

1                   UNITED STATES OF AMERICA  
2                   NUCLEAR REGULATORY COMMISSION

3 - - - - - - - - - - - - - - - x  
4     In the matter of:                   :  
5     METROPOLITAN EDISON COMPANY       :                   Docket No. 50-289  
6     (Three Mile Island Unit 1)        :                   (Restart)  
7 - - - - - - - - - - - - - - - :  
8

9                   25 North Court Street,  
10                  Harrisburg, Pennsylvania

11                  Thursday, April 16, 1981

12                  Evidentiary hearing in the above-entitled  
13                  matter was resumed, pursuant to adjournment, at 9:00 a.m.  
14                  BEFORE:

15                  IVAN W. SMITH, Esq., Chairman,  
16                  Atomic Safety and Licensing Board

17                  DR. WALTER H. JORDAN, Member

18                  DR. LINDA W. LITTLE, Member

19                  Also present on behalf of the Board:

20                  MS. DORIS MORAN,  
21                  Clerk to the Board

22                  LAWRENCE BRENNER, Esq.  
23                  Legal Advisor to the Board

24

25

## 1 APPEARANCES:

2 On behalf of the Licensee, Metropolitan Edison  
3 Company:

4 GEORGE F. TROWBRIDGE, Esq.  
5 ROBERT ZAHLER, Esq.  
6 Shaw, Pittman, Potts and Trowbridge,  
7 1800 M Street, N.W.,  
8 Washington, D. C.

9 On behalf of the Commonwealth of Pennsylvania:

10 MICHELE STRAUBE, Esq.  
11 Assistant Attorney General,  
12 505 Executive House,  
13 Harrisburg, Pennsylvania

14 On behalf of Newberry Township TMI Steering  
15 Committee:

16 JORDAN E. CUNNINGHAM, Esq.  
17 Fox, Farr and Cunningham  
18 2320 North Second Street  
19 Harrisburg, Pennsylvania

20 On behalf of Anti-Nuclear Group  
21 Representing York:

22 GAIL BRADFORD

23 On behalf of Three Mile Island Alert:

24 LOUISE BRADFORD

25 On behalf of the Regulatory Staff:

26 JAMES TOURTELLOTTE, Esq.  
27 Office of Executive Legal Director,  
28 United States Nuclear Regulatory Commission,  
29 Washington, D. C.  
30 DANIEL P. COSGROVE, Esq.  
31 Assistant General Counsel for FIRE  
32 Federal Emergency Management Agency  
33 Washington, D.C. 20472

## C O N T E N T S

CROSS

<u>WITNESS:</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>	<u>BOARD</u>	<u>ON BOARD</u>
-----------------	---------------	--------------	-----------------	----------------	--------------	-----------------

Thomas Urbanik, II						
By Mr. Gray	19,136					
By Ms. Gail Bradford		19,138				
By Ms. Straube		19,167				
By Mr. Zahler		19,179				
By Dr. Jordan						19,185
By Mr. Smith						19,186
By Dr. Jordan						19,187
By Mr. Zahler		19,188				
By Ms. Gail Bradford						19,189
By Mr. Cunningham		19,192				
By Mr. Gray				19,193		

Michael S. Pawlowski,						
Frederick J. Bath and						
Vernon E. Adler (Resumed)						
By Mr. Cunningham		19,197				

AFTERNOON SESSION.....page 19,227

<u>LIMITED APPEARANCE STATEMENT OF:</u>	<u>PAGE</u>
---	-------------

Martha McCurdy	19,227
----------------	--------

CROSS

<u>WITNESS:</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>	<u>BOARD</u>	<u>ON BOARD</u>
-----------------	---------------	--------------	-----------------	----------------	--------------	-----------------

Michael S. Pawlowski,						
Frederick J. Bath and						
Vernon E. Adler (Resumed)						
By Mr. Cunningham	19,233					
By Ms. Gail Bradford		19,286				
By Ms. Straube		19,327				

<u>LIMITED APPEARANCE STATEMENT OF:</u>	<u>PAGE</u>
---	-------------

Steve Brooks	19,350
--------------	--------

Keith Bentz	19,359
-------------	--------

1

C O N T E N T S

2

WITNESS:

DIRECT CROSS REDIRECT RECROSS BOARD ON BOARD

CROSS

3

Michael S. Pawlowski,  
Frederick J. Bath and  
Vernon E. Adler (Resumed)

4

By Ms. Straube

19,361

5

6

7

8

9

10

Dr. Urabnik's Testimony and Professional  
Qualifications.....page 19,137

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1                   PROCEEDINGS

2                   (9:03 a.m.)

3                 CHAIRMAN SMITH: The Board's request to the staff  
4 to provide transcript pages and written testimony to Mr.  
5 Basdekas appears in yesterday's transcript at 19,127 to  
6 19,130. We suggest that those transcript pages be provided  
7 to Mr. Basdekas as soon as possible.

8                 In addition, although not of immediate importance,  
9 transcript pages 18,918 to 18,924 and transcript 18,997 to  
10 19,000 from yesterday's transcript, containing a discussion  
11 of the Board's frustration in trying to communicate to Mr.  
12 Basdekas and learn from him our mutual interest in his  
13 concerns, should be provided to him.

14                 Is there any preliminary business?

15                 (No response.)

16                 CHAIRMAN SMITH: Mr. Cunningham, you may proceed.

17                 MR. GRAY: Mr. Chairman, at this time we would  
18 like to interrupt the FEMA panel and to present Mr. Urbanik  
19 on the evacuation time estimate study. If there are no  
20 objections, I will call Mr. Urbanik at this time.

21 Whereupon,

22                 THOMAS URBANIK, II,

23 called as a witness by counsel for the Regulatory Staff,  
24 having first been duly sworn by the Chairman, was examined  
25 and testified as follows:

## 1 DIRECT EXAMINATION

2 BY MR. GRAY:

3 Q Mr. Urbanik, would you state your name for the  
4 record and spell it, also. Give your business address and a  
5 brief description of your employment duties, please?

6 A My name is Thomas Urbanik II. The last name is  
7 U-r-b-a-n-i-k. I work for the Texas Transportation  
8 Institute, which is part of the Texas A&M University system,  
9 College Station, Texas, 77843. My duties are as a  
10 transportation engineer in the transport operations of the  
11 Institute.

12 I am involved in various aspects of transportation  
13 planning, including studies on hurricane evacuation, nuclear  
14 evacuation, public transportation planning, traffic  
15 engineering and the like.

16 Q Do you have before you a document entitled  
17 "Testimony of Thomas Urbanik II on evacuation time estimate  
18 studies for Three Mile Island," dated April 10, 1981?

19 A Yes, sir.

20 Q Did you prepare this testimony?

21 A Yes, sir.

22 Q Do you have any additions or corrections to make  
23 to this testimony?

24 A No, sir.

25 Q Is this testimony true and correct to the best of

1 your knowledge?

2 A Yes, it is.

3 Q And do you adopt it as your testimony in this  
4 proceeding?

5 A I do.

6 MR. GRAY: Copies of this testimony were  
7 distributed to the parties with emergency planning interests  
8 in this proceeding last Friday, April 10, and to the  
9 Licensing Board on Tuesday.

10 At this time I would request that the testimony be  
11 admitted as evidence of the NRC staff.

12 CHAIRMAN SMITH: Are there any objections?

13 (No response.)

14 CHAIRMAN SMITH: All right. We will receive Dr.  
15 Urbanik's testimony and professional qualifications into  
16 evidence.

17 (The documents referred to follow:)

18

19

20

21

22

23

24

25

(1)  
4/16

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of }  
METROPOLITAN EDISON COMPANY } Docket No. 50-289  
(Three Mile Island Unit 1) } (Restart)

TESTIMONY OF THOMAS URBANIK II ON EVACUATION  
TIME ESTIMATE STUDY FOR THREE MILE ISLAND

April 10, 1981

OUTLINE

TESTIMONY OF THOMAS URBANIK II ON EVACUATION TIME  
ESTIMATE STUDY FOR THREE MILE ISLAND

This testimony addresses the manner in which the Evacuation Time Estimate Study prepared for Three Mile Island conforms with Revision 1 to NUREG-0654, Appendix 4. However, the review of the evacuation time estimate study did not include an analysis of the planning assumptions of the study or a comparison of the evacuation time estimate study with existing offsite emergency plans. The testimony addresses the methodology used in the study to determine the road network capacity and to compute evacuation times for normal daytime, nighttime, and adverse weather evacuation scenarios. The provisions of the evacuation time estimate study which account for the permanent, transient, and special facility population is also discussed. Finally, the testimony indicates that the evacuation time estimate study could be used to identify to planners and emergency response personnel the need to consider actual roadway conditions in determining the need is traffic control as well as providing a reasonable basis to emergency response decisionmakers on which to make a protective action recommendation involving evacuation.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of }  
METROPOLITAN EDISON COMPANY } Docket No. 50-289  
(Three Mile Island, Unit 1) } (Restart)

TESTIMONY OF THOMAS URBANIK II ON EVACUATION  
TIME ESTIMATE STUDY FOR THREE MILE ISLAND

Q.1. State your name and title.

A. I am Thomas Urbanik II, a transportation engineer and Assistant Research Engineer associated with the Texas Transportation Institute of the Texas A&M University System, College Station, Texas

Q.2. Do you have a statement of your professional qualifications?

A. Yes. A statement of my professional qualifications is attached to this testimony.

Q.3. In what capacity are you testifying here?

A. I am testifying on behalf of the NRC Staff for which I serve as a consultant, through the Battelle Pacific Northwest Laboratories which is responsible for reviewing evacuation time estimates of nuclear facilities under contract to the Nuclear Regulatory Commission.

Q.4. Briefly summarize your experience with evacuation time estimate studies for nuclear facilities.

A. I was a principal writer of NUREG/CR-1745, "Analysis of Techniques for Estimating Evacuation Times for Emergency Planning Zones", which was published in November 1980. That document described the limitations of several methodologies and some alternatives for determining evacuation time estimates. Additionally, I provided input to the development of the current guidance for evacuation time estimate studies which appear in Appendix 4 to NUREG-0654, Revision 1. Furthermore I have reviewed the initial evacuation time estimate study submittals of approximately 52 operating and near term nuclear facilities for the NRC against guidance of NUREG-0654, Revision 0.

Q.5. What is the purpose of this testimony?

A. The purpose of this testimony is to address the manner in which the Evacuation Time Estimates for the Plume Exposure Pathway EPZ at Three Mile Island Nuclear Generating facilities prepared for General Public Utilities Service Corporation by Parsons, Brinkerhoff, Quade and Douglas, Inc. of March 3, 1981 compares to the guidance of NUREG-0654, Appendix 4, based on a review which I completed on April 3, 1981.

