

ORIGINAL

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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IN THE MATTER OF:

DOCKET NO: 50-352-OL  
50-353-OL

PHILADELPHIA ELECTRIC COMPANY

(Limerick Nuclear Generating  
Station, Units 1 and 2)

LOCATION: PHILADELPHIA, PENNSYLVANIA

PAGES: 16,971-17,118

DATE: FRIDAY, JANUARY 4, 1985

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of: ]  
] ]  
PHILADELPHIA ELECTRIC COMPANY ] Docket Nos. 50-352-OL  
] 50-353-OL  
(Limerick Generating Station, ]  
Units 1 & 2) ]

Commonwealth Court of Pennsylvania  
Ninth and Market Streets  
Courtroom Number "6"  
Philadelphia, Pennsylvania

Friday, 4 January 1985

The hearing in the above-entitled matter convened,  
pursuant to recess, at 9:00 o'clock a.m.

BEFORE:

HELEN F. HOYT, Esquire, Chairwoman  
Atomic Safety and Licensing Board  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

RICHARD F. COLE, Member  
Atomic Safety and Licensing Board  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

JERRY HARBOUR, Member  
Atomic Safety and Licensing Board  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555



MM/mm1

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APPEARANCES: (Continued.)

On behalf of the Friends of the Earth and pro se:

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25C O N T E N T SWITNESSES:

			Examination
	Direct	Cross	Redirect Board

ROBERT BRADSHAW )  
JOHN CUNNINGTON )  
Resumed

By	Ms. Zitzer	16,974		
	Mr. Goodwin	17,013		
	Mr. Hassell	17,026		
	Mr. Rader		17,033	
	Judge Harbour			17,035

ROBERT KLIMM

By	Mr. Rader	17,039		
	Mr. Stone	17,059		
	Mr. Anthony	17,088		
	Mr. Goodwin	17,097		
	Mr. Hassell	17,107		
	Mr. Rader		17,111	
	Judge Cole			17,112
	Judge Harbour			17,113

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Exhibits:IdentificationEvidence

Applicant's

No. E-92	17,051	--
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JUDGE HOYT: The hearing will come to order.  
Let the record reflect that the hearing was called to order, that the parties are all present in the hearing room, that the witnesses have taken their places on the witness stand.

Once again, gentlemen, you are reminded that you are still under oath.

Miss Zitzer, the witnesses had been tendered to you for cross-examination last evening and they are ready.

MS. ZITZER: Thank you.

Whereupon,

JOHN CUNNINGTON

and

ROBERT BRADSHAW

resumed the stand and, having been previously duly sworn, were examined and testified as follows:

CROSS-EXAMINATION

BY MS. ZITZER:

Q Mr. Bradshaw, yesterday you testified with regard to the Feters Bus Company, I believe, at transcript page 16,906. You stated that, to the best of your knowledge, Mr. Feters' busses were not part of the 200 busses identified by Chester County in their plan.

XXXXXXXX

1           Can you refer me to any section of the  
2 plan or direct knowledge you have regarding what bus  
3 companies are intended to provide those 200 busses, if you have  
4 that knowledge.

5           A       (Witness Bradshaw) No, I do not have that  
6 knowledge.

7           Q       Could you then provide for the record any  
8 information you have regarding the basis for your  
9 statement that Mr. Feters' busses are not part of that 200?

10          A       Yes. I believe in my testimony I stated the  
11 basis. That was my discussions with my Chester County  
12 planner, the planner on my staff who is responsible for  
13 assisting Chester Counter.

14                Subsequent to Mr. Feters' testimony, that staff  
15 person discussed this with Chester County staff and was told  
16 that Mr. Feters was not included within that number.

17          Q       Could you provide -- you referred to two  
18 individuals, a member of your staff that reported to  
19 you and a member of the Chester County Department of  
20 Emergency Services.

21                Could you provide the names of the individuals  
22 you are referring to.

23          A       My staff person would be Joel Grottenthaler,  
24 G-r-o-t-t-e-n-t-h-a-l-e-r. And I am not sure of the staff  
25 person or the person from Chester County he talked to. I



1 am assuming it is Tim Campbell.

2 Q To the best of your knowledge, is there any  
3 information contained in the Chester County plan, which,  
4 I believe, is Applicant's Exhibit E-2, regarding the identifi-  
5 cation of the source of the 200 busses referred to?

6 A I believe I stated I was not aware of the source  
7 of those busses.

8 Q Is Mr. Cunnington aware of the source of those  
9 busses?

10 A (Witness Cunnington) No, I am not.

11 Q Mr. Cunnington, I believe yesterday you  
12 provided some testimony regarding your knowledge of  
13 the agreement status between the Levy Bus Company  
14 and the Upper Perkiomen School District regarding the  
15 provision of the busses that are routinely provided  
16 to the school district for transportation and the  
17 applicability of those -- of the existing contract for the  
18 provision of busses to be utilized in the event of a  
19 radiological emergency.

20 I would like to ask you -- just a moment.

21 Is it your understanding that that existing  
22 agreement which you referred to not only applies to the  
23 provision of busses but also applies to the provision  
24 of drivers as well?

25 A I believe Dr. Persing testified that it applies

1 to the provision of bus service. My assumption is  
2 that service includes not only the vehicle but the  
3 driver.

4 Q Do you have any specific knowledge of whether,  
5 indeed, that is the case other than your recollection of  
6 Dr. Persing's testimony?

7 A Yes, I have observed busses entering and  
8 exiting the school, taking students home, and talked to  
9 the bus companies. And they indicate that they provide  
10 bus service which includes vehicles and drivers.

11 They certainly do, on a routine basis, move  
12 the students in the district.

13 Q You are specifically referring to the Levy  
14 Bus Company?

15 A Yes, ma'am.

16 Q I would assume you understand that my question  
17 is regarding the provision of those drivers in the  
18 event of a radiological emergency, not their routine  
19 assignment.

20 A Yes, ma'am. And I testified that Dr. Persing  
21 had indicated in his testimony that the agreement was  
22 not exclusive of that.

23 Q I would like to stick to your specific  
24 knowledge, if possible, regarding the agreement existing  
25 between the Levy Bus Company and the Upper Perkiomen School

1 District and the applicability of that existing contract  
2 to the provision of those resources which I believe you  
3 referred to as bus services in the event of a radiological  
4 emergency at Limerick.

5 Is it your understanding that that agreement, the  
6 applicability of that agreement to the provision of  
7 those bus services in the event of a radiological  
8 emergency would also apply to the provision of drivers for  
9 those busses?

10 A My knowledge is based on Dr. Persing's testimony.

11 Q Do you have any other direct knowledge other  
12 than his testimony?

13 A I have never seen a copy of the agreement or  
14 reviewed it.

15 Q Several times, I believe, in your direct examination  
16 yesterday you have referred to the fact that busses and  
17 drivers that normally service school districts can be  
18 assumed, without special arrangements or contracts, to be  
19 available during a radiological emergency to provide  
20 transportation for schools to which they are routinely  
21 assigned under existing contracts and that, therefore,  
22 no ancillary contracts, in your opinion, were required to  
23 provide assurance of that service.

24 Is it your testimony that this statement which  
25 you have made would apply to both the provision of busses and

1 drivers?

2           A     I believe it would apply to the provision of  
3 bus service, and I indicated in my testimony yesterday,  
4 I believe, that the school districts themselves made the  
5 assignments as part of their radiological emergency  
6 response plans. And the county honored those assignments.  
7 And it would include drivers.

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T2 MM/mml 1 Q I'm referring specifically to risk school  
2 districts that would rely upon contractors other than  
3 school-district-owned vehicles.

4 Would your statement also be applicable in that  
5 case?

6 A Yes, ma'am, it would apply.

7 The evidence in the Draft Radiological Emergency  
8 Response Plans would indicate the assignments were made  
9 both for districts that owned and operated their own buses,  
10 and employed their own drivers, and for those districts  
11 that contracted for that service.

12 Q Is it your testimony that that is the case for  
13 private bus companies that routinely provide bus service  
14 to these school districts irregardless of whether or not  
15 there has yet been a letter of agreement executed with the  
16 Montgomery County Office of Emergency Preparedness, as we  
17 have previously discussed?

18 A Yes, ma'am. The letters of agreement with the  
19 private bus companies, with school district EPZs, school  
20 district responsibilities, would be applicable for after  
21 school hours and emergencies other than the Limerick Generating  
22 Station.

23 Q With regard to private bus companies that do not  
24 routinely provide bus transportation to risk area school  
25 districts, would that statement also apply?



mm2 1 Let me rephrase that.

2 With regard to private bus companies that do not  
3 routinely provide bus service for this school district, in  
4 the absence of an executed letter of agreement with the  
5 Montgomery County Office of Emergency Preparedness, what  
6 would be the basis for your statement regarding the fact that  
7 no additional agreement is necessary?

8 MR. RADER: Object to the form of the question.

9 I believe the question relates to bus companies  
10 which do not already have an existing contract with the  
11 school district. The scope of the direct examination was  
12 limited to such situations and did not go to situations  
13 involving school districts which did not have those  
14 contracted services.

15 So, it goes beyond the scope of the direct  
16 examination.

17 MS. ZITZER: I am willing to rephrase this question.  
18 I think there is a clearer way for me to pursue that.

19 JUDGE HOYT: Very well.

20 MS. ZITZER: Thank you.

21 BY MS. ZITZER:

22 Q Mr. Cunningham, yesterday I believe you testified --  
23 specifically I am referring to transcript page 16,910, starting  
24 at line 18, where you testified that members of your staff  
25 have attended similar meetings between the Phoenixville

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1 School District and Chester County, and in Montgomery County  
2 that you had attended 33 separate meetings with bus providers.  
3 At a minimum 2, and some cases as many as 5 or 6 meetings.  
4 And then, it continues to discuss the other meetings you have  
5 been involved in.

6 The 33 separate meetings you are referring to with  
7 bus providers, does that in any way correlate to the 33  
8 bus providers listed in Annex I of the Montgomery County Plan,  
9 which is Applicant's Exhibit E-3?

10 A Yes, ma'am.

11 Q Is it your testimony that you attended a meeting  
12 with each of the bus providers listed in Annex I of the Montgomery  
13 County Plan?

14 A Yes, 31 meetings direct face to face, and I believe  
15 two lengthy telephone conversations.

16 Q And did the discussions -- what was the nature of  
17 the discussions at those meetings?

18 A I believe I testified yesterday that the County  
19 introduced itself, the Office of Emergency Preparedness, its  
20 roles, responsibilities, its organization and structure,  
21 discussed the need for the County to develop information  
22 regarding the transportation resources available in the County  
23 and their relationship to response in times of emergencies.

24 Collected information from the bus providers, which  
25 would include units operated, drivers, fuel, contact persons,

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1 confidential telephone numbers, discussed the response during  
2 time of emergency that would be coordinated by the Office of  
3 Emergency Preparedness, including the transportation staging  
4 area concept, obtained conservative estimates of vehicles  
5 that might be available in times of emergency for utilization  
6 to address the transportation needs of other citizens in  
7 Montgomery County that might need it during a time of disaster  
8 or emergency.

9 Q Was there a discussion specifically relating to  
10 the Office of Emergency Preparedness request either at that  
11 time or subsequent to that for the bus provider to enter into  
12 a written agreement stating that they would provide buses  
13 and drivers to the maximum extent possible for an emergency,  
14 including the Limerick Generating Station?

15 A The meeting included information provided by the  
16 County, that it would take the data that it collected, compile  
17 it, provide a data sheet to the bus company for review and  
18 correction, and along with that data sheet provide them a  
19 short agreement that would reflect the willingness of the bus  
20 provider to, to the maximum extent possible, provide buses  
21 and drivers or vehicles and drivers for all emergencies,  
22 manmade or natural, including an incident at the Limerick  
23 Generating Station.

24 And that was what was subsequently completed by  
25 OEP.

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1 Q Let's take an example. Was one of the bus providers  
2 involved Carol Lines of Philadelphia, which is listed on --  
3 if it would help you to refer to it, page I-2-6 of Applicant's  
4 Exhibit E-3? This is in Annex I, I believe, Tab 3, which is  
5 the bus provider section of the County plan.

6 A Yes, it was.

7 Q Were you directly involved in a meeting with the  
8 representatives of Carol Lines?

9 A Yes. The meeting was held with Mr. Martin Javitch  
10 of his office, within the city limits of Philadelphia.

11 Q You specifically discussed this proposal with  
12 Mr. Javitch?

13 A The meeting was conducted by Mr. Bigelow, and that  
14 was discussed with Mr. Javitch.

15 Q Are you aware of whether or not at that time  
16 Mr. Javitch indicated a willingness to enter into either a  
17 verbal or written agreement with the County regarding its  
18 request to provide buses and drivers in the event of a  
19 radiological emergency?

20 A Yes, ma'am.

21 He indicated that if there was a legitimate and  
22 declared emergency either by State or County officials in  
23 Montgomery County, that he would be willing to assist in any  
24 way he could. In fact, he also supplied information voluntarily  
25 to Mr. Bigelow regarding a special vehicle that he operated for

mm6 1 handicapped individuals. It held quite a large number of  
2 wheelchairs.

3 I remember it very well.

4 Q Do you have any knowledge of whether or not  
5 Mr. Javitch has executed a written letter of agreement as  
6 requested by Mr. Bigelow?

7 A I would have to consult the plan. My understanding  
8 is at this point in time he has not signed a written agreement.

9 Q Have you had any further contacts with Mr. Javitch  
10 or are you aware of any reason why he has not signed a written  
11 agreement?

12 MR. RADER: Objection. This goes well beyond the  
13 scope of the direct examination.

14 MS. ZITZER: Your Honor, that was my last question  
15 along this line.

16 JUDGE HOYT: I'm not certain that is an argument  
17 against the objection.

18 But the area, Mr. Rader, I am not certain was not  
19 at least touched on, looking back over some of the testimony  
20 yesterday.

21 MR. RADER: To be exact, I think my questions went  
22 to the relationship between the school district and the  
23 County with regard to the agreements, the contracts that  
24 the school districts had with their own providers. And only  
25 in that sense did I touch upon whether or not it was necessary



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1 to have an agreement between the County and the bus providers.

2 But, I did not touch upon the status of those  
3 agreements or the scope of those agreements as regards the  
4 County and the bus providers themselves.

5 JUDGE HOYT: Thank you.

6 We have got enough of it in there, that the question  
7 can be made.

8 Your objection is overruled.

9 WITNESS CUNNINGTON: I believe the contact subsequent  
10 to that meeting has been between the Office of Emergency  
11 Preparedness and Mr. Javitch.

12 The record, previous record would indicate there was  
13 a letter mailed on September 7 to update that information and  
14 I do not know the status of the update, and I am not aware --  
15 I was not part of that, have not participated in any other  
16 meetings.

17 BY MS. ZITZER:

18 Q Taking one other example, the Ashbourne Transportation  
19 Company listed on Page I-2-5 of the same plan, were you  
20 directly involved in one of the meetings that you referred  
21 to with a representative of the Ashbourne Transportation Company?

22 A Yes, ma'am, I was present at that meeting with  
23 Mr. Bigelow.

24 Q If you recall, who was the representative of the  
25 Ashbourne Transportation Company that you met with?

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1           A        I believe it was a Mr. Mark Jacobs, but I would  
2 have to check the records for that.

3                    There were two individuals at the meeting, but I  
4 believe Mr. Jacobs was at the meeting for the entire time. I  
5 don't recall the name of the other individual that began it.

6           Q        Do you recall the nature of the immediate response  
7 from Mr. Jacobs regarding the willingness of the company to  
8 enter into either a written or a verbal agreement with  
9 Montgomery County regarding the provision of buses and drivers  
10 in the event of a radiological emergency?

11           A        I recall that at the meeting they indicated that  
12 rather than collect the information, in detail at the time of  
13 the meeting, that they would, when Mr. Bigelow mailed them a  
14 summary form, Mr. Jacobs would discuss it with another  
15 individual from the company, the numbers of buses, drivers  
16 in more detail, fill out the information that Mr. Bigelow  
17 needed, and Mr. Jacobs or the other individual that was at  
18 the meeting for part time also indicated that they had recently  
19 lost their contract, I believe with the Cheltenham School  
20 District and there were a large number of vehicles at that  
21 point in time that we met, that were not assigned to any  
22 particular routine day-to-day service, and that might be  
23 available as a reserve.

24                    I believe the number might have been 98 buses. I  
25 am not positive about that. And that's what I recall directly  
about the meeting.

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1 Q Do you recall whether or not Mr. Jacobs at that  
2 time made what could be described as a verbal agreement to  
3 provide buses and drivers in the event requested in the event  
4 of a radiological emergency?

5 A He supplied Mr. Bigelow some telephone numbers  
6 that could be used for 24-hour contact and indicated that  
7 if there was an emergency in Montgomery County as I had  
8 spoken before, a legitimate emergency declared by the state  
9 or the county officials, that Mr. Bigelow could call upon  
10 him or the company and they would do whatever they could to  
11 provide whatever resources were available at the time in  
12 the same fashion that I described in the previous instance.

13 Q Do you recall approximately when this meeting took  
14 place?

15 A In the time period of March to April of 1984.

16 Q To the best of your knowledge have you or any other  
17 member of your staff had any other contact or conversations with  
18 any representatives of the Ashbourne Transportation Company  
19 since that time?

20 A No, I have not.

21 Q Did Mr. Jacobs make any representation to you with  
22 regard to his position with the company and his authorization  
23 to enter into any kind of a verbal agreement with the owners  
24 of the Ashbourne Transportation Company?

25 A I believe he gave us his title at the time and

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1 indicated that he would have to review that agreement with  
2 other individuals at the company.

3 Q Do you have any knowledge whether or not he did  
4 that?

5 A No, I don't.

6 Q Do you have any knowledge of whether or not the  
7 Ashbourne Transportation Company has entered into a formal  
8 written agreement with the county regarding the provision of  
9 buses and drivers in the event of a radiological emergency?

10 A No. I believe that they have not as of this date.

11 Q Do you have any knowledge regarding the reason  
12 why they have not entered into a written agreement with the  
13 county?

14 A No. I do not have any knowledge.

15 Q I just want to make sure I am correct. Your  
16 testimony then with regard to the buses routinely assigned to  
17 provide service to a risk school district, it is your  
18 testimony that the existing contract for that service can  
19 be assumed without any kind of special arrangements or contracts,  
20 ancillary contracts I believe is the word you used, to be  
21 available to provide that service in the event of a  
22 radiological emergency at the Limerick Generating Station?

23 A Could you repeat that?

24 Q Certainly. I believe you testified yesterday that  
25 it was your opinion with regard to risk school districts that

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1 the existing contracts and bus providers routinely providing  
2 transportation to those risk school districts could be  
3 assumed without special arrangements or ancillary contracts  
4 above and beyond the existing contracts to be able to provide  
5 transportation service in the event of a radiological emergency  
6 at the Limerick Generating Station without any additional  
7 agreements or contracts specifically referring to an  
8 incident at the Limerick Generating Station?

9 A Yes. In fact, I would say it is stronger than  
10 assumed. The draft radiological emergency response plans  
11 for the risk school districts make those assignments as they  
12 should for the development of unmet needs. They assign the  
13 bus service to appropriate assignments in their plan so that  
14 they can determine what unmet needs they may have which then  
15 can be passed to the next highest level of government which  
16 is appropriately the county.

17 Q So then is it your testimony that this is an  
18 underlying assumption of the risk school district plans as  
19 they have been developed?

20 A It is not an assumption.

21 MR. RADER: Objection. The witness stated it was  
22 not an assumption.

23 JUDGE HOYT: I think the witness has already  
24 answered the question and that is exactly what he stated.

25 MR. RADER: I will withdraw my objection.



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1 JUDGE HOYT: Very well.

2 BY MS. ZITZER: (Resuming)

3 Q If it is not an assumption, how would you characterize  
4 it?

5 A (Witness Cunningham) It is an assignment made as  
6 part of their radiological emergency response plan.

7 Q Would this assignment also be assumed to apply to  
8 the drivers as well?

9 MR. RADER: Objection to the form of the question.  
10 The witness said it was not an assumption.

11 MS. ZITZER: I said assignment.

12 MR. RADER: You said --

13 MS. ZITZER: I will rephrase the question.

14 JUDGE HOYT: Very well. Proceed.

15 BY MS. ZITZER: (Resuming)

16 Q Does this assignment as reflected in the plans also  
17 refer to the availability of bus drivers?

18 A (Witness Cunningham) Yes, it does.

19 Q Would this assignment refer to all the bus drivers  
20 routinely providing that service as detailed in the respective  
21 plans?

22 A I think that question has to be qualified in my  
23 answer. I don't think it refers to all of the drivers. It  
24 refers to a driver for each vehicle assigned.

25 (PAUSE.)

1 JUDGE HARBOUR: While there is a pause, what school  
2 district is this?

3 WITNESS CUNNINGTON: I believe she asked me for all  
4 risk school districts, was that not the question.

5 MS. ZITZER: Yes, that is correct.

6 JUDGE HARBOUR: Thank you.

7 BY MS. ZITZER: (Resuming)

8 Q Along this same line I believe Mr. Bradshaw on  
9 transcript page 16,911 made the following statement, that  
10 you would further add that during your employment with the  
11 Pennsylvania Emergency Management Agency and you continue  
12 then to describe having been involved in reviewing other  
13 school plans in the Commonwealth that it has not been the  
14 practice to have a school district enter into an agreement  
15 with bus companies that are currently under contract. You  
16 then state that that has never been sought in any other  
17 planning process that you are aware of in Pennsylvania.  
18 Could you be specific with regard to what other plans you are  
19 referring to there?

20 A (Witness Bradshaw) Yes. I have reviewed the school  
21 district plans for the Beaver Valley Station, the Peach Bottom  
22 Atomic Power Station and Three Mile Island.

23 Q In each of those cases, it is correct that there  
24 were school districts involved that did require evacuation?

25 A Yes.

1 Q Do you recall the number of school districts involved  
2 in any of those situations?

3 A No, I do not.

4 Q Do you recall whether or not any of the school  
5 district plans that you reviewed include school districts  
6 that do not normally contract for a large extent of their  
7 bus service? I am referring to in this example the Pottstown  
8 School District which basically is a walking school district  
9 and doesn't have its own buses.

10 A I don't recall the character of the contracts, no.

11 Q Do you have any opinion or knowledge of whether or  
12 not the number of buses required for school district evacuation  
13 in the emergency planning zone at any of these other facilities  
14 which you have referred to is in any way comparable to that  
15 required for the Limerick Generating Station?

16 A I don't know in what sense you mean comparable. No.  
17 It would be very difficult for me to make that comparison.

18 Q Mr. Bradshaw, at transcript page 16,912 you  
19 further provided your opinion regarding whether or not  
20 ancillary agreements were necessary to assure provision of  
21 bus service with providers routinely assigned to school  
22 districts and you made the statement in response to a question  
23 that you didn't believe that ancillary agreements were necessary  
24 to insure that a bus provider will provide the buses guaranteed  
25 under an existing contract with the school district. I would

1 just like to clarify when you referred to buses there, you  
2 were also including the provision of drivers for those buses?

3 MR. RADER: Your Honor, if Ms. Zitzer is going to  
4 ask a number of questions directly from the transcript, may  
5 I provide the witness with a copy of the transcript?

6 MS. ZITZER: Certainly. I think that would be  
7 helpful.

8 JUDGE HOYT: I think Ms. Zitzer only has one copy.

9 MR. RADER: I have an extra copy.

10 JUDGE HOYT: Very well.

11 (The above-referenced document was supplied to  
12 the witnesses.)

13 WITNESS BRADSHAW: Would you mind giving us the  
14 reference again?

15 BY MS. ZITZER: (Resuming)

16 Q It is page 16,912.

17 A (Perusing document.)

18 Q I think the question is fairly general. The question  
19 starts at line "7" through "15" and I am concerned about the  
20 last couple of lines of the question where there was a specific  
21 reference to the bus provider providing buses and you answered  
22 that no, you didn't think ancillary agreements were necessary.

23 I just want to ask you in that answer, were you  
24 also referring to the provision of drivers?

25 A (Witness Bradshaw) I should point out that that was

1 Mr. Cunningham's testimony.

2 Q I apologize.

3 A (Witness Cunningham) Yes, I included drivers.

4 Q Yes. We have previously discussed that. Thank you.

5 Mr. Bradshaw, you had testified yesterday that there had been  
6 some additional requests for orientation programs as a result  
7 of a number of the risk school district superintendents  
8 testifying in this proceeding and I believe you specifically  
9 stated that Dr. Feich and Dr. Welliver, I believe as well  
10 as Dr. Persing, had all had some contact with your office  
11 regarding a request for either retraining or training or  
12 some type of orientation program.

13 If it would help, specifically at transcript page  
14 16,917, Mr. Bradshaw, you have specifically referred to the  
15 requests from Dr. Feich and Dr. Welliver. To the best of your  
16 knowledge was any other than the request for the program,  
17 the orientation program, to be scheduled was anything else  
18 discussed when either of those individuals contacted your  
19 office regarding their plans as we have been discussing in these  
20 hearings?

21 MR. RADER: Objection. That clearly goes beyond  
22 the scope of the direct examination.

23 MS. ZITZER: I will rephrase the question. I don't  
24 think it was clear.

25 JUDGE HOYT: Very well.



1 BY MS. ZITZER: (Resuming)

2 Q Other than requesting retraining, was there any  
3 retraining or an additional orientation program -- strike that.  
4 Mr. Bradshaw, you testified that Dr. Feich had contacted your  
5 office, I believe, to request a retraining program in  
6 February, is that correct?

7 A (Witness Bradshaw) That is correct.

8 Q Did he discuss any other aspect of the training  
9 program with you other than to make the request with you or  
10 your staff when he made that call?

11 A Not that I am aware of.

12 Q Do you have specific knowledge of the conversation  
13 that took place when he made that call?

14 A I only know that he discussed arranging the training  
15 program and that he requested to meet with us to discuss  
16 content before that time.

17 Q Mr. Cunningham, do you have more specific knowledge  
18 than that?

19 A (Witness Cunningham) No. As Mr. Bradshaw described  
20 it, he wants a meeting.

21 Q All right. With regard to Dr. Welliver's request  
22 for a training program in February, do either of you have  
23 specific knowledge of the nature of his request or whether or not  
24 any of the aspects of the training program other than simply  
25 requesting that it be scheduled were discussed when he contacted

1 your staff?

2 A (Witness Bradshaw) I believe Dr. Welliver's request  
3 was in writing and that letter is back at our office. I haven't  
4 seen it yet. I have only been made aware of its availability.

5 Q But neither of you have any other knowledge of the  
6 nature of the request?

7 A No.

8 A (Witness Cunningham) No.

9 Q Mr. Cunningham, you also testified that you believe  
10 that there had been a request from the Upper Perkiomen School  
11 District for training subsequent to Dr. Persing's testimony.  
12 Do you have any specific knowledge of the nature of the  
13 conversation that took place between a member of your staff  
14 and Dr. Persing?

15 A Yes. It was a preliminary conversation that took  
16 place between the emergency planning representative of the  
17 Perkiomen School District and myself. It was not the purpose  
18 of the meeting at which we were at but he indicated that he  
19 would like a meeting prior to the training date that he would  
20 schedule with our training office so that he could provide  
21 some input and some structure.

22 Q Did he discuss with you any other aspects or  
23 matters relating to the orientation or training program at  
24 that time?

25 A No, other than indicating that he would like a meeting

mn3-11

1 prior to the training.

2 (PAUSE.)

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END#3

1 MS. ZITZER: I will just be a minute.

2 BY MS. ZITZER:

3 Q I believe yesterday the panel provided  
4 testimony that it would be the policy to discourage  
5 parental pickup of students in the event of a radiological  
6 emergency, and I believe that there was testimony regarding  
7 the fact that that was the standard procedure in private  
8 and school district radiological emergency response plans  
9 as developed. Is that correct?

10 MR. RADER: Could you refer the witness to a specific  
11 page of the transcript?

12 MS. ZITZER: Certainly.

13 BY MS. ZITZER:

14 Q On page 16,928, Mr. Bradshaw, lines 8 and 10,  
15 provided a response to a question saying that it was  
16 the standard procedure in both school district and  
17 private school district plans. I just wanted to confirm  
18 that by that you are referring to this as a planning  
19 assumption in the risk school district and private school  
20 district plans as developed?

21 MR. RADER: I object to the form of the  
22 question insofar as it says "a planning assumption." I  
23 don't think Mr. Bradshaw testified that it was an  
24 assumption.

25 MS. ZITZER: I will rephrase the question.

1 BY MS. ZITZER:

2 Q You used the phrase that it is "a standard  
3 procedure" in both school districts and private school  
4 plans.

5 What do you mean by a standard procedure?

6 A (Witness Bradshaw) To my recollection, I believe  
7 it is in the sample letter to the parents in the  
8 school district plans. There is information to the  
9 parents from the school district which discourages them  
10 from coming to the school at the time of an emergency to  
11 pick up their children.

12 Q Are you aware of whether or not any of the  
13 risk school districts have decided to -- strike that.

14 Are there any of the risk school districts  
15 where parents will not be permitted to pick up students in  
16 the event of a radiological emergency according to your  
17 knowledge of the procedures contained in the risk school  
18 district plans which you have assisted in developing?

19 A Not to my knowledge.

20 A (Witness Cunningham) Absolutely not.

21 Q Do the risk school district plans that you are  
22 familiar with establish any procedures to be usitlized in  
23 the event that parents do desire to pick up their children?

24 A (Witness Bradshaw) Yes.

25 Q Could you be more specific?



1           A   (Witness Cunningham) I believe that all but  
2 two of the risk school districts that I worked directly  
3 with already have procedures in the most current draft of  
4 their radiological emergency response plan, and the  
5 remaining ones have indicated that they either will  
6 develop those procedures as administrative procedures  
7 or will include them in a subsequent revision or draft of  
8 their plan.

9           Q   You stated that you believe there were two that did  
10 not. Could you provide the names of those, if you are  
11 familiar with them?

12           A   Perkiomen Valley and Spring Ford are the two  
13 that I am aware of that I worked directly with that  
14 don't have those procedures yet, and both of them have  
15 indicated, as I have said, that they are either developing  
16 them as administrative procedures or will include them in a  
17 subsequent revision or draft and already have thought about  
18 them and know what they would do.

19           Q   When you say the procedures are contained in  
20 the plans, are you referring to anything other than the  
21 proposed letter to parents contained, I believe, in the  
22 back of those plans?

23           A   Yes, I am. There are procedures indicated for  
24 parent pickup, and there are also -- there is also  
25 specific information in many of the plans in the attachments

1 pertaining to driveways, parking lots, entrances, exits, lobby  
2 areas, things like that that are specific to parent pickup  
3 procedures to allow.

4 Q What assurance is there that parents will follow  
5 those provisions at this point in time?

6 A They are adults. They are reasonable. The  
7 letters to parents will provide them information and the  
8 attitude of the school district will indicate that those  
9 procedures are offered for the efficient pickup of  
10 students and will show the willingness of the  
11 school district to allow a parent and, in fact, help a  
12 parent that wants to pick up a child without disrupting  
13 the rest of the school's activity or having minimum  
14 disruption.

15 A (Witness Bradshaw) I would state that the  
16 preference and the school districts encourage the parents  
17 not to come to the schools, but those procedures have  
18 been placed in there exactly because we can't assure that  
19 they won't. So that that procedure and eventuality is  
20 taken care of.

21 A (Witness Cunningham) The school districts are  
22 providing a picture to parents that they understand the  
23 parents' wishes and are preparing for that.

24 Q Could either of you be specific, if you have any  
25 direct knowledge, of what information at this time has been

1 provided to parents along the lines which you have  
2 just testified?

3 A The letters to parents, to my knowledge, have  
4 not been sent. There have been PTA and PTO meetings and  
5 different mechanisms in different school districts to provide  
6 that information to parents.

7 Q Mr. Bradshaw, you stated that, I believe, the  
8 school districts are providing a picture of this  
9 preference in terms of this policy to the parents.

10 Were you referring to anything specific when you made  
11 that statement?

12 MR. RADER: I believe that was Mr. Cunningham's  
13 answer.

14 JUDGE HOYT: These witnesses are perfectly  
15 capable of informing us of that, Mr. Rader.

16 WITNESS BRADSHAW: I didn't understand the question.  
17 I'm sorry.

18 BY MS. ZITZER:

19 Q In response to my previous question regarding  
20 what information was being provided to parents, one of  
21 you specifically stated that the schools were providing  
22 a picture to the parents.

23 I believe you were referring to information.  
24 I am not sure. I was just trying to get you to be more  
25 specific about what you meant by that.

1           A       (Witness Cunnington) I don't understand  
2 the reference to "picture." If I or Mr. Bradshaw said  
3 that, they are presenting to the parents their competence  
4 at being able to supervise students under all circumstances  
5 and they are capable of keeping account and safeguarding  
6 students. But if an individual parent would so  
7 choose to come to the school, they are presenting a picture --  
8 I will use that term now -- of their willingness to  
9 adjust their procedures to fit an individual parent's  
10 needs. But they are discouraging parents from doing that  
11 by letting them know that they do have plans in place to  
12 safeguard children, and those plans are adequate.

13           Q       Could you be more specific? When you say "they  
14 are letting them know," specifically at what school  
15 districts has this taken place, if you are aware?

16           A       This will take place when the school districts  
17 provide a supplemental letter to all of the parents in  
18 their school district after the public information brochure  
19 is sent to the parents from the state and the county and  
20 utility.

21           Q       When you say "a supplemental letter," you  
22 mean a letter to supplement the brochure or to supplement  
23 some other letter?

24           A       A letter to provide more specific information  
25 as related to statements that are made in the brochure.



1 Q Okay.

2 Were you referring to anything else that has  
3 presently taken place at this time?

4 A There has been no transmission of information  
5 that I am aware of at this time because they recognize  
6 that the public information brochure is a necessary  
7 pre-condition to the transmittal of that letter.

8 Q I believe one of you testified that there had  
9 been some discussion of these procedures with parents  
10 at PTA or PTO meetings. Could you provide any specific  
11 information that you are aware of which school districts  
12 these types of discussions have taken place?

13 A Several school districts. I can give you a list  
14 from me memory, if you would like.

15 Q If you have direct knowledge of instances  
16 where this has been discussed, that would be helpful.  
17 If it is not direct knowledge or information that you are  
18 unsure of, I don't think it would help the record at this  
19 point.

20 A Owen J. Roberts, Pottsgrove, I believe Methacton,  
21 Perkiomen Valley.

22 Q Can you be --

23 A There are so many PTA/PTO meetings.

24 Q My question, though, is with regard to what

25 discussions have taken place to provide parents with the kind



1 of information you have been referring to?

2 A District officials have met with them to discuss  
3 and in some cases even invited representatives of the county  
4 or representatives of Energy Consultants to come and assist  
5 them in describing these procedures.

6 Q Do you have direct knowledge of the four  
7 school districts that you have just referred to of the  
8 nature of the discussions that took place with parents  
9 at those meetings?

10 A I was present at meetings at Pottsgrove, Methacton,  
11 and I am aware of the meetings that were held in the  
12 others.

13 Q How many parents were present, if you recall,  
14 at the Methacton meeting which you attended?

15 A It was at one elementary school building. If you  
16 are aware, PTOs and PTAs are specific to buildings. There  
17 were quite a few at that meeting because they were discussing  
18 playground equipment and it seemed to be a very big issue.  
19 So there were quite a few parents at that meeting. I will  
20 say 40 at a small elementary school. That seemed very large  
21 to me.

22 Q And at Pottsgrove School District, do you recall  
23 how many parents attended the meeting you were at?

24 A 50 to 75.

25 Q Do you have direct knowledge of such a discussion

1 with any of the PTA or PTOs within the Owen J. Roberts  
2 School District?

3 A No representatives of PTO/PTA are on their  
4 task force. And it is those representatives that have  
5 made those discussions as members of PTAs and PTOs, so I  
6 have no direct knowledge.

7 Q Do you have any knowledge of at what point in  
8 time the proposed letters to parents will be distributed  
9 by the risk school districts?

10 A My understanding is within weeks of the distribution  
11 of the public information brochure.

12 Q Do you have any direct knowledge when the  
13 public information brochure will be distributed?

14 A (Witness Bradshaw) In planning discussions  
15 that we have had with the counties and the state, the goal  
16 at the present time is to distribute the brochure around the  
17 end of January, I believe.

18 Q Mr. Cunnington, I believe you testified that other  
19 than the Perkiomen Valley and Spring Ford school districts,  
20 which were currently developing policies regarding  
21 parental pickup procedures, that the other school  
22 districts whom you have worked with already have such  
23 policies in their plans.

24 Could you provide us with the names of the  
25 school districts you were referring to?

1           A       (Witness Cunningham) Yes. I would like to  
2 amend what I said. I believe Soudertown area may not  
3 have those procedures. Upper Perkiomen docs. Pottsgrove  
4 does. Pottstown does. Owen J. Roberts does. And  
5 there are also two school districts in Berks County which  
6 we have not discussed here in these hearings that also  
7 have them.

8                   I don't know about the districts that I don't  
9 work directly with. Methacton's committee, it is my  
10 understanding, has developed some procedures also, but I  
11 have not seen those.

12           Q       Do either of you have knowledge regarding  
13 the Phoenixville School District?

14           A       (Witness Bradshaw) No.

15           A       (Witness Cunningham) I don't work directly  
16 with them.

17           Q       Fine.

18                   Mr. Bradshaw, you testified, if it would help you,  
19 this is on page 16,928, that it was a policy of the  
20 Commonwealth of Pennsylvania to discourage parental pickup  
21 at the time of an evacuation.

22                   Could you provide the source, if you are  
23 aware of it, of the policy which you were referring to?

24           A       (Witness Bradshaw) I wouldn't refer to a  
25 particular source. The basis of my statement is the fact  
that I worked for that agency for two years.

05 MM/ml

Q What is the basis for your saying policy?

2 A Obviously we have coordination -- PEMA has  
3 coordination in all emergency planning. We reviewed municipal,  
4 county and school district plans. That is one aspect of a  
5 school district plan that would be reviewed and that informa-  
6 tion, that policy would be reviewed to see if it were consistent  
7 with state policy.

8 Q In light of that, do you believe that the provisions  
9 for parental pickup in the risk school district plans which  
10 we have been discussing, are consistent with the state  
11 policy to which you are referring?

12 A Yes, I believe they are.

13 Q If you have that belief, could you be more specific  
14 what the basis for your knowledge of that policy is?

15 A I couldn't point to a particular place where it is  
16 written. It is based on my knowledge of Commonwealth's  
17 policies.

18 Q Could you be more specific what the nature of your  
19 knowledge of the Commonwealth's policy is?

20 MR. RADER: I object. The witness has twice  
21 described the basis for his answer, and I believe he has  
22 answered the question.

23 JUDGE HOYT: The question will be permitted.

24 Objection overruled.

25 WITNESS BRADSHAW: The basis for my understanding



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1 is the two years I spent employed by the Pennsylvania  
2 Emergency Management Agency and my familiarity with their  
3 Radiological Emergency Response Planning.

4 BY MS. ZITZER:

5 Q Are you in any way referring to any provisions of  
6 Annex E of the Commonwealth Disaster Operations Plan?

7 A (Witness Bradshaw) I would have to review Annex E.  
8 I couldn't confirm that that was in writing in Annex E.

9 Q At this time however, the basis for your statement  
10 is not specifically any provision of Annex E, but your  
11 general knowledge during the two years that you were an employee  
12 at PEMA, is that correct?

13 A That's correct.

14 If I may give a reference, the school evacuation  
15 announcements contained in each county plan contain language  
16 which discourages parents from coming to the schools. Those  
17 evacuation announcements were drafted by the Pennsylvania  
18 Emergency Management Agency and subjected to county approval.

19 A Thank you.

20 (Time signal sounding.)

21 JUDGE HOYT: Ms. Zitzer, your time is up.

22 Do you have any --

23 MS. ZITZER: I do have one question.

24 JUDGE HOYT: Ask your last question then.

25 Mr. Goodwin, you will be ready to start your



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c 1 cross examination, and yours will be 30 minutes.

2 MR. GOODWIN: Yes. Thank you.

3 BY MS. ZITZER:

4 Q Mr. Cunningham, I believe you stated that you  
5 believe the identification of unmet needs for 25 buses for  
6 the Owen J. Roberts School District was an overstatement of  
7 their resource needs.

8 I believe you also testified that previous drafts  
9 of the school district's plan had indicated a need for fewer  
10 buses. I believe you referred to 15 as opposed to 25.

11 Is that generally -- would you agree that that was  
12 your testimony.

13 A (Witness Cunningham) Yes.

14 Q What is the basis for your -- strike that.

15 Are you aware that the Owen J. Roberts Task Force  
16 had determined that the request for 25 buses -- and I believe  
17 Dr. Claypool also concurred in this -- is a real and valid unmet  
18 need?

19 A Yes, I am aware of that.

20 Q And are you aware of their basis for determining  
21 that identification of 25 buses as a real and valid unmet need?

22 A Yes. From the statements in Dr. Claypool's letter  
23 and from the representations that he has made at meetings and  
24 also here at these meetings.

25 Q Based on your knowledge of that, then, what is the

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1 basis for your testimony that the figure of 25 is an  
2 overstatement regarding the number of buses that have been  
3 identified by the school district as an unmet need?

4 A The student enrollments do not require the number  
5 of buses. The buses are parked at the main campus at alert,  
6 the keys are available to the buses.

7 JUDGE HOYT: Are we winding this down, Ms. Zitzer?  
8 I think we have got one question which has now been covered  
9 by seven or eight.

10 MS. ZITZER: I apologize. I needed to lay a founda-  
11 tion to ask the question.

12 (Pause.)

13 BY MS. ZITZER:

14 Q Is it your testimony that these factors were  
15 not considered by Dr. Claypool or the Emergency Planning  
16 Task Force when they determined that the figure of 25 was a  
17 real and valid unmet need regarding bus requirements?

18 A I believe that their figures mix their need for  
19 drivers -- their supposed need for drivers and their need for  
20 buses and do not consider them separately. And which, if you  
21 look at the procedures in their plan they should be considered  
22 and looked at separately.

23 MS. ZITZER: Fine.

24 Thank you.

25 JUDGE HOYT: Thank you.

mm5 1

All right, Mr. Goodwin, if you will begin your cross examination for thirty minutes.

XXX

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BY MR. GOODWIN:

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Q Mr. Bradshaw, on page 16,906 of the transcript, you were talking about the Downingtown School District. And in your testimony you mentioned there is one school within the EPZ but that is also outside the ten-mile radius of Limerick.

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And you said, due to this fact that the Downingtown School District didn't plan to evacuate anyone, instead they would be using a sheltering mode.

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In light of this policy determination on the part of Downingtown to shelter their students, are you aware of any parental opposition to this type of policy to shelter instead of evacuate?

13

14

A (Witness Bradshaw) No, I am not.

15

16

Q What is this based on? Have you talked to anyone, gotten any feedback information from anyone?

17

18

A I haven't. I am simply not aware of any.

19

20

Q Have any of the administrators there in Downingtown mentioned to you any opposition?

21

22

A I haven't worked -- I am the manager of that project. I haven't worked directly with that Downingtown School District.

23

My staff planner may well be aware of that activity, but I am not.

24

25

A (Witness Cunnington) I believe they approved the

mm6

1 plan with that provision in it, so there was a majority of  
2 the school board in favor of that provision.

3 Q On page 16,909 -- I believe this is your testimony,  
4 Mr.Cunnington -- you were talking about the agreement between  
5 Montgomery County and the Levey Company, and your answer  
6 basically stated that you believed that Levey would honor its  
7 contract in all situations.

8 Is that basically correct?

9 A I believe I said they were going to honor the  
10 arrangement.

11 The arrangement is that Levey routinely provides  
12 bus service for the Upper Perkiomen School District, and  
13 routinely buses the students that are at the Western Montgomery  
14 Vocational Technical School. The District made those assign-  
15 ments in its emergency plan, and the County is honoring those  
16 arrangements that were made by the District and not using  
17 Levey for anything else when school is in session.

18 That is what I implied, I believe, in that testimony  
19 if you are talking about at the top of the page.

20 Q I am not sure I understand what you meant there  
21 when you said Levey would basically honor the agreement.

22 Are you saying by that all case scenarios, including  
23 if it would come to an evacuation, that they would honor their  
24 contract and participate?

25 A I'm reading the testimony, and it says:



mm7

1 "Montgomery County has indicated to the  
2 District that they are going to honor the arrangement,  
3 that Levey routinely provides bus service to the  
4 District for the movement of its students and to  
5 the District for the movement of its students to and  
6 from the vocational technical school."

7 The assignment at the time of a radiological  
8 emergency is made by the District for those vehicles, and  
9 the County is going to honor that arrangement, yes.

10 Q Mr. Bradshaw, you made a statement a little further  
11 on in the transcript concerning sheltering. And I believe you  
12 stated at that time it was your opinion that sheltering away  
13 from windows was basically just for comfort purposes.

14 Is that correct?

15 A (Witness Bradshaw) I believe it was Mr. Cunnington's  
16 testimony, but I would agree.

17 Q Mr. Cunnington, are you aware then of the section  
18 in Annex E of the State plan -- in particular I am referring to  
19 page E-9-L-1 that gets into talking about the sheltering mode?

20 A Yes.

21 MR. RADER: Could the witness be provided with the  
22 document, please, your Honor?

23 I will be happy to provide him with a copy.

24 JUDGE HOYT: Very well. Mr. Goodwin, Mr. Rader  
25 will place that before the witness. Let the record reflect



1 that the document is now in the hands of the witness.

mm 2 (Document handed to witness.)

3 JUDGE HARBOUR: Will you please repeat the page  
4 number.

5 MR. GOODWIN: It is on E-9-L-1.

6 BY MR. GOODWIN:

7 Q In particular, on that page I draw your attention  
8 just to 2C where the statement is made: "Inner rooms of  
9 a building with no windows offer the best protection."

10 A (Witness Cunningham) Yes.

11 Q Now, what would be your interpretation of that  
12 statement there, then?

13 A That inner rooms of a building with no windows  
14 offer the best protection.

15 Q Is that referring, do you think, to comfort? Or,  
16 do you think it is talking more --

17 A That specifically is not referring to comfort.  
18 References in the plans were.

19 Q Then does this statement in any way alter your basic  
20 opinion that sheltering away from windows is strictly for  
21 comfort purposes? Not radiological protection?

22 A In a building with inner rooms and no windows, it  
23 would have effect.

24 In a building without inner rooms with no windows,  
25 it would not.

mm9

1           Many schools have no inner rooms without windows.  
2 They may have hallways, and I believe hallways are reflected  
3 as potential shelter areas in the school district in private  
4 school plans. But in many cases they do not have inner rooms  
5 without windows.

6           Q       Okay, that is what I was getting at. I was thinking  
7 along the lines of hallways and so forth. So, that has been  
8 conveyed --

9           A       I can't recall the reference. There are references  
10 in the school plans to looking at hallways and other things  
11 in considering buildings, in considering a place or a location  
12 for sheltering.

13                   It has to be related though to the size of the  
14 hallways, and other concerns that the District has in super-  
15 vising the students at those times.

16           Q       Right, I understand. But that is what I wanted  
17 that they understood.

18           A       But that does not negate the situation whereby  
19 there are still comfort factors involved. If you are choosing  
20 even a location that has to have windows, you still have to  
21 take comfort considerations into effect, based on the early  
22 dismissals we have seen for weather-related incidents of heat  
23 and cold.

24                   Other sections of this plan provide for turning  
25 off air intake systems, which could include heat and air

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1 conditioning.

2 Q On page 16,936 of the transcript, Mr. Cunnington,  
3 you made a statement. We were talking about the subject of  
4 private schools and how their transportation needs would be  
5 met. In particular, could you explain a little further for  
6 the record, how the individual needs of the private schools  
7 are being reported to the counties?

8 A Yes. Would an example be appropriate?

9 Q Go ahead.

10 A I will take a private school, for example. I  
11 will take the Hill School in the Pottstown School District.

12 Pottstown School District has about 3200 students  
13 in the public school buildings, and they have about nine or  
14 ten buses under contractor agreement which they assigned for  
15 incidents at the Limerick Generating Station, so the District  
16 had an unmet need for public school buildings -- I would have  
17 to look at the plan, but in the vicinity of 20 or 30-some  
18 buses to move the public school students.

19 The Hill School was one of the private schools in  
20 the Pottstown jurisdiction. It had an unmet need, or the Hill  
21 School has an unmet need for a certain number of buses which  
22 I can refer to -- I believe it is in the range of 10 to 12 --  
23 to move its students.

24 That need was -- needed to be passed to the next  
25 level of government for address. It could be provided to

mm11

1 the Pottstown School District Superintendent who was aware,  
2 who was made aware that the Hill School needs additional  
3 buses to move its students.

4 The Superintendent had no choice but to pass that as  
5 a need to the County, which is his next level of government  
6 because he could not address it from his normal complement  
7 of bus resources. So that need was passed to the county. And  
8 the county Office of Emergency Preparedness then compiled all  
9 the needs from all of the school districts and all of their  
10 related private schools to come up with its particular bus  
11 needs for the entire EPZ.

12 Q Is this basic procedure that has been followed  
13 throughout?

14 A Yes. For example, in Montgomery County it is very  
15 consistent because the four school districts with private  
16 schools in the EPZ, namely Perkiomen Valley, Spring Ford  
17 area, Pottstown and Pottsgrove, all had passed without any  
18 consultation with the private schools just for the public  
19 schools alone had passed an unmet need so that when they  
20 consulted with the private schools, they had to take all of  
21 the needs of the private schools and pass them to the county  
22 because they already had to do that for the public school  
23 buildings themselves.

24 Q On page 16,949, Mr. Cunningham, you made reference  
25 to the Owen J. Roberts School District and the planning for



1 prepositioning the buses dealing with the problem of conges-  
2 tion and so forth. Could you explain that a little further  
3 just what they have in mind here about the prepositioning  
4 and how this might eliminate the congestion situation?

5 A Yes. The District and the Gross Bus Company  
6 allow a certain number of the Owen J. Roberts bus drivers  
7 to at certain times of the day or overnight take the buses  
8 home with them or to their place of business and begin their  
9 regular and routine runs from their home or from their place  
10 of business at an assigned time, and anticipating that  
11 all of the complement of buses would be needed to evacuate  
12 the students, the entire student complement or enrollment  
13 at the time of a radiological emergency, the task force  
14 felt it would be prudent to modify that procedure during a  
15 time of emergency like an incident at Limerick to have those  
16 buses located at a central location with the keys so that  
17 the equipment itself would be available to the district  
18 without having to contact the driver and have him drive the  
19 equipment to an emergency assignment. So, therefore, they  
20 put that procedure in their plan.

21 In addition, they decided to put the buses at the  
22 main campus rather than at their bus lot for convenience of  
23 assignment and for size of the parking area.

24 END#4



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1 Q You also made a statement on that page where you  
2 say I believe it is overstated, the congestion scenario would  
3 not evidence itself. What do you mean here by this being  
4 overstated right in the ~~m~~iddle of the page?

5 A I believe Dr. Claypool was indicating that the  
6 roads would be so jammed and I am recollecting that no buses  
7 would be able to get to his school buildings and park for their  
8 Limerick assignments and I was saying that I think that is  
9 somewhat overstated. I feel that the traffic control on  
10 the main roads would mitigate that circumstance and I also  
11 believe that his own task force and administration has given  
12 a thorough look at all of the school buildings and has made  
13 perhaps the most detailed attempt to relocate traffic around  
14 each building so that there would be an open access road both  
15 for buses and for parents and that there would be sufficient  
16 parking proximate to each of the school buildings to allow  
17 for the buses to park right up next to the buildings. Therefore,  
18 I believe his characterization that traffic congestion would not  
19 allow the buses to get there is somewhat overstated.

20 Q On page 16,952, Mr. Bradshaw, in answer to a question  
21 from Mr. Rader concerning Chester County and Montgomery County  
22 intending to update their transportation surveys, you stated  
23 that they planned to resurvey the needs of the public in  
24 early 1985. Could you go into a little more detail about  
25 this and how you plan to do the survey and so forth?

(Witness Bradshaw)

1           A.    Yes.  The initial survey was conducted in the latter  
2 part of 1983 and the beginning of 1984 and I envision in my  
3 discussions with county personnel that the same type of survey,  
4 pretty much the same type of survey, would be conducted in  
5 1985.  It would involve a mailing of a survey form with  
6 questions regarding needs for special notifications and  
7 transportation and special medical assistance with a cover  
8 letter from each county emergency director.  The mailing  
9 uses various sources to get to the residents of the EPZ  
10 including utility billing records and municipal tax records  
11 and the returns are provided back to the county emergency  
12 management agency for compilation and incorporation into the  
13 municipal plans.

14           Q    What is the time frame for completing this survey,  
15 from start to finish?

16           A.    I don't believe there is a time frame set.  The  
17 difficulty in setting an end point for it is that the returns  
18 come in sporadically from the public over a several week  
19 period.  The returns from the survey which was initially mailed  
20 in 1983 came back over a period of between eight to 12 weeks.  
21 So I can't set a time frame in 1985.  The task force has been  
22 established or is being established and discussions, initial  
23 discussions, have been undertaken by the counties and Energy  
24 Consultants and to the best of my recollection I believe PEMA  
25 was also involved to decide what the time frame will be and what

1 the mechanism will be and any necessary revisions to the  
2 questionnaire.

3 Q A little further on in the transcript I believe  
4 this was your testimony, Mr. Cunnington, you were talking  
5 about contractual situations involving teachers. You made  
6 the statement that it was basically your understanding that  
7 any teachers would be volunteers in an evacuation scenario  
8 and thus there would not be any need for any contract  
9 involving them, is that correct?

10 A (Witness Cunnington) I don't recall that. Could  
11 I have a reference, please?

12 (PAUSE.)

13 Q I believe I was thinking it was teachers, but  
14 apparently it is bus drivers on page 16,957.

15 A (Perusing document.)

16 Yes. I have that reference.

17 Q Towards the bottom of the page, line 18, where the  
18 question was, "Is it your understanding that school bus drivers  
19 from outside the EPZ would be responding as volunteers or as  
20 paid employees?"

21 A Yes. I have that reference. It is on page 16,957?

22 Q Right. Just what is this understanding or opinion  
23 based on?

24 A The meetings that were held between the county office  
25 of emergency preparedness and the bus providers, the indication

mn6-4

1 from the county was that for all emergencies in Montgomery  
2 County the drivers would volunteer. They did not discuss  
3 any contractual implication on the part of the contractor to  
4 provide a driver. He was to request his drivers to volunteer.

5 Q On basically the same subject here only dealing  
6 with SEPTA in this case, I believe you also made a statement  
7 that SEPTA drivers would also be volunteers. I am wondering  
8 here what did you base this opinion on?

9 A SEPTA from the same standpoint is outside of the  
10 emergency planning zone. To my knowledge they have no  
11 existing contractual obligation to bus any school students  
12 or any private facility or any such thing in the EPZ that  
13 would have created an assignment in the planning process.  
14 Therefore, the counties requesting of them an assistance for  
15 a Limerick emergency or for in fact any other emergency, they  
16 would be requesting and asking SEPTA to provide equipment and  
17 to seek individuals in its employ as volunteers to operate  
18 that equipment.

19 Now if there are contractual implications that  
20 SEPTA has, the county was not trying to interfere with them  
21 in any way, but the county was indicating that from their  
22 standpoint they were only requesting that SEPTA look at its  
23 work force and ask them to volunteer.

24 I don't believe that SEPTA has any school bus  
25 contracts or anything. I don't think they bus any schools in



1 the Spring Ford or Perkiomen Valley or Pottstown or Pottsgrove  
2 School Districts where they would have a routine transportation  
3 situation.

4 A (Witness Bradshaw) If I might add, Mr. Cunnington  
5 was also a party to the meeting between SEPTA and the Office  
6 of Emergency Preparedness in which the same general discussion  
7 would have occurred in which it would have been represented to  
8 SEPTA that their bus drivers should be viewed as volunteers.

9 Q Has Energy Consultants undertaken any type of  
10 survey or done any interviews with SEPTA drivers to get a  
11 feel for who might be willing to volunteer or the percentage  
12 of drivers that might be available?

13 A No. We have not been requested by any party to  
14 undertake any such survey.

15 Q Just one further question here, Mr. Bradshaw, and  
16 this was your answer on page 16,959 where your last answer  
17 talked about "I would have to say that the situation is  
18 certainly inconsistent with the historical record regarding  
19 emergency response" and the question had to do with people  
20 volunteering in emergency type situations. What do you mean  
21 by "historical record?" What are you talking about?

22 A We have had extensive discussions in these  
23 proceedings, sir, which I think you probably missed regarding  
24 historical response and human response to disaster emergencies.  
25 In my previous testimony I discussed several emergency planning



1 documents one of which is Hans and Sells Study which is an  
2 evaluation of evacuation risks and discusses human responses  
3 to emergencies. That, in addition to a myriad of other  
4 emergency management research suggests that the availability  
5 of volunteers and emergency responders in disaster situations  
6 has never been a problem, that these volunteers do respond  
7 to the public need at the time of the disaster.

8 MR. GOODWIN: That is the end of my cross-examination,  
9 Your Honor.

10 JUDGE HOYT: Very well. Mr. Hirsch.

11 MR. HIRSCH: FEMA has no cross-examination, Your  
12 Honor.

13 JUDGE HOYT: Mr. Hassell, are you prepared to  
14 proceed, sir?

15 MR. HASSELL: Yes. I have a few questions.

16 JUDGE HOYT: Very well. You have 30 minutes.

17 BY MR. HASSELL:

18 Q Mr. Cunningham, is it correct that you testified  
19 that for the Western Montgomery County Technical School  
20 that you expected a change in enrollment next year to just  
21 12th graders and adults and as a consequence of that change  
22 in enrollment, more students would be allowed to use their  
23 cars in the event of an evacuation and therefore, that the  
24 five buses assigned overstates significantly the need, is  
25 that a correct characterization of your testimony?

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1 A (Witness Cunningham) That is a correct representation.

2 Q Could you be more precise in terms of describing the  
3 extent to which the five buses would overstate the need?

4 A Surely. At the current time at the Vo-Tech school  
5 during this academic year, they are in the process of  
6 transition to a different kind of a program and I am  
7 representing what was given to me by one of the supervisors  
8 of the Vo-Tech school that I worked very closely with in  
9 their planning process.

10 Right now I believe the Vo-Tech school still receives  
11 10th, 11th and 12th grade students and some 9th grade students  
12 from three school districts and St. Pious High School. Those  
13 students, some of them do drive their cars to the Vocational  
14 Technical School. Many of them are bused there under contract  
15 between the Vo-Tech School and the individual contractors  
16 for those districts, the three districts which I think are  
17 Spring Ford, Upper Perkiomen and Pottsgrove.

18 The age of those students would range from like  
19 15 to 18-plus. With the change in their program and it is  
20 somewhat experimental. I believe they are going to go to all  
21 12th grade age students and change the curriculum somewhat  
22 which would mean all of the students would be in the age range  
23 of 17 to 18. So a greater number of them would have either  
24 a junior or senior license in Pennsylvania. They anticipate  
25 that a greater number of them will want to drive and will be

1 allowed by the district that sent them or the school that sent  
2 them under its policy to drive because they are older and  
3 whatever. They are also going to have more all day students  
4 in the program. So, therefore, they are anticipating that  
5 the normal complement of students which is now in the vicinity  
6 of 300 will reduce somewhat to the 250 to 260 range and many  
7 more of them will drive.

8           In addition, some greater percentage of the  
9 students next year will also be what they call tuition  
10 students who may have actually graduated but are coming back  
11 for other vocational programs. They will have to drive.  
12 They will not be able to be bused because they don't fit into  
13 the busing criteria of the districts. So, therefore, they  
14 expect the enrollment to drop and the number of students  
15 to drive increase.

16           We are still leaving the five 60-passenger buses  
17 in there but I think it is going to overstate their need.  
18 The county is aware of that but at this point in time is  
19 not going to change the administrative assignment until the  
20 Vo-Tech school can more assuredly give them what the actual  
21 student breakdown will be next year.

22           Q     Mr. Cunningham, I believe you have also testified  
23 yesterday at 16,936 of the transcript that private schools  
24 report unmet transportation needs to the county, Energy  
25 Consultants and school districts and you went on to state in

mn6-9

1 your testimony that it would be more appropriate for them  
2 to report unmet transportation needs to the school district  
3 or directly to the county. Would you agree that that is an  
4 accurate statement of your testimony?

5 A. Yes.

6 Q. My question is, are private schools aware of  
7 what the appropriate channel is for reporting these unmet  
8 transportation needs?

9 A. At the meetings that I have attended and with  
10 and without county officials, it has been made known to them  
11 that their needs should be reported to the school superintendent  
12 of the public school and also that those needs would then be  
13 summed with the needs of the public school buildings and be  
14 reported to the county.

15 They are aware that any district-wide unmet needs  
16 would be provided by the county. They usually as a practical  
17 means report their needs right at those meetings where this  
18 is described where we are present and when I say "we," I mean  
19 Energy Consultants and usually a representative of the county.  
20 The counties are aware that the school districts will not be  
21 able to meet their needs because they have already had meetings  
22 with the school superintendents of the affected districts  
23 prior to meeting with the private schools and therefore  
24 in practice, it is more direct to the county.

25 A. (Witness Bradshaw) Mr. Hassell, if I might add I



mn6-10

1 believe Energy Consultants was included in that list as one  
2 source that the private schools had reported unmet needs to  
3 only in the sense that they are using us as a vehicle in the  
4 planning process. I believe the plans are clear that at the  
5 time of an emergency, those needs are reported to the county  
6 and that procedure would be indeed utilized under emergency  
7 conditions.

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END#6



1 Q Okay.

2 Mr. Bradshaw, I believe at transcript page  
3 16,939, you testified that approximately 43 Gross Company  
4 bus drivers who routinely service Owen J. Roberts School  
5 District had received training and you thought the  
6 training had been done in December of 1983.

7 Is that essentially correct?

8 A (Witness Bradshaw) That is correct.

9 Q Do you know how long that training lasted?

10 A I believe it was between one and a half and  
11 two hours.

12 Q Mr. Cunnington, at transcript page 16,959,  
13 you testified that some SEPTA employees engaged essentially  
14 involunteer work; do you recall that statement?

15 A (Witness Cunnington) Yes, I believe I said  
16 out of the 4,000, some would, yes.

17 Q What is your basis for that understanding?

18 A Out of any group as large as 4,000, there are  
19 going to be some individuals that perform other functions.  
20 In addition, several of the SEPTA employees should be  
21 residents of suburban areas and in the suburban areas,  
22 I think I was directly reflecting, there are usually  
23 volunteer emergency services. They are rather large in  
24 this area in their enrollments.

25 The ambulance services have great numbers of

1 volunteers. I am sure that some SEPTA employees are  
2 going to have those kinds of responsibilities that they bring  
3 upon themselves. They will be volunteers in other aspects  
4 of their life other than being a SEPTA bus driver.

5 Q However, outside of your testimony that you  
6 have just given, you have no direct knowledge?

7 A No. I have no direct knowledge of which of the 4,000.

8 MR. HASSELL: No further questions.

9 JUDGE HOYT: Very well. I believe we have no  
10 redirect in this --

11 MR. RADER: I do have a very brief redirect,  
12 if I may. I am sure it will take less than five  
13 minutes.

14 JUDGE HOYT: All right. But it will be  
15 limited to those matters covered on the --

16 MS. ZITZER: If this is the case, would  
17 LEA also be permitted follow-up questions, if necessary?

18 JUDGE HOYT: Recross?

19 MS. ZITZER: Following Mr. Rader's redirect?

20 JUDGE HOYT: Redirect is one thing, Miss Zitzer.  
21 But you have had your cross-examination and you have raised  
22 other matters that now have to be covered by the  
23 Applicant. Remember, the Applicant has the burden of  
24 proof here.

25 MR. RADER Shall I proceed?

1 JUDGE HOYT: Go ahead.

2 REDIRECT EXAMINATION

3 BY MR. RADER:

4 Q You were asked a question by Mr. Goodwin regarding  
5 the basis for your testimony that school bus drivers  
6 are regarded as volunteers. You referred to certain  
7 discussions you had with county officials.

8 Did you have any discussion with PEMA  
9 officials in that regard, or do you have any other  
10 knowledge regarding the position which PEMA has taken  
11 concerning whether or not school bus drivers would be  
12 regarded as volunteers?

13 A (Witness Cunnington) I have no knowledge, no.

14 Q Is there anything in Annex E which would  
15 provide guidance as to whether they would be  
16 considered volunteers, particularly with regard to the  
17 definition of emergency workers?

18 A (Witness Bradshaw) The definition of emergency  
19 worker does not include bus drivers to the best of my  
20 recollection. Neither am I aware of any other reference in  
21 Annex E that would address bus drivers in particular  
22 and whether or not they would be considered volunteers.

23 Q Mr. Hassell asked you as to the mechanism for  
24 reporting unmet needs of private schools. Would you  
25 explain how that mechanism would work with regard to private

1 schools in school districts where the public school  
2 district has taken the position in its planning that it  
3 will not assume responsibility for transportation  
4 needed for private schools?

5 A (Witness Cunnington) I assume you would be  
6 referring to something like the Owen J. Roberts situation?

7 Q If you wish to use that as an example.

8 A In that circumstance, the county still, in this  
9 case Chester, conducts similar meetings with the private  
10 schools and so does Energy Consultants. The same  
11 care is taken in determining what the individual needs  
12 of the private school are and the county recognizes that  
13 the district has indicated that it will not assume that  
14 responsibility.

15 The county assumes the responsibility, reflects  
16 the needs in the appropriate annexes of its plan, and  
17 applies the resources that are available to the county in  
18 the same way to those schools as it does to any other  
19 private school. The only difference being that the  
20 private school, at the time of an emergency, has only  
21 the county to report its at the time of emergency unmet  
22 needs to. That is the only difference that I am  
23 aware of, would be at the time of the emergency, they  
24 would have to report their needs directly to the county.

25 Q Is the county -- strike that.



1           Are the private schools which you have discussed  
2 aware of that mechanism based upon your discussions and  
3 meetings with them?

4           A     Yes, and they are aware that their school  
5 district of jurisdiction, for example, Owen J. Roberts,  
6 has declined to perform that role. That was  
7 specifically stated to them both by Energy Consultants and  
8 by Chester County Department of Emergency Services.

9           Q     To your knowledge, have private schools within  
10 such school districts, in fact, reported unmet transportation  
11 needs to the county?

12          A     Absolutely.

13          Q     Mr. Cunnington, you were asked by Mr. Hassell  
14 as to the basis for your statement that there are  
15 probably volunteers in emergency services in the suburban  
16 areas or from private ambulance services in the City of  
17 Philadelphia.

18                   Was your statement in part based upon your  
19 knowledge that the bus drivers are, in fact, drivers of  
20 busses and, in fact, hold special licenses to do that?

21          A     No.

22                   MR. RADER: No further questions.

23                   JUDGE HOYT: Dr. Cole has no questions.

24                   Dr. Harbour has a question.

1 BY JUDGE HARBOUR:

2 Q Going back to the letter from Mr. Gross which  
3 he had shown to Dr. Claypool. That letter was, I believe,  
4 addressed to Mr. Campbell who is the Chester County  
5 Coordinator for the Department of Emergency Services.

6 By what means would you have any knowledge as  
7 to whether he had received or not received that letter?

8 JUDGE HOYT: Just a moment, before you answer.  
9 Let's see if we can get a copy of it in front of you  
10 so you know exactly what was referred to.

11 MS. ZITZER: It is LEA-E-30. I have a copy of  
12 it, if it would help.

13 JUDGE HOYT: May we borrow yours, Miss Zitzer?  
14 (LEA representative approaches witness panel.)

15 WITNESS BRADSHAW: Dr. Harbour, our only  
16 knowledge of that letter was the fact that it was brought  
17 up on the record of this proceeding and previous to that  
18 time we were not aware of its existence.

19 BY JUDGE HARBOUR:

20 Q But you have no knowledge really of whether  
21 Mr. Campbell did or did not receive that letter?

22 A No, I do not.

23 Q Thank you.

24 JUDGE HOYT: I have no questions -- I'm sorry.  
25 I thought you were through.

1 BY JUDGE HARBOUR:

2 Q In the Owen J. Roberts School District prepositioning  
3 of their busses at their main campus ahead of any evacuation,  
4 how does this correlate with the plans for  
5 transportation staging areas during an actual emergency?

6 Would this be considered a transportation staging  
7 area?

8 A (Witness Cunnington) No, not by the county. It  
9 might be considered a staging area by the district, but  
10 not by Chester County. It is just a location where  
11 the busses are garaged or lodged or whatever in the eyes of the  
12 county, I am sure.

13 Q And how would the county then be aware of whether  
14 any busses were required from a transportation staging  
15 area to serve Owen J. Roberts School District, if necessary?

16 A If any busses or drivers were required, the  
17 Owen J. Roberts School District would report that to the county  
18 at alert site emergency.

19 JUDGE HARBOUR: All right. That is all I have.

20 JUDGE HOYT: Very well. I have no questions.

21 I take it, then, the panel can be excused?

22 MR. RADER: I believe that is correct.

23 Thank you, your Honor.

24 JUDGE HOYT: Gentlemen, you are excused. Thank  
25 you.

1 (The witnesses stood down.)

2 JUDGE HOYT: We will have a very brief recess.  
3 Please stay close to the courtroom, as possible.  
4 Thank you.

5 (Recess.)

6 JUDGE HOYT: The hearing will come to order.  
7 Let the record reflect that all the parties to the  
8 hearing are again present in the hearing room.

9 Mr. Rader, you may call your next witness.

10 MR. RADER: The Applicant calls Mr. Robert Klimm.

11 JUDGE HOYT: Mr. Klimm, you have taken your  
12 place on the witness stand previously in this  
13 proceeding at another time, another place. You had taken  
14 an oath of this Board. I will remind you that you are  
15 still under that oath.

16 MR. ANTHONY: Judge Hoyt, when would be an  
17 appropriate time for me to have an answer to my --

18 JUDGE HOYT: Mr. Anthony, you have filed  
19 your motion with the Board. The Board has it under  
20 advisement. We will take no argument on the motion this  
21 morning.

22 MR. ANTHONY: There is a question of getting  
23 Mr. Wagenmann here on Monday.

24 JUDGE HOYT: Mr. Anthony, I just told you we were  
25 not taking any argument on this motion this morning.

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1 MR. ANTHONY: So that I would have to tell  
2 Mr. Wagenmann --

3 JUDGE HOYT: Mr. Rader, would you proceed, sir.  
4 You have 90 minutes.

5 MR. RADER: Thank you, your Honor.  
6 Whereupon,

7 ROBERT KLIMM

8 was recalled as a witness and, having been previously duly  
9 sworn, was examined and testified further as follows:

10 DIRECT EXAMINATION

11 BY MR. RADER:

12 Q Mr. Klimm, we have received testimony in  
13 this proceeding related to contention LEA-24 from  
14 Mr. Vutz, Mr. Fewless, and Mr. Fetters. Were you present  
15 during most of that testimony by those witnesses?

16 A Yes, I was.

17 Q I will ask you several questions regarding their  
18 testimony and ask for your responses accordingly.

19 Mr. Vutz described what he characterized as a  
20 heavy rush hour traffic along route 23 at the intersection  
21 of Valley Park Road, which is at the Valley Forge Post  
22 Office, and also along a state road at the intersection  
23 of Potthouse Road.

24 Could you tell me whether or not the  
25 evacuation time estimate study which you had prepared for the

XXXXX

1 Limerick plan takes into account those particular  
2 intersections and any heavy rush hour traffic associated  
3 with them?

4 A Yes. The evacuation time estimate study did consider  
5 those particular intersections. Both State Road and Route 23  
6 are designated primary evacuation routes, and the  
7 intersections of Valley Park Road and Route 23 and State  
8 Road and Potthouse Road were included in the evacuation  
9 analysis.

10 The evacuation scenarios, which were evaluation,  
11 were for an evacuation condition. They were not for  
12 a peak hour rush traffic condition. Under an evacuation  
13 scenario, certain corridors would be controlled and origins  
14 and destinations would be different than that which would  
15 typically occur during rush hour periods.

16 Q Is there any correlation between the traffic patterns  
17 which you envision for an evacuation of the emergency  
18 planning zone and traffic patterns associated with  
19 commuter travel to work each morning?

20 A No. There would be totally different conditions.  
21 As I mentioned, origins and destinations would be  
22 different. The extent of traffic control would be  
23 different.

24 Q Mr. Vutz also testified as to a concern that  
25 Phoenixville residents would utilize Route 23 north and

1 thereby overburden the Schuylkill Township  
2 highway capacity.

3 Do you have any opinion as to whether or not  
4 that states a realistic concern?

5 A I believe it does not. The primary evacuation  
6 routes for Phoenixville Borough are Route 23 east to  
7 Route 252 south or Route 20 south to route 202 south.

8 As noted on page 6-3 of the evacuation time  
9 estimate study, vehicles from Phoenixville Borough  
10 would also or could also use route 23 to route 113 south.  
11 Those vehicles which did use the latter corridor would  
12 not travel through Schuylkill Township and, therefore,  
13 would not add to traffic through the township.

14 Q Mr. Vutz also expressed an opinion that families  
15 which own more than one car might load up a second car  
16 in order to take pets and valuables out of the EPZ when they  
17 evacuate.

18 Do you have any opinion as to whether or not  
19 that is likely to happen and did you take that possibility  
20 into account in preparing your evacuation time estimate  
21 study?

22 A That, in my opinion, is an unlikely event.  
23 Empirical data does indicate, and historical  
24 data does indicate the tendency of families to unite  
25 prior to evacuation and to evacuate in the best available

1 automobile.

2 This empirical data, which is outlined in  
3 several sources, two of which are the Hans and Sel  
4 evaluation of risks and evaluation report, and the  
5 second, the evacuation planning and emergency management  
6 by Perry, Lyndahl and Green which document this fact.

7 Data which has been collected on these past evacuations  
8 were data that was collected during life-threatening  
9 events and, as such, would be comparable to a situation  
10 involving an incident at Limerick.

11 Q Based upon that opinion, did you find it  
12 necessary to make any assumption in your evacuation time  
13 estimate study that families would use a second car to evacuate  
14 the EPZ?

15 A No.

16 Q Mr. Vutz also stated a concern regarding an antici-  
17 pated zoning rule within Schuylkill Township which  
18 he said would have the effect of doubling the area of the  
19 township and adding to the population of the township.

20 Do you believe that a matter such as that  
21 would have any effect upon the traffic flow patterns  
22 in the area and, if so, do you believe that it would be  
23 necessary to consider that in your evacuation time  
24 estimate study?

25 A Such a hypothetical situation may have an



1 effect on evacuation times. I might note that  
 2 the evacuation time estimate was based upon the best  
 3 available data. There are a number of hypothetical  
 4 situations concerning future conditions, not only for this  
 5 particular development, but possible for others that may or  
 6 may not have an impact on evacuation times in the  
 7 future.

8 Appendix 4 of NUREG 0654, in fact, states that  
 9 evacuation time estimate studies should be updated  
 10 as local conditions change. Such a significant population  
 11 increase would certainly be one of those cases that would  
 12 require a reevaluation.

13 I might also note that the population increase  
 14 would also coincide with probably roadway improvements  
 15 in the area to accommodate the particular development.  
 16 So as such, if, in fact, the development were to come  
 17 into effect with the magnitude that is projected at some  
 18 future time period, that would have to be reevaluated  
 19 along with any roadway improvements that would be  
 20 scheduled to accommodate that additional growth.

END 7

21  
 22  
 23  
 24  
 25

T8 MM/mml

1 Q Are changes of that magnitude likely to occur  
2 instantaneously, and how would they be taken into account by  
3 the plans?

4 A No, that change would certainly not be instantaneous.  
5 It would be spread over a period of time.

6 The local plans are reviewed annually, and as such  
7 local, county and state planners have opportunities to review  
8 plans at least on an annual basis and to evaluate any changes  
9 that have occurred in the area on that basis.

10 Q Mr. Vutz expressed concern regarding the snowplowing  
11 by PennDOT for Valley Park Road and Country Club Road in  
12 Schuylkill Township. And Mr. Fetters also expressed concern  
13 regarding snow removal by PennDOT in Upper Uwchlan Township,  
14 and had stated it sometimes takes up to two days for those  
15 roads to be plowed.

16 Do you have an opinion as to whether or not snow-  
17 plowing by PennDOT, and whether or not that snowplowing is  
18 accomplished within an immediate timeframe, would have any  
19 effect upon your time estimates in an evacuation time study?

20 A The time associated with snowplowing activities  
21 would vary, possibly significantly, depending on a number  
22 of factors; one being weather conditions, greater precipita-  
23 tion, ground temperature and so forth.

24 Another being available resources, both personnel  
25 and equipment.

mm2  
1 Local and state officials would be aware of the  
2 situation at the time of a potential incident. In fact,  
3 PennDOT officials would be stationed at both the county and  
4 state EOC and so their input would be available for the  
5 decisionmaking process.

6 The evacuation time estimate study considered the  
7 effect of snow on evacuation times in relation to its effect on  
8 travel speed, and degraded roadway conditions and impaired  
9 visibility. This represents the condition prior to the need  
10 for snowplowing.

11 And again, the information on weather conditions  
12 would be available at the time to local, county and state  
13 officials and would be factored into the decisionmaking  
14 process at that time.

15 Q When you say the decisionmaking process, what are  
16 you referring to?

17 A The decisionmaking process for protective action  
18 concerning an incident or potential incident at Limerick  
19 Station.

20 Q And what would those protective actions include?

21 A Either sheltering or evacuation.

22 Q Mr. Vutz stated that he was concerned that  
23 assumptions in the evacuation time estimate study did not  
24 include snow conditions that would double or triple evacuation  
25 time.

mm3

1 Do you have any opinion as to whether or not it  
2 would be appropriate from your study, to include what could  
3 be described as a worst-case scenario for a snowstorm that  
4 would double or triple evacuation times?

5 A Well, a worst-case scenario would not provide  
6 information useful in protective action decisionmaking.

7 The worst case may be a severe blizzard where  
8 evacuation is near impossible on a short-term basis. That  
9 information would not provide useful data to county and state  
10 emergency planners, and the protective action decisionmaking  
11 process.

12 The intent of NUREG 0654 is to develop representative  
13 evacuation times for fair and adverse weather conditions which  
14 can appropriately be used in the protective action  
15 decisionmaking process, and a worst-case scenario would not  
16 fall into that category and would not be a useful guide in  
17 that decisionmaking process or a useful planning tool.

18 Q What assumptions, if any, does your evacuation  
19 time estimate study make regarding road reduction -- reduction  
20 in road capacity in the event of a snowstorm?

21 A The evacuation time estimate study has a factor  
22 of a 30 percent reduction in roadway capacity and travel speed  
23 for the winter adverse weather snow condition. This factor  
24 was developed based upon empirical data and represents a  
25 condition again where roadway conditions are degraded,



mm4

1 visibility is impaired, travel speeds are reduced.

2 But, it is prior to the time where snowplowing  
3 would be required.

4 And, just to translate that in this particular  
5 area, that would be something on the order of one to two inches  
6 of snow. This factor, I might note, was reviewed by both  
7 PEMA and the Counties and considered to be appropriate for  
8 this area and for the evacuation time estimate analysis.

9 Q Do you know whether a similar reduction factor was  
10 used in other plans with similar climate and meteorology?

11 A Yes. This factor has been used at other sites, and  
12 was reviewed for this site and considered to be -- to take  
13 into account the characteristics associated with this site.

14 Q Do you have any knowledge as to the plans for  
15 using rangers from the Valley Forge National Park to divert  
16 traffic south on Route 252 and to prevent incoming traffic  
17 on Route 23 in the event of a radiological emergency at  
18 Limerick, and in the event of an evacuation?

19 A Yes.

20 Park Rangers would assist county officials in the  
21 directing of traffic during an evacuation. This would  
22 include traffic control at the intersection of Route 252 and  
23 Route 23.

24 Discussions have been held between county officials  
25 and park officials and that particular location will be manned.

mm5

1           The traffic control that would be accomplished at  
2 that location would be directing of evacuating vehicles south  
3 on Route 252, and restriction or control of vehicles traveling  
4 through the park from conflicting with that evacuation traffic  
5 flow.

6           Q       Mr. Fewless was asked questions regarding the  
7 possibility that there would be incoming traffic at Route 23  
8 at the intersection of Route 252.

9                   Does your evacuation time estimate study take into  
10 account any inbound traffic into the EPZ in the event of a  
11 declared emergency and evacuation?

12           A       Yes. And the manner in which that was accomplished  
13 was that inbound travel lanes were not to be used by  
14 evacuating vehicles and would be open for vehicles that may  
15 have to travel into the area; people that may be working  
16 outside of the area, for instance and may live in the area  
17 and will have to travel in and prepare and mobilize before  
18 evacuating.

19                   Also, I might add that it was taken into account  
20 also by the use of a range of preparation and mobilization  
21 times specific to each one of the various population  
22 categories; permanent residents, transients and special  
23 facilities. And that time ranged up to between two and  
24 two and a half hours for permanent residents, for example.

25           Q       Were those procedures which you just described

mm6 1 reviewed by PEMA?

2 A Yes, they were.

3 Q Did PEMA agree that that was a proper methodology?

4 A Yes.

5 Q Are the evacuation time estimates for Limerick  
6 affected by vehicles entering the Valley Forge Park?

7 A Vehicles from the park would be restricted from  
8 accessing the primary evacuation corridors. This would be  
9 accomplished or controlled by Park Rangers.

10 So as such, park visitors would be restricted from  
11 conflicting with vehicles evacuating from the emergency  
12 planning zone.

13 Q Did you, at my request, prepare an additional  
14 schematic depiction of the Valley Forge National Park?

15 A Yes, I did.

16 Q Do you have those with you now?

17 (Document handed to counsel by witness, and  
18 distributed by counsel to Board and Parties.)

19 BY MR. RADER:

20 Q Mr. Klimm, would you please address yourself to the  
21 newly prepared schematic depiction of the Valley Forge National  
22 Park area, and explain what changes if any, were made in this  
23 new depiction, in comparison to the depiction which was  
24 previously identified and received into evidence as  
25 Applicant's Exhibit E-68?

mm7

1 A Yes.

2 This new schematic represents the Valley Forge  
3 National Park boundary as identified on detailed land ownership  
4 maps which were provided by the National Park. I might note  
5 this represents both land within the park boundaries owned  
6 by the federal government, and that land which is in the  
7 official boundaries, which is currently privately owned.

8 Q And does anything which has been changed on this  
9 newly revised depiction as opposed to the first one, reflect  
10 any changes, or would it cause any changes in your testimony  
11 previously?

12 A No, it would not.

13 MR. RADER: Your Honor, I would ask -- I am not sure  
14 what the Board's preference is here. We can submit this new  
15 map or depiction and have it identified as Applicant's Exhibit  
16 E-92, or if the Board desires, we can substitute it for the  
17 previous one in view of the witness' testimony that it would  
18 not change his prior testimony regarding that map.

19 JUDGE HOYT: I think substitution for E-68 will  
20 eliminate a superfluous piece of information.

21 MR. STONE: Objection. I just have a couple of  
22 problems.

23 One is --

24 JUDGE HOYT: All right, Mr. Stone, forget it, we  
25 will mark this as Applicant's Exhibit 92. E-92.



mm8

1 (The document referred to was  
2 marked Applicant's Exhibit No.  
3 E-92 for identification.)

4 BY MR. RADER:

5 Q Mr. Klimm, are there a number of documents from  
6 which you obtained the various boundary changes represented  
7 in Applicant's Exhibit E-92?

8 A This boundary change was again based upon detailed  
9 land ownership maps received from the National Park Service.

10 There are a number of maps available both from  
11 the Park Service in terms of pamphlets and brochures and  
12 that type of thing, and commercial maps which indicate park  
13 boundaries. Many of those differ and represent more general  
14 areas and not specific detailed boundaries.

15 This particular -- the first version of this map  
16 was a schematic, and the location of the park was primarily  
17 to indicate its location in reference to the primary evacuation  
18 corridor indicated in blue on the map, and was obtained from  
19 a commercial map.

20 This version of the map contains a detailed -- more  
21 detailed land ownership boundary based on very detailed maps  
22 provided by the National Park.

23 Q Referring to the asterisked footnote on  
24 Applicant's Exhibit E-92 stating the source of the information  
25 for the Valley Forge National Park, is that a true and

mm9

1 accurate statement?

2 A Yes.

3 Q And does the schematic depiction to the best of  
4 your knowledge and information, represent a true and accurate  
5 depiction of the area which it represents?

6 A Yes.

7 Q Mr. Fetters testified as to the adequacy of  
8 Redbone Lane as an evacuation route, in view of the fact that  
9 it is a dirt road.

10 Could you state whether or not this would in any  
11 way affect your evacuation time estimates, and if so, how?

12 A The portion of Redbone Lane on the evacuation route  
13 was considered in the evacuation time estimate study in terms  
14 of the conditions that exist now.

15 There are a number of alternative local collector  
16 roadways which are available in the area, which could be used  
17 by vehicles evacuating from that particular area to Route 100  
18 South. Use of those alternative collector roadways during  
19 times of inclement weather, or when that particular portion  
20 of Redbone Lane may be impassable or undesirable for travel,  
21 would have no effect on the evacuation times, since the  
22 alternative routes would still act as a feeder to the  
23 primary Route 100 South corridor.

24 Q Mr. Fetters also testified as to a daily traffic  
25 load of 15,000 to 17,000 vehicles per day along Route 113,

mm10

1 and 20,000 vehicles per day along Route 100.

2           Would those figures, assuming them to be correct,  
3 have any impact upon your evacuation time estimate study?

4           A       No. Those particular flows are two-way, 24-hour  
5 flows, and are irrelevant to the evacuation analysis..

6           Vehicle demands were estimated in the evacuation  
7 time estimate study as indicated in the study itself. For  
8 the evacuation vehicle loading along those two routes,  
9 Route 100 and Route 13 were approximately 6000 vehicles.

10           During the course of the evacuation, that is all  
11 one-direction flow.

12           Q       Mr. Fetters also testified that from his experience  
13 Route 100 is paralyzed in any light covering of snow.

14           Could you tell me whether or not the evacuation  
15 time estimate study takes something like that into effect?

16           A       The statement of automatic paralysis I think for  
17 any storm, that general statement, I think is unfounded.  
18 Certainly contrary to my experience.

19           The effect that adverse weather would have on any  
20 given roadway would depend upon a number of factors, primary  
21 of which would be the weather condition, rate of precipitation,  
22 and ground temperature.

23           The statement that any accumulation or any snowstorm  
24 would virtually paralyze a roadway I think is totally unfounded  
25 and unqualified statement.

1           The effect that it would have on the flow of  
2 vehicles would depend, again on the weather conditions, rate  
3 of precipitation and ground temperature. That was considered  
4 in the evacuation time estimate study as previously indicated  
5 through a reduction factor for snow conditions of 30 percent  
6 of roadway capacity and travel speeds.

7           Q       Mr. Fetters also testified that in his experience  
8 one could expect from 750 to 1000 cars carrying visitors to  
9 the Marsh Creek Park on a daily basis.

10                   Do you agree with those figures, and do you have  
11 any opinion as to whether or not they have been taken into  
12 account in your evacuation time estimate study results?

13           A       I do not know the basis of the figures presented  
14 by Mr. Fetters.

15                   The evacuation time estimate study used estimates  
16 of park attendance developed from information received from  
17 Marsh Creek State Park officials.

18                   For the peak summer weekend condition which was  
19 analyzied in the evacuation study, that was slightly over 4000  
20 vehicles. And, for the winter weekday condition it was 200  
21 vehicles.

end T8



1 Q Were the number of those vehicles and how they  
2 would exit the park taken into account in your time study?

3 A Yes, they were.

4 Q In what way? Could you explain that?

5 A The vehicles in the park would evacuate north  
6 on Park Road to Route 100 South.

7 Q Are there any alternative plans for evacuating  
8 Marsh Creek State Park traffic?

9 A There is an option which could be used to direct  
10 traffic away from the primary evacuation corridor. However,  
11 based upon discussions with Chester County emergency  
12 preparedness officials, it was most appropriate to assume  
13 that those vehicles would travel toward Route 100 and south  
14 to evacuate. As such, that is the scenario which was  
15 evaluated in the evacuation time estimate study.

16 Q Mr. Feters also testified as to a traffic tie-up  
17 which occurred each morning at the intersection of route 100  
18 and the Pennsylvania Turnpike which in his opinion led to a  
19 two and half mile back-up. Do you have any opinion as to  
20 whether a similar back-up would occur in an evacuation  
21 scenario?

22 A Again the scenarios would not be exactly comparable  
23 for peak hour condition during an evacuation. There would be  
24 congestion and delays along the entire route 100 corridor during  
25 the course of an evacuation due to the extent or amount of

1 vehicles using that particular corridor. Based upon  
2 discussions with PEMA and county officials, it was determined  
3 to be most likely that the vehicles evacuating along that  
4 particular corridor would continue south on Route 100  
5 and not utilize I-76 Turnpike.

6 Q Is that particular interchange inside or outside of  
7 the emergency planning zone?

8 A It is outside the emergency planning zone.

9 Q Based upon your discussions with PEMA and any  
10 other county officials, did any of those individuals indicate  
11 to you a need to establish an additional traffic control  
12 point at that intersection?

13 A No.

14 Q Does your evacuation time estimate study consider  
15 hazardous driving conditions on roadways such as oil slicks  
16 that might be more or less permanent in nature due to the  
17 kind of commercial traffic on that road?

18 A Yes. To the extent that such conditions are  
19 permanent, they would have been evaluated in the very detailed  
20 site survey that was conducted for the area which included  
21 a collection of data on the geometrics such as the number of  
22 lanes and lane width and also operational characteristics  
23 like travel speed and traffic control and such a permanent  
24 condition that would restrict or affect travel speed, for  
25 instance, would have been noted in the field survey.

mn9-3

1 Q Would such field surveys also consider unusual  
2 road configurations that may have the effect of delaying  
3 traffic?

4 A Yes.

5 Q Is that what you meant in referring to the  
6 geometrics, I believe?

7 A Yes.

8 Q What exactly did you mean by geometrics?

9 A Basically that is the physical configuration of a  
10 particular roadway or roadway sections would be the number of  
11 lanes and distance to obstruction or shoulder width, curvature  
12 of the roadways, grade and so forth, all of which would  
13 affect travel speed along the particular roadway.

14 Q You stated that you had discussions with PEMA  
15 officials. Did you have any discussions with Chester County  
16 officials regarding the evacuation routes?

17 A Yes.

18 Q In your discussions with any of those officials,  
19 did they indicate any problem with manning the traffic control  
20 points in Upper Uwchlan Township?

21 A No.

22 Q Did they indicate that there would be any problem in  
23 finding sufficient Pennsylvania State Police or fire personnel  
24 to man the five traffic control points which were identified in  
25 the Upper Uwchlan plan in particular?

1           A.    No.

2           Q.    Mr. Lukacs filed a written statement which was  
3 received in evidence in which he stated that the low load  
4 capacity and already badly overcrowded roads in Schuylkill  
5 Township and Phoenixville had not been considered adequately  
6 in the evacuation time estimate study. Do you have any  
7 opinion as to whether or not those factors are correct and  
8 whether or not they were considered in your study?

9           A.    I am not exactly sure what was meant by his reference  
10 to low load capacity. I am assuming he means the actual  
11 capacity of the roadway. Yes, certainly that was considered  
12 in the evacuation time estimate study. For all evacuation  
13 routes detailed data was collected along each roadway section  
14 and at each intersection in the evacuation network and as  
15 such, the characteristics of the roadway, the particular  
16 roadway, were taken into account.

17          Q.    Did you conduct the same kind of site specific  
18 surveys for those particular roads?

19          A.    Yes.

20               MR. RADER: No further questions.

21               JUDGE HOYT: Very well. Intervenors, LEA and FOE,  
22 have a total of 60 minutes time for their cross-examination  
23 of this witness. You may divide that time however you may  
24 wish.

25               MR. RADER: Your Honor, may I respectfully point out



1 that I took approximately one-half hour with the direct  
2 examination of this witness.

3 JUDGE HOYT: You were given an hour and a half.  
4 You were so efficient, Mr. Rader, I guess you are handicapped  
5 by your own efficiency.

6 MR. RADER: All right. I believe the Board's  
7 statement the other day was that the time accorded the  
8 intervenors would be as I used it, in proportion to what  
9 I actually used, but I understand the Board's ruling.

10 JUDGE HOYT: I think the problem th's morning is  
11 somewhat different.

12 MR. RADER: I understand.

13 JUDGE HOYT: Very well. Sixty minutes, you must  
14 divide the time with your co-intervenor as you may see fit  
15 however, by orders of this Board frequently cited LEA has  
16 been appointed and designated, I should say, the lead  
17 intervenor. Your time will start now.

18 MR. STONE: Thank you.

19 CROSS EXAMINATION

20 BY MR. STONE:

21 Q You referred to the taking into account of heavy  
22 rush hour traffic in response to a question by Mr. Rader.  
23 Does that taking into account include any entry into the  
24 computer in a numerical way of existing traffic flows?

25 A I am not sure what you mean by numerical way. I

XXXXXXXXXX

mn9-6

1 stated the manner in which the vehicle enters into the  
2 emergency planning zone were addressed.

3 The simulation was that inbound traffic lines  
4 were left open for that travel and the time associated with  
5 that travel was incorporated in the preparation and mobilization  
6 time distribution.

7 Q Let me restate the question. By entry into the  
8 computer I meant specifically as indicated in the time estimate  
9 study on A-10-2 and A-10-3, there is a list of numbers which  
10 represent as I understand entries into the computer that you  
11 made and the question was, does this taking into account  
12 include any inclusion of the specific numerical data into  
13 the computer program as it is run of existing traffic flows,  
14 peak flows and so forth?

15 MR. RADER: I object to the form of the question  
16 insofar as it refers to specific numerical data. I know of  
17 no foundation in the record for any such data.

18 MR. STONE: I think that -- and not having the  
19 transcript in front of me -- the witness talked about --

20 JUDGE HOYT: Well, if you have the transcript in  
21 front of you, Mr. Stone, why don't you use that?

22 MR. STONE: Maybe I was misunderstood. I am doing  
23 the cross here and I don't have his transcript, but I believe  
24 he referred today to the way in which he took into account  
25 these peak rush hour traffic and I was trying to clarify the

1 point about whether they were entered into the computer.

2 JUDGE HOYT: Why don't you just examine him on those  
3 matters then, Mr. Stone.

4 BY MR. STONE: (Resuming)

5 Q Again, the same question. Are the numerical data  
6 about peak traffic flows, rush hour flows and so forth  
7 entered into the computer as you have run the computer  
8 simulation?

9 MR. RADER: I have the same objection. I don't know  
10 what numerical data Mr. Stone is referring to. He said  
11 numerical data regarding peak flows. Now I don't know what  
12 the source of that is or what data he is referring to.

13 JUDGE HOYT: Could you clarify that, Mr. Stone,  
14 because I am having difficulty trying to follow your question?

15 BY MR. STONE: (Resuming)

16 Q Reference is made a couple of times in your testimony  
17 here today about peak traffic flows meaning the number of  
18 cars that might exist on a roadlink in peak rush hour times  
19 and the question is simply whether that kind of numerical data  
20 is entered in any way into your computer simulation as you  
21 have run it?

22 JUDGE HOYT: Are you saying, Mr. Stone, are you  
23 taking into account traffic flow in your computer simulation?

24 MR. STONE: It is a simple point just to say if  
25 you are taking into account as he has testified, do you actually

mn9-8

1 enter these flows into the computer simulation and it is  
2 really a simple question.

3 JUDGE HOYT: Does the witness understand the  
4 question?

5 THE WITNESS: I think so, yes.

6 JUDGE HOYT: All right. If you understand it then  
7 in the course of answering it, how about explaining it as  
8 well as you can.

9 THE WITNESS: There are two parts to the question,  
10 first, which is incorrect. I do not believe that I testified  
11 that we looked at peak hour traffic flows in an evacuation  
12 simulation. In fact, I think I testified just the opposite,  
13 that those two conditions would not be comparable. Evacuation  
14 scenario would not be comparable to a peak hour traffic  
15 conditions. Origins and destinations would be different.  
16 Traffic control to the extent of traffic control would be  
17 different and so forth.

18 The vehicle demand associated with all vehicles  
19 who would be in the emergency planning zone during the course  
20 of the evacuation whether they were in the area at the time of  
21 notification or were working outside of the area and possibly  
22 had to drive in and unite with families and then depart were  
23 taken into account and were simulated.

24 So, yes, those vehicles were taken into account  
25 and were simulated.



1 BY MR. STONE: (Resuming)

2 Q Is there any entry as indicated in Appendix 10-2  
3 and 10-3 which corresponds to the peak hour flows that  
4 already exist on a daily basis on the links indicated in  
5 those tables?

6 A No. As I have indicated the peak hour flows or  
7 flows during peak hour periods are not comparable to an evacu-  
8 ation scenario.

9 Q Is there any correlation between a road links  
10 capacity and the kinds of capacities that road link carries  
11 on a daily basis?

12 A I am not sure I understood the question.

13 Q Okay. You have testified I believe that there was  
14 not any correlation between an evacuation scenario and rush  
15 hour peak flows and my question is, is there any correlation  
16 between a given section of roadway, road links capacity during  
17 an evacuation, and its capacity in normal daily peak hour  
18 traffic situations? Again, the section of roadway regardless  
19 if intersections.

20 A Yes. Capacity is a determination of the maximum  
21 flow along certain roadways and it is independent of the  
22 actual demand. Capacity is the same for a particular roadway  
23 at one time versus another. It is the maximum number of  
24 vehicles able to traverse the particular roadway section and  
25 through an intersection location.

1 Q Based upon that, would you expect to see a correlation  
2 between the volume of traffic that a roadway link can handle  
3 in the morning peak rush hour and the amount of traffic  
4 that it can handle during an evacuation for a given section  
5 of roadway regardless of any intersection down the way?

6 A It is possible. The question is vague. It would  
7 be specific to the area. If a particular roadway during a peak  
8 hour period were operating at capacity and the same was the  
9 case for an evacuation condition for a particular time period,  
10 then yes, they would be comparable.

11 Q You referred in the evacuation time estimate study  
12 to a section 6-3 which as you testified describes the  
13 potential traffic routes for the City of Phoenixville. As  
14 you actually performed this simulation, can you tell from  
15 either your own recollection or the tables, A-10-2 and A-10-3,  
16 what actual route your computer simulation ran out the numbers  
17 for, computed for?

18 A I am sorry but I don't understand that question.

19 Q Again in the evacuation time estimate study in  
20 6-3, there are listed as you have testified a couple of  
21 different possible evacuation routes for the City of  
22 Phoenixville. My question is simply in the computer time  
23 estimate simulation as you actually performed it, which of  
24 those several possible routes was actually run through the  
25 simulation with the numbers with the entry into the computer and

1 so forth?

2 A They both were. As indicated in the report, the  
3 primary routes which were identified were the primary routes  
4 which would be used in this particular case from vehicles  
5 originating in Phoenixville borough. As an alternative  
6 during conditions of severe congestion and that may vary  
7 throughout the simulation period, vehicles would be allowed to  
8 travel down route 113 south to avoid that congestion.  
9 That option was reviewed with PEMA and the counties and  
10 considered to be totally realistic for that particular area,  
11 and as such, was simulated that way.

12 Q I have a follow-up on that. Was the actual loading  
13 of traffic from Phoenixville onto route 113 south simulated  
14 in your computer study by entering certain numbers of traffic  
15 onto that route?

16 A Vehicles were not loaded directly onto that route.  
17 Vehicles were given the option of travelling north on route 252  
18 to route 113 south. Now vehicles were not loaded right on  
19 route 113 such that they would automatically travel down  
20 113 south. They are located in Phoenixville borough and  
21 again the primary evacuation routes were as previously  
22 identified.

23 Q Can your computer simulation as you performed it  
24 tell us what effect a certain percentage of Phoenixville  
25 traffic entering route 113 south by whatever means would have

mn9-12

1 on the evacuation times for that particular roadway link?

2 A Yes, certainly. We have an indication of what is  
3 happening on the entire evacuation network for any given  
4 simulation.

END#12

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1 Q Did you simulate, in a numerical way, again,  
2 by entering onto the roadway link 113 south a certain  
3 percentage of Phoenixville Traffic as you performed the computer  
4 simulation as reflected in the evacuation time estimate  
5 study which we have as an exhibit?

6 A Again, the percentage that would utilize would  
7 vary throughout the course of the evacuation depending  
8 upon congestion along the primary evacuation routes.

9 Q Is it your testimony that you have included  
10 some percentage of Phoenixville traffic in the computer  
11 simulation as you have performed it and as reflected in  
12 the document?

13 A Yes, it is my testimony. And it is very evident  
14 by the statement you brought out in the evacuation time  
15 estimate study that that was the case, yes.

16 Q With respect to the use of route 29 and route 23  
17 in Schuylkill Township, is there any way to tell from  
18 the tables in A.10-2 or A.10-3 or from your own recollection  
19 what percentage of Phoenixville traffic would take each  
20 of the two routes?

21 A Again, no, but there is a dynamic process that  
22 depends upon conditions throughout the course of the  
23 evacuation.

24 Q When you say a dynamic process, are you  
25 talking about a dynamic route selection process, as you

1 have defined it in your --

2 A Dynamic in that conditions change. And as  
3 conditions change, people's driving characteristics may  
4 change for those where it is reasonable to assume that that  
5 would be the case.

6 The Phoenixville Borough is one situation that,  
7 based upon discussions with the PEMA and county officials,  
8 vehicles given the option of traveling down 133 south  
9 or following predesignated evacuation routes, vehicles  
10 would use 113 south as an alternative during those  
11 congested time periods.

12 Q I was referring in my question in this case  
13 particularly to route 29 in Schuylkill Township and route 23,  
14 and maybe you could tell us directly when the computer  
15 simulation is performed and was performed, what percentage  
16 of Phoenixville traffic is assigned to each of those  
17 evacuation routes or, alternatively, is some sort of  
18 dynamic route selection situation set up here?

19 A It is a dynamic route selection based upon traffic  
20 conditions which is what would happen in that particular  
21 area during the course of the evacuation.

22 Q Is the assignment made by a geographical slice  
23 of Phoenixville assigned to route 29 and a geographical  
24 slice assigned to route 23, or is there something else  
25 happening here in your computer simulation as you run it?

1           A     I can't recall offhand exactly how the assignment  
2 was performed. It was performed -- Phoenixville vehicles  
3 were assigned to evacuation corridors developed for that  
4 area based upon the plans.

5                     I would have to look through those and look  
6 through notes to tell you the exact assignment for any  
7 particular section of Phoenixville.

8           Q     And the last question is, is it a geographic  
9 assignment, as you recollect, or is it some other kind  
10 of assignment based upon a dynamic process during the  
11 evacuation involving the traffic flows on each of those two  
12 routes, route 29 and route 23 in Schuylkill Township?

13           A     It is a combination of both. The vehicles  
14 are entered onto a roadway network system at a particular  
15 location or what we call "centroid." And that represents  
16 vehicle loadings for a certain geographical area.

17           Q     You referred to a couple of studies which you  
18 said indicated to you certain facts which you derived  
19 from them about the number of cars per family not  
20 exceeding one, as I recall. What was -- for the record,  
21 do you have the exact title of those two studies?

22           A     Yes. There are two of them in particular  
23 I mentioned, and I think I gave these but I will give  
24 them again. Evacuation risks, an evaluation, which is  
25 an Environmental Protection Agency document prepared by

1 Hans and Sel in 1974. The second is a publication  
2 called Evacuation Planning and Emergency Management  
3 which is a report prepared by Parry, Lyndahl and Green,  
4 and that was prepared in 1981.

5 Q Have you read these studies?

6 A I beg your pardon?

7 Q Have you read these studies?

8 A Yes, I have.

9 Q In there is there a discussion of the area  
10 we are talking about -- that is, the assumption of one  
11 car per family unit?

12 A For this particular area, I am not sure whether  
13 any of the data that was collected was for areas that  
14 might be in this general vicinity. I couldn't respond  
15 to that.

16 Q Do either of these studies include life-threatening  
17 events involving a radiological emergency?

18 A No. However, as I have indicated, they did  
19 involve evacuation due to life-threatening events which,  
20 as concluded in the Hans and Sel report, would be the same  
21 for evacuation due to a radiological emergency.

22 Q What specific information in either of these  
23 documents were you referring to regarding your statement  
24 that families would unite and use one car prior to  
25 evacuation?



1           A     There is information contained in both  
2 reports that indicates the tendency of families to unite  
3 and prior to evacuation and travel as a family unit.

4           I might note, in reference to the -- just  
5 as an aside -- that the vehicle demand for permanent  
6 residents was developed based upon the assumption of three  
7 persons per vehicle. Roughly that is one vehicle  
8 per familiy.

9           That factor has been used and was developed  
10 by PEMA and has been used by PEMA for other sites in the  
11 state, including Susquehanna.

12           It is a factor which has been adopted by  
13 PEMA and used at all sites in the state.

14           Q     Do either of these studies we have been  
15 referring to involve evacuation in the ten-mile radius  
16 of a fixed nuclear facility in the event of a radiological  
17 emergency?

18           A     The events in those particular documents, as  
19 I have indicated, no, they do no.

20           Q     And finally, is there specific discussion in  
21 those two studies, as you have read them and recall them,  
22 about the assignment of three people per car as a  
23 planning assumption?

24           A     That is in the range of the number of vehicles  
25 that have been observed at a number of sites. It is in the

1 range of occupancy rates that have been identified in  
2 Appendix 4 of NUREG 0654. And it is a fact which, as  
3 I mentioned, has been used at other sites in the state,  
4 including Susquehanna, and has been reviewed by NRC and  
5 accepted.

6 Q Do you have any specific knowledge of the  
7 Schuylkill Township area with respect to car ownership  
8 or family use patterns of automobiles?

9 A I myself don't have specific data, no. However,  
10 county officials and state officials were involved in  
11 the development of the evacuation study and, as such,  
12 the knowledge and experience of these local officials was  
13 incorporated in all planning assumptions.

14 Q Was the input of township officials taken into  
15 account?

16 A During the conduct of the study, we met --  
17 HMM Associates met with state and county officials. To  
18 the extent that the county and state officials represent  
19 the knowledge and experience and desires and policies  
20 and so forth of township officials, yes, they were considered.  
21 They were not contacted directly by us, HMM Associates,  
22 during the conduct of the study, however.

23 Q And according to your knowledge, who was it at  
24 PEMA who did this input with respect to the vehicle  
25 occupancy rates?

1           A     Well, as I mentioned, it is a rate that has  
2           been used at other sites. We met with a number of  
3           people at PEMA, including Mr. Hippert, and Mr. Ted Charney.

4           Q     Did Mr. Hippert specifically discuss that  
5           issue with you?

6           A     Yes, we discussed that issue.

7           Q     What specific knowledge do you have about  
8           route 100 south from Pottstown through the area referred  
9           to by Mr. Fetters?

10          MR. RADER: Did Mr. Stone say Pottstown? I  
11          believe that goes beyond the scope of my examination.

12          JUDGE HOYT: Did you say Pottstown, Mr. Stone?

13          MR. STONE: I believe in the second part of  
14          the sentence -- I can read it word for word because it  
15          is written here -- I said what specific knowledge does he  
16          have about route 100 south from Pottstown through the  
17          area referred to by Mr. Fetters. I am specifically referring  
18          to the area referred to by Mr. Fetters.

19          JUDGE HOYT: I think that is covered by your  
20          examination, Mr. Rader.

21          The objection is overruled.

22          THE WITNESS: Route 100 from Pottstown south  
23          is included in the evacuation network. It is basically  
24          a two-lane road. Lane widths vary, depending on the specific  
25          location. Data was recorded along the entire location within

1 the EPZ and external to the EPZ.

2 BY MR. STONE:

3 Q Is there, again, any numerical way, as indicated  
4 on page A.10-2 and A.10-3, in which the particular  
5 local conditions that might apply on route 100 in the  
6 area discussed by Mr. Fetters in ice and snow conditions or  
7 with respect to oil slicks and forth are entered into  
8 the computer simulation as it was run and performed?

9 A As I have testified, conditions that would  
10 be of a permanent nature were taken into account, and  
11 travel speeds were recorded. And any characteristics  
12 that would result in permanent reduction in travel speed  
13 for whatever reason would have been taken into account  
14 in the collection of that field data.

15 Q Is that field data entered numerically into  
16 the tables in A.10-2 and A.10-3?

17 A Yes.

18 Q And is there some such field data with respect  
19 to something such as an oil slick or particularly  
20 treacherous topography?

21 A That would be reflected in the speed characteristics  
22 as it affected traffic flow or speed along a particular  
23 roadway.

24 Q This speed data was collected under what specific  
25 conditions?



1           A     Under typical driving conditions.

2           Q     And by typical, I assume that you aren't talking  
3 about peak morning rush hour/peak afternoon rush hour  
4 conditions?

5           A     No. The data is not collected for peak  
6 hour periods. The model simulates reductions in speeds  
7 based upon a speed/density relationship. As density  
8 increases, speed decreases.

9                     What is input to the model is a typical,  
10 primarily free flow travel speed, which is the travel  
11 speed which could be accommodated by the particular roadway  
12 section without hindrance from a significant number of  
13 vehicles along that roadway section.

14          Q     You have testified today that you have assumed  
15 a 30 percent reduction for the snow storm type adverse  
16 weather condition.

17                     My question is, is that a uniform reduction  
18 throughout the roadway link simulated in your study,  
19 or are some areas assigned differing capacity reductions  
20 depending upon the particular topography in those areas?

21          A     No. It is a uniform factor. The topography  
22 in the area is not that significantly different that  
23 weather from one part of the EPZ to another would  
24 significantly affect roadway conditions in a varying way.

25          Q     Is it your testimony that a given snow fall or snow

1 storm condition would cause a uniform reduction in roadway  
2 link capacity throughout the emergency planning zone?

3 A Yes. A given snow storm condition would  
4 have a comparable effect to reductions in the ability  
5 of roadway facilities to handle traffic and reductions  
6 in visibility and reductions in travel speed along  
7 roadways.

8 Q Aren't some roads more susceptible to  
9 capacity reductions due to slight snow falls than others?

10 A Possibly, slight reduction. Certainly  
11 nothing that would significantly affect the evacuation times.  
12 I might note, that 30 percent reduction factor is a percent  
13 of the actual capacity. So that the actual numerical  
14 reduction in terms of vehicles per hour would not be  
15 constant. So it does relate to the existing capacity  
16 or fair weather capacity of a facility.

17 Q To ask the question again, is it your testimony  
18 that a given snow fall would affect the capacity of a link  
19 to carry traffic during an evacuation uniformly and  
20 without respect to the particular roadway link under  
21 discussion?

22 MR. RADER: Objection. Asked and answered.

23 JUDGE HOYT: We will permit the question. This  
24 is cross, Mr. Rader.

25 Objection overruled.

1 THE WITNESS: The exact same answer would  
2 apply. It would be the same in terms of a reduction  
3 factor, and there would be -- the reduction factor  
4 would be uniform. However, the actual quantity of  
5 reduction or the actual reduction of vehicles per hour  
6 would not be uniform since that is a percent of the base  
7 fair weather capacity.

8 MR. STONE: Your Honor, Mr. Anthony has  
9 given me a note. He asks how much time is left?

10 JUDGE HOYT: 30 minutes and 13 seconds.

11 MR. STONE: I did that with respect to his  
12 request. Thank you.

13 BY MR. STONE:

14 Q As you understand it, is there any mechanism in  
15 the emergency plans to selectively shelter certain  
16 areas in adverse weather conditions should roadway  
17 capacities in those areas be restricted more than they  
18 are in other areas in the emergency planning zone?

19 MR. RADER: Objection. Sheltering is beyond  
20 the scope of my examination. I believe it is beyond  
21 the scope of the contention, for that matter.

22 MR. STONE: If I may, I think the witness  
23 today talked about sheltering as a protective action  
24 that would be taken and his 30 percent reduction capacity  
25 figure is, as I understand it, supposed to be useful to

1 public officials in deciding whether or not to shelter.

2 That is really the thrust of the question.

3 MR. RADER: If your Honor please, my recollection  
4 is that I asked the witness the question with regard to  
5 the consideration of protective actions that might be taken  
6 in the decision making process. I did not interrogate  
7 as to the existence of any particular shelters per se  
8 as structures or buildings.

9 JUDGE LOYT: Mr. Stone, I think that the only  
10 reference that I recall is somewhat along the lines that  
11 Mr. Rader has talked about. To that extent, you may explore  
12 on cross.

13 To the extent your question exceeds it, the  
14 objection is sustained.

15 MR. STONE: Okay.

16 BY MR. STONE:

17 Q Are there intermediate stages between a  
18 30 percent capacity reduction and a totally closed  
19 roadway network that might be useful to study for the  
20 decision making process?

21 A In my opinion, no. If you were to evaluate  
22 a case significantly higher than 30 percent, it would not  
23 provide useful information because that would  
24 represent a case where snow plowing would be necessitated  
25 and the time associated with that would have to be incorporated.  
The answer is no.



1 Q Can you tell us, is there a direct numerical  
2 relationship between a 30 percent reduction and the increase  
3 in evacuation time that results from computer simulation?

4 JUDGE HOYT: When you answer the question, would  
5 you please come a little bit forward, perhaps tilt that mike  
6 slightly down. It would help me some in hearing you.

7 And, if you will speak directly into the mike,  
8 I believe also, Mr. Klimm, that will help. We are having  
9 difficulty hearing your responses, sometimes, when you draw  
10 away from it unconsciously.

11 Thank you.

12 Do you have the question?

13 THE WITNESS: Yes, I do.

14 JUDGE HOYT: Very well.

15 THE WITNESS: No, not necessarily. The reduction  
16 in roadway capacity is used to redefine the upper bound  
17 permittable or allowable flow along the evacuation route.

18 There is not necessarily direct relationship between  
19 reductions in roadway capacity and increases in evacuation time.  
20 It is very dependent upon the amount of vehicle demand upon  
21 particular roads. For rural areas for instance, reductions  
22 in roadway capacity can virtually have very little effect on  
23 evacuation time.

24 However, roadways that are heavily travelled would  
25 have more of an effect.

mm2

1                   Studies that we have conducted throughout the study  
2 indicate no direct interrelationship between increases --  
3 or decreases in roadway capacity and increases in evacuation  
4 time.

5                   BY MR. STONE:

6                   Q       You have testified with respect to the Marsh Creek  
7 Park situation that you did take into account the peak summer  
8 weekend traffic of 4000 vehicles. And I believe you also  
9 recall that Mr. Feters had testified to a summer weekday  
10 figure which he gave of 750 to 1000 cars.

11                   Did you take such a summer weekday figure into  
12 account in your computer simulation?

13                   Did you actually perform that numerically when you  
14 did it?

15                   (Witness referring to document.)

16                   A       No. There was not an evacuation scenario done for  
17 a summer weekday condition.

18                   Those that were done include the winter weekday,  
19 winter weeknight, summer weekend, fair weather conditions  
20 and the winter weekday adverse weather condition and summer  
21 weekend adverse weather condition.

22                   These scenarios were developed and reviewed with  
23 both PEMA and the counties, and considered to represent the  
24 most reasonable range of evacuation times useful for the  
25 protective action decisionmaking process.

mm3

1 Q So is it your testimony that the 750 to 1000 cars  
2 that Mr. Feters says is a summer weekday condition for Marsh  
3 Creek State Park are not loaded on to Route 100 during the  
4 simulation as you performed it for the summer weekday  
5 situation?

6 A I just indicated we did not evaluate the summer  
7 weekday condition.

8 Q With respect to -- and you may refer to Appendix  
9 11-2, 3, whatever you need to -- with respect to possible  
10 queueing along Route 100 in the area described by Mr. Feters,  
11 are there any indication on those maps of a similar type of  
12 backup or queueing during an emergency evacuation at  
13 Limerick?

14 And I might refer you to -- specifically to A-11-2,  
15 which is vehicle queueing at 2 -- actually that's not a good  
16 one.

17 JUDGE HOYT: Does the witness have that before him?

18 BY MR. STONE:

19 Q Any of the --

20 A I have the document. I am not sure he has  
21 referenced a specific --

22 Q Is there any of those maps there which you have  
23 prepared which indicate vehicle queueing of a magnitude  
24 comparable to Mr. Feters' testimony, the two and a half mile  
25 backup on Route 100 in an evacuation?

mm4

1 JUDGE HOYT: Mr. Stone, what exhibit are you  
2 referring to?

3 MR. STONE: I'm sorry, it is the Evacuation Time  
4 Estimate Study.

5 JUDGE HOYT: Applicant's Exhibit No. E-67?

6 MR. STONE: Right.

7 JUDGE HOYT: Now the witness has it in front of him,  
8 is that correct?

9 THE WITNESS: Yes, I do.

10 JUDGE HOYT: Very well.

11 MR. STONE: He has been referring to it during the  
12 course of his testimony, specifically A-11-2 or -3 and so  
13 forth.

14 BY MR. STONE:

15 Q What I am looking for, is there any map which  
16 indicates a queueing of similar magnitude as Mr. Fetters  
17 described during morning peak hours of two and a half miles?

18 A There is vehicle queueing indicated on Route 100,  
19 as indicated on pages A-11-5 and A-11-6.

20 Q On A-11-6, can you tell from that what might be  
21 the possible length of that queueing?

22 A No, I can't.

23 As I previously testified -- or it has been pre-  
24 viously testified, this particular figure represents those  
25 roadway sections where vehicles are queued and not necessarily



mm5 1 the exact length of the queue at a particular point in time.

2 Q Could you describe simply from the map the two  
3 limits of that queueing indicated on 100 in A-11-6?

4 A Well, roughly between Conestoga Road on the north --  
5 For different conditions it extends down into Uwchlan Township  
6 at Route 113.

7 Q With respect to Redbone Lane which you referred to,  
8 you mentioned certain other routes which traffic from the  
9 West Vincent and Birch Runville area might take as an  
10 alternative to Redbone Lane.

11 Q Could you tell us simply whether or not the computer  
12 simulation as you performed it on the computer used Redbone  
13 Lane as the limiting capacity factor or whether or not other  
14 routes were used?

15 A Data collected on that route was used. In the  
16 simulation it was assumed that was used.

17 Q However, as I pointed out, that particular road  
18 which then feeds down to Fellowship Road and on to Route 100  
19 South acts primarily as a collector road feeding Route 100  
20 South and traveling south out of the emergency planning zone.

21 Q Use of alternative routes, which could include  
22 Conestoga Road, Horseshoe Trail or Blackhorse Road would  
23 not significantly affect evacuation times. It would just  
24 redistribute the collection of those local vehicles onto the  
25 major Route 100 South.

mm6

1 Q Can you tell us from A-11-6, Applicant's Exhibit  
2 E-67, the nodes indicated for Redbone Lane, and specifically  
3 to help -- I think it might be best to use the extension  
4 of St. Matthews Road, there in that location.

5 A Yes.

6 Redbone Lane would be the western portion of  
7 what is indicated as St. Matthews Road, which runs into Node  
8 117 prior to continuing westerly on Fellowship Road to Node  
9 5 along Route 100.

10 Q Are you reading those node numbers off your copy of  
11 A-11-6?

12 A I am looking at A-11-7.

13 Q A-11-7?

14 A Same nodes, though.

15 Q Finally, today another exhibit was entered,  
16 Applicant's Exhibit E-92, and you observed there are some  
17 differences between that and Applicant's Exhibit E-68.

18 Has this exhibit, E-92, been reviewed by Mr. Fewless?

19 A No, I do not believe it has.

20 Q Has this Exhibit E-92 been reviewed by any  
21 National Park Service officials?

22 A Not to my knowledge.

23 Q And simply for the record, why did you develop  
24 Applicant's Exhibit E-92?

25 A Primarily because testimony was offered which

mm7 1 indicated that the park boundaries, which were included  
2 primarily for reference purposes on this particular exhibit,  
3 were not consistent with exact National Park ownership  
4 boundaries.

5           Upon reviewing that we found out that in fact there  
6 were several maps that indicate different park boundaries.

7           Our brochures, which are available through the  
8 Park Service, indicate boundaries -- not consistent boundaries  
9 have been developed for different purposes.

10           Some of the park boundary brochure information is  
11 developed primarily to indicate major areas, and not actual  
12 ownership.

13           This particular map, the intent of this was not to  
14 detail exactly park ownership, but to show the relative  
15 location of the park in relation to the Route 363 County Line  
16 Expressway, Route 202, I-76 and 276 corridor.

17           Q       On Applicant's Exhibit E-92, it indicates a shading  
18 which is indicated in the key as land owned by the Federal  
19 Government within the park boundary which is indicated by  
20 the dashed line, and the intersection -- I will describe some  
21 route numbers here -- 363, 23, some cloverleafs indicated.  
22 Is that indicated to be within the park boundary?

23           A       Yes, it is.

24           Q       And previously, on Applicant's Exhibit E-68, was  
25 that indicated to be within the park boundary?

mm8

1 A No, it was not.

2 Q Could you just tell us from the Appendix 11-6 or  
3 -7, whatever you can read the best considering the illegibility  
4 of much of it, just the node numbers that correspond to that  
5 intersection 363, 23 and so forth?

6 If you can't read them all, just give us a couple.

7 A That particular interchange is not specifically  
8 included in the evacuation network. It is vehicles traveling  
9 south on 363 from the emergency planning zone would continue  
10 south on County Line Expressway and then east on Route 202,  
11 north on I-76 and east on 276.

12 Likewise, vehicles from the Kind of Prussia area  
13 or the National Park would be restricted from entering County  
14 Line Expressway south of that location. Consequently, it is  
15 not a location where there would be vehicle conflict.

16 Q According to your knowledge, will Park Rangers  
17 be responsible for doing traffic control at that intersection  
18 which is within the park boundaries?

19 A That will either be accommodated to the best of  
20 my knowledge either by Park Rangers or state or county police  
21 officials.

22 Q And who have you discussed that with?

23 A Based upon discussions with PEMA, that location will  
24 be manned.

25 Q One more question and then I will turn it over



mm9

1 to Mr. Anthony.

2           You said that movement of traffic into the inbound  
3 emergency planning zone would not affect evacuation times  
4 as you have studied them.

5           Are any turning movements of that traffic considered  
6 as it might impact upon outgoing traffic lanes?

7           A       Not explicitly. It is taken into account by way  
8 of the fact again that those inbound lanes are available, that  
9 there are traffic controllers located throughout the evacuation  
10 network and along all evacuation corridors to control  
11 movement in the inbound direction as well as the outbound  
12 direction.

13           Q       And specifically with respect to eastbound traffic  
14 potentially from Valley Forge Park onto 252 and the intersection  
15 there, was there any possible effect of that traffic on the  
16 252 lane where it was sharing a lane with EPZ traffic in  
17 the computer simulation as you numerically ran it.

18           A       I think I have answered this before, that the  
19 vehicles from the park would be controlled at the intersection  
20 of 252 and Route 23 by a park ranger. Vehicle movement would  
21 be permitted along Route 23 south, but park access onto, for  
22 instance, Route 252 south would be restricted, or could be  
23 controlled such that conflict with vehicles evacuating south  
24 on Route 252 would not be evident and would not impact the  
25 flow of vehicles in the major evacuation route.

mm10 1

MR. STONE: Judge Hoyt, I haven't really completed my cross examination, but it seems as if Mr. Anthony is taking the microphone.

4

I don't know just how much time is left.

5

JUDGE HOYT: You have 11 minutes 23 seconds and counting.

7

MR. STONE: We are in the uncomfortable position -- we have been indicated as lead intervenor here -- LEA objects to the situation where we have to work things out with Mr. Anthony in the present circumstances.

11

That is just for the record, your Honor.

12

MR. ANTHONY: I am sorry to interrupt, but I have a few questions.

14

BY MR. ANTHONY:

XXXX

15

Q On the E-92 you have indicated the roads in Valley Forge Park. Some are in fine line, some are in heavy line.

16

17

Does that mean they are different size?

18

A Generally. Again, this is a schematic diagram and does not indicate specific lane width or anything. It is just --

19

20

21

Q What is the situation --

22

MR. RADER: Let the witness finish his answer, your Honor.

23

24

JUDGE HOYT: Let the witness finish, Mr. Anthony.

25

THE WITNESS: The thickness of the particular roads

mml1

1 in this particular schematic are roughly comparable to  
2 general functional usage of the roadway.

3 BY MR. ANTHONY:

4 Q I understand.

5 There is Gulf Road. Do you see Gulf Road on there?  
6 It stops at Treḍyffrin Township?

7 A I'm sorry, I did not hear the question.

8 Q Gulf Road, does it stop at the border of Treḍyffrin  
9 Township? Do you know that road? Have you been on that  
10 road?

11 A Yes, I know where Gulf Road is.

12 Q Did you hear Mr. Fewless say that cars travel  
13 through there every day and come out on 363?

14 A Yes.

15 Q And they travel all through the park on the other  
16 roads? And Outerline Road changes from a fine line to a  
17 heavy line at 363, is that accurate, or is it the same size  
18 on both sides?

19 A Geometrics are roughly the same on either side.

20 The functional usage of Route 23 north of that  
21 particular intersection -- I'm sorry, east of that intersection  
22 is different than --

23 Q Now --

24 A -- than the access road to the park.

25 JUDGE HOYT: Mr. Anthony, neither the reporter, nor

mm12

1 the witness, nor the Board, nor the other parties can hear  
2 when you are speaking over the response of the witness.

3 If you will allow him to answer first, then you  
4 may ask your next question.

5 Very well, proceed.

6 BY MR. ANTHONY:

7 Q The turn from Route 363 onto 202 is indicated as  
8 a heavy line.

9 The turn from 202 onto number 76 is indicated as  
10 a fine line.

11 What is the difference between those two? Are  
12 they both 270-degree turns?

13 A There is no difference. Again, this is a schematic.  
14 The particular case, County Line Expressway has been extended  
15 all the way to 202.

16 The other interchange, primarily because of the  
17 complexity of it has been indicated in light lines.

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1 Q So they are the same?

2 A Yes.

3 Q Does traffic slow or funnel down to one car behind  
4 the other on each of those turns?

5 MR. RADER: Objection. This is beyond the scope of  
6 direct examination.

7 JUDGE HOYT: Objection sustained.

8 BY MR. ANTHONY: (Resuming)

9 Q Did you show the ten-mile circle on this map?

10 A No. The ten-mile circle or the ten-mile radius  
11 around the Limerick plant is not indicated on this map, no.

12 Q You did not show any part of Valley Forge Park  
13 within the ten miles?

14 A I just indicated the ten-mile radius is not on this  
15 particular schematic.

16 Q On the west side of the Schuylkill River, is that  
17 all Lower Providence Township? Is the park all in Lower  
18 Providence Township?

19 A North of Schuylkill, yes, most of it. Yes, all of  
20 it.

21 Q Is Lower Providence covered in the EPZ evacuation  
22 plan?

23 MR. RADER: Objection. This is beyond the scope of  
24 the direct examination.

25 JUDGE HOYT: The objection is sustained.

mn12-2

1 BY MR. ANTHONY: (Resuming)

2 Q You said that the rangers would assist the county,  
3 who would be in charge?

4 A The county it is my understanding would be in charge  
5 of the coordination of that effort.

6 Q Did you hear Mr. Fewless say that they would be  
7 in charge in the park?

8 A I am not sure who you mean by "they."

9 Q The rangers would be in charge in the park.

10 A It is my understanding of what I heard of Mr. Fewless'  
11 testimony that the Park Service would assist the county in  
12 any and every manner than they could.

13 Q Did you understand then that the Park will turn over  
14 the authority to direct traffic to the county?

15 A I see no reason why that could not be the case  
16 for a given circumstance.

17 Q Didn't Mr. Fewless say that the rangers would not  
18 stop any traffic on route 23?

19 A I am not sure I recollect that part of the testimony.

20 Q I am not surprised that you don't recollect it  
21 but he said that. Does that mean then that the park rangers  
22 would not stop anybody from taking any route they wanted through  
23 the park no matter if there was an evacuation route?

24 MR. RADER: I object to the form of this line of  
25 questioning. I think that Mr. Anthony should show the witness

1 the transcript reference he is relying upon with regard to  
2 Mr. Fewless' testimony. My recollection is different as to  
3 that testimony but I don't wish to argue about it.

4 JUDGE HOYT: Unless you can give us the transcript  
5 references and there is that conflict existing, Mr. Anthony,  
6 I think this line of questioning should be abandoned.

7 MR. ANTHONY: I would like to have the reference  
8 but I don't have it.

9 BY MR. ANTHONY: (Resuming)

10 Q I will change the subject to traffic flowing through  
11 the park on 23 into King of Prussia. Would all of that  
12 traffic of workers and shoppers flowing into King of Prussia  
13 reverse direction in case of a nuclear alert at Limerick?

14 MR. RADER: Objection, beyond the scope of direct  
15 examination.

16 JUDGE HOYT: Yes. That is clearly beyond the scope,  
17 Mr. Anthony.

18 BY MR. ANTHONY: (Resuming)

19 Q You mentioned the handling of the traffic at the  
20 intersection of 252 and 23. The traffic on 23 you said would  
21 be going back into the EPZ, would that be traffic that went out  
22 of the EPZ to work or to shop?

23 A It may be depending on the particular time period.

24 Q Would it be the same volume as the traffic that went  
25 out would be flow back?

mnl2-4

1 A. That would depend on the circumstance, the time  
2 period.

3 Q. Yes or no, please.

4 A. There is no yes or no.

5 Q. I don't know why not.

6 A. If you set a time period to be the time the outbound  
7 flow occurred. Obviously on a weekly basis the outbound flow  
8 would not equal that which would be anticipated in the matter  
9 of a few hours during an evacuation.

10 Q. Would the same people who travel that route eastbound  
11 approximately the same number turn westbound in case of an  
12 alert?

13 A. Not necessarily, no.

14 Q. What percentage of them would be? What does your  
15 study show you?

16 A. I couldn't estimate that. That would vary depending  
17 upon a number of circumstances like time of day --

18 Q. Isn't it important?

19 A. -- season of the year and day of the week.

20 Q. That is an evasive answer. What is the percentage of  
21 the people that your study shows would flow west onto 23?  
22 Is the percentage compared to the flow in, the traffic commuter  
23 or shopper traffic flowing east?

24 A. The outbound flow --

25 Q. Excuse me.



mnl2-5

1  
2 A The outbound flow that is associated with permanent  
3 residents would travel back into the area. That is an  
4 underlying plan assumption that was used to develop the  
5 time estimates so as such that component of the outbound  
6 flow for a particular period as associated with permanent  
7 residents traveling out to work or for whatever reason would  
8 travel back in.

9 In addition to that, normal everyday peak hour  
10 traffic along route 23 includes other through traffic and  
11 vehicles with entirely different origins and destinations  
12 and travel patterns than would be expected during an  
13 evacuation.

14 Q You are giving me more than I wanted. Do you have  
15 any count in your study of the number of vehicles that would  
16 flow westward on route 23 in case of an alert, yes or no?

17 A Yes. We have the evacuation traffic flows simulated  
18 for a number of evacuation scenarios.

19 Q It is simulated, but what is that count? Do you  
20 have that number?

21 A Off the top of my head, no. It is available in the  
22 evacuation time estimate report.

23 Q Off the top of your head, how would that compare  
24 in percentage to the flow that went in the opposite direction  
25 of those people going to work or going to shop?

A Again, that would vary depending on the time of day.

1 Q Would it be 80 percent?

2 A I couldn't even guess.

3 Q I thought you were the traffic expert. Why  
4 can't you say something about it.

5 A I can only make guesses upon rational and reasonable  
6 assumptions.

7 Q Would it be 50 percent?

8 A It may be given the circumstances. It would vary.  
9 You have to define the bounds of your assumption before --

10 Q I know it would vary. I am asking you for a figure.  
11 You are the expert. Yes or no or a figure.

12 A It would vary.

13 MR. RADER: Your Honor, I think this has --

14 MR. ANTHONY: That is not a proper answer.

15 BY MR. ANTHONY: (Resuming)

16 Q Did PEMA see this map?

17 A Which map?

18 Q E-92.

19 A I believe they have a copy of it.

20 Q Did they have any input in it?

21 A No. This was developed by us for the purposes  
22 identified and it is a schematic.

23 (Time signal sounded.)

24 JUDGE HOYT: Mr. Anthony, your time has expired.

25 Are you ready, sir, for the Commonwealth?

mnl2-6

1 MR. GOODWIN: Yes.

2 JUDGE HOYT: Proceed.

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3 BY MR. GOODWIN:

4 Q Mr. Klimm, I am Mr. Goodwin, counsel for the  
5 Commonwealth. I do have some questions concerning the  
6 quadrant E-92 myself. Who prepared E-92?

7 A That was prepared by HMM Associates under my  
8 direction.

9 Q Do you know who drew the boundary line for the EPZ  
10 on this particular quadrant, the yellow line?

11 A Who drew it? It was prepared by our office.

12 Q It wasn't yourself then I take it?

13 A No.

14 Q I believe in your answer just a minute ago to  
15 Mr. Anthony you stated that this was done by HMM alone  
16 without consulting with PEMA in advance, is that correct?

17 A That is correct and for the purposes identified  
18 primarily as a schematic to show the relationship of  
19 different areas to the primary evacuation corridor through  
20 the 363 County Line Expressway and 202 and 76 and 276 corridor.  
21 That was the intent of this particular schematic. It was not  
22 intended to be a detailed document indicating every road  
23 in a particular area.

24 Q Are you aware then that the boundary line as  
25 drawn on E-92 does not correspond with the actual boundary

1 description that appears in the state operation plan, Annex E?

2 A No. I am not aware of that.

3 Q What is your understanding if you know of the  
4 boundary line to the west of the Valley Forge National  
5 Park for the EPZ?

6 A (Perusing document.)

7 It would be in Chester County. I am not sure of  
8 the exact boundary. I would have to look at a number of  
9 sources to see what this particular identification was used  
10 for or was developed from.

11 Q As far as you know, is any part of the Valley Forge  
12 National Park south of the Schuylkill River in the EPZ itself?

13 MR. RADER: I must object to this as beyond the  
14 scope of direct examination.

15 JUDGE HOYT: I agree with you, counsellor, but  
16 I think we will permit the question because I think this  
17 counsel was not present during the other session when this  
18 witness previously testified and he may need to know that  
19 to continue his examination. The objection is overruled.  
20 Go ahead, sir.

21 THE WITNESS: I believe so based upon this map  
22 however I might note again the discrepancy that is available  
23 or that is evident by a number of different maps on park  
24 boundaries. This particular map again was not expected to  
25 be a detailed definitive map on either EPZ boundaries, park



1 boundaries or exact roadway widths, et cetera. The intent  
2 was primarily to show the relationship of route 363,  
3 County Line Expressway, 202 and that particular corridor  
4 since that particular corridor is verbally difficult to  
5 describe without seeing it visually. The intent was to  
6 show this on a schematic and to indicate other points of  
7 reference and not to detail exact boudaries or be all  
8 inclusive.

9 BY MR. GOODWIN: (Resuming)

10 Q So then if I am understanding you correctly  
11 the intent is basically to show the road system in the  
12 area and not the actual boundaries?

13 A That was the entire intent on this particular  
14 exhibit because of the confusion primarily with route 363  
15 extending south and changing into County Line Expressway  
16 and describing that verbally, to aid in that description  
17 this particular map was prepared and again it is a schematic  
18 and is not expected to be a definitive representation of  
19 exact boundaries, exact roadway widths or exact locations  
20 but it is more representative and reflects general relation-  
21 ships between this particular evacuation route and other major  
22 routes of interest in the area.

23 MR. GOODWIN: Your Honor, if I may, the whole  
24 purpose of my line of questioning here with the witness  
25 was to establish that we have a basic disagreement with the

1 boundary line as shown on this schematic. I am just wondering  
2 if this might be an appropriate time to ask the applicant  
3 if we can establish that it is an inaccurate representation  
4 of the EPZ boundary line that they might stipulate to that  
5 so that I can get on to the actual direct testimony.

6 JUDGE HOYT: Are you speaking of the yellow line,  
7 Mr. Goodwin, is that what is bothering you?

8 MR. GOODWIN: Yes, Your Honor, right. Based upon  
9 our maps and boundary descriptions the actual EPZ boundary  
10 line should be the boundary line for Schuylkill County  
11 which is the dotted line a little further to the west of  
12 the Chester County line as drawn on this schematic.

13 JUDGE HOYT: Try that again. I didn't follow you,  
14 Mr. Goodwin.

15 MR. GOODWIN: Ms. Ferkin had filed a motion back  
16 in December in response to a motion filed by Mr. Anthony  
17 questioning this whole area of the boundary line near the  
18 Valley Forge National Park and in her motion we stated that  
19 the actual EPZ boundary line is -- it is our position that  
20 the boundary line is the Schuylkill Township boundary.

21 JUDGE HOYT: In other words, you are talking about  
22 the yellow line as it turns sharply southward?

23 MR. GOODWIN: Yes.

24 JUDGE HOYT: It should be extended?

25 MR. GOODWIN: Right, it should be extended further

1 west and not include any portion of the Valley Forge National  
2 Park.

3 JUDGE COLE: Are you saying then, Mr. Goodwin,  
4 that the portion that is shown shaded within Chester County  
5 is not in Schuylkill Township?

6 MR. GOODWIN: No. I am saying that the portion  
7 that is shaded is not in the EPZ.

8 JUDGE HOYT: This is where he is talking about here.  
9 In other words, you are saying that it should go directly  
10 west and not turn sharply southward. Let me get other  
11 counsel up here.

12 MR. HASSELL: I was going to say that this  
13 description should be on the record.

14 JUDGE HOYT: We will make this off the record  
15 and then describe the event on the record after we have  
16 completed this.

17 (Discussion off the record.)  
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1 JUDGE HOYT: The hearing will come to order.  
2 Let the record reflect that all the parties to the hearing  
3 who were present when the hearing recessed are again  
4 present in the hearing room.

5 The witness has taken his place on the witness.  
6 Sir, Mr. Klimm, you are still under oath.

7 THE WITNESS: Yes.

8 JUDGE HOYT: All right. Now, we had a brief  
9 off-the-record discussion concerning the boundary  
10 line that had been drawn on what has been marked as  
11 Applicant's Exhibit E-92 for identification.

12 The problem seemed to be that the Schuylkill  
13 River yellow line on this map turning south at  
14 Chester, proceeding south to a solid line and then in  
15 a westward direction after that was in error.

16 Mr. Goodwin advised that he would check the  
17 state plan at the request of counsel for Applicant, and  
18 it is that determination that we are awaiting now.

19 MR. GOODWIN: That is correct, your Honor.

20 JUDGE HOYT: Let me first determine, is there  
21 any additions, deletions, or revisions to the remarks  
22 that I have made concerning what occurred during the  
23 off-the-record conference?

24 MR. RADER: I believe it is accurate.

25 JUDGE HOYT: Mr. Goodwin, would you proceed at this



1 time to advise us what the result of your research was?

2 MR. GOODWIN: Yes, your Honor. We conferred on  
3 the matter and checked the state plan, and it is our  
4 position that the actual EPZ boundary line would  
5 be to the west of what is shown on this exhibit.

6 I will renew my offer that we enter into a  
7 stipulation with the Applicant that the boundary line  
8 is actually along the western boundary of the  
9 Valley Forge National Park and not the Chester County  
10 line.

11 JUDGE HOYT: Mr. Rader?

12 MR. RADER: We stipulate to that.

13 JUDGE HOYT: Very well. The stipulation will  
14 be received and the -- I would assume, Mr Rader, that  
15 prior to offering this into evidence that you will make  
16 that change on the maps that you have distributed and  
17 on the copies given to the reporter?

18 MR. RADER: Yes, we will.

19 MR. STONE: Objection, your Honor.

20 JUDGE HOYT: To what, Mr. Stone?

21 MR. STONE: At the point at which this is  
22 offered into the record, I really think it is important  
23 that the original version be preserved and another -- any  
24 correction or notation be made as well. I think --  
25 because ECs -- it is my understanding that this version,

1 Applicant's Exhibit E-92 --

2 JUDGE HOYT: Mr. Stone, I will here from the  
3 representative of LEA.

4 MS. ZITZER: Your Honor, I just wanted to  
5 verify that both exhibits, E-68 and E-92, with the  
6 stipulated agreement to the --

7 JUDGE HOYT: Miss Zitzer, E-68 is not involved  
8 in this stipulation.

9 MS. ZITZER: We have no objection to what has  
10 been discussed.

11 JUDGE HOYT: Very well. The stipulation will  
12 be received.

13 The corrected version of the exhibit will be  
14 distributed first thing on Monday, Mr. Rader.

15 MR. RADER: Yes, I will see to that.

16 JUDGE HOYT: Now, do you have any additional  
17 questions, Mr. Goodwin?

18 MR. GOODWIN: I just have a few questions,  
19 Mr. Klimm.

20 BY MR. GOODWIN:

21 Q You had stated in your direct testimony that  
22 under NUREG 0654 that the normal evacuation time  
23 tables occur under what they call the fair and average  
24 weather conditions.

25 Is that correct? That is the basis that is used for

1 making the --

2 A I think what I testified to was that the intent  
3 of Appendix 4 of NUREG 0654 is to present representative  
4 evacuation time estimates for a number of scenarios  
5 involving both fair and adverse weather conditions.

6 Q My question is, what is your understanding of  
7 what the NRC means by the fair and average weather conditions?

8 A My understanding and my interpretation of  
9 Appendix 4 is that adverse weather represents or is  
10 defined as a case which is representative and useful  
11 to local and state officials in protective action decision  
12 making.

13 There are no exact bounds identified in  
14 Appendix 4 as to adverse weather, but the intent, based  
15 upon my experience with preparing a study for Appendix 4  
16 for a number of years and discussions with both NRC and  
17 FEMA staff and having prepared evacuation time estimate  
18 studies and having had those accepted, would certainly  
19 lead me to believe that the interpretation I have is a  
20 correct one.

21 Q You made one statement in answer to a question  
22 concerning the route 100 corridor.

23 In effect, I believe your statement was that  
24 delays would occur along the route 100 corridor.

25 Could you explain that a little further, what you

1 meant and what type of delays you are talking about?

2 A Well, delays to varying degrees would occur  
3 along virtually all the evacuation corridors during  
4 different time periods throughout the evacuation.

5 The magnitude of the delay would vary,  
6 depending upon the actual demand present at the time  
7 and its relationship to the capacity of the roadway  
8 facilities.

9 The delay would vary with time, depending  
10 upon those two variables -- demand and capacity.

11 Q I believe you had testified, in answer to a  
12 question about some earlier testimony, that there is  
13 a backlog in that general area that sometimes extends  
14 to two miles or more.

15 A There are backups that occur along that  
16 corridor.

17 Q But you are not aware of this one particular  
18 scenario then?

19 A As I think I testified, in reference to  
20 Appendix A.11 of the evacuation time estimate study,  
21 those areas where vehicle queuing was indicated or  
22 congestion was indicated represent areas where vehicles  
23 are stopped along the various roadway sections and do  
24 not necessarily reflect the exact magnitude of vehicles  
25 stopped at those locations.



1 MR. GOODWIN: No other questions.

2 JUDGE HOYT: Very well.

3 Mr. Hirsch?

4 MR. HIRSCH: FEMA has no cross, your Honor.

5 JUDGE HOYT: Mr. Hassell?

6 MR. HASSELL: I have a few questions, Judge

7 Hoyt.

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8 CROSS-EXAMINATION

9 BY MR. HASSELL:

10 Q Mr. Klimm, I believe you testified on  
11 direct examination that when there are major population  
12 changes, there would be some kind of an evaluation --  
13 I believe you said on an annual basis -- to try and  
14 reflect those population shifts.

15 Is that correct? If not, correct me.

16 A I don't believe that is entirely correct.  
17 There will be an annual review of all plans, and that  
18 is required. NUREG 0654 Appendix 4 requires a reevaluation  
19 of evacuation times when conditions significantly  
20 change in a particular area.

21 It is not necessary that that happen on an  
22 annual basis. However, the process for that is set in  
23 place by the annual review of the plans.

24 Q Are there specific plan provisions that call  
25 for that review?

1 A The annual review?

2 Q Yes, to your knowledge.

3 A To my knowledge, yes.

4 Q I believe you testified that the evacuation  
5 time estimates prepared by HMM Associates for PECO  
6 considered the effect of snow; is that correct?

7 A That is correct, yes.

8 Q What amount of snow fall was assumed?

9 A As I testified, it could be comparable in this  
10 area to approximately one to two inches. It would  
11 represent the amount of snow prior to required snow plowing  
12 activities.

13 Q Do you recall your testimony in response to  
14 questions by Mr. Stone concerning the extent to which  
15 the evacuation time estimate study did or did not consider  
16 this summer weekday scenario?

17 A Yes, I do recall that.

18 Q With respect to that summer weekday scenario,  
19 is it not your testimony that the evacuation time estimates  
20 did not consider that scenario?

21 A We did not prepare -- our evacuation time  
22 estimates were not prepared for that particular scenario.  
23 However, that does not imply that that particular case  
24 may not be or may be virtually the same as one of the  
25 other conditions that were simulated based upon the population

1 that might be in the area for that particular time.

2 Q To what extent did the evacuation time estimate  
3 study bound that condition in terms of the other  
4 scenarios that it did consider?

5 A I would have to look in some detail through  
6 some of our background meetings, but in general, I would  
7 say that the summer weekend -- a typical summer  
8 -- I am sorry, weekday case would include a transient  
9 population at lower levels than a summer weekend case.  
10 They would not include school facilities in place.  
11 They would include permanent residents. And the  
12 transient population levels would be of some other  
13 facilities such as hotels and motels, et cetera, would  
14 be lower than summer weekend cases. So that the times  
15 could reasonably be expected to fall, I would say,  
16 between the winter weekday conditions and the summer weekend  
17 conditions.

18 Q I would like to return briefly to Applicant's  
19 Exhibit E-92.

20 I believe you described the purpose for which  
21 that exhibit was prepared was to show the general  
22 relationship of certain evacuation routes to one another,  
23 specifically 363, 202, and the County Line Expressway.

24 Is that correct?

25 A That is correct.

1 Q Now, with respect to that purpose for which  
2 this exhibit was prepared, is the depiction accurate?

3 A Yes, it is.

4 Q One further question for you.

5 I believe in your testimony in response to  
6 Mr. Stone's cross-examination, you cited, again, two  
7 studies that were your basis for an assumption you had  
8 made about the one-car-per-family unit for purposes  
9 of evacuation.

10 Is that correct?

11 A Yes. I did reference two sources.

12 Q I believe you also testified that those  
13 particular sources did not involve a radiological  
14 emergency; is that correct?

15 A Yes, those two sources did not present data  
16 from a natural radiological emergency.

17 Q Assuming for the moment that a particular  
18 emergency does not involve any blockage of the roads,  
19 assuming that, would there be any effect on road capacity,  
20 on the road capacity figures that have been used in the  
21 evacuation time estimate study?

22 A I don't follow that.

23 Q Let me back up. How have you -- would  
24 you please explain again what road capacity means for  
25 purposes of the evacuation time estimate study?





1 MR. RADER: No further questions.

2 JUDGE HOYT: Dr. Cole?

3 BOARD EXAMINATION

4 BY JUDGE COLE:

5 Q Just one question, really, Mr. Klimm.

6 Mr. Rader was asking you about certain of  
7 Dr. Vutz' testimony concerning the commons in  
8 Schuylkill Township or in the Schuylkill Township area.  
9 And in his testimony, Dr. Vutz described an ongoing  
10 zoning battle which he indicated that if he was --  
11 if Schuylkill Township was unsuccessful, that it would  
12 result in doubling of the population of Schuylkill  
13 Township.

14 In his question to you, in Mr. Rader's  
15 question to you, he indicated or I though I heard that  
16 this was an increase in the area of the township.

17 Do you know what the nature of the dispute is?  
18 Is it actually an increase in the area of the township  
19 or is it a zoning density dispute?

20 A My understanding is that it is a zoning  
21 density dispute. In any event, whether it was an area-  
22 that is under consideration or population density, the  
23 same principles would apply. Any significant increases  
24 in population and in vehicles that may be in an area should  
25 be reevaluated and reconsidered in the evacuation analysis.

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1 Q So in your view, it wouldn't make any difference  
2 whether it was an area dispute or a population  
3 density dispute or both?

4 A As long as it was within the emergency planning  
5 zone, it would make no difference.

6 JUDGE COLE: All right, sir. Thank you.

7 BOARD EXAMINATION

8 BY JUDGE HARBOUR:

9 Q Along that same line, I believe that you  
10 also stated -- correct me if I am wrong -- that  
11 you felt that an increase in population through this  
12 zoning change would logically be accompanied by  
13 improvement in roads.

14 Was that your testimony?

15 A Yes, it was.

16 Q What basis do you have for making that statement?

17 A The basis of experience and I think a lot of  
18 it is common sense. Most development that does occur  
19 that significantly affects -- private development that  
20 occurs that significantly affects or may have an impact  
21 on roadways do something in order to mitigate any  
22 potential impact.

23 A major development, one that may significantly  
24 increase a population in a township, it is only reasonable  
25 to assume that that would be associated with a comparable

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1 increase in roadway network to handle that vehicle  
2 demand.

3 I think it is reasonable to assume that public  
4 officials would demand such an increase in roadway  
5 service to accommodate the future private development,  
6 and I think that has been borne out in past  
7 experience with virtually every large development.

8 JUDGE HARBOUR: Thank you. That is all I have.

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JUDGE HOYT: I have no questions.

The witness is excused. Thank you.

(Witness excused.)

MR. ANTHONY: I wonder if I could have a couple of other questions of Mr. Klimm?

JUDGE HOYT: No, sir, your time has expired.

The witness has been excused.

MR. ANTHONY: I would like to know whether it is a good time now to have a discussion of my motion?

JUDGE HOYT: No, we will not take any argument on the motions of this morning this afternoon, now.

The order of business for Monday will be first, to get your offers of proof in, Ms. Zitzer. I think there are no other outstanding motions before the Board that had preceded the one that Mr. Anthony filed this morning. I assume that all parties have a copy of this motion.

MR. ANTHONY: Excuse me, Judge Hoyt.

JUDGE HOYT: Just a minute, Mr. Anthony, may I run this proceeding, please?

MR. ANTHONY: Sure, I beg your pardon.

JUDGE HOYT: Mr. Rader, do you have a copy of this motion from Mr. Anthony?

MR. RADER: I believe we do.

JUDGE HOYT: It is dated January 3.

All right. Mr. Hassell, do you have it?

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MR. HASSELL: Yes, I do.

JUDGE HOYT: Mr. Hirsch?

MR. HIRSCH: Yes.

JUDGE HOYT: Does the Commonwealth have a copy?

MR. GOODWIN: Yes, your Honor.

JUDGE HOYT: Very well, I will expect the Parties to be prepared to argue the motion on Monday at the conclusion of the presentation of Ms. Zitzer on the offers of proof.

All right, Mr. Rader, do you have it?

MR. RADER: I just wanted to make one other point before the Board adjourns.

Mr. Conner had announced yesterday the decision of Judge Garb in the case of Daniel J. Sullivan et al versus County of Bucks in the Court of Common Pleas of Bucks County, and had represented that copies of that decision would be made available.

I would now, for the record, like to make that decision available to the Board and Parties.

Of course, copies will be also made available through the routine mailing system and thereby be provided to the Appeal Board and City of Philadelphia as well.

(Document distributed to Board and Parties.)

JUDGE HOYT: Very well. Thank you very much for providing that decision for us.

Mr. Rader, will you move then, I guess, Applicant's

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1 Exhibit E-92 for identification into evidence on Monday when  
2 you have the completed copies?

3 MR. RADER: That was my intention. Thank you.

4 JUDGE HOYT: Prior to this witness leaving the  
5 area, is there any foreseeable problem that anyone is going  
6 to have with this Exhibit E-92 prior to the time that it  
7 is moved into evidence, while Applicant still has this witness  
8 present?

9 (No response.)

10 I don't think the schematic map with the corrections  
11 will --

12 MR. ANTHONY: I had a question on it.

13 JUDGE HOYT: All right, Mr. Anthony, what is your  
14 question?

15 MR. ANTHONY: Well, Mr. Hassell asked whether this  
16 map served the purpose for which it was designed, and --

17 JUDGE HOYT: Mr. Anthony, we have long since passed  
18 that point in the proceeding. I am asking, do you have any  
19 particular objections to this map being received into evidence,  
20 and I am trying to elicit that from the counsel and  
21 representatives prior to the witness leaving the area, because  
22 as I understand it this witness is not located in the  
23 Philadelphia area.

24 Mr. Goodwin, did you have something?

25 MR. GOODWIN: No, your Honor. Based on the

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1 stipulation, the facts that we described in the stipulation,  
2 I am satisfied.

3 JUDGE HOYT: I think that probably cures all the  
4 errors, then.

5 Ms. Zitzer?

6 MS. ZITZER: LEA would request the opportunity to  
7 review the map at the time that it is admitted, to simply  
8 verify that it does represent what we have discussed.

9 I don't believe it will present a problem. I also  
10 do believe Mr. Klimm is going to be here next week because  
11 of the testimony on the deferred contentions.

12 JUDGE HOYT: Is Mr. Klimm going to remain in the  
13 area for next week?

14 MR. RADER: He will be here Monday.

15 JUDGE HOYT: All right. I anticipated a problem  
16 that doesn't exist, then. Cancel all the above.

17 The hearing will adjourn to meet on Monday at  
18 12 o'clock, I believe.

19 (Whereupon, at 1:30 p.m., the hearing in the  
20 above-entitled matter was adjourned, to resume on Monday,  
21 January 7, 1985 at 12:00 Noon.)

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CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the  
UNITED STATES NUCLEAR REGULATORY COMMISSION in the matter of:

NAME OF PROCEEDING: Philadelphia Electric Company  
Limerick Generating Station  
Units 1 and 2

DOCKET NO.: 50-352-OL and 50-353-OL

PLACE: Philadelphia, Pennsylvania

DATE: Friday, January 4, 1985

were held as herein appears, and that this is the original  
transcript thereof for the file of the United States Nuclear  
Regulatory Commission.

*Rebecca Eyster*  
*Mimie Meltzer*  
*Marilynn Nations*  
(Sigt) \_\_\_\_\_  
(TYPED) Rebecca Eyster, Mimie Meltzer,  
Marilynn Nations

Official Reporter

Reporter's Affiliation