acute
15 lymphocytic leukemia or ALL, they were 4.7 times more likely
16 to have been exposed.

17 One cannot translate these differences in exposures
18 into a causal relationship.

19 Q Right, but at least you are saying there is an
20 association that for some reason -- and I agree we don't
21 know for what reason -- but for some reason, if you are
22 having ALL chances are nearly five times higher that you
23 have lived -- have been exposed to high levels of EMFs?

24 A In this particular sample.

25 Q In that particular sample. Thank you. That's all

1 the point I want to make with regard to this paper.

2 Again, the paper of Draper and colleagues, one of the
3 clarifications you mentioned that they took into account 400
4 kV lines and 200 kV lines. When I read it its 400 kV lines
5 and 172 kV lines; is this correct?

6 A Let me check my copy. You may be correct. Yes.
7 They also have intermediate voltage lines in the UK, but
8 those apparently were not studied.

9 Q One of those voltages were actually lower than the
10 proposed 178 kV; correct?

11 A Slightly lower, yes.

12 Q How would you refer, okay, to the study which talks
13 about 29,081 children with cancer, including the seven
14 children with leukemia?

15 JUDGE NENE: Repeat that.

16 BY MR. KALINSKI:

17 Q How would you classify the study that basically
18 analyses records of over 29,000 children with cancer,
19 including nearly 10,000 children with leukemia; is that a
20 small study, is it an intermediate size study, is it a large
21 study?

22 A Again, it depends on for what purpose. They
23 collected data on where a large number of children lived,
24 but whether that information was informative about telling
25 us about whether there are health risks associated with

1 power lines is a different question.

2 Q But when you compare this size of study to the
3 studies that were available in 2001 that you based your
4 recommendation of EMF being a possible carcinogen, is it
5 likely a bigger study or a similar size study of the average
6 of all of those studies?

7 A It has, as you correctly stated, a larger number of
8 total subjects, but the number -- we don't know what the
9 number of subjects are who have exposures to magnetic
10 fields.

11 Q Thank you.

12 A Because they were not measured, unlike the previous
13 studies in which they attempted to estimate or measure the
14 magnetic field exposure.

15 Q Okay. So do you think that there can be any
16 participation bias study in this paper? And I think they
17 address, okay, at some places, okay, that there was no
18 active participation required because they just analyzed the
19 records.

20 A That's correct.

21 Q Is it then reasonable to assume that responder rates
22 were not -- could not be a cause of possible bias in this
23 study?

24 A Because no response was required.

25 Q Was required. Right.

1 A And so, therefore, that imposes a serious limitation
2 on the interpretation of the study because we don't know
3 what other potential factors that have been suggested as
4 being related to childhood leukemia might differ among these
5 people as a function of distance as well.

6 Q Right, but at least -- if you would answer my
7 question.

8 A I have answered it.

9 Q Okay. I didn't get it. Was it yes or no? Would you
10 agree that, okay, there couldn't be participation bias in
11 this study?

12 A The only potential bias that I'm aware of there is
13 that, in fact, that this was not an exhaustive study and, in
14 fact, all of central London was left out of the database.

15 Q What bias, participation bias --

16 A That is a participation bias if cases and controls
17 were not included in London.

18 Q Previously when I asked you -- raised the possibility
19 that some of the people may be more motivated or less
20 motivated to answer these kinds of questions. I'm referring
21 to that question.

22 Could that be the case also in this study or not?

23 A I answered the question that only those that -- that
24 people were not asked for a response and so, therefore, the
25 question about people being asked and responding is not a

1 potential bias. I agree.

2 Q Okay. Thank you.

3 A However, I pointed out that there were people in this
4 population who were systematically not represented and those
5 were people living in London.

6 Q Okay. And do you seriously think that being in
7 London, okay, may be reducing the chances of getting
8 leukemia?

9 A I'm not speculating. I'm just pointing out that
10 there's a large group of people in metropolitan London --

11 Q And why do you --

12 A -- mentioned in the study and the study does not
13 highlight this.

14 Q Why do you mention this? I'm trying to follow your
15 train of thought.

16 A Because you asked if I knew of any potential
17 selection bias and I was saying that if one had enumerated
18 the entire population as the study appears, of England and
19 Wales, but here I'm identifying that there's a large
20 population in metropolitan London that was excluded from
21 this study.

22 Q Do you think its a serious concern that people living
23 in one area such as London were excluded in this study?

24 A I don't know. That's an empirical question, but in
25 the Swedish study we saw that this did make a difference in

1 their analysis.

2 Q But you don't know whether it could have affected
3 this study, or do you?

4 A I have no idea.

5 Q Can you tell us, okay, this time results are
6 presented as --

7 JUDGE NENE: I didn't understand.

8 BY MR. KALINSKI:

9 Q The current study doesn't deal with odds ratios, it
10 deals with a relative --

11 MS. SESTAK: Your Honor, if I may reimpose my
12 objection, when Mr. Kalinski is asked to clarify, if he
13 would be instructed to simply repeat slower exactly what he
14 just said instead of attempting to rephrase repeatedly in
15 equally incomprehensible terms, it would certainly make
16 things go a little quicker.

17 JUDGE NENE: I don't know that it would, but
18 would you try to do that.

19 MR. KALINSKI: I will try, Your Honor.

20 BY MR. KALINSKI:

21 Q Could you please tell us what is a relative risk of
22 leukemia?

23 JUDGE NENE: What did you say?

24 MRS. NYPAVER: Relative.

25 MR. NYPAVER: Relative.

1 A Can I just pull up my copy of the paper here because
2 in responding to this I misplaced my copy. Its somewhere in
3 here. Okay. So your question is, sir?

4 Q What is relative risk --

5 JUDGE NENE: What is --

6 A The question is what is the relative risk that is
7 computed in this study and this, like the previous study, is
8 computed as an odds ratio, that is a difference in exposure
9 which is estimated by distance, and so I'll read from the
10 results, compared with those who lived more -- greater than
11 600 meters from a line, at birth children who lived within
12 200 meters had a relative risk of leukemia of 1.69, 95
13 percent confidence interval of 1.13 to 2.53. Those born
14 between 200 and 600 meters had a relative risk of 1.23 again
15 in confidence interval 1.02 to 1.49.

16 JUDGE NENE: I think we need to take a break.
17 Its been a very intense hour-and-a-half and I think for the
18 sake of the Court Reporter we will take a ten-minute break.

19 (Thereupon, a recess was taken).

20 JUDGE NENE: Mr. Kalinski.

21 MR. KALINSKI: Thank you, Your Honor.

22 BY MR. KALINSKI:

23 Q So, Dr. Bailey, would you agree that the conclusion
24 of these two studies was that there is an association which
25 may be causative, may not be, between proximity to the high

1 voltage transmission lines or with the level of exposure to
2 electromagnetic fields and childhood leukemias, particularly
3 to ALL?

4 A The Draper study reported an association with
5 distance and the Kabuto study reported an association with
6 electromagnetic field.

7 Q Are you aware of any later studies, more recent of
8 those of similar size that refuted these notions?

9 A Perhaps I wasn't clear in my previous explanations.
10 When we're assessing the potential health risks from any
11 exposure, we don't rely on a single study and so I wouldn't
12 place these studies or other studies in terms of
13 refutations, that these studies are part of the scientific
14 knowledge that we have on this topic and that if one wants
15 to assess the potential health risk, one would take into
16 account all of the studies in this topic and not attempt to
17 draw a conclusion based upon one or two studies.

18 Q Come back to my question. Yes or no, are you aware
19 of recent studies of similar nature that reject the
20 association between ALL and higher levels of EMF or the
21 proximity to high power transmission line?

22 A I don't know of any newer, larger studies that have
23 investigated this question.

24 Q Thank you. Dr. Bailey, could you define your level
25 of expertise; are you a specialist in electromagnetic fields

1 or in cancer?

2 A In electromagnetic fields.

3 Q You are arguing in your testimony that one of the
4 problems with, okay, with the possibility that EMFs are a
5 causative agent for childhood leukemias is the lack of
6 mechanistic studies that would demonstrate the
7 carcinogenicity of EMFs in experimental animals or in vitro;
8 do I read you right or not?

9 A That was my characterization of my conclusion of what
10 the IARC panel was.

11 Q I was wondering basically how such a conclusion would
12 be reached because I'm not aware of any mouse models of
13 acute lymphoblastic leukemia. Are you aware of any such
14 models?

15 A There are a variety of experiments -- first of all,
16 the questions that have been raised in terms of potential
17 carcinogenicity of magnetic fields has been addressed by
18 looking -- by exposing animals over short periods of time to
19 magnetic fields and then in other studies over their entire
20 lifetime and those animals, depending upon the nature of the
21 exposure, maybe susceptible to a whole variety of different
22 forms of cancer.

23 In addition, there are studies in which animals have
24 a genetic predisposition to leukemia and lymphoma and have
25 been exposed to magnetic fields and those studies do not

1 report that a greater proportion of animals developed the
2 disease or that it appears more quickly in animals who have
3 exposures.

4 Q Have any of the studies been performed in the model
5 acute lymphoblastic leukemia? I don't think the model
6 exists, I just want an answer to my question.

7 A I don't know of an exact model to acute lymphoblastic
8 leukemia.

9 Q I think it doesn't exist either. So how can you use
10 mouse models to look at the disease that cannot be induced
11 in mouse?

12 A There are -- if you are aware, sir, that every
13 exposure which has been demonstrated to cause cancer in
14 humans has also been demonstrated to cause cancer in one or
15 more animal species and for most of the exposures in our
16 environment we don't have epidemiological data. So the
17 health and safety of almost all the drugs and medicines we
18 take is based upon experimental studies in which animals are
19 exposed at very high levels for various periods of time,
20 including their lifetime, and seeing if they develop cancer
21 or other disease and so none of the types of cancer which
22 have been suggested as being related to magnetic fields has
23 been observed at higher rates in animals who have had
24 exposures to magnetic fields over their lifetime, including
25 in one Japanese study the levels that are 50,000 times

1 higher than the average exposure in a home.

2 So, its on the basis of these studies that there has
3 not been regarded as being, A, experimental evidence for the
4 induction of cancer in several species or, B, no one has
5 come up with a mechanism that would explain how exposures at
6 a level of two, three, four milligauss over a long period of
7 time would damage cells or change them in such a way as to
8 affect the rate of cancer.

9 Q When I'm writing my papers -- in my experience any
10 time a scientist addresses therapy or induction of specific
11 human disease, he or she needs to prove that its also true
12 in the model of the same disease in mouse. For our studies
13 of human cancer vaccines in melanoma, we are asked to
14 perform studies. For our studies -- in our studies in human
15 colorectal cancer we are asked to perform studies in mouse
16 models of colorectal cancer.

17 How can you having in mind the literature showing
18 that the disease that's most in question is acute
19 lymphoblastic leukemia, how can you test any of the
20 carcinogenicity in a mouse where you do not have a model of
21 acute lymphoblastic leukemia? I think you can -- you
22 cannot. Do you think you can?

23 A It would certainly be desirable if we had a good
24 mouse or rat model for this disease.

25 Q Right.

1 A But the absence of a perfect model does not mean that
2 we have to disregard all of the evidence which has been
3 accumulated in other models and other systems.

4 Q But you would agree with me that there's no mouse
5 model that would allow to eliminate the possibility that
6 that EMF are carcinogens?

7 A I think you're overreaching the -- overreaching the
8 grasp of science. We -- even if we were to have a model, we
9 would not be able to necessarily prove the absence of a
10 disease based upon a negative finding in that model.

11 Q Its difficult for me --

12 JUDGE NENE: I'm sorry, I don't understand.

13 MR. KALINSKI: I will rephrase.

14 JUDGE NENE: Ms. Sestak wishes you would not
15 rephrase, just repeat.

16 MR. KALINSKI: Okay.

17 BY MR. KALINSKI:

18 Q Its difficult for me to understand your answers
19 because you have not providing me with straight yes or no
20 answers, so I need to repeat myself multiple times, but let
21 me try. I'm just concerned about our time.

22 Would you agree that there are no mouse models of
23 acute lymphoblastic leukemia?

24 A We were looking for better ones and I answered before
25 about what models there had been in this area.

1 Q Would you agree with me that there are no mouse
2 models of acute lymphoblastic leukemia, yes or no?

3 A No, and referencing my previous answers --

4 Q Thank you. Okay. You mentioned in your testimony
5 that one reason that you believe that EMF is not
6 carcinogenic is because people have been exposing themselves
7 to high dose EMFs over their entire life span without
8 observation of any negative effects. Can you tell me what
9 is the life span of a mouse compared to human?

10 A Obviously in years its shorter. We're talking about
11 somewhere between one and two years.

12 Q Right. So in the study, okay, of one of these papers
13 either Kabuto or Draper, let me find it, what is the
14 earliest onset of acute lymphoblastic leukemia? And I think
15 they got only about 10, 11 percent of cases below two years.
16 Is that correct or not from the table? I haven't
17 highlighted it.

18 A As you're aware, the bulk of the cases are below age
19 4 and 5 and less than two years there's 11.2 percent -- less
20 than two years of age, 11.2 percent, between 2 and 3 years
21 of age, 27.5, between ages 4 and 5, 17.1 percent.

22 Q So do you think its reasonable to assume that cancer
23 levels develop longer than two years?

24 A I'm not sure I know what you mean by the question.

25 Q I'll rephrase. Do you think its possible that you

1 cannot observe carcinogenic potential of a factor that
2 induces cancer in usually more than two years in any mouse
3 species that normally lives not more than one year?

4 A I don't know of any good evidence against the
5 assumption that these development of diseases would scale
6 roughly proportional to the life span, so that a month of a
7 mouse life might be equivalent to, you know, years of human
8 life.

9 Q Yes.

10 A But its certainly true that different types of
11 diseases, including cancers, develop at different rates and
12 in the case of some carcinogens, it may take decades before
13 they occur. But just because a disease takes decades to
14 occur in humans doesn't necessarily mean that if you expose
15 mouse or rat to those equivalent levels of exposures, that
16 they could never develop the disease because they didn't
17 live 40 years.

18 Q Perhaps. Thank you. I got -- in addition to
19 potential impact of EMF on cancer, are you aware of reports
20 that address impact on other logical disorders, depression,
21 rate of suicide or attention deficit and hyperactivity
22 disorder?

23 A You have a list of a number of diseases there. I'm
24 not aware of anything with hyperactivity disorder per se.
25 There have been in the past studies of adults with regard to

1 cognitive disorders including depression, but I'm not aware
2 of studies relating magnetic fields in epidemiology studies
3 to hyperactivity disorder.

4 Q Could you please read this one introductory paragraph
5 and its a study in itself, but its too long to present it
6 now, from a journal called Bioelectric Magnetics from 1997.

7 MS. SESTAK: Excuse me, may I ask was this one
8 of the articles presented as prepared testimony?

9 MR. KALINSKI: It wasn't.

10 THE WITNESS: And its not cited in my
11 testimony.

12 MS. SESTAK: Your Honor, I'm going to object
13 to this. Mr. Bailey is not prepared to address an article
14 that he has never had the opportunity to see before. We had
15 been instructed by your prehearing order that all expert
16 testimony and things of that nature were to be presented by
17 the 20th of June.

18 JUDGE NENE: Yes.

19 MR. KALINSKI: May I argue that Dr. Bailey's
20 an expert on health impact of electromagnetic radiation and
21 I think this --

22 JUDGE NENE: I'm going to sustain the
23 objection. The author of this article is not here. That's
24 hearsay as far as you're concerned and this witness has not
25 been prepared to testify to this article.

1 MR. KALINSKI: Your Honor --

2 JUDGE NENE: So the objection is sustained.

3 MR. KALINSKI: Your Honor, we got two
4 witnesses we were not prepared to see today. Okay. Okay.
5 We'll just -- its a pity.

6 BY MR. KALINSKI:

7 Q My last question is that when you mention that there
8 are no mechanistic studies or no mechanistic proof that
9 electromagnetic fields, okay, cause cancer, could a possible
10 explanation be that in addition to direct mutagenic and
11 carcinogenic effect of EMF there is something different
12 about high power transmission lines, they may result in this
13 correlation with the type of leukemias, like level of ozone
14 in the atmosphere because of the arc, like the level of
15 ionization of chemicals around factors that could not be
16 easily tested in vitro or in mouse laboratory experiments?

17 A People have for a hundred years looked for potential
18 mechanisms about how magnetic and electric fields might
19 affect organisms, either adversely or beneficially, and none
20 of these mechanisms at the levels we're talking about --
21 including those levels associated with the proposed
22 transmission line -- you know, has any evidence come out
23 that would suggest this is the case.

24 This is a relatively low voltage transmission line,
25 its not a 345 kV or 500 kV in which you might expect some

1 ozone production and even when people have attempted to
2 measure an increase in the level of ozone down wind of a
3 thousand kv line, they have been unable to detect it above
4 background levels and I don't think that there's any
5 confirmed evidence that would suggest that factors other
6 than electromagnetic fields or some aspect related to them
7 has been proposed and confirmed as a mechanism that would
8 explain childhood leukemia or any other disorder.

9 Q In this case I would like to finalize with my initial
10 question, do you believe in the progress of science and do
11 you believe there are certain associations demonstrated
12 using statistics and we might be able to explain them only
13 ten years from now?

14 A Anything is possible, of course, but, you know,
15 unlike many areas where we have relatively few studies and
16 investigation, this is an area that has been undergoing
17 general study for a hundred years and very intense study
18 since the 1960's and, you know, one can't predict the
19 future, but we have a lot of evidence here, more evidence
20 about exposures of our communities to electrical magnetic
21 fields than we do many of the other 68,000 chemicals which
22 are in everyday use.

23 So, I can't speculate about what might occur in the
24 future, but I'm telling you that the database that we have
25 to make judgments about this exposure is quite extensive and

1 despite the fact that we have been looking hard for a
2 mechanism or a basis for something or other, we have not
3 determined it and that's how science progresses. Its not --
4 the research is not continuing because we found a problem,
5 but research is continuing to test this hypothesis again and
6 again and again and the reason why is because everyone in
7 our society, whether you live near the proposed line or not,
8 has exposures to these fields.

9 So even a very tiny risk would be a public health
10 importance and should not be overlooked.

11 MR. KALINSKI: Thank you. Thank you, Your
12 Honor. I'm done.

13 JUDGE NENE: Dr. Janosko?

14 MR. JANOSKO: I think Mr. Nypaver --

15 MR. NYPAVER: No, you go ahead. Keep it on
16 the same subject.

17 MR. JANOSKO: Okay. Your Honor and Dr.
18 Bailey, Ms. Sestak, we appreciate your patience with us
19 legal neophytes.

20 CROSS-EXAMINATION

21 BY MR. JANOSKO:

22 Q Dr. Bailey, have you ever given testimony in hearings
23 similar to this one?

24 A Yes.

25 Q I think you mentioned that in your testimony with

1 Duquesne Light; is that correct?

2 A Yes.

3 Q Do you recall giving testimony on behalf of
4 Connecticut Light and Power Company and United Illuminated
5 Company in May, 2004?

6 A Yes.

7 MR. JANOSKO: Your Honor, do I need to give a
8 copy of that testimony at this time?

9 JUDGE NENE: To give who a copy?

10 MR. JANOSKO: Dr. Bailey -- give the Court a
11 copy of Dr. Bailey's testimony at that time?

12 JUDGE NENE: Do you want to submit it into
13 evidence?

14 MR. JANOSKO: I would like to, thank you.

15 JUDGE NENE: Has it been marked?

16 MR. JANOSKO: No. I'm not sure who gets --

17 JUDGE NENE: I suggest we mark it with your
18 initials, maybe. That would be --

19 MR. JANOSKO: MRJ.

20 JUDGE NENE: MRJ 1. MRJ 1 and I'll have two
21 copies for the Court Reporter. Do you have an objection?

22 (Thereupon, the document was marked
23 as Exhibit MRJ 1 for
24 identification).

25 MS. SESTAK: Your Honor, I don't know what

1 this is, I haven't seen it yet, so I reserve objections
2 until I have a chance to review it.

3 JUDGE NENE: We'll allow you to make an
4 objection at any subsequent time before the Record closes.

5 MS. SESTAK: Thank you.

6 MR. JANOSKO: Just for the Record, Your Honor,
7 in Dr. Bailey's written testimony for Duquesne Light he has
8 acknowledged giving this prior testimony and I'm not showing
9 it to make any correction in Dr. Bailey's statements as I
10 think he has been very consistent in his beliefs in prior
11 tests and we all acknowledge that Dr. Bailey is an expert in
12 this field of study.

13 JUDGE NENE: Very well.

14 BY MR. JANOSKO:

15 Q At the time Connecticut Light and Power Company was
16 -- at that time they wanted to build a new high voltage
17 electric line and they were planning to reconstruct part of
18 an existing high voltage line; is that true?

19 A Yes.

20 Q During that testimony you were asked to comment on
21 passive and active regulatory reaction as defined by the
22 National Institute for Environmental Health Sciences in
23 1999; is that true?

24 A Yes.

25 Q In that 1999 report by the NIEHS, they recommend that

1 utility companies take passive measures into consideration
2 when constructing electrical lines to reduce possible
3 exposure to ELF's and EMF's; is that true?

4 A Yes. Its quoted on page 2 of my testimony, the quote
5 from NIS.

6 Q In this May, 2004, testimony did you also comment on
7 publications by Dr. Granger Morgan?

8 A Yes.

9 Q What did Dr. Granger Morgan mean by prudent avoidance
10 in relation to EMF's?

11 A I have already answered that earlier.

12 Q Okay. You have to bear with me because I'm not a
13 professional attorney.

14 Do the terms passive action as defined by the NIEHS
15 and prudent avoidance as coined by Dr. Morgan refer to
16 similar concepts?

17 A It would appear so.

18 Q Is it true that Dr. Granger's 1989 publication -- let
19 me rephrase it. I'm sorry.

20 Is it true that in Dr. Granger's 1989 publication he
21 makes comment to how much money should be spent to try to
22 avoid exposure to EMF's?

23 A Yes, I recall he looked at that question.

24 Q Does he, meaning Dr. Granger, feel that spending up
25 to "a few thousand dollars" per person is justifiable to try

1 to reduce exposure?

2 A I can't specify the accuracy of that quote, but it
3 seems reasonable that he said something like that.

4 Q I'm going to refer you then to page 4.

5 A Yes. Oh, yes, I see it there. Its on page 4.

6 Q So you acknowledge that he has mentioned this in the
7 past?

8 A Yes.

9 Q And this also includes -- and this includes the
10 location of transmission lines in such a way as to reduce
11 exposure; is that true?

12 A Yes. There could be a variety of means of achieving
13 prudent avoidance.

14 Q In regard to prudent avoidance in constructing
15 utility lines, does this include positioning of line and
16 utility poles so as to limit exposure to local residents?

17 A That could be considered part of prudent avoidance,
18 yes.

19 Q So if you have a choice between two corridors for a
20 high voltage line and one corridor has 100 households on its
21 route and the other has ten households on its route, using
22 the concepts of passive action and prudent avoidance, what
23 would be the best option for this route?

24 A The decisions about what is the appropriate route
25 involve more than just electromagnetic fields and I think in

1 the context of the Connecticut Siting Council it is, in
2 fact, explicitly required to balance environmental impacts,
3 health and safety, a whole variety of issues and in the
4 context of that, EMF is just one of the issues, and I'm sure
5 there must be something similar here in Pennsylvania, that
6 the issues involving siting involve just more than
7 calculating the fields and determining the number of houses
8 near there.

9 So as part of a balancing act between addressing all
10 of these different issues, taking into account the number of
11 households very close to the line could be one factor as
12 part of -- taken into consideration as part of that
13 balancing act.

14 I think as my experience, utilities do address this
15 to minimize land use conflicts, attempt to do this wherever
16 possible.

17 Q In a hypothetical situation, with all other things
18 being equal, one route has a hundred homes on it, the other
19 one has ten, all other things being equal, using those two
20 concepts of passive action and prudent avoidance, what would
21 be the best option for that route?

22 A The way its phrased, it would appear that taking the
23 route that has the fewest number of residences along it
24 would be one consideration. However, I can tell you that
25 the scientific evidence does not provide us with an

1 empirical basis to choose between these two alternatives.

2 Q You were a member of the working group for the
3 International Agency for Research in Cancer, a division of
4 the World Health Organization in 2001; is that true?

5 A Yes.

6 Q This group published its findings in a very large
7 report in 2002, roughly 280 pages; is that true?

8 A Yes, this is cited in my testimony.

9 Q Okay. And that report in regards to childhood
10 leukemia, the group -- did the group conclude that magnetic
11 fields were possibly carcinogenic in humans?

12 A Yes.

13 Q Okay. So currently the scientific community is not
14 sure whether there is a link between EMF exposure and
15 childhood cancer; is that true?

16 A Its hard to speak for the scientific community at
17 large, and I think I summarize conclusions of the national
18 and international panels that have been assembled to assess
19 this evidence and discuss this relationship.

20 Q That sounds like that would include the scientific
21 community, given its national and international panels.

22 A There are hundreds of thousands of scientists engaged
23 in the practice of science. Its my opinion that the
24 assessments offered by these panels provide the best
25 guidance to companies, national authorities and so on and so

1 that's why I recommend their conclusions in my testimony.

2 Q Does this mean that there is a chance that magnetic
3 fields such as those created by high voltage electrical
4 lines may increase the risk for childhood cancer?

5 A Based upon our assessment of the evidence, its
6 possible. That just means its not impossible. But the
7 evidence did not convince us, nor any of the other expert
8 panels, that the weight of the evidence was sufficient to
9 conclude that, in fact, that there was a causal
10 relationship. We don't know what the basis for that
11 association is and there are very few known risk factors for
12 childhood leukemia and there are many efforts going on
13 around the world to find those risk factors.

14 Q But you said it is possible?

15 A It is certainly possible.

16 MR. JANOSKO: Your Honor, I would like to
17 submit a list of groups to be possible carcinogenic agents
18 that is maintained by the International Agency for Research
19 in Cancer, which Dr. Bailey has been part of in the past as
20 my -- as another --

21 JUDGE NENE: Counsel have any objection?

22 MR. JANOSKO: This is a list.

23 MS. SESTAK: Your Honor, I object on the basis
24 that this was not previously provided as required by your
25 prehearing order unless it can be established that Dr.

1 Bailey personally participated in the preparation of the
2 list and can identify it.

3 JUDGE NENE: What's your association with that
4 list, if anything, Doctor?

5 THE WITNESS: My association with that list is
6 that I was involved in the assessment of one agent or group
7 of agents on that list. As I have identified, that is in
8 the 2 B category. That's my sole relationship with that
9 list.

10 MR. JANOSKO: Magnetic fields is listed in
11 this list and I'm --

12 JUDGE NENE: Yes, but the witness has
13 testified to his extent -- to the extent of his research
14 into the area of EMFs and that that was the extent of his
15 involvement in that study.

16 MR. JANOSKO: I understand.

17 JUDGE NENE: And his research in that area is
18 open to Cross-Examination and so I don't see the relevance
19 of what other factors might have been made part of a list,
20 if he, himself, had no participation.

21 MR. JANOSKO: I understand. The list has
22 other chemicals and other exposures that have been shown to
23 have the same cancer risk, classified as the same potential
24 cancer risk as the International Agency in Research in
25 Cancer classified magnetic fields.

1 JUDGE NENE: I don't get the point.

2 MR. JANOSKO: My point is that -- is to
3 compare magnetic fields to other agents that the
4 International Agency for Research in Cancer recognizes as
5 possible carcinogenic agents.

6 JUDGE NENE: But there's no evidence in this
7 case that any of those other factors are going to be created
8 by the siting of this line.

9 MR. JANOSKO: I mention this because some of
10 the chemicals on the list have been banned by the United
11 States and yet they are listed as group 2 B possible
12 carcinogenic agents, the same as magnetic fields.

13 JUDGE NENE: This is a paper you wish to
14 introduce?

15 MR. JANOSKO: It is a list of chemicals

16 JUDGE NENE: A list of chemicals. There has
17 to be some supportive context to it.

18 MR. JANOSKO: This list contains all agents
19 evaluated as being in group 2 B by the International Agency
20 for Research in Cancer.

21 JUDGE NENE: You can mark it and make it part
22 of the Record for the value that it might have. Do you have
23 copies for -- sufficient number of copies?

24 MR. JANOSKO: Yes, Your Honor.

25 JUDGE NENE: You can mark that -- would you

1 mark it with your initials and a number 2, please, MRJ No.

2 2. Your objection will be noted, Ms. Sestak.

3 (Thereupon, the document was marked
4 as Exhibit MRJ 2 for
5 identification).

6 MS. SESTAK: Thank you, Your Honor.

7 JUDGE NENE: Two for the Court Reporter, one
8 for myself.

9 MR. JANOSKO: I think Dr. Bailey needs a copy
10 as well.

11 BY MR. JANOSKO:

12 Q Dr. Bailey, would you mind reading the date in the
13 lower right-hand corner on the first page of the list.

14 A July 12, 2006, that's the date you downloaded it from
15 the Internet.

16 Q So this is a current list by the International Agency
17 for Research in Cancer. Can you please read the sections
18 that are highlighted in yellow.

19 A Group 2 B possibly carcinogenic to humans 241 -- and
20 that refers to the number of agents and groups of agents in
21 this category.

22 JUDGE NENE: Are you familiar with this list,
23 Doctor?

24 THE WITNESS: Only in general terms. There
25 are a number of compounds in the list that, you know, we all

1 are familiar with, coffee, pickled vegetables, gasoline, et
2 cetera, and many others.

3 BY MR. JANOSKO:

4 Q You are familiar with the list because you haven't
5 even gotten to those pages yet?

6 A I'm familiar those specific substance contained on
7 this list, but I'm not familiar with the details of this
8 list and I think that you should recognize that
9 participating in this list you cannot make inferences about
10 other compounds on the list. Its sort of like saying
11 because two people live in Pittsburgh that they must be
12 related. Because magnetic fields and these other compounds
13 are on the same category of 2 B doesn't necessarily mean
14 that they appear on this list for similar reasons.

15 Q They are listed as group 2 B agents because they are
16 listed as possible carcinogenic agents in humans.

17 A That's correct.

18 Q That's what I'm going to address. There is more
19 that's highlighted on other pages. Page 3, page 5, 8, 9 and
20 10. Can you please read those highlighted areas for the
21 Court.

22 THE WITNESS: Do you wish me to read them or
23 do --

24 JUDGE NENE: I think they are -- we can all
25 read them. They are all highlighted.

1 MRS. NYPAVER: We don't have --

2 JUDGE NENE: Pardon me?

3 MRS. NYPAVER: We don't have highlighting.

4 JUDGE NENE: Maybe Mr. Janosko can provide you
5 with -- if he intends to introduced this into evidence,
6 you'll have to provide the other parties with a copy.

7 MR. JANOSKO: I will, Your Honor.

8 JUDGE NENE: I see no reason why you shouldn't
9 read the list, the highlighted list.

10 A On page 3 he has highlighted DDT, on page 5 he has
11 highlighted human immune deficiency virus type 2, human
12 papillomaviruses, lead, magnetic fields, extremely low
13 frequency, on page 8 he has highlighted progestins and
14 styrene, and page 9 toluene diisocyanates.

15 JUDGE NENE: Progestins is not highlighted on
16 mine. Okay.

17 A (Continuing) And on page 10 engine exhaust, gasoline,
18 gasoline and welding fumes.

19 Q DDT, isn't that a pesticide?

20 JUDGE NENE: I'm going to ask you for an offer
21 of proof here because the witness has said that he didn't
22 have anything to do with the listing of those or any other
23 items except for the one that we're concerned with.

24 So, what are you going to try to prove with this line
25 of questioning?

1 MR. JANOSKO: I'm using this list as a
2 comparison to other agents that the Court may be well aware
3 of or have heard of in the past that are recognized as
4 potentially hazardous products and do have some cancer
5 risks.

6 MS. SESTAK: Your Honor, I object on this
7 basis, certainly most of us are aware that DDT was
8 apparently banned not due to any perceived cancer risk but
9 due to its affect on birds such as the bald eagle and the
10 fact that it causes breeding problems with too thin shells.

11 I don't think that any extrapolation such as that
12 suggested by Mr. Janosko from this list has any validity in
13 this matter.

14 JUDGE NENE: I think we can admit that there
15 are some things that are known to be causing cancer, but
16 that's not this witness' area of expertise and that's -- I'm
17 going to not allow this into evidence.

18 MR. JANOSKO: Okay.

19 BY MR. JANOSKO:

20 Q Dr. Bailey, were you here for yesterday's testimony?

21 A Yes.

22 Q Did you have the opportunity to hear Mr. Houston, one
23 of the GAI consultants' testimony?

24 A Yes.

25 Q Are you aware of Duquesne Light's proposed Route E,

1 where its located?

2 A Not specifically.

3 Q Are you aware of how many homes are within a hundred
4 feet of the proposed line, meaning Route E?

5 A I recall that he testified about the number of
6 residences and that there were differences among the routes,
7 but I could not quote you the number of residences on each
8 of those routes.

9 Q I'll refer you to Duquesne Light's testimony by Mr.
10 Robert Houston and this is table A 1.

11 A Okay.

12 Q So now are you aware of how many residential homes
13 are within 100 feet of the proposed line?

14 A I see they have tabulated on the second page of table
15 A 1 that information.

16 Q And that is what number?

17 A For which particular section?

18 Q Its 116; is that correct?

19 JUDGE NENE: I think the way to ask the
20 question -- I mean, he's not --

21 THE WITNESS: Is it E or E-1 he is asking
22 about?

23 MR. JANOSKO: I'm going to ask about E-1.

24 JUDGE NENE: The testimony has been that its
25 116.

1 BY MR. JANOSKO:

2 Q Regarding Route E-1 that was the original proposed
3 line corridor, are there 126 -- 126 houses within a hundred
4 feet of the center line of that route?

5 A My copy reads 128.

6 Q My apologies, its 128. On Route A's line, there are
7 35 homes; is that correct?

8 A Yes.

9 Q And on Route C there are 11 homes; is that correct?

10 A Yes.

11 JUDGE NENE: I don't know whether you can
12 testify that that's correct. This is in a document that has
13 been submitted by another witness and its not for this
14 witness to read it and confirm.

15 THE WITNESS: I can just testify that he's
16 reading the document correctly.

17 BY MR. JANOSKO:

18 Q In your opinion do you think more children live on
19 proposed Route E versus Route A which has one-third as many
20 homes within a hundred feet of the proposed line?

21 A I don't know.

22 Q Okay. Regarding Route E again, in comparison to
23 Route C, Route C has one-tenth as many homes within a
24 hundred feet of the center line. In your opinion do you
25 think that more children live on Route E versus Route C?

1 A I don't know. There could be speculation about fewer
2 homes fewer children, but that's an empirical question. I
3 have no information about.

4 Q Is it likely that Route E has more children than the
5 other two --

6 MS. SESTAK: Objection.

7 JUDGE NENE: I'm going to sustain the
8 objection. This is not a proper line of questioning. You
9 can elicit facts to the point that have already been
10 established and you can make arguments if you want, but not
11 with this witness and its pure speculation on how many
12 people live -- children live in these homes.

13 MR. JANOSKO: That's the end of my
14 questioning, Your Honor. Thank you, Dr. Bailey.

15 JUDGE NENE: Mr. Nypaver, you had a few
16 questions? I'm sorry, maybe you -- Mr. Lapets had a few.

17 MR. NYPAVER: I'll go after him.

18 MR. LAPETS: I have two questions.

19 THE WITNESS: Could you sit in the chair so I
20 can hear you?

21 MR. LAPETS: Sure. No problem.

22 JUDGE NENE: Just identify yourself.

23 MR. LAPETS: My name is Oleg Lapets.

24 CROSS-EXAMINATION

25 BY MR. LAPETS:

1 Q How do you define statistically significant
2 association?

3 A Statistically significant association is one that is
4 unlikely, just by reason of sampling, to error, to have
5 arisen by chance.

6 I mentioned before in my testimony that at the
7 standard levels of statistical significance, one would
8 expect one in every 20 computations to have suggested a
9 difference arising that could be to chance alone.

10 Q Okay. Thank you. And the second question, can
11 statistically significant association occur by chance only?

12 A Yes.

13 MR. LAPETS: Thank you. That's it.

14 JUDGE NENE: Mr. Nypaver?

15 MR. NYPAVER: Yes.

16 CROSS-EXAMINATION

17 BY MR. NYPAVER:

18 Q On page 6 of your --

19 JUDGE NENE: I couldn't understand that.

20 A Are you directing me to a particular page?

21 Q Yes, page 6 of your testimony and its basically
22 saying that you are referencing -- that you're looking at
23 the electric research and management --

24 JUDGE NENE: A little louder. You're just not
25 talking to the gentleman next to you.

1 MR. NYPAVER: Okay.

2 BY MR. NYPAVER:

3 Q On page 6 lines 15 and 16 you refer to Dr. Fugate's
4 analysis of his preparation and you agree to his studies and
5 I just want to ask you -- excuse me -- a question.

6 It would be actually going back to Dr. Fugate's study
7 on page 13, which is under Section 3. Dr. Fugate had taken
8 readings on Windy View Drive.

9 A I'm sorry, what page?

10 Q Page 13.

11 A Okay.

12 Q Dr. Fugate had taken readings on Windy View Drive.

13 A Windy View Lane.

14 Q Windy View Lane. Concerning EMFs and electric
15 fields. My question is, do you remember my
16 Cross-Examination of Dr. Fugate yesterday?

17 A What are --

18 Q It was in reference to the fact that he was a certain
19 distance below the line and he went out to take readings and
20 he actually is a further distance away from the line.

21 A Yes.

22 Q And basically Dr. Fugate agreed with me that because
23 you're actually a distance away from the center of the
24 phases, that if you were actually at a house 20 feet away
25 down here, you actually could be closer in the house on the

1 second floor?

2 A Yes.

3 Q And since you are actually closer, you're reading
4 could actually be higher?

5 A Depending upon how much higher you are in
6 relationship to the line, yes.

7 Q Well, I mean in reference to his readings as well.
8 He's reading 35 feet -- he is reading 25 feet over here, so
9 he's technically lower to the line so his readings could
10 actually be --

11 A If I remember his testimony, he stated that the
12 magnetic field could be higher as you got closer to the
13 conductors.

14 Q Okay.

15 A That was the determining factor.

16 MR. NYPAVER: Okay. That's all I have, Your
17 Honor.

18 JUDGE NENE: Thank you. Dolores Nypaver?

19 MRS. NYPAVER: I have no further questions.

20 Thank you.

21 JUDGE NENE: Any other protestant? Mrs. Zaun?

22 MS. ZAUN: I do not have any questions.

23 JUDGE NENE: Do you have Redirect?

24 MS. SESTAK: Very little, Your Honor.

25 REDIRECT EXAMINATION

1 BY MS. SESTAK:

2 Q Mr. Bailey, speaking purely hypothetically, if, in
3 fact, EMF -- or as you have repeatedly said magnetic fields
4 have been linked with a statistically significant, although
5 small relation to childhood leukemia, if, in fact, it would
6 turn out that there is a causal relation between magnetic
7 fields and childhood leukemia, what would be the affect of
8 replacing the present 23 kilovolt line with a 138 kilovolt
9 line based upon Dr. Fugate's calculations indicating that
10 the magnetic field would drop significantly or at worst
11 remain the same?

12 A In response to your hypothetical question, if there
13 were, indeed, a risk associated with magnetic field exposure
14 at these levels, then the upgrading of the proposed line to
15 138 kV would result in the same level or lower levels of
16 exposure as Dr. Fugate has testified.

17 MS. SESTAK: Thank you. I have no further
18 questions.

19 JUDGE NENE: Mr. Kalinski? On that subject.

20 MR. KALINSKI: On the subject. Very short
21 one.

22 RE-CROSS-EXAMINATION

23 BY MR. KALINSKI:

24 Q Mr. Fugate also mentioned yesterday that, yes,
25 indeed, the initial levels of the electromagnetic fields

1 would drop down, however in case of full maximum utilization
2 of new line the electromagnetic fields can be brought up ten
3 fold.

4 MS. SESTAK: Objection. That was not Mr.
5 Fugate's testimony. Mr. Kalinski --

6 MR. KALINSKI: I think it was.

7 MS. SESTAK: Mr. Kalinski has misstated Mr.
8 Fugate's testimony. Mr. Fugate testified to the magnetic
9 fields at the proposed voltage and for a 20 megavolt -- a 20
10 MVA substation and for a possible future use at 30 MVA.

11 Anything ten fold was solely in response to questions
12 from Mr. Kalinski speculating with no basis whatsoever in
13 fact or prior testimony that for some reason the voltage
14 would be increased at the substation to 500 MVA.

15 JUDGE NENE: I think --

16 MR. KALINSKI: May I rephrase the question?

17 JUDGE NENE: Mr. Fugate's testimony is going
18 to stand as he testified.

19 MR. KALINSKI: If I can rephrase.

20 BY MR. KALINSKI:

21 Q In a hypothetical case that this new power line will
22 reach its maximum capacity of 30 MVA, would the -- compared
23 to the current maximal level of 20 MVA, am I correct to
24 state that in such a hypothetical case the level of EMFs
25 would increase by ten fold?

1 A In a hypothetical case the level of magnetic field
2 would increase.

3 Q In such a case, referring to the previous question
4 from Ms. Sestak, would the possible risks associated with
5 EMFs increase?

6 A On the assumption that there was -- which is again
7 contrary to facts not in evidence -- a linear dose response
8 relationship.

9 Q There would be a linear dose response?

10 A Assumed.

11 MR. KALINSKI: Okay. Thank you. Thank you,
12 Your Honor.

13 JUDGE NENE: Any other Cross-Examination?

14 MR. JANOSKO: I have a question on Redirect,
15 too.

16 CROSS-EXAMINATION

17 BY MR. JANOSKO:

18 Q Dr. Fugate's calculations were based on -- his
19 readings were based on calculations and not actual readings
20 of EMFs by 138 kV lines; is that true?

21 A His testimony stands as it is.

22 MR. JANOSKO: No further questions, Your
23 Honor.

24 JUDGE NENE: Thank you, Dr. Bailey.

25 MS. SESTAK: Your Honor, may I ask one more

1 Redirect?

2 JUDGE NENE: Yes. Surrebuttal.

3 MS. SESTAK: Surrebuttal.

4 SURREBUTTAL

5 BY MS. SESTAK:

6 Q Dr. Bailey, based upon the calculations that Mr.

7 Fugate performed and which were offered into evidence as DWF

8 3, if, in fact, the magnetic field would go lower at 30 --

9 for 30 MVA substation than they are presently with the 23

10 kilovolt line, would your prior answer still stand that it

11 would, in fact, reduce the risk?

12 A Yes.

13 MS. SESTAK: Thank you.

14 JUDGE NENE: Recross on that? Thank you.

15 Thank you, Mr. Bailey.

16 THE WITNESS: Thank you, Your Honor.

17 JUDGE NENE: Do you have anything else, Ms.

18 Sestak?

19 MS. SESTAK: Your Honor, I have one further
20 witness. Its likely that his testimony would be protected.

21 We could begin his testimony.

22 JUDGE NENE: We could begin it.

23 MS. SESTAK: We could begin and see how long
24 it will go.

25 JUDGE NENE: Call your witness.

1 MS. SESTAK: Paul Cass.

2 JUDGE NENE: I intend to go no later than 5
3 o'clock.

4 MS. SESTAK: Okay. Your Honor, I don't think
5 any one of us wants to be here beyond 5 o'clock.

6 JUDGE NENE: You have been sworn, sir?

7 MR. CASS: Yes, I have.

8 PAUL G. CASS,
9 having been previously duly cautioned and sworn, testified
10 as follows:

11 DIRECT EXAMINATION

12 BY MS. SESTAK:

13 Q Would you please state your name and spell your name
14 for the benefit of the Court Reporter.

15 A My name is Paul G. Cass, C-a-s-s.

16 Q Mr. Cass, did you prepare written testimony in this
17 matter that is identified as Duquesne Light Company's
18 Exhibit -- or Statement No. 2?

19 A Yes, I did.

20 Q Did you also prepare the documents that are labeled
21 PC 1, PC 2, PC 3, PC 4, PC 5 and PC 6 that are Exhibits to
22 that testimony?

23 A Yes, I did.

24 Q I would like to ask you a few questions to expand
25 upon matters that have been raised at the public input

1 hearing and in subsequent testimony here in the last day and
2 a half -- the last two days.

3 Let me begin with matters raised at the public input
4 hearing. Were you present at the public input hearings?

5 A Yes, I was.

6 Q Okay. At the public input hearings there was
7 testimony from Mr. Kalinski concerning his speculation about
8 the cost of Route A. Did you, in fact, calculate a cost for
9 the various routes before a decision was made as to what the
10 recommended route would be?

11 A We had a general cost for the project, costs for --
12 detailed costs on each route were not determined.

13 Q Were you directly involved in the decision to choose
14 Route E?

15 A I was directly involved with that decision.

16 Q Now, there was testimony from Barbara Zaun that
17 Allegheny Power does not -- that there are no structures
18 within 100 feet of high voltage transmission lines in
19 Allegheny Power's territory.

20 Are you aware of whether or not that is an accurate
21 statement?

22 A I am aware that that is not an accurate statement.

23 Q And what is the basis of your awareness?

24 A I used to live in Bethel Park near the road, Logan
25 Road, about two blocks away from Logan Road, and Allegheny

1 Power has a 138 kV line running down the entire length of
2 Logan Road and Irishtown Road and Fort Couch Road.

3 Q And what would the characteristics of these roads be;
4 would they be rural, residential, suburban, commercial?

5 A They would be pretty close in both houses, vegetation
6 and the way it winds as say Wildwood Road or Thompson Run
7 Road, similar to the roads out here.

8 Q Do you have a photograph to substantiate your
9 testimony?

10 A Yes, I do. I have three photographs that you can
11 enter as Exhibits.

12 MS. SESTAK: Yes. I would like to enter these
13 as Exhibits PC 7, as a group Exhibit and I did bring paper
14 clips.

15 JUDGE NENE: Have they been marked?

16 MS. SESTAK: They have not been marked.

17 THE WITNESS: They have not been marked.

18 MS. SESTAK: Your Honor, we were not certain
19 of the exact order in which things were would be admitted
20 and, therefore, nothing has been premarked.

21 JUDGE NENE: Okay.

22 THE WITNESS: I can distribute the three --

23 JUDGE NENE: This is of the Logan Road area?

24 THE WITNESS: This is Logan Road in Bethel
25 Park, which there's three photos.

1 MR. NYPAVER: Okay.

2 THE WITNESS: I'll explain what they show.

3 MS. SESTAK: Mr. Cass, can you give one copy
4 to the Judge, two copies to the Court Reporter, one copy to
5 me and additional copies to the participants.

6 THE WITNESS: I'm going to pass these around
7 and everyone can take what they need.

8 JUDGE NENE: How many photographs in the
9 group?

10 THE WITNESS: There's a total of three
11 photographs and they're not collated.

12 MS. SESTAK: Would anyone like a paper clip?

13 JUDGE NENE: I would like all three
14 photographs.

15 THE WITNESS: Yes, there's one, two, three.

16 JUDGE NENE: I don't know whether we should be
17 compiling these.

18 MS. SESTAK: Your Honor, I can have him
19 introduce them one a time if that would be easier.

20 JUDGE NENE: They are not going to be in the
21 same order.

22 MS. SESTAK: He will speak of them in order.
23 Maybe we can backup and just do them one at a time.

24 JUDGE NENE: Do them one at a time.

25 BY MS. SESTAK:

1 Q Okay. Paul -- Mr. Cass, which photograph would you
2 like to discuss first?

3 A We'll discuss the pole that was closest to my house
4 and that would be the one that shows the big stop sign. It
5 would show the stop sign and this is at the corner of East
6 View Road -- East View Drive, I'm sorry, and Logan Road.

7 MS. SESTAK: I ask that this be marked Exhibit
8 PC No. 7. Do you have additional copies for the Court
9 Reporter? I'll mark the Court Reporter's copies.

10 JUDGE NENE: How are you marking it?

11 MS. SESTAK: PC 7. Would you like me to mark
12 a copy for you as well?

13 JUDGE NENE: Yes, please.

14 (Thereupon, the document was marked
15 as Exhibit PC No. 7 for
16 identification).

17 BY MS. SESTAK:

18 Q Mr. Cass, let me ask you one thing, how do you know
19 that this is in Allegheny Power service territory?

20 A Well, I used to live there, so I know who it belongs
21 to.

22 JUDGE NENE: Did you pay the bills there?

23 THE WITNESS: I did not pay the bills there.
24 No.

25 A (Continuing) I also have talked to Allegheny Power

1 afterward, just for confirmation that this was, in fact,
2 theirs, but I knew that to begin with.

3 Q Okay. When you say this was, in fact, theirs, what
4 are you referring to?

5 A Confirm that Allegheny Power did have that line and
6 that it was 138 kV.

7 Q Is that line shown in this photograph?

8 A The line is not shown in this particular photograph,
9 but the line overhangs the street, but you can see where the
10 pole is.

11 Q Is it your testimony that the line runs on this large
12 metal pole besides the stop sign?

13 A Yes, it does.

14 Q Thank you. What is your next photograph?

15 A We'll go to the one here with the lines being more
16 readily marked, available to be seen and again the stop sign
17 that's there.

18 MS. SESTAK: Your Honor, I will mark copies
19 for yourself and the Court Reporter as PC 8.

20 (Thereupon, the document was marked
21 as Exhibit PC No. 8 for
22 identification).

23 A (Continuing) This picture is taken along Logan Road
24 heading toward South Park Road and Fort Couch Road.

25 Q And --

1 A And it shows a better representation of the pole
2 itself and its proximity to the houses that are along Logan
3 Road and I contend that its a similar situation in terms of
4 pole location to that which will be along Thompson Run Road
5 or Route 8.

6 I would also like to remark that our poles will not
7 look like these poles and we'll get into that later, but for
8 reference point, our poles will look smaller, less
9 significant.

10 Q And do you have an additional photograph?

11 A The final photograph is taken -- that one, the one
12 with the intersection itself.

13 MS. SESTAK: I ask that these photographs be
14 marked Exhibit No. PC 9.

15 (Thereupon, the document was marked
16 as Exhibit PC No. 9 for
17 identification).

18 A (Continuing) That is taken right at the intersection
19 of Logan and South Park Road and in the little bit of a
20 distance you can see the transmission pole there continuing
21 down Logan Road.

22 Q Do you have anything else concerning these three
23 photographs?

24 A Just note that I can, by counting the bells on the
25 pole that would be under PC 8, I can see that its a 138

1 line, in addition to my conversations with Allegheny Power,
2 I was able to confirm that.

3 JUDGE NENE: Counting the what?

4 THE WITNESS: What we call bell or skirts on
5 the insulators, I'm able to tell what voltage that should
6 be.

7 MR. NYPAVER: Your Honor, does Duquesne Light
8 not have the same number of bells that it can count and
9 verify that is a Duquesne Light different pole design?

10 THE WITNESS: Well, in this particular case
11 they happen to have 11 bells for the steel pole and we also
12 happen to have 11 bells on our steel pole for 138 and again,
13 I confirmed the exact voltage with Allegheny Power and their
14 Transmission Line Department.

15 BY MS. SESTAK:

16 Q Following the public input hearings, the Judge asked
17 for cost estimates on alternate lines, specifically route C
18 and possibly Route A as well.

19 Were you able to establish any cost estimates for
20 those routes?

21 A We developed what I would consider a preliminary cost
22 estimate, given the amount of time for doing such.

23 Q Okay. And what was the cost estimate for Route A
24 that is down Route 8?

25 A I would like to refer to another -- for distribution,

1 I have cost estimates written down, so if you would like to
2 make that a part of the Record.

3 JUDGE NENE: Would this be PC 10?

4 MS. SESTAK: Yes, Your Honor, I ask that this
5 be marked PC 10.

6 JUDGE NENE: So marked.

7 (Thereupon, the document was marked
8 as Exhibit PC No. 10 for
9 identification).

10 MS. SESTAK: I believe you have the Court
11 Reporter's copy.

12 THE WITNESS: I have a cost for the
13 construction of option E, the line costs, which would be
14 construction costs, of approximately \$3.0 million and that
15 would pretty much represent the construction -- the total
16 costs. There is no right-of-way acquisition costs or
17 anything like that.

18 Option A, which is not listed, would be, to our
19 knowledge, also about \$3 million. This particular estimate
20 was based on similar type per mile costs to construct the
21 line. It is -- it has a relatively -- there's a large
22 variability in what it actually could be because the line
23 has not been designed yet and so we do not know the exact
24 configurations. Right now it is based on siting and based
25 on looking at individual poles, but not doing a specific

1 design of pole by pole.

2 But its our feeling that option A and option E would
3 be approximately the same as we listed.

4 BY MS. SESTAK:

5 Q Let me ask you, would you be the individual who would
6 do the actual design pole by pole?

7 A Yes, it is me. It would be me.

8 Q Did you attempt to do a preliminary design on Route C
9 to determine whether or not that route would be feasible
10 following the public input hearings?

11 A Yes. Route C offered challenges in terms of
12 estimating that Route A and E does not because Route C -- I
13 presume that we would have to use steel poles and that those
14 poles would not be guyed and, therefore, we would have quite
15 different configurations of poles -- configuration would
16 stay the same, but the strength and weight of each pole
17 would change dramatically from one site to the next site.

18 So what I did is I did a preliminary design of Route
19 C assuming that a line would be installed approximately 20
20 feet from the existing track and I laid that out and did a
21 one iteration design of the line. From that I was able to
22 determine, roughly speaking, the weight of the poles. Using
23 \$3.00 a pound for that cost, I came up with a number and
24 then I did subsequent things like insulators, wire and so on
25 to come up with a cost of about two-and-a-half million for

1 that line as laid out by GAI and as discussed where we would
2 be about 20 feet off of the tracks.

3 Q Continue.

4 A In addition, when you have to do a longitudinal
5 occupation of a railroad, you have to add extra grounding
6 and extra stuff for inductive interference mitigation.
7 Depending on -- again, its a magnetic field type thing,
8 electric field type thing -- how it affects the railway
9 communications. We did not have -- I had a past project
10 where we estimated \$100,000.00 per mile, but that involved a
11 lot of transmission and a lot of facilities in there and
12 that hundred thousand was somewhat of an educated guess.

13 At this point, the \$200,000.00 figure is an educated
14 guess. Its not of the same accuracy as the two-and-a-half
15 million, but that would be there regardless of the -- of
16 building along Route C.

17 We went through the line and as Tom mentioned,
18 myself, Tom Schmitt, Dale Kaulklin from GAI, K-a-u-l-k-i-n,
19 I believe, walked the line, spend a day-and-a-half on it
20 identifying problems. We are of the understanding that
21 while we want to build and it would be very constructible to
22 build 20 feet off the line, that, in fact, 20 feet off the
23 line would fall right in where proposed tracks would be and
24 if we were forced to go an additional 20 or 18 feet off that
25 line in either direction because of potential or probable

1 railroad -- the railroad taking those facilities, we would
2 be forced to areas that are not as buildable.

3 The line itself, the structure itself would be an
4 extra 18 or 20 feet either way, that would not change
5 significantly, but there would be a considerable amount of
6 civil type additional costs to build and some real
7 substantial problems doing it.

8 JUDGE NENE: Ms. Noble explained this morning
9 a lot of the problems with that road.

10 THE WITNESS: I can explain in greater detail
11 with photos. That's --

12 BY MS. SESTAK:

13 Q Mr. Cass, you indicated that -- in your testimony on
14 page 1 -- that unlike some of the other engineers with
15 Duquesne Light, you are a civil engineer?

16 A Yes, I am.

17 Q Could you explain just very briefly the difference
18 between a civil engineer and an electrical engineer.

19 A Well, the civil engineer is a more multi disciplined
20 type engineering, specifically I have a geotechnical
21 engineering background, both as a Master's Degree in civil,
22 but I took geotechnical specialization.

23 I would get involved with design of structures,
24 design of foundations, problems with landslides, all the
25 problems that you would have -- a geotechnical engineer

1 would be faced with.

2 I'm also the transmission line design engineer and
3 aside from the capacity part, I design the wires and sags
4 and all the stresses that go with it.

5 So, it would be pretty all encompassing aside from
6 determining loads. That's where Homer would come in.

7 Q You said you had photographs. Could you very
8 briefly, using your photographs, explain what the
9 engineering -- civil engineering problems would be with
10 attempting to construct the line along the Route C corridor.

11 A I have another set -- and these are stapled and maybe
12 it would be good to enter them as a package Exhibit.

13 JUDGE NENE: Yes.

14 THE WITNESS: Okay. In addition, if Bill
15 won't mind, there's another folder by my seat that looks
16 like this and there's some other plans in there.

17 JUDGE NENE: I need one more.

18 THE WITNESS: One more. Okay.

19 JUDGE NENE: This is marked PC 10?

20 MS. SESTAK: PC 11, I believe. PC 10 was the
21 cost estimate.

22 JUDGE NENE: Great.

23 (Thereupon, the document was marked
24 as Exhibit PC No. 11 for
25 identification).

1 THE WITNESS: I don't know whether you want to
2 include this as part of it. I mentioned that I did a
3 preliminary design, so we used that preliminary design to
4 see where poles would be located on a preliminary basis and
5 when you go out to the field, you're out there in one spot
6 and when you're standing out there one spot looks like
7 another spot, so I programmed these site locations into a
8 GPS unit which allowed me to, when I was out there, to say
9 specifically where I would be on the line. I can tie my
10 observations into a physical location.

11 MS. SESTAK: May we have copies to mark as PC
12 12, the schematic drawing. PC 12?

13 THE WITNESS: PC 12, similar copies.

14 MS. SESTAK: I apologize.

15 (Thereupon, the document was marked
16 as Exhibit PC No. 12 for
17 identification).

18 THE WITNESS: I had a problem designing a line
19 which I believe would be rejected by the railroad if I went
20 20 feet away and I believe that someone would ask me, well,
21 what if you went further and so that's what this represents,
22 the fact of what I would do if I went further and instead of
23 just limiting myself to the one set of tracks and moving
24 over, I went on both sides of the tracks. That would cause
25 us to do several crossings over the tracks, but not at a

1 right angle like its normally done.

2 To preface that, the railroad doesn't like us to
3 cross the tracks like we would cross a road. Maybe we can
4 convince them that that's a good idea, but up front they
5 don't like that.

6 BY MS. SESTAK:

7 Q Mr. Cass, did you take into consideration the
8 information that Ms. Noble provided this morning concerning
9 the railroad's requirement that the facilities be at the
10 edge of the right-of-way?

11 A We were locating our facilities -- again, in one case
12 it was 30 feet off of the -- as you look at the PC 12, if
13 you go from site 1 at the bottom, all the way up to site 67
14 at the top, the right-hand side, as you would go down the
15 line, that would be the side with the vacant track and we
16 would locate our facilities approximately -- the closest we
17 could locate our facilities to the existing track is 30 feet
18 from the rail.

19 So we looked at 30 feet from the rail on the
20 right-hand side. We also looked at the facilities available
21 on the left-hand side of the rail 15 feet.

22 If you sum the width of the railway and plus our 15
23 feet or 30 feet, we would be very close to the edge of the
24 right-of-way, as we assumed the right-of-way is 65 feet,
25 based on a scale distance on GIS and that is not universally

1 true. There are places that its narrower. That's an
2 approximate for most of the line, that's an approximate
3 width that we think the line -- that we think the CSX width
4 is.

5 That also roughly corresponds to what we see in the
6 field in terms of any maintenance work that CSX had done,
7 construction work of the original line.

8 Our first hurdle going from Wildwood working toward
9 the tap at North is a set of bridges. There's, in fact,
10 three bridges -- actually four bridges, I should correct
11 that there's four bridges, but you see the first three
12 bridges and the further bridge that you see there on this
13 package here, which would be PC 11, that is the bridge that
14 is currently being just used for the active track.

15 The second bridge you would see there would be the
16 bridge that they would use if they put in the second track
17 and the third bridge would be the vacant track. In initial
18 construction, we may be able to use the second bridge, but
19 if, in fact, a second line came in -- a second railroad line
20 came into being, which I anticipate, then we would be forced
21 to use this third bridge and this bridge or the fourth
22 bridge, which has potential property issues which would have
23 to be used to access the line.

24 There's no other way to access the line beyond there
25 without going over this bridge to the terrain due to

1 property issues.

2 So, you can see that we would have to redeck the
3 bridge; including putting stringers between these main beams
4 going across the two longitudinal beams.

5 Q Mr. Cass, you have moved onto a second photo?

6 A I apologize, I have moved onto the second photo.

7 Q Thank you.

8 A This is the picture of the third bridge, which would
9 be the one that we would use. It would have to be
10 thoroughly inspected. There was a cursory inspection just
11 to see that its viable and we would have to deck it and it
12 would be significant costs doing that.

13 I have the breakdowns on each, that GAI provided.
14 That's where GAI got involved and I don't know if I had that
15 -- I have things right there, but I have the sum of all of
16 those costs right here and that would be \$2 million to do
17 the various civil type things.

18 As we go to -- I believe most of the pictures have a
19 little bit of a title thing on the left-hand side, you'll
20 see a little -- that's a picture description and if you look
21 on say the third picture, you'll see Wildwood C Site 018
22 third railroad bridge, see second bridge to the right. That
23 is actually the name of the photo I gave it.

24 But if you look on this plan here, that would be site
25 18. So if you look at Exhibit 12, you go to point 18, that

1 would be what I call a pole -- potential pole site. The
2 railroad, as well as our transmission line, would cross over
3 that bridge and what you see here is the bridge as it exists
4 this week and how it looks and it is similar to what would
5 be involved at site 6.

6 Again, we would have to rebuild the top decking of
7 the bridge. This also happens to have, while not shown in
8 the photograph, this happens to have some more severe
9 corrosion and this could involve more work needed to help
10 the steel.

11 Another side issue which was not in the estimate is
12 if we started to take over the bridge and to do such work,
13 we would actually have to probably, by purchase or do
14 something for the railroad to turn it over to our
15 responsibility because we are taking such extensive work on
16 the bridge. So, we would expect that the railroad would
17 want to put a degree of ownership to us on that. Again,
18 there's no costs associated with that, though.

19 If you look to the right of the bridge you will see
20 what is bridge No. 2 and that is the potential track for the
21 expanded railroad and, in fact, on that one, most of the
22 ties and everything are still there. The degree of work
23 needed to make that suitable to run say line trucks on it
24 would be significantly less than if you had to go to bridge
25 3.

1 We cannot -- once the rail is on the bridge, we
2 cannot drive our trucks on the bridge. That's both not
3 allowed and not feasible.

4 We tried to avoid having to -- we tried to minimize
5 our costs. We jumped from side to side. We have to get
6 access along the entire length and, in fact, in some cases
7 we have to construct an access road where there isn't one
8 right now.

9 We're faced on the next photo -- at what I would say
10 is Wildwood C site 52. If you look on the plan drawings,
11 that would be PC 12, you may or may not notice that there's
12 a little creek, say, for instance, going into Pine Creek, a
13 smaller creek. This creek, though, has a box culvert,
14 reinforced concrete box culvert. Its approximately 15 feet
15 in length, 12 foot in depth, so below the decking that you
16 see here it is another 12 feet to the water surface and we
17 would have to build a box culvert where that box culvert --
18 adjacent to this, abutting this box culvert, so that we
19 could pass our trucks over that. We could also consider
20 bridges, but we use the box culvert and there's a cost for
21 that.

22 It doesn't matter, the box culvert is good for two
23 sets of tracks. There is no extension beyond those two sets
24 of tracks. If they would build, they would have to build a
25 box culvert.

1 If you go to the next drawing, which is at site 74,
2 the railroad for a short distance parallels, I think its
3 Sample Road -- yes -- actually, if we can back up to PC 12
4 and if you look at the drawing here you'll see these dots
5 representing pole sites and you'll see in the middle of the
6 curves that you'll see that the dots are closely spaced and
7 as you go into the straight away they are less closely
8 spaced. That is -- as we go into the curves that is because
9 of the curve nature of it and the fact that we're not using
10 guys or cannot use guys that we would require stronger
11 poles, stronger closer poles.

12 I limited myself to the maximum pole size that is
13 standard for a pole manufacturer. We can go custom, but
14 this would be the maximum strongest pole that we can go and
15 use standard pole sizes and where its dense, not only are
16 the poles closely spaced, but they are very heavily
17 reinforced. Where it is more straight, the poles are of
18 smaller diameter, less weight, less cost.

19 At this particular site, on site 74, we are faced
20 with the pole, which would be located where Tom Schmitt is,
21 would be the same -- almost at the same location as the
22 road. That is a -- that's just a minor problem. We would
23 obviously have to span that area, but it does show that we
24 are abutting and we have no more room to move at that
25 location, we cannot move either to the right or the left any

1 further.

2 If you go to the next one that says site 89, Tom
3 Schmitt is now standing at the top of the creek bank, though
4 you cannot see the creek, that is Pine Creek, and there's
5 also communication facilities running along the entire
6 length of the railroad. That would be the pole with the
7 original top that we would have to miss and that is only at
8 29 feet. To go 30 feet, we're over the bank into the creek.

9 Q Mr. Cass, let me ask you, are there any difficulties
10 with building in a creek?

11 A Yes, there is. The DEP is not fond of building in
12 the creek, particularly if its a trout creek.

13 Q Thank you.

14 A And Pine Creek is a trout creek, so it does pose
15 problems over and above what is estimated here to get PUC --
16 or DER approval to do that, as well as railroad approval.

17 Our next one is the bridge, we have to -- this is Mt.
18 Royal Boulevard and in this particular case while my
19 drawings don't show it, we have to go off the right-of-way,
20 whether we follow parallel to the existing track or go --
21 went to the edge of the right-of-way, we would have to go
22 off the track, get some private property rights and come
23 back down.

24 The reason we have to go off the track is if you see
25 the pole up here to the center right, we have to have our

1 wires cross over those wires so we have a significant height
2 to construct. It would be too tall of a pole to put at the
3 railroad grade itself, so we have to get ourselves up in a
4 better location.

5 We have a stretch of right-of-way, if you go to the
6 next photo, which is site 113, we have a stretch of a
7 scenario there that is particularly difficult and that
8 roughly extends from pole site 112 to pole site 118 and that
9 particular stretch you have a very steep embankment to your
10 right, that would be on the right-hand side, that would be
11 where the tracks would be and we have, of course, the creek
12 on the left-hand side.

13 In this particular case Tom Schmitt is standing 12
14 feet off of the rail right there. We need to go for our
15 edge -- by the way, its our edge of pole, not the center of
16 pole. So our closest surface that we can go out to the
17 tracks is three feet more than Tom Schmitt is standing.
18 This condition is, in fact, typical along a large length of
19 tracks.

20 If you go to the next picture, this is what we are
21 concerned with in terms of our right-of-way and this is what
22 sort of bothers me -- bothered me in the beginning, bothers
23 me still now, and that is the condition of the hillside if
24 we were to build on that side. We have a -- my impression
25 of the hillside is pretty much as I believe is shown in

1 this, it is a road cut, it is very steep in the -- it was a
2 railroad cut originally, very steep and then we go to the
3 trees. Most all of those trees that you see are off the
4 right-of-way and my concern -- if I may draw a sketch here
5 -- we thought about trees -- we talked about trees being a
6 problem, but some trees are worse than other trees.

7 Do we have a marker here?

8 MR. HOUSTON: I got one.

9 A (Continuing) I'm going to attempt to draw this
10 relative to scale to the best I can. So, forgive me. Okay.
11 This is a general thing the way that particular area exists.
12 If we were to go to 30 feet, our poles would be located
13 roughly here (indicating). If we were to go to 15 feet on
14 this side, our poles would be located roughly here, neither
15 of which is a very good scenario.

16 One case we would have to build basically in the
17 creek and surprisingly it is my preferred choice, its a
18 shock here, we think we could possibly do it with vibrated
19 cans and some coffer dams like you would build in the river
20 if you were to build a bridge pier in the river. It would
21 be quite enormous because not only do you have to support
22 the pole, but we have to support this hillside right where
23 the -- only locally where the pole is, because I would
24 expect that that would be pushing against it.

25 In addition, it hasn't faced the fact that again

1 toward -- if the creek would flood, it could erode the
2 sides, which it has done in the past and things like that,
3 but hypothetically you could build a big concrete foundation
4 here. It would have to be embedded to rock, so its rather
5 complicated and of those, just to give you an idea of the
6 costs, there's about 110,000 per pole to build a foundation
7 like this. Okay. The end result, though, is something that
8 would have a greater reliability, I believe, than if you
9 built it right along here (indicating) where you don't have
10 the right and even if you did have the rights to do it, to
11 do it safely, you would have to denude the hillside and my
12 concern is if you have a tree here -- first off, the trees
13 are typically leaning, by the way. This is almost to scale,
14 in a sense. This is, at least as I see it, this tree would
15 -- could fall, when it does fall its not like a tree that's
16 equally close, but down at sea level. Where you're up in
17 this area, we're now down where the trunk area is and I
18 would expect or be concerned about the trunk hitting the
19 trees and failing this pole. By the way, we have never had
20 a total structural failure, but if that happened, this would
21 be a first.

22 There's more pictures that just detail the fact that
23 that continues.

24 JUDGE NENE: Your concerned. Okay. I think
25 we can conclude that you're very concerned for justifiable

1 reasons.

2 BY MS. SESTAK:

3 Q Mr. Cass, are you aware of any problems with building
4 on Route A, that is, Route 8?

5 A Yes. Most of those problems have been enumerated,
6 but one problem that maybe has not been enumerated as much
7 as others is along Wildwood Road we could be faced with the
8 same right-of-way type limited to the street by permit, we
9 would be limited to where we could be allowed right now to
10 cut. We would have to get additional rights to do that and
11 that would be at the whim, I would say, of the adjacent
12 property owners. We do not have eminent domain to force
13 them to give us anchor rights, et cetera.

14 Q Mr. Cass, we've been looking at these two photographs
15 of a mach up of what the poles might look like after
16 construction on Route E and with your testimony you included
17 three Exhibits, I believe PC 4, 5 and 6, showing actual
18 photographs of poles of the type that are likely to be put
19 along Route E.

20 A That is correct.

21 Q Do you have additional photographs you wanted to show
22 us today?

23 A I have some additional photographs, for illustrative
24 purposes of the -- of two locations on Thompson Run Road and
25 I'll give you this one that says -- what will this be

1 called?

2 Q This will be PC 13.

3 A The maps are 12.

4 Q The drawing is 12. I apologize.

5 (Thereupon, the document was marked
6 as Exhibit PC No. 13 for
7 identification).

8 A Okay. This is one and we'll talk about this one
9 first and then I'll go to the second one. I cannot tell you
10 specifically at what specific location this pole is at. I
11 did, similar to some of the other stuff in this particular
12 case when I photographed each pole, I photographed them in
13 unison. This is picture 45 out of 110, so this would be
14 somewhere along -- midway along Thompson Run Road and this
15 picture was chosen because its a good illustration of being
16 able to see everything on the pole.

17 Now, I want to introduce another thing just to
18 explain what I'm about to explain. This is a standard --
19 Duquesne Light standard for construction of 138 kV poles and
20 this is the, you know, basically what I will try to follow
21 in design and that would be PC 14 and that may help in
22 giving a perspective. In fact, I would like to talk about
23 PC 14 before I talk about PC 13.

24 JUDGE NENE: Is that my pen?

25 THE WITNESS: Probably, I'm sorry. It looks

1 like mine. No, its mine.

2 MS. SESTAK: Off the Record.

3 (Discussion off the Record).

4 (Thereupon, the document was marked
5 as Exhibit PC No. 14 for
6 identification).

7 JUDGE NENE: This is PC 14?

8 THE WITNESS: Yes. Its marked on there.

9 A (Continuing) What I want to point out here is this is
10 our standard, this is what -- how it will be built and
11 because the line is already there, we are going to -- we're
12 not going to raise any of the existing wires. We're going
13 to take -- I'm going to go back to this, between 13 and 14,
14 we're going to take off this top set of arms and the wires.
15 That's gone. That is being replaced with the 138. Okay.

16 Now, the second cross arm that you see on PC 13 is
17 represented by this cross arm that you see on PC 14 across.
18 That is the distribution line. Okay.

19 Now, we will build everything -- we'll leave that
20 distribution line where it is. It may change poles, but it
21 will be at the same location. All the stuff below that will
22 be at the same location. Okay. So we will be putting a
23 pole in to match this existing. So when we size the pole,
24 we will size the pole so that we are a minimum -- our new
25 one will be a minimum of six foot, the lower insulator will

1 be a minimum of six foot below -- above, I'm sorry, the top
2 of the existing cross arm.

3 If you look on PC 13, I would estimate that the
4 existing 23kV cross arm is about seven feet above the
5 distribution cross arm and the reason I say that is our
6 cross arm at the very top is about nine foot, so in total
7 length, I sort of scale that by what I see. Okay.

8 So, in fact, at this particular site, if we go to the
9 minimum that we can go to -- I'll explain why we won't later
10 or can't in some cases later -- we will be actually below,
11 the bottom conductor will actually be below this cross arm
12 and that is also, by the way, in conformance with the EMF
13 calculations that were done. That shows that same removal
14 and replacement in the same location.

15 Then so you could say from the existing 23kV
16 subtransmission cross arm that typically our pole will be 20
17 foot taller than the existing pole. Now, the exception is
18 that we work our poles in five foot increments. Okay. We
19 don't put in 72 foot poles, we put in 70 foot poles or 75
20 foot poles. So whatever the pole length happens to be so
21 that you meet that six foot minimum, that's what will occur.
22 So, that six foot maybe six foot or seven foot or might be
23 ten foot, something like that.

24 So, we, in some cases, we may be just above the
25 existing cross arm, but we'll be within certainly five feet,

1 23 subtransmission and the 23 distribution. That's a little
2 more than six foot, but again, we're into that six to ten
3 foot range between there and you could draw or -- you can
4 draw visually in your own mind -- or I could draw what it
5 would look like, but that's representative.

6 I just wanted to show, you know, specific spots and
7 be able for you guys to see.

8 JUDGE NENE: Okay.

9 BY MS. SESTAK:

10 Q Mr. Cass, did you have anything further to present
11 that would explain your written testimony in reference to
12 matters raised at the public input hearing or your testimony
13 here today?

14 A No, I don't, but may I have some water, please.

15 JUDGE NENE: Its going on 5 o'clock and I
16 don't know whether we should -- its 4:35 -- whether we
17 should start Cross-Examination now. I think I know I have
18 had -- I feel exhausted, so if we start tomorrow morning at
19 9:00 o'clock again, I'm hoping we can complete the
20 testimony.

21 Is that okay with you, Ms. Sestak?

22 MS. SESTAK: Yes, Your Honor. Your Honor, may
23 Duquesne Light Company's witnesses who have already
24 testified be excused from tomorrow's session?

25 JUDGE NENE: Absolutely. Yes. That's your

1 decision, but we won't compel any of the witnesses who have
2 testified to return.

3 MS. SESTAK: Thank you.

4 JUDGE NENE: I also want to indicate that
5 early after lunch I was provided with 19 additional
6 complaints and just now a few minutes ago two more.
7 Apparently somebody is circulating a standard complaint.
8 They all look the same, like as though they have been
9 runoff. They refer to the public input hearings. They are
10 all identical, so we might be getting these protests.
11 Fortunately they're not giving them separate numbers.

12 MR. KALINSKI: Your Honor. May I ask a
13 question?

14 JUDGE NENE: Pardon me?

15 MR. KALINSKI: May I ask a question?

16 JUDGE NENE: Yes.

17 MR. KALINSKI: With regard to those additional
18 complaints, well, I filed only complaint from my
19 neighborhood from my street, me, myself, and all of my
20 neighbors assumed that they also would be considered since
21 they signed the complaints as complainants -- sorry or my
22 English there -- we only recently realized that they are not
23 and its only me actually who filed the complaint.

24 In a recent paper published in the Pittsburgh Tribune
25 Review we could read that only seven families filed

1 complaint about this proposed line. I know that there were
2 ten people who complained on my letter, we have heard from
3 Jean yesterday that there were up to 200 signatures in
4 total. I mean, I don't know whether it makes any matter,
5 but I know that some of these people are concerned. They
6 thought they filed complaints formally only now they are
7 realizing they haven't failed a complaint, so is there a way
8 to consider all of those people who signed as formally --

9 JUDGE NENE: Well, we'll consider all of
10 these, of course, and we consider the testimony at the
11 public input hearings. These are all things that are a
12 matter of record, on file with the Commission.

13 MR. KALINSKI: But in order for all of them,
14 for example, for my ten neighbors on the street who signed
15 -- they filed a complaint, they were a little bit upset by
16 learning --

17 JUDGE NENE: I'm sorry, I can't understand.

18 MR. KALINSKI: Some of my neighbors were upset
19 about the paper -- published in the Tribune Review saying
20 only seven families have got --

21 JUDGE NENE: Somebody has corrected that
22 situation.

23 MR. KALINSKI: I should tell them they should
24 file this complaint?

25 JUDGE NENE: To what end?

1 MR. KALINSKI: They wanted to somehow be on
2 the Record that they don't like.

3 JUDGE NENE: The Record is going to close at
4 the end of testimony.

5 MR. KALINSKI: So they should do it before the
6 end of the day tomorrow?

7 JUDGE NENE: Its up to you. I mean, I can't
8 tell you --

9 MR. KALINSKI: They asked me ask this question
10 to Your Honor. They wanted to make a point that they don't
11 like it either.

12 JUDGE NENE: I think that its pretty clear
13 that a lot of people don't like it and its not going to be a
14 matter of counting how many don't like it and how many
15 didn't say anything.

16 MR. KALINSKI: I have concern. Thank you,
17 Your Honor.

18 JUDGE NENE: We'll recess now and we'll
19 reconvene at 9:00 o'clock tomorrow morning and you can take
20 some water and be subject to Cross-Examination. I hope you
21 find your pen. Thank you all.

22 (Thereupon, 4:35 o'clock p.m., the Hearing was
23 adjourned).
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C E R T I F I C A T E

I hereby certify, as the stenographic reporter, that the foregoing proceedings were taken stenographically by me and thereafter reduced to typewriting by me or under my direction; and that this transcript is a true and accurate record to the best of my ability.

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