Q.6. What was the scope of your review of the March 3, 1981 Evacuation Time Estimate Study for TMI?

A. I conducted this review during the last two weeks of March 1981 at the request of the NRC Staff. The results of the study as well as the methodology used to develop the evacuation time estimates were evaluated and compared with the guidance of Appendix 4 to NUREG-0654. My review did not involve a comparison of the study with any emergency preparedness plans or procedures of the licensee or State or local response organizations.

Q.7. What were the criteria that you used during your review of the evacuation study submitted by Metropolitan Edison?

A. I compared the Three Mile Island evacuation time estimate study with the guidance of NUREG-0654, Appendix 4. Appendix 4 discusses several elements which the NRC and FEMA believe should be included in evacuation time studies. The considerations include: (a) an accounting for permanent, transient, and special facility populations in the plume exposure EPZ; (b) an indication of the traffic analysis method and the method of arriving at road capacities; (c) a consideration of a range of evacuation scenarios generally representative of normal through adverse evacuation conditions; (d) consideration of confirmation of evacuation (e) identification of critical links and need for traffic control; and (f) use of methodology and traffic flow modeling techniques for various time estimates consistent with the guidance of NUREG-0654, Appendix 4.

Q.8. Briefly describe the methodology of the study.

A. The methodology used for analyzing evacuation times at TMI is a volume/capacity analysis on a roadway link basis in order to determine critical roadway segments under various evacuation scenarios. A computer program was used in the analysis to do the counting of vehicles on evacuation routes and to determine the volume to capacity ratios. The method for computing total evacuation time was a sequential method, consistant with one of the two acceptable approaches identified in NUREG-0654, Rev. 1, Appendix 4.

Detailed population estimates were made for permanent residents, transients, and special facility residents as specified in NUREG-0654, Rev. 1. The permanent population estimates were based on preliminary 1980 Census data.

In addition, a variety of data sources were used to estimate transient and special facility populations.

Populations were converted to the number of evacuating vehicles in several ways. Permanent residents were apportioned to vehicles based on the number of automobiles available for evacuation. This results in an average of less than two persons per vehicle. Transient populations were converted to evacuating vehicles based on assumed occupancy rates, except for transient employees for which vehicle estimates are based on survey data. The overall approach used to determine evacuating vehicles is reasonable and makes maximum use of available data.

Non-auto evacuation times are based on utilizing identified buses in close proximity to the EPZ. Multiple trips would be required to evacuate some residents. The time required would be dependent on the effectiveness of the plan to deploy the available resources.

The capacity analysis is based on a capacity range. The lower bound (i.e., lowest time estimate) reflects an upper limit on capacity. The upper bound provides a reasonable estimate of increased time due to a number of variables including state-of-readiness and less than ideal capacity and will provide protective action decisionmakers a useable mechanism for accounting for existing conditions at the time of evacuation.

The evacuation time estimates are based on three scenarios. The scenarios are normal conditions (daytime populations), adverse weather (snow), and nighttime when total populations are lower and family units are together. The evacuation time estimate thus considers a range of evacuation scenarios representative of normal through adverse evacuation conditions generally reflective of the type of conditions that might be expected to exist in an actual evacuation.

The analysis identifies a number of critical locations (potential traffic bottle-necks) and, while it assumes that adequate traffic control personnel are available for those critical locations, it has identified the critical locations so that emergency response officials may assign needed traffic control or account for the lack of traffic control at critical locations in their decision making.

Q.9. Based on your review of the evacuation time estimate study, have you identified any weaknesses or areas in the study which were not addressed.

A. Yes. An adverse weather scenario considering rain in combination with normal daytime populations might possibly produce evacuation times higher than the normal scenarios studied. My only concern in this regard was that no discussion was included in the evacuation time study which indicated that rain was considered.

Q.10. What is your opinion as to the overall compliance of the study to the criteria of NUREG-0654?

A. The report on evacuation times is responsive to and is in compliance with NUREG-0654, and the estimates provided delineate a reasonable range of times required to evacuate the TMI-1 plume EPZ.

Q.11. How, in your opinion, will emergency response personnel be able to utilize these evacuation time estimates?

A. These time estimates should provide to emergency response decisionmakers additional information and a basis on which a decision as to the feasibility of an evacuation could be made. The evacuation study could identify some necessary modifications to local evacuation plans as a result of bottlenecks or inadequate traffic control and routing.

THOMAS URBANIK II

APRIL 1980

BIOGRAPHICAL DATA

Education: Ph.D., Civil Engineering (Transportation), Texas A&M University, in progress  
M.S., Civil Engineering (Transportation), Purdue University, 1971  
B.S., Civil Engineering, Syracuse University, 1969  
B.S., (Forest Engineering), State University of New York, 1968

Professional Positions: Texas Transportation Institute, Texas A&M University, January 1977 to Present. Assistant Research Engineer.  
City of Ann Arbor, Ann Arbor, Michigan, 1972-1976. Traffic Engineer.  
City of Ann Arbor, Ann Arbor, Michigan, 1971-1972. Transportation Planning Engineer.  
Joint Highway Research Project, Purdue University, 1970-1971. Research Assistant.

Experience: Principal Investigator on several studies concerning public transportation planning at the state and local levels. Areas include general transit, elderly and handicapped transportation, and priority treatment of freeways and arterial streets. Other transportation planning studies include hurrievane evacuation, nuclear evacuation and truck routing for hazardous materials. Recent traffic engineering work includes delineation of portable barriers in construction zones.  
Responsible to Director of Streets, Traffic and Parking, Ann Arbor, Michigan. Responsible supervisory and professional traffic engineering work in directing the traffic engineering function of the department. Work involved responsibility for the application of professional engineering skill and knowledge to difficult traffic engineering problems in traffic regulation and control, street use, street lighting, geometrics, parking, school safety, curb cuts, and related traffic engineering activities. Was directly responsible for the supervision of the traffic signal and traffic sign maintenance personnel.  
Responsible to Director of Traffic Engineering and Transportation, Ann Arbor, Michigan. Reviewed transportation aspects of all plans for development in the city. Staff member to the Ann Arbor Transportation Authority responsible for budget and union negotiations. Staff Coordinator for the planning, design,

implementation, and operation of the Dial-A-Ride demand-responsive demonstration project.

Under general direction of Dr. Kenneth W. Heathington, Purdue University, designed attitudinal questionnaire concerning public transportation for a home interview survey in Lafayette, Indiana. Also analyzed survey results for inclusion in a report which was the basis for improving public transportation in Lafayette.

Affiliations: Institute of Transportation Engineers  
Transportation Research Board  
Sigma Xi  
Chi Epsilon

Registration: Registered Professional Engineer, Texas and Michigan

Publications: Urbanik, T. and Jose' A. Soegaard, Cost-Effectiveness of Accessible Fixed-Route Busses in Texas, Texas Transportation Institute, Technical Report 1061-1F, September 1979.

Urbanik, T. and Jose' A. Soegaard, Transportation of the Elderly and Handicapped in Texas: A Case Study, Texas Transportation Institute, Technical Report 1056-2F, September 1979.

Urbanik, T., Bryan-College Station Transit Improvement Plan, Texas Transportation Institute, September 1979.

Urbanik, T., Total Accessibility Versus Equivalent Mobility of the Handicapped, Institute of Transportation Engineers, Compendium of Technical Papers, 49th Annual Meeting, 1979.

Urbanik, T. et al., Survey of Vehicles and Equipment for Elderly and Handicapped Transportation, Texas Transportation Institute, Technical Report 1056-1, September 1978.

Urbanik, T. and R.W. Holder, Corpus Christi Elderly and Handicapped Transportation Study, Texas Transportation Institute, September 1978.

Urbanik, T., Texas Hurricane Evacuation Study, Texas Transportation Institute, September 1978.

Urbanik, T., Priority Treatment of Buses at Traffic Signals, Transportation Engineering, November 1977.

Urbanik, T. and R.W. Holder, Priority Treatment of High Occupancy Vehicles on Arterial Streets, Texas Transportation Institute, Report 205-5, July 1977.

Urbanik, T. and R.W. Holder, Evaluation of Alternative Concepts for Priority Use of Urban Freeway

Urbanik, T., et al., Ann Arbor Dial-A-Ride Project Final Report, Ann Arbor Transportation Authority, April 1973.

Urbanik, T., Ann Arbor Dial-A-Ride Operations, Highway Research Board Special Report 136, 1973.

Urbanik, T. and K.W. Heathington, Driver Information Systems for Highway-Railway Grade Crossings, Highway Research Record Number 414, 1972.

Urbanik, T., et al., The Greater Lafayett Area Bus Transit Study, Joint Highway Research Project, Purdue University, April 1971.

1           MR. GRAY: And this witness is now available for  
2 cross-examination.

3           (Pause.)

4           CHAIRMAN SMITH: Ms. Bradford?

5           DR. LITTLE: I have one quick question we might  
6 just as well get out of the way right here. I notice that  
7 your resume is dated April 1980.

8           THE WITNESS: Yes, ma'am.

9           DR. LITTLE: Is that correct?

10          THE WITNESS: Yes.

11          DR. LITTLE: We were wondering if you had  
12 completed your Ph.D. yet.

13          THE WITNESS: No, ma'am. I am a candidate. I  
14 have everything but my dissertation completed.

15          DR. LITTLE: All right. Thank you.

16          (Pause.)

17                           CROSS-EXAMINATION

18          BY MS. GAIL BRADFORD:

19          Q      In general, in your review of evacuation time  
20 estimates, is it true that traffic at the one mile or less  
21 radius may be likely to travel at a normal everyday speed  
22 for the road, but as traffic increases and as the distance  
23 from the plant increases, the speed of the traffic by the  
24 nine mile radius point is likely to be only a fraction of  
25 the normal traffic flow which would be -- which would travel

1 over that road?

2 A I am not sure I completely understand your  
3 question, but I do not think you can make such broad  
4 generalizations that would say that it is necessarily better  
5 or worse along a network. You could have a freeway picking  
6 up at the nine mile point that had ten lanes, and if there  
7 were only a few cars getting out there then their speed  
8 might be faster than closer in.

9 I think that is the basic reason for the analysis,  
10 is to relate the demand to the capacity of the system.

11 Q In the TMI study, was it true that the capacity  
12 factor was reduced at the nine mile point?

13 A The capacities were considered on a link by link  
14 basis throughout the network. So the capacities were, you  
15 know, were appropriate to what was actually on the ground  
16 there.

17 Q Oh, I guess --

18 A And I would not generalize and say whether nine  
19 miles is different than close in. Obviously there are more  
20 people as, you know, you get to the outside, there are more  
21 people. I mean, you have the people from one mile, two  
22 miles, three miles, and when you get to ten miles you have  
23 ten miles' worth of people, potentially ten miles' worth of  
24 people. So there are more people.

25 Q In your review of the study, did you look at the

1 times or did you just look at the system, yes, the system  
2 that they used?

3 A What do you mean, did I look at the times?

4 Q Did you look at the results of the study?

5 A Yes.

6 Q Can you tell us whether in this case it was true  
7 that the speed at the outside edge of the EPZ was going at a  
8 lower speed than the normal speed that traffic travels over  
9 those roads?

10 A The requirement -- the guidance does not have any  
11 specific requirement on reporting speeds as such, so there  
12 is no specific reporting of that. It could be determined  
13 rather easily by looking at the volumes and the capacities,  
14 and they did use that data in their analysis.

15 Speed was one of the factors that they did  
16 consider. But no, I cannot just tell you what that speed is  
17 without going in the report and doing some calculations.

18 DR. JORDAN: Mr. Urbanik, I think it would be  
19 helpful if you would just say a few words about the relation  
20 between the speed and the volume.

21 THE WITNESS: Okay. The relationship between the  
22 speed and the volume is basically, as volumes increase  
23 relative to the capacity of the system, the speeds  
24 decrease. You are actually -- your maximum capacity occurs  
25 not at 55 miles an hour on a roadway, but down at the 20 to

1 30 mile an hour range. But then as you -- as the system  
2 then exceeds capacity, then your speeds, you know, may  
3 increase even further, and that is when you develop the  
4 queues, and that is the basic methodology of using volume to  
5 capacity.

6 When the volume exceeds capacity, then there is a  
7 delay that is caused by these vehicles being queued up in  
8 the system. And you could -- you could take the total delay  
9 time and the distance involved and actually compute an  
10 average speed over the network which would be rather low.

11 DR. JORDAN: Will there be queues experienced?  
12 Does the study predict that there will be delays as a result  
13 of queueing?

14 THE WITNESS: Yes, sir.

15 DR. JORDAN: All right.

16 (Pause.)

17 BY MS. GAIL BRADFORD: (Resuming)

18 Q In your study of the 52 other evacuation time  
19 estimates that you have studied, is that generally true,  
20 that there is a queuing phenomenon, as you were just talking  
21 about?

22 A Not necessarily. You have plants that range from  
23 something on the order of -- I am just guessing here, but an  
24 order of magnitude, maybe 5,000 or 8,000 residents, up to  
25 sites within the 200,000 to 300,000 population, and so you

1 have a whole range of conditions, some of which have rather  
2 -- rather minor delays.

3 Q Could you describe a condition which would have a  
4 minor delay or a condition which would have a major queuing  
5 delay?

6 A Sure. If you had a roadway that only carried 500  
7 people to use it and had a capacity of 1500 vehicles per  
8 hour, those vehicles could move along at basically the  
9 normal operating speed of the roadway.

10 Q I guess it would be more helpful if you could  
11 describe it in terms of a more specific situation. We can  
12 understand the extremes fairly easily, but the more specific  
13 situation would be helpful.

14 A You mean a specific site?

15 Q Well, I do not know whether you could think of one  
16 offhand, but that could be helpful if you could.

17 A Well, I would hate to have -- having not reviewed  
18 it -- you have to realize I have reviewed 52 sites and I  
19 cannot recall all the -- all the details of the volumes and  
20 capacities on all those sites.

21 So I, without -- without reviewing one, I would be  
22 hesitant to just speak off the top of my head.

23 (Counsel for ANGRY conferring.)

24 DR. JORDAN: I think it would be helpful, however,  
25 if you could just give us a little feeling for the present

1 situation versus some of the other situations that you have  
2 run into. Are the evacuation times here unusually long  
3 compared to the average site or are they fairly typical?

4           THE WITNESS: Okay. I'd better understand your  
5 question. Excuse me. They are probably in the mid to upper  
6 range of times. There are some which are, you know,  
7 relatively just, you know, an hour or two. Some of the  
8 estimates have been made, you know, up in the range of a day  
9 or more.

10           So I would say that would be, you know,  
11 mid-range.

12           DR. JORDAN: Some as high as a day or more?

13           THE WITNESS: Right. Of course, you have to  
14 realize that some of them have not necessarily been done --  
15 done as well as this particular study.

16           DR. JORDAN: Done as well?

17           THE WITNESS: Done as well.

18           DR. JORDAN: I see.

19           THE WITNESS: I would say, you know, generally, in  
20 some cases that people that have not had the experience  
21 would probably tend to overestimate the time that is  
22 required for evacuation. They tend to be conservative and  
23 --

24           DR. JORDAN: All right. Could you, for my  
25 benefit, tell me about, well, what the results are from this

1 study in terms of fractions evacuated as a function of  
2 time? How much in two hours, what fraction in four hours?

3               THE WITNESS: Their -- their report has some of  
4 that information in it. I can -- if you look on page 77 of  
5 the Parsons study, they estimate the times for 50 percent  
6 and 90 percent evacuation. For 50 percent their estimates,  
7 lower to upper, two and a half to three and a half hours.  
8 Then five hours and 15 minutes to eight hours and 30 minutes  
9 for the 90 percent evacuation. And then the number for the  
10 whole would be higher than that.

11               I might -- might add, there is a report that  
12 should be coming out shortly which is the evacuation -- an  
13 analysis of the evacuation time estimates around 52 nuclear  
14 power plants, plant sites, volume one. It will have the  
15 number NUREG/CR-1856, and that report does give you the  
16 average -- the average times for various factors. I should  
17 say median times, because some of the times are a little bit  
18 higher.

19               We use the median because the mean actually is  
20 distorted somewhat.

21               DR. JORDAN: Are you an author of that report?

22               THE WITNESS: Yes, sir.

23               (Counsel for ANGRY conferring.)

24               THE WITNESS: If I might just continue, since you  
25 asked the question, just looking into that particular

1 report, the evacuation times for the general population  
2 range from a minimum of one hour; 25 percentile was 2.9  
3 hours; the median was -- was five; the 75th percentile was  
4 eight, and the maximum was 21 hours.

5 DR. JORDAN: This was -- this is over all sites?

6 THE WITNESS: Over all the 52 sites in the United  
7 States.

8 DR. JORDAN: Would you give me those numbers again  
9 slowly?

10 THE WITNESS: Sure. This is for normal  
11 conditions: minimum, one hour; 25th percentile, 2.9 hours;  
12 median, five hours; 75th percentile, 8.0 hours; maximum, 21  
13 hours.

14 DR. JORDAN: Now, the numbers that you quoted, are  
15 those the numbers for getting 50 percent of the people out  
16 or 80 percent of the people out or something?

17 THE WITNESS: That is 100 percent.

18 DR. JORDAN: These were the 100 percent numbers?

19 THE WITNESS: Right, based on all reports, you  
20 know, good bad and indifferent.

21 DR. JORDAN: All right, fine. Go ahead.

22 Did that complete your --

23 THE WITNESS: Yes, sir.

24 DR. JORDAN: Thank you.

25 BY MS. GAIL BRADFORD: (Resuming)

1 C Do you know which one is the 21-hour? Is that  
2 Indian Point or --

3 A I would have to look that up. That -- again, that  
4 report has all the times for all the sites as appendices.  
5 You can look at -- look at what times they reported.

6 Q Do you have a copy there?

7 A I have just a draft copy here.

8 Q Could you --

9 A I do not know when -- when the NRC is going to  
10 release it.

11 Q Could you look up in there conveniently to find  
12 out what --

13 A It would take a while to do that. There are 52  
14 sites.

15 Q It is not conveniently indexed yet.

16 A There is one table for every site. I mean -- you  
17 know, we could look at Indian Point.

18 CHAIRMAN SMITH: There are a few sites that would  
19 suggest themselves as being the site in question. Have you  
20 considered -- would that be helpful, if we suggest some?

21 THE WITNESS: Yes, right. Here is Indian Point,  
22 talking about five hours and ten minutes as the general  
23 population evacuation time for normal conditions.

24 BY MS. GAIL BRADFORD: (Resuming)

25 Q Is that the comparable figure that you just gave

1 us?

2 A Right, comparable figures.

3 Q Okay.

4 (Witness reviewing document.)

5 DR. LITTLE: You might check Zion.

6 THE WITNESS: I am just flipping through here to  
7 see if I can find the one that is 21 hours.

8 DR. LITTLE: You might look at Zion and see if  
9 that is one.

10 THE WITNESS: Excuse me?

11 DR. LITTLE: You might look at Zion, the Zion  
12 plant.

13 THE WITNESS: I do not believe it is Zion, but --

14 (Witness reviewing document.)

15 THE WITNESS: Yes, I believe it is. You are  
16 right. I can convert minutes to hours. 60 minutes in an  
17 hour, 21 hours, right. Yes, Zion is the one that is  
18 estimated at 21 hours.

19 (Counsel for ANGRY conferring.)

20 BY MS. GAIL BRADFORD: (Resuming)

21 Q In this particular study or in the evacuation time  
22 estimate studies you are familiar with, is consideration  
23 given to whether the traffic or abnormal traffic outside of  
24 the ten-mile EPZ will congest the exodus of traffic from  
25 within the EPZ?

1       A     The general assumption that is used is that some  
2 means of traffic control is established outside the EPZ such  
3 that that traffic will not be adversely affected.

4       Q     Do you mean that they will be prevented from going  
5 onto the interstates or --

6       A     For example, that somewhere outside of the EPZ,  
7 that you would close down the toll road and divert it to  
8 another route, through Harrisburg, for example, over  
9 Interstate 81.

10      Q     If that traffic control were not done or were not  
11 possible for some reason, can you say whether -- whether the  
12 congestion would queue up the traffic within the EPZ?

13      A     Well, if there the same cars -- if there are more  
14 cars competing for the same space, then it would take more  
15 time to evacuate. The capacity of the road is irrespective  
16 of whether they are coming from within or without the EPZ.  
17 If they go to the same point, they have to add up.

18      Q     Is it normal in doing a study like this -- or  
19 should I say, is it useful in doing a study like this to  
20 figure out whether or not there is an impact on the exodus  
21 from the ten-mile EPZ from -- you could make different  
22 assumptions. You could assume that half of the people  
23 within the 10 to 20-mile radius also spontaneously evacuate,  
24 or you could make a series of assumptions like that?

25      A     That would a reasonable if you assumed that

1 nobody was going to do anything. I think if your assumption  
2 is that some action is going to be taken by, you know, state  
3 or local agencies, then there is -- that is not necessarily  
4 a necessary scenario.

5 Q I guess we had a concern that there may not be  
6 enough traffic control persons to take care of the 20-mile  
7 radius in addition to just the ten-mile radius, I mean, if  
8 that were the case.

9 A If there were not adequate traffic control in an  
10 area that was critical to evacuation, it would have an  
11 effect. That is one of the reasons the Licensee used more  
12 than one scenario.

13 Q Can you say how the difference in areas affected  
14 the assumption or proposition that the persons within 10 to  
15 20 miles might also evacuate?

16 A I do not believe that there was any specific  
17 consideration of evacuation beyond the ten miles. There is  
18 -- there is no guidance to do that in the regulations.

19 (Counsel for ANGRY conferring.)

20 Q I have a copy of NUREG/CR-1745, "Analysis of  
21 Techniques for Estimating Evacuation Times for Emergency  
22 Planning Zones." I assume you are familiar with that?

23 A Yes, I wrote that.

24 Q Starting at the bottom of page 3 and going on to  
25 the top of page 4, I am wondering whether you would still

1 agree with the statement, that is to say:

2            "The length of time that it takes to clear the  
3 area cannot be calculated with any degree of certainty  
4 without knowing how long it takes to notify the populace of  
5 an impending evacuation and how long each person will  
6 consume in preparation. Unfortunately, little research has  
7 been done that addresses either of these two problems."

8            A      I basically agree with that. If people are not  
9 notified for one or two hours, then there has to be one or  
10 two hours from time zero until people start evacuating.

11          Q      In this -- in this study there was an assumption  
12 that it would take, after the notice to evacuate had been  
13 received, that it would take an average of 20 minutes for  
14 preparation time. Did I get that right, Mr. Zahler?

15          MR. ZAHLER: No. Actually, the report assumes a  
16 minimum of 20 minutes for preparation time. As the witness  
17 has explained, in loading their model there are delays --  
18 there are times beyond the 20 minutes beyond which they  
19 assume that people did not even get onto the network. So  
20 the minimum preparation time is 20 minutes. It is not the  
21 average.

22          MS. GAIL BRADFORD: Yes, I am sorry.

23          BY MS. GAIL BRADFORD: (Resuming)

24          Q      Is that a reasonable --

25          A      Yes. Let me expand on that statement a little

1 bit. There are -- there are two kinds of sites, in a  
2 sense. There are those sites that have higher population  
3 densities and those that have lower population densities.  
4 If in fact it took -- if the actual transportation time, the  
5 response time, was less than an hour, then notification time  
6 becomes more significant, because if it took you two hours  
7 to notify everybody then the last guy cannot leave for two  
8 hours.

9 So you cannot just take 20 minutes of preparation  
10 and an hour of transportation, so you can get out in an hour  
11 and 20 minutes, when it is going to take you two hours to  
12 notify everybody.

13 However, in the other extreme, which is typical of  
14 the TMI site, you are talking about an evacuation that takes  
15 literally hours, and all you have to do during that first 20  
16 minutes is get enough people on the roadway to utilize that  
17 first hour's worth of capacity.

18 So the assumption of 20 minutes is a reasonable  
19 assumption in this particular case. You do not have to get  
20 all 200,000 people on the road in 20 minutes. If they were  
21 there, they only have then, you know, six, eight hours of  
22 waiting. You know, they -- they could just as well be  
23 spending the time getting prepared.

24 (Counsel for ANGRY conferring.)

25 Q Can you tell us or give us a general range of what

1 percentage of the population you might need to get on the  
2 road within the first hour to use that hour's capacity?

3 A Sure. In this particular case, if we were to  
4 assume that it takes ten hours to evacuate, we would need to  
5 get ten percent of the population on during the first hour.

6 Q Oh.

7 (Counsel for ANGRY conferring.)

8 Q You talked about the possibility that rain might  
9 be a good example of an adverse weather condition in this  
10 area. Did you ever consider that fog might also be an  
11 example of adverse weather in this area, which might be  
12 worse than the snow condition that they used?

13 A No, I did not specifically consider fog. I think  
14 rain is a more -- more typical occurrence. But I do not --  
15 I am not familiar with the meteorology of Harrisburg.

16 (Pause.)

17 DR. JORDAN: Is the reason for not considering fog  
18 because you did not feel it was an important factor in  
19 occurrence rate or because you felt that there were other  
20 factors that were more important?

21 THE WITNESS: I would -- I would feel that  
22 generally rain would be a more important factor.

23 DR. JORDAN: Why is that?

24 THE WITNESS: Because of its general occurrence.

25 The adverse condition is not necessarily a total worst case

1 scenario. It is a -- we could have an earthquake or any of  
2 a number of things that would -- would totally disrupt, or  
3 you could have a snowfall that might take you a day or two.  
4 What if you got 25 inches of snow?

5                 The purpose of the adverse weather scenario is to  
6 look at some occurrences that have, you know, a reasonable  
7 possibility of happening.

8                 DR. JORDAN: I see. So that your considerations,  
9 then, did take into account the relative probability of the  
10 various adverse conditions in order to arrive at a  
11 statistical estimate and statistical fluctuations about a  
12 mean, is that right?

13                 THE WITNESS: Well, I would not call it quite that  
14 scientific in terms of being a statistical analysis. But it  
15 does consider the fact that certain events are more likely  
16 to occur, and rain is one of those events that occurs with  
17 reasonable frequency.

18                 DR. JORDAN: I see. Then it is not the rain which  
19 slows the traffic down or increases the evacuation time over  
20 that of a fog. It is just that rain is a much more likely  
21 occurrence.

22                 THE WITNESS: Right.

23                 DR. JORDAN: All right.

24                 THE WITNESS: I might add, the estimates are a  
25 tool to aid the planners in the process. It is not to give,

1 you know, the answer under all -- all conditions. One can  
2 factor in some other things once you have the basic -- basic  
3 information to work with.

4 DR. JORDAN: Did I get the -- I arrived at a  
5 conclusion from one of your statements that may be wrong,  
6 namely that as evacuation proceeds one reaches a kind of a  
7 saturation condition, and therefore sort of a constant  
8 volume over a considerable period of time; is that correct?

9 THE WITNESS: Yes, sir.

10 DR. JORDAN: All right.

11 MR. ZAHLER: Dr. Jordan, just so that the record  
12 is complete, I bring to your attention that there is a place  
13 in the record -- it is not in the emergency planning area --  
14 where Mr. Riethle did testify as to the occurrence of heavy  
15 fog in the area, defined as less than one quarter mile's  
16 visibility. And the records based on meteorology kept at  
17 the Island is that that occurrence is .4 percent of the  
18 time. That is in the record just before his testimony on  
19 groundwater.

20 DR. JORDAN: What was the last statement you said,  
21 just before --

22 MR. ZAHLER: That testimony is in the record just  
23 before his testimony on groundwater.

24 DR. JORDAN: On groundwater, oh. All right, thank  
25 you.

1 BY MS. GAIL BRADFORD: (Resuming)

2 Q In your judgment, have car ownership patterns  
3 changed since 1970?

4 A I do not think significantly. We are beginning to  
5 reach a saturation point in terms of number of cars and  
6 number of drivers. Once you have one car per registered  
7 driver, the need for additional cars diminishes, whereas 20  
8 years ago when you had, you know, one car per three drivers,  
9 as our affluence increased so did the number of our cars.

10 DR. JORDAN: Ms. Bradford, you are just too young  
11 to know what he is talking about.

12 (Laughter.)

13 BY MS. GAIL BRADFORD: (Resuming)

14 Q Is it accurate to say that the difference between  
15 the upper and lower time estimate, which is to say the time  
16 represented by subtracting the lower time from the upper  
17 time, is equal to the advance mobilization time needed to  
18 effectuate the lower time estimate?

19 A I do not believe so. The -- the difference  
20 between the upper and lower ranges represents basically a  
21 difference in capacity and some other factors that affect  
22 capacity, like degree of preparation. So the upper bound is  
23 basically developed based on a reduced capacity for a number  
24 of factors.

25 Q I was interested in your comment that one could

1 assume that, if it takes ten hours to get people out, then  
2 ten percent should leave within the first hour. How -- I am  
3 wondering how that relates to the description we got of how  
4 they loaded their model. As I remember, they called it a  
5 static loading model and they said they assumed that the  
6 people nearest the plant got on the highway first, and they  
7 said they platooned people on, and they envisioned that  
8 everyone started -- joined the train when the traffic got to  
9 them.

10 And that was just what I envisioned from what they  
11 were saying. Is that accurate or how does that relate to  
12 your ten percent idea?

13 A Well, in doing theirs they assumed essentially  
14 instantaneous loading. Their -- the guidance provides two  
15 alternatives. We call it the sequential method, and the  
16 other one is distribution method. Some people are overly  
17 enamored with mathematics and have used distribution  
18 functions to load onto the network.

19 As their analysis -- the reason that we allowed  
20 the two alternatives -- and I should not say "we." The  
21 reason I believe that the NRC allows the two alternatives,  
22 based on some of our input, is that it does not make that  
23 much difference, especially in these cases where you have  
24 long, long amounts of queuing. And that is really what I  
25 was explaining earlier, that if there are low levels -- low

1 volumes, then these other factors take on importance, but  
2 when you get into multiple hour evacuations, the fact that  
3 you load these people on two hours after the beginning of  
4 evacuation has essentially no effect, because they get --  
5 they get at the end of an eight or a ten-hour queue and they  
6 just arrive at the queue later in time, but they still get  
7 out at the same time.

8 Q But don't they then sit there in the traffic flow  
9 for eight hours or so, whatever, some long period of time?

10 A That would in fact be true if they all left  
11 instantaneously. We are talking about modeling a process to  
12 get an answer. And what I am, I guess, trying to tell you  
13 is that if you approach it from two different approaches you  
14 are going to get the same -- same answer.

15 The fact that they loaded it sequentially or  
16 loaded it instantaneously does not mean that that is the way  
17 the people are going to respond. It is basically -- it  
18 means basically that is how they analyze the problem. And  
19 what I am saying to you is that -- and what is in that  
20 report, CR-1745 -- each person is going to have an  
21 individual response distribution. They will not have a  
22 distribution, but they will have an individual response  
23 function.

24 And they will leave at different times. I do not  
25 suspect everybody is going to leave at the same time.

1 C And so what --

2           A     I do not think that affects the answer. Just  
3 because they did it that way does not change the answer.

4 Q What you are saying is that in reality it does not  
5 really matter which ten percent leaves first, the first  
6 hour?

7 A Right.

8 (Counsel for ANGRY conferring.)

9 Q I assume you are not at all familiar with the five  
10 county plans in this area?

11 A No, I am not.

12 Q If you -- if you assume that the York County plan  
13 has decontamination points outside the ten-mile EPZ, would  
14 that change your analysis of the time estimate?

15 A You would have to have a service function to know  
16 how fast they were servicing them. I mean, if they had one  
17 guy trying to decontaminate 100,000 cars, it would take  
18 quite a while. It would affect it.

19 (Counsel for ANGRY conferring.)

20 Q If -- I believe they assumed that they -- that  
21 there was no refueling needed for cars. And it seems to me  
22 that if cars sit there for a long time in traffic, then they  
23 might need gas after sitting there running for some several  
24 hours.

that the information available to the public is also available to the media.

1 disabled vehicles would not be a problem. They could be  
2 gotten out of the way or the traffic flow could go around  
3 them.

4           Are these reasonable assumptions?

5       A    Yes, I believe they are reasonable assumptions.

6           In -- I do not think either gasoline or accidents  
7 or disabled vehicles are a problem. We did an analysis for  
8 a hurricane evacuation where we plugged in some accident  
9 rates, response times of emergency wreckers, and a whole  
10 bunch of things like that, and also doubled the accident  
11 rate, did the analysis again, and basically it is  
12 insignificant effect on evacuation time.

13      Q     Do you know of any tests or implementations which  
14 test the accuracy of the assumptions used by Parsons,  
15 Brinckerhoff for this study?

16      A     Well, basically, the process is based on standard  
17 transportation procedures that have been used for a long  
18 time. So they have stood the test of everyday use.

19      Q     Are they commonly used on a scale of this size, or  
20 is this not a large size for transportation planning?

21      A     Much larger scale. We do modeling for cities like  
22 Houston, where we have thousands of zones, run huge big  
23 computer models where we push these cars around for hours of  
24 time in the computer. Evacuation is basically a very simple  
25 subcase of the normal transportation planning process.

(Counsel for ANGRY conferring.)

2 Q I believe there is an assumption in this plan that  
3 people will be able to get to the pickup points before the  
4 buses on presumably a second round would be able to get to  
5 the pickup points. Would you say that a critical time  
6 factor would be the arrival of buses for persons without  
7 their own automobiles, rather than the arrival of people?

8                   Do you know that -- do you know whether those  
9 assumptions would be correct in general that -- or can you  
10 answer that?

11       A     I believe the analysis of using the buses for the  
12 non-auto population is reasonable. Obviously, you have to  
13 have a plan to do all of this. But I do not have any  
14 problem with it.

15 (Counsel for ANGRY conferring.)

16 Q So you are saying that that answer is really  
17 dependent upon the quality of the plan or the nature of the  
18 -- or the implementation of the plan?

19 A Yes.

20 (Counsel for ANGRY conferring.)

21 Q I meant the local county plan, not the time  
22 estimate.

23           A     Right. It -- the whole estimate process is really  
24 to get people the information they need to do the planning  
25 that would be required to develop an effective evacuation.

1 Q Can you -- can you give us an idea of in what way  
2 the TMI evacuation time estimates would be affected if the  
3 population statistics were accurate, including transient  
4 patterns, but the number of private cars available to  
5 persons within the EPZ for a workday scenario were  
6 overestimated by ten percent, which is to say there would be  
7 fewer private cars available?

8 A Well, I think their analysis in that area is  
9 conservative, because they basically took all the available  
10 automobiles. So if they -- if it had turned out that there  
11 were less automobiles being used, which I think it would be  
12 the case, that the number of automobiles would more closely  
13 approximate the number of households rather than the number  
14 of automobiles that actually exist, that the evacuation time  
15 would be less.

16 Q If one -- it would seem to me that certainly fewer  
17 cars would be leaving there, but more buses would be needed  
18 to pick up other people. That was my assumption.

19 A Well, I think there would be fewer cars and more  
20 people per car. The assumption they made was that every car  
21 that is available within the area would in fact be used for  
22 evacuation, that if I had two cars that my wife would drive  
23 one and I would drive the other one. I do not think that is  
24 necessarily the case.

25 I think it would be reasonable in many cases that

1 one of the cars would be left behind. And there is some  
2 information to support that on some surveys we have done  
3 with hurricane evacuations.

4 (Pause.)

5 Q I do not suppose you can see it. There is a map  
6 -- could you hand the witness this map of the 50-mile  
7 radius.

8 (Counsel handing document to witness.)

9 THE WITNESS: Thank you.

10 BY MS. GAIL BRADFORD: (Resuming)

11 Q That, I believe, is a map of the Three Mile Island  
12 area, 50-mile radius, showing a computer-generated printout  
13 of the population density in the area. Can you identify the  
14 ten-mile EPZ on that map?

15 A Yes.

16 Q And can you tell us or can you give us just a  
17 judgment, what effect do you think the population density in  
18 the 10 to 20-mile range, which includes portions of  
19 Harrisburg, York -- I do not know whether it also includes  
20 Lancaster; Lancaster might be a little further out than  
21 that. Can you tell us what effect you might estimate an  
22 evacuation of the 20-mile area would have on the 10-mile  
23 EPZ?

24 A I really would not like to speculate on that. It  
25 basically would require some analysis to make a real

1 definitive answer. You know, our report says that  
2 evacuation time is basically a function of population and  
3 roadways. And without going through an analysis it would be  
4 pure speculation to say that it was better or worse. It  
5 would be like me coming in here and, having done no analysis  
6 on the ten miles, and say it is going to take ten hours to  
7 get out.

8 I do not think the credibility would be there.  
9 That is the reason for having the analysis.

10 (Counsel for ANGRY conferring.)

11 A If you would like a little speculation, the only  
12 -- some of our preliminary analysis indicates that it does  
13 not take much longer to evacuate further distances. We have  
14 done some analysis, and it indicates that, contrary to my  
15 intuition -- I would expect that the times would increase as  
16 you went with distance. The initial analysis indicates --  
17 and this is over all the Licensees and over all the  
18 estimates -- indicates that as distance increases the  
19 evacuation times have generally gone up less than  
20 proportionally.

21 Q Is that on studies of greater than ten miles or at  
22 the ten-mile range?

23 A That is based on the data from two miles, five  
24 miles, and ten miles. And the time increase from five to  
25 ten miles does not even double.

1           Q     That is --

2           A     But -- go ahead.

3           Q     That is just over averages of these 52 studies?

4           A     Right.

5           Q     Have you sorted that data out by -- in a -- well,  
6 there were some comments in your book about the Hans and  
7 Sells study, and I understand your comments that that was --  
8 there were problems applying that data.

9           A     I would not use Hans and Sells for anything.  
10 Basically, they indicated that as the population density  
11 increased that the accident time decreased. And taking that  
12 to its logical conclusion, the best place to locate your  
13 power plant would be midtown Manhattan.

14          Q     Or Bethesda?

15          A     Or Bethesda.

16                 (Laughter.)

17                 DR. JORDAN: The increase with distance I guess  
18 intrigues me a bit. You would think as a first  
19 approximation it might increase as the square, because as  
20 the number of cars presumably increases with the square of  
21 the distance. On the other hand, the perimeter which they  
22 are evacuating also increases linearly with distance. So  
23 therefore maybe a linear approximation would be expected.  
24 Is this kind of reasonable?

25                 THE WITNESS: It appears to be pretty linear, and

1 that was contrary to my intuition. And -- but I would, you  
2 know, the data is less than super, okay.

3 DR. JORDAN: Right.

4 THE WITNESS: And there are some times that look  
5 to be inconsistent. But I can give you the actual numbers  
6 here. Again, comparing apples and apples, these are  
7 comparable to the other numbers I have given you earlier.

8 Okay, general population, normal conditions:  
9 two-mile radius, 1.5 hours median time; five-mile radius,  
10 2.2 hours median time; and ten-mile radius, 5.0. So it is  
11 roughly double, pretty close to linear.

12 BY MS. GAIL BRADFORD: (Resuming)

13 Q In your rough guess, is that affected by a  
14 situation and how would it be affected by a situation where,  
15 for example, here you see that we have a much denser  
16 population in the 10 to 20 mile, or population standards in  
17 the 10 to 20-mile area?

18 A Would you repeat the question?

19 Q How is that linearity affected by the density of  
20 the population centers within the 10 to 20-mile area?

21 A That is why I say the data is at best speculative,  
22 because there is no correlation -- no correlation was made  
23 with other factors that we know affected, like population  
24 density. It just seems to suggest to some extent, as you  
25 get further out you also have more roads, so the evacuation

1 time may not take that much -- much longer.

2                 But this is based on just the reported data for  
3 the various sites. So it would include those where the  
4 population density probably in the data actually increases,  
5 because most of the plants are located outside of more  
6 developed areas. And we start picking up population density  
7 as we get further away from the plant.

8                 Typically, the plant is not located in Harrisburg  
9 and you are evacuating to York. The plant is located closer  
10 to York and you are evacuating toward bigger areas.

11              Q     Is it your understanding that the Parsons,  
12 Brinckerhoff study used the assumption that 100 percent of  
13 the population could be warned within 45 minutes?

14              A     There is no assumption on my part that they did  
15 that.

16              Q     I think it is on page 74.

17              A     The only assumption that would be critical is the  
18 20-minute warning, the 20-minute notification preparation  
19 time. If that is not reasonable, then the times would  
20 increase. Like we said before, all you need is like maybe  
21 ten percent of the population evacuating during the first  
22 hour. So you do not have to have a large population warned  
23 within 45 minutes.

24                 (Counsel for ANGRY conferring.)

25              Q     In general, what error factor would you estimate

1 for a study using the techniques and assumptions used by  
2 Parsons, Brinckerhoff, or in specific for this study?

3 A I could only guess, perhaps 10, 20 percent.

4 (Counsel for ANGELY conferring.)

5 MS. GAIL BRADFORD: Thank you. That is all the  
6 questions we have.

7 CHAIRMAN SMITH: Ms. Straube?

8 BY MS. STRAUBE:

9 Q Mr. Urbanik, how long have you been at Texas A&M  
10 -- right over here.

11 A Excuse me.

12 Q How long have you been at Texas A&M?

13 A Four years, January of '77.

14 Q I have to do this. I am sorry, I went to Rice  
15 University. Are you a football fan at all?

16 A Yes. I believe we have a better football team.

17 Q But which school has the better band?

18 A A&M.

19 Q Wrong. Okay.

20 (Laughter.)

21 A You realize, I am testifying outside of the area  
22 of my expertise.

23 (Laughter.)

24 CHAIRMAN SMITH: But you also realize, he is under  
25 oath.

1                   (Laughter.)

2                   MS. STRAUBE: That's right.

3                   BY MS. STRAUBE: (Resuming)

4                   Q        Okay. We have already been discussing, or Ms.

5 Bradford has already discussed NUREG/CR-1745, which I  
6 believe you authored; is that correct?

7                   A        Yes.

8                   Q        How does this relate to the development of  
9 NUREG-0654?

10                  A        It was basically the preliminary -- excuse me,  
11 preliminary work in the area. At that point in time we were  
12 basically reviewing the state of the art and made some  
13 recommendations on how to proceed. Most or all of those  
14 recommendations, plus some more, were eventually  
15 incorporated in 0654.

16                  Q        Well, okay. I guess the problem I am having is  
17 the date published for both 0654 and this NUREG/CR-1745 is  
18 November of 1980. And I am wondering -- I believe -- I am  
19 wondering how the NUREG/CR-1745, whether it was considered  
20 in developing 0654 and whether it was the final version of  
21 your CR-1745 that was considered.

22                  A        Okay. The actual -- the actual date of the report  
23 when I finished it was June of '80, and the report was  
24 really kind of laying around for a while in the review and  
25 other process. So it was largely developed in January and

1 February of 1980, following Brian Grimes' letter of November  
2 '79. So the date is probably a little deceptive.

3 Q Okay. Are there any major differences between the  
4 analysis recommended in NUREG/CR-1745 and that recommended  
5 in NUREG-0654?

6 A NUREG-0654 includes everything in 1745 and then  
7 some.

8 Q Okay. I want to go through a couple additional  
9 considerations which you identified in 1745, and if they are  
10 incorporated in 0654 just say so. If they are not, please  
11 tell me.

12 On page 13 of 1745, I will quote the sentence:  
13 "The analysis is subject to error whenever the scope is  
14 limited to estimates of the total demand and capacity of  
15 perceived critical links. Unless the analysis is performed  
16 systematically for all transportation links, the wrong  
17 roadways may be selected as critical links."

18 Now, has that recommendation or problem been  
19 corrected in NUREG-0654?

20 A Yes. The requirements do require a systematic  
21 approach and if there -- if the analysis was done without  
22 that, they would get a less than satisfactory rating.

23

24

25

1       Q     Okay. Then the obvious next question is does the  
2 Parsons, Brinckerhoff system use the systematic approach  
3 which you described in CR 1745?

4       A     Yes, it does.

5       Q     Okay. If you could turn to page 15 of CR 1745,  
6 and I will quote again. It says, "Since the evacuation of  
7 special facilities would typically be accomplished  
8 concurrently with the general evacuation, evacuation time  
9 estimates for special facilities should clearly reflect any  
10 impacts of the general evacuation."

11              Is that a requirement of NUREG-0654?

12       A     Yes.

13       Q     And from your review of the Parsons, Brinckerhoff  
14 study, do the evacuation times for special facilities take  
15 into account the impacts of a general evacuation?

16       A     Yes.

17       Q     And also on page 15, it says "There are many" -- I  
18 am quoting again -- "many different types of traffic  
19 generators such as factories, universities or military bases  
20 that have a seasonal or time of day variation that may  
21 require special consideration."

22              Is that a requirement in NUREG-0654?

23       A     Yes.

24       Q     And from your review of the Parsons, Brinckerhoff  
25 study, was that type of special consideration given?

1        A     Yes.

2        Q     Would it be possible to identify which traffic  
3 generators were given that kind of special consideration in  
4 the Parsons, Brinckerhoff study?

5        A     Well, there are numerous facilities that were  
6 identified in their study. Without going over and relooking  
7 at it, I could not specifically tell you the names, but I  
8 would say that there analysis and identification of those  
9 facilities was extensive.

10       Q    I understand that they were identified. Were the  
11 seasonal or time of day variations taken into account for  
12 those facilities?

13       A     Yes. By considering them they are taken into  
14 consideration, yes. The analysis generally -- the approach  
15 taken in this case was to identify basically worst case type  
16 situation in putting them all in. This results in generally  
17 a conservative type estimate by including everything and  
18 lumping them all together. That is why they have a scenario  
19 for night, for example. That is a different time of day.

20       Q    I understand that, but that is not specific to any  
21 facility. It is night-time for everybody. What I am asking  
22 is whether there was special consideration given for each of  
23 these additional traffic generators, such as factories or  
24 colleges or universities.

25       A     It was included and it is my judgment that it

1 satisfies those requirements.

2 Q As a comparison -- now, I know in your direct  
3 testimony you said that you did not compare the Parsons,  
4 Brinckerhoff study to the state and county plans; is that  
5 correct?

6 A Yes.

7 Q Do you know whether such a comparison has been  
8 done either by FEMA or by NRC?

9 A No, I do not know.

10 Q And do you know whether such a comparison is going  
11 to be done?

12 A I do not know.

13 Q You also stated in your direct testimony and I  
14 believe on cross examination it was covered some that you  
15 would like to see rain and normal daytime population used as  
16 the adverse weather scenario.

17 A Yes.

18 Q Is that correct?

19 A Yes.

20 Q Okay. Based on your review of the other 52, I  
21 believe it is, evacuation time studies, what do they in  
22 general use as the adverse weather scenario?

23 A Generally people have taken the Parsons approach  
24 of using snow as the worst case.

25 Q Okay. And do you think that using rain and normal

1 daytime population would give longer time estimates than  
2 those contained in the Parsons, Brinckerhoff study?

3 A I think it is possible that it might increase the  
4 time slightly. I do not think it would be of an order of  
5 magnitude, but there might be a slight increase.

6 Q Do you mean like total of an hour or -- I do not  
7 know what you mean by slight increase.

8 A Okay. The difference in doing a snow-type analysis  
9 and a rain analysis having different impacts relates to the  
10 population that is used in that analysis. The reason for  
11 the objection in some cases to using snow is to use an  
12 example of a place which has a large seasonal population  
13 during the summer. They take a winter case with a lower  
14 population and snow conditions and use that as a worst case  
15 and actually come up with a time that is less than during  
16 the summer with good conditions

17 In this case I believe they used snow with a  
18 population component that would be less than normal daytime  
19 population, so if you used a normal daytime population and  
20 rain, you would result in a slightly longer time.

21 Q Okay. And I guess you have not answered it, and  
22 maybe you cannot, what you mean by slightly longer time.

23 A I would be speculating but I would say, you know,  
24 10, 20 percent as opposed to, you know, 100 or 200 percent.

25 Q Okay. Am I correct in summarizing your testimony

1 in saying that you feel the Parsons, Brinckerhoff study is  
2 an evacuation time study which complies with NUREG-0654 as  
3 to methodology?

4 A Yes.

5 Q Okay. Would you agree with me that the  
6 assumptions relating to the state and local plans have to be  
7 exactly the same as those in the plans to make the study in  
8 total compliance with NUREG-0654?

9 A No, I do not agree with that.

10 Q To what -- wait a minute. Okay. Would you agree  
11 with me that the assumptions in the study have to follow the  
12 state and local plans or the provisions in the state and  
13 local plans to make the evacuation time study useful as a  
14 decision-making tool?

15 A I think it has to reasonably approximate what is  
16 planned to be of use, yes.

17 Q Okay. Using the Parsons, Brinckerhoff study and  
18 assuming that the decision-maker is going to use it in its  
19 present format, what additional information does the  
20 decision-maker have to factor in in making that protective  
21 action recommendation?

22 A Well, he has to know whether or not those  
23 assumptions are going to be implemented in that manner. For  
24 example, if the decision is the situation is critical, we  
25 need to evacuate, our choice is to evacuate immediately,

1 then he would have to use the longer time to reflect the  
2 lack of traffic control.

3 So the decision-maker would have to understand the  
4 parameters that went into it. He could not use the lower  
5 time estimate for an immediate evacuation if no one was  
6 going to be prepared. He could use it, I guess, but it  
7 would not be reasonable to use that time if the other  
8 assumptions are not met.

9 Q Okay. Well, I am not sure I am going to get what  
10 I want, but if we are now at the point where the  
11 decision-maker is trying to decide whether they want to  
12 evacuate or not and they have in front of them the  
13 Parsons-Brinckerhoff study, what additional information do  
14 they have to have to make that study useful? What  
15 additional information do they have to gather to make that  
16 study useful?

17 If I could make a suggestion, for example they  
18 have to know whether the traffic control points have people  
19 manning or personning the traffic control points. I mean  
20 that is an example. What other type of information like  
21 that would the decision-maker have to get?

22 A Well, he would have to know how much time he had  
23 available which would go into using that for either  
24 evacuation or sheltering-type things. Is that what you are  
25 driving at?

1           Q     What assumptions that are made in the Parsons,  
2 Brinckerhoff study that the decision-maker has to verify  
3 before he or she can use that study in making a protective  
4 action recommendation or decision?

5                         (Pause.)

6           A     There are -- I do not know that he would have,  
7 other than the ones -- the one I have identified -- that  
8 comes to mind is the traffic control, the other thing about,  
9 you know, buses, you know, if he did not have any buses  
10 available it would be kind of meaning -- not of great  
11 meaning to assume it would take ten hours or whatever out by  
12 bus.

13                  MS. STRAUBE: Okay, thank you. I have no further  
14 questions.

15                  CHAIRMAN SMITH: Ms. Straube, what were you trying  
16 to develop by the question that you asked: Do you agree that  
17 the assumptions have to follow the plans to be in total  
18 compliance with 0654? What were you trying to establish  
19 there?

20                  MS. STRAUBE: Well, whether an evacuation time  
21 study, which does not have the same assumptions as the state  
22 and local plans, would comply with NUREG-0654. Does that  
23 clarify it?

24                  CHAIRMAN SMITH: Yes, I guess it does; and the  
25 answer was no, and you were satisfied with that answer.

1 MS. STRAUBE: Yes.

2 (Board conferring.)

3 DR. LITTLE: I have a follow-on question on this.

4 Being familiar with how many studies are utilized or not  
5 utilized after they are done, especially if they are in  
6 compliance with some regulation, what do you assume will be  
7 done with this report? The first requirement is 0654 says  
8 that the Licensee must have estimates of evacuation times,  
9 and this report was produced in response to that requirement.

10 Now does it go in a drawer and somebody checks off  
11 on the list that this has been satisfied, or what use do you  
12 visualize should be made of this report? Not just  
13 satisfying an item on a checklist, I hope.

14 THE WITNESS: I guess you are asking for my  
15 opinion. It should be a document that is used in the  
16 planning process to develop plans, specific plans. It  
17 should not be a document that is the answer to the  
18 evacuation problem. It is information that would be useful  
19 in developing a good plan.

20 DR. LITTLE: And I think what Ms. Straube was  
21 after was now that we have the Parsons, Brinckerhoff study  
22 in hand, what is next? What has to be available to the  
23 decision-makers in addition to that for them to make  
24 appropriate recommendations in the case of an evacuation?

25 THE WITNESS: They have to have their plan for

1 implementing it. I do not -- you need to have people that  
2 understand what it means in the decision-making process to  
3 evaluate any contingencies that might come along. I mean if  
4 there were -- you know, a bridge went out, for example, and  
5 someone would need some expertise to say, you know, how that  
6 affected the time. The basic information would be there and  
7 a judgment, a reasonable judgment should be able to be made  
8 on what effect it has.

9 CHAIRMAN SMITH: If you were a traffic engineer on  
10 the staff of one of the counties at risk and you are asked  
11 by the county coordinator, "Look, we have this time  
12 evacuation study, now what else do we need to do our job?"  
13 now what would you say as a traffic engineer?

14 THE WITNESS: I would develop a traffic management  
15 plan to get the people out of my jurisdiction, how to handle  
16 various traffic signals, control points and things of that  
17 nature.

18 CHAIRMAN SMITH: And how would you use the  
19 evacuation time estimates in the traffic management plan?

20 THE WITNESS: I would use the identification of  
21 the critical points to identify where I needed to put my  
22 attention to see if I could do anything to make sure that we  
23 are getting everything we can out of the system, whether or  
24 not I could even develop some plans that might expedite the  
25 traffic flow.

1 CHAIRMAN SMITH: All right.

2 THE WITNESS: You can develop operational  
3 techniques to improve traffic flow. We do it very typically  
4 for football games. When I was in Anne Arbor, Michigan, we  
5 had a plan similar to an evacuation where we had to get  
6 100,000 people out of the stadium. We had a traffic  
7 management plan, so to speak, how we operated our traffic  
8 signals. We had special cycles and all kind of things to  
9 get the most capacity out of our system.

10 DR. LITTLE: You basically see this document as  
11 something that state or county engineers would be looking at  
12 in making further plans, not as something they would pull  
13 out at the first time at the time an evacuation was ordered.

14 THE WITNESS: Right.

15 (Board conferring.)

16 CHAIRMAN SMITH: Mr. Zahler.

17 BY MR. ZAHLER:

18 Q Mr. Urbanik, is it possible to even develop an  
19 evacuation time study like that contained in the Parsons,  
20 Brinckerhoff study without making various assumptions like  
21 those described in the study?

22 A No.

23 Q In your review of the study did you identify any  
24 assumption that you viewed as unreasonable?

25 A No.

1       Q     When the NRC forwarded a copy of NUPEG-0654 to  
2 Licensees in December of 1980, they included a chart  
3 evaluating the various evacuation time estimates that had  
4 been previously submitted to them. Did you provide input  
5 for the development of that evaluation?

6       A     I developed it.

7       Q     And you understand the chart I am talking about.  
8 It is one that has four major areas and some subpoints and  
9 then an overall rating.

10      A     Right.

11      Q     Have you similarly done an evaluation of the  
12 Parsons, Brinckerhoff study in the format of this evaluation?

13      A     I conceptually followed that plan. I have not  
14 developed a new checklist for the next round of  
15 evaluations. We may modify that somewhat.

16      Q     But this evaluation rated the plans in terms of  
17 excellent, adequate, poor and none. Do you have an opinion,  
18 if you were to rate the Parsons, Brinckerhoff study in those  
19 categories for overall, what you would rate it?

20      A     If the Parsons study was submitted at the time  
21 that those evaluations were done, it would be in the good to  
22 excellent range. But I have not done that for this new  
23 revision of 0654. The new guidance is more severe than  
24 that, but I do not have any problems with it. I just would  
25 be hesitant to give you -- just say, you know, excellent off

1 the bat not having done a whole bunch of others to put it in  
2 the proper perspective.

3 Q I understand.

4 A It certainly would be at least good. Okay. It  
5 would not rate poor in any category.

6 Q I am not really looking for a report card. I  
7 wanted to know whether such an evaluation had been done.

8 Did you review any of the transcripts of the cross  
9 examination of the Parsons, Brinckerhoff witnesses in this  
10 proceeding?

11 A I went over them in general. I would not say that  
12 I covered all of it. I tried to look for the overall flavor  
13 of what was involved.

14 Q Did you discover anything in that cross  
15 examination that would lead you to change any of the  
16 conclusions that you reached in your testimony at this time?

17 A Based on what I saw, now.

18 MR. ZAHLER: I have no further questions.

19 CHAIRMAN SMITH: Do you have follow-on?

20 MS. GAIL BRADFORD: I have one question which is  
21 important to my case and the other one which is just a  
22 general curiosity question. I will ask the important one  
23 first.

24 CHAIRMAN SMITH: All right. That is consistent  
25 with our admonition.

1 BY MS. GAIL BRADFORD: (Resuming)

2 Q I would like to know how obvious you think the  
3 critical assumptions in the time estimate would be to  
4 someone such as a county coordinator, a county emergency  
5 operations coordinator just from the review of a document  
6 like Licensee Exhibit 52, which is the evacuation time  
7 estimate study.

8 Would he be able to review that document, figure  
9 out the critical assumptions and know whether or not his  
10 plan has the same assumption about roadways, traffic control  
11 points or whatever you think the critical assumptions are?

12 A Yes.

13 Q How easily would he be able to do that?

14 A Fairly easily.

15 Q The other question I have relates to your study of  
16 the 52 evacuation time estimates,, and I am wondering if you  
17 included I think nine or ten studies which were done by  
18 Wilbur Smith, and one of them was this TMI area study. I  
19 just was thinking about that time estimate for Indian Point,  
20 and that was my recollection, the five hours and ten minutes  
21 was what Wilbur Smith concluded for Indian Point.

22 A We included both. The number that I gave you was  
23 the one -- actually I believe it was done by Parsons.

24 Q That would be the recent -- they talked about  
25 doing a very recent study.

1        A     You know, I could always be wrong because there  
2 are always things in the pipeline. Okay. But I believe that  
3 is the most recent. There was some earlier work that was  
4 done for Indian Point that was not up to snuff.

5        Q     Okay.

6        A     So I, you know, to the best of my knowledge what I  
7 referred to you, the times were based on their most current  
8 study which meets the requirements.

9        Q     At what time did you collect this data? When is  
10 that current to? Does that, for instance, include the TMI  
11 evacuation time study in the 52?

12      A     The one by Parsons?

13      Q     Yes.

14      A     No, it does not include it. The report is dated  
15 October of '80.

16      Q     And anything up until October '80 would be  
17 included?

18      A     No. Anything up to about August of '80 was  
19 included.

20            MS. GAIL BRADFORD: Thank you.

21            (Board conferring.)

22            DR. LITTLE: I do not know whether this question  
23 should be addressed to Mr. Urbanik, Mr. Gray or Mr.  
24 Cosgrove. I noticed Mr. Urbanik indicated his review did  
25 not include an analysis of the planning assumptions of the

1 study or a comparison of the evacuation time estimate study  
2 with existing offsite emergency plans, and I wonder if such  
3 comparisons and analyses will be done, and if so, under  
4 whose jurisdiction.

5 MR. GRAY: We will be asking FEMA to do an  
6 evaluation in that regard.

7 DR. LITTLE: It is not part of Mr. Urbanik's --

8 MR. GRAY: That is correct.

9 DR. LITTLE: That is what I thought.

10 CHAIRMAN SMITH: Mr. Gray.

11 (Board conferring.)

12

13

14

15

16

17

18

19

20

21

22

23

24

25

## 1 BOARD EXAMINATION

2 BY DR. JORDAN:

3 Q In the Parsons, Brinckerhoff study did it assume  
4 that there would be no evacuation of people outside the  
5 ten-mile zone: that is, that the people outside the ten-mile  
6 zone would not start moving at the same time?

7 A I believe that is true.

8 Q Is there any comparable situation that you are  
9 familiar with that would bear out the validity of that  
10 assumption?

11 A No.

12 Q From a population dose standpoint, it would  
13 probably be ideal to evacuate first the inner zone, one  
14 mile, then one to two, then two to three and so on. Is that  
15 true? Have you thought about that?

16 A To some extent I think that would be -- that is my  
17 opinion, that it would be difficult for one to just convince  
18 only those people closer in that they are the only ones that  
19 need to evacuate immediately.

20 Q And therefore for the same reason don't you feel  
21 it would be difficult to convince the people outside the  
22 ten-mile zone that they should remain fixed?

23 A I think it is reasonable to assume that some  
24 portion of the population outside the ten miles may evacuate  
25 by themselves.

1 Q In looking at the Parsons, Princkerhoff study I  
2 could not find the figure I think that you did give me and  
3 perhaps I did not copy down. You gave me the evacuation  
4 time estimates for 100 percent evacuation for 52 different  
5 plants. The 25 percent -- the minimum, the 25 percent, the  
6 medians and so on, I believe.

7 You told me the new document, the NUREG document  
8 that is coming out has this in it in some form.

9 A Right.

10 Q Now, I did not copy down or can I find exactly the  
11 similar situation for TMI-1. Do you have their comparable  
12 times, the minimum, 25 percent and so on?

13 A I do not have them in front of me.

14 Q Is there a table for TMI-1 in this report that you  
15 are about to put out that has that information?

16 A No.

17 MR. JORDAN: All right, then. That is all. Thank  
18 you.

19 Just a minute.

20 (Board conferring.)

21 BY MR. SMITH:

22 Q Mr. Urbanik, following on Dr. Jordan's questioning  
23 about the desirability of evacuating those closer to the  
24 reactor earlier, is that a consideration that could probably  
25 be taken by traffic control people when they talk about

1 queues and other problems with various links? As a traffic  
2 engineer, would you take that into account in your  
3 evaluation?

4 A You could to some extent take that into account in  
5 your evacuation by controlling some of the key  
6 intersections. You would not be able to totally control  
7 that but you could have places where, for example, the main  
8 route leaving an area has access points, and by controlling  
9 those access points you could in fact delay the people in  
10 the outer zones from getting access to the principal  
11 routes. So that could be done on a traffic management basis  
12 so that you could expedite the people inside.

13 The same thing could be done also outside, outside  
14 the ten miles also. Say, for example, there is a place  
15 where a couple of highways come together, and one of them is  
16 serving people outside the ten miles. You could in fact  
17 delay them while you expedited the traffic for people that  
18 were coming from within ten miles.

19 BY DR. JORDAN:

20 Q Now, is this what you mean when you say a traffic  
21 control engineer would be able to use these traffic  
22 estimates, time estimates in developing a good plan?

23 A Right. The Parsons study identifies the critical  
24 links where the most traffic is going to be, and those would  
25 be the points that he would look at first for traffic

1 management techniques.

2 Q But didn't the Parsons, Brinckerhoff study also  
3 try to assume an optimum traffic control in making the plan?  
4 Wasn't there feedback, in other words, in devising the  
5 estimates? Wasn't there an attempt to optimize the traffic  
6 control plan?

7 A Yes. I think that is basically what is causing  
8 some of the disagreement, and the fact that Parsons then  
9 identified some alternate routes that they thought would  
10 speed the evacuation.

11 Q Disagreement between them and the state plan, you  
12 mean?

13 A I --

14 Q Or --

15 A Yes.

16 DR. JORDAN: All right.

17 (Board conferring.)

18 CHAIRMAN SMITH: All right. Mr. Gray.

19 MR. ZAHLER: Mr. Smith, I have one follow-on  
20 question that should go before Mr. Gray's.

21 BY MR. ZAHLER: (Resuming)

22 Q Mr. Urbanik, it is true, isn't it, that O654  
23 instructs the preparer of an evacuation time estimate to  
24 suggest some additional routing if the preparer believes  
25 that that will assist in the evaucation? Isn't that true?

卷之三

3 MS. GAIL BRADFORD: Yes, sir. I have a follow-on  
4 to the Board question.

BY MS. GAIL BRADFORD.

7. Q Dealing in realities for a minute here, do you  
8 really expect that traffic control persons would be able to  
9 stop exiting traffic that wanted to get onto an interstate  
10 without -- especially in this Three Mile Island area,  
11 without the traffic control persons having to resort to use  
12 of force?

13       A     I think we see traffic control -- I think it would  
14 be unreasonable voluntarily without a person there. It would  
15 be a problem. In any case you get certain people that will,  
16 you know, defy authority, but I think it is reasonable that  
17 traffic control people can establish priorities of who moves  
18 first.

19 Q Can you give us an idea of how many hours that  
20 control point would have to be maintained if it were, say,  
21 at the ten-mile radius?

22 A It would depend on the point, but it could be up  
23 to the total time it would take to clear. We have cases  
24 where we have had officers 14, 24 hours on duty on a corner  
25 during evacuation would hurricanes. It has been done.

1 Q Does that mean holding people back for 14 or 21  
2 hours?

3 A It means directing traffic for 14 hours, being out  
4 there on the corner and saying "You go," "Okay, come on,"  
5 "Okay, you stop," "Now it is your turn."

6 (Counsel for ANGRY conferring.)

7 Q Okay. Do you mean to barricade access to  
8 evacuation routes from persons outside of the evacuating  
9 zone?

10 A That would be an alternative. You know, I have  
11 not reviewed specific cases. One case would be to  
12 barricade, but I think it would have to be a manned point.  
13 If you say -- you know, I think if there is just a barricade  
14 there, people will find out how to get around it.  
15 Alternatives would include closing routes and forcing people  
16 onto other routes.

17 Q How would you do that? Just tell them all turn  
18 left at some corner or --

19       A     Well, for example you might have -- typically with  
20 interstate highways you have older routes that were  
21 established before the interstate system that people do not  
22 take out of choice, but if there is someone on that  
23 particular route that is then coming out of town and trying  
24 to get on the interstate, you just keep them moving on that  
25 local road.

Q And that would presumably -- the older road would have a lower capacity factor than the interstate.

A It would probably have a lower capacity.

4 (Counsel for ANGRY conferring.)

5 A You are talking about diverting people that do not  
6 have as high a priority for getting out.

7 Q Whose priority, I guess.

8 (Counsel for ANGRY conferring.)

9           A       I did not set up the priorities, but somebody  
10 decided that a ten-mile EPZ was a good starting point to  
11 work with, so the people that have decided that have  
12 established the priorities.

13 MS. GAIL BRADFORD: Yes. Could I have just a  
14 minute to confer with Mr. Cunningham? I would be glad to  
15 come back to this later if that would be all right.

16 (Board conferring.)

17 CHAIRMAN SMITH: Go ahead.

18 (Counsel for ANGRY conferring.)

19 CHAIRMAN SMITH: You are not quite completed yet,  
20 Mr. Urbanik. Did you want to take a break? We were not  
21 quite finished.

22 have, Gray? \*  
the oon you have, Gray?

23 MR. GRAY: One question.

24 MR. CUNNINGHAM: Mr. Chairman, we do not want to  
25 double up as intervenors, but is it possible that I ask this

1 one last question?

2 CHAIRMAN SMITH: Yes, go ahead.

3 BY MR. CUNNINGHAM:

4 Q Mr. Urbanik, you were not here yesterday but there  
5 was quite a discussion between the Board and Ms. Bradford  
6 about dealing with realities of situations and the warning  
7 system within plants and hearing those systems. My question  
8 to you is: Based upon the realities of a situation, is it  
9 your opinion that a traffic control person such as a  
10 policeman at the limited access areas of interstate highways  
11 that have been identified as the major evacuation routes in  
12 this plan would be able to keep individuals from jamming or  
13 coming onto that highway outside of the ten-mile EPZ? If  
14 that is your opinion, fine.

15 A Yes, I do believe that to be true.

16 MR. CUNNINGHAM: Thank you.

17 CHAIRMAN SMITH: Incidentally, we do not have any  
18 concern about you functioning as a team and asking questions  
19 in a coordinated way, either of you. I mean that is no  
20 problem. I think you are cooperating with the Board on the  
21 purposes of our consolidation.

22 MR. CUNNINGHAM: Okay, thank you. I just did not  
23 want to lead to confusion.

24 CHAIRMAN SMITH: Mr. Gray.

25 REDIRECT EXAMINATION

1 BY MR. GRAY:

2 Q Mr. Urbanik, Ms. Bradford asked you about the  
3 possible effects on evacuation times from the EPZ of  
4 decontamination points outside of the EPZ. I believe you  
5 indicated that the effect on evacuation times would be  
6 dependent on the number of people doing the  
7 decontamination.

8 I would like to ask you, wouldn't it also be  
9 dependent upon the distance of the decontamination points  
10 from the EPZ?

11 A Yes.

12 Q Thus, for example, if a decontamination point were  
13 10 to 15 miles from the outer boundary of the EPZ, the  
14 effect on traffic movement out of the EPZ would be  
15 considerably less than if it were somewhat closer to the EPZ  
16 boundary, isn't that true?

17 A Yes.

18 MR. GRAY: No further questions.

19 DR. LITTLE: Would you agree or disagree that  
20 traffic activities outside the ten-mile EPZ, for example, 10  
21 to 20 miles, would not affect evacuation from within the  
22 ten-mile radius?

23 THE WITNESS: I think there could be cases where  
24 traffic outside the ten miles could affect it. Again, it  
25 would be similar to the decontamination -- I mean, if there

1 were something right close to the EPZ you would probably  
2 have a larger effect than if it was ten miles away. But I  
3 do not think you can consider totally in isolation of the  
4 rest of the area.

5 DR. LITTLE: Do you see any need for formal  
6 arrangements for traffic control points between the 10 and  
7 20-mile boundaries?

8 THE WITNESS: I would envision that there would be  
9 the need for some traffic control beyond ten miles.  
10 Primarily one area that I would think would be -- diversion  
11 of traffic off of those principal routes like I mentioned  
12 earlier where if you are trying to use the Pennsylvania  
13 Turnpike, for example, as one of your routes, you would try  
14 to get the people off of the turnpike at some point where  
15 they could take an alternate route, and that might be some  
16 distance outside of the EPZ. You could not use them or they  
17 would get in your way if they came up to the EPZ and just  
18 stopped there. I mean you have to somehow get rid of them,  
19 so you have to divert them to some alternate route.

20 DR. LITTLE: Do you know whether or not plans that  
21 are developed in guidance with NUREG-0654 do consider  
22 traffic control outside the ten-mile EPZ?

23 THE WITNESS: I do not know.

24 DR. LITTLE: You do not know. Would you consider  
25 it a defect if they did not?

1 THE WITNESS: If they did not consider some  
2 traffic control outside, I would think that it could  
3 possibly have an adverse effect.

4 DB. LITTLE: And the significance, of course,  
5 would vary with the area, so it would have to be site  
6 specific.

THE WITNESS: Right.

DR. LITTLE: Thank you.

CHAIRMAN H.H. Anythin' you do in this country is wrong.

10 (No response.)

11 CHAIRMAN SMITH: All right. You are excused, Mr.  
12 Urbanik. Thank you

13 THE WITNESS: Thank you.

<sup>14</sup> (The writer was excused.)

15 CHAIRMAN SMITH: We will take a ten-minute  
16 midmorning break.

17 (Recess.)

10

19

30

31

22

22

34

1 CHAIRMAN SMITH: We will resume on page 7 of your  
2 cross-examination plan.

3 MR. CUNNINGHAM: The last question to the  
4 witnesses was with regard to the overload of the 911  
5 systems, "What were the other appropriate resources?" I  
6 believe that was the last question on the transcript.

7 MR. ADLER: The other appropriate resources in  
8 this context is the emergency dispatcher. The counties,  
9 generally speaking, with the exception of Dauphin County,  
10 have alternate rumor control telephone numbers. For  
11 example, in the Cumberland County pamphlet you will see the  
12 rumor control center number is 717-272-7621.

13 Unfortunately, in the case of Dauphin County, they  
14 do not have a rumor control center number assigned. It says  
15 "To be announced." We would hope that in a redistribution  
16 of an updated Dauphin County pamphlet such a rumor control  
17 center would have been established and the number stated.

18 So at this point it is the emergency dispatcher.  
19 Whereupon,

20 MICHAEL S. PAWLOWSKI

21 FREDERICK J. BATH

22 VERNON E. ADLER,

23 the witnesses on the stand at the time of recess, resumed  
24 the stand and, having first been previously duly sworn by  
25 the Chairman, were examined and testified further as follows:

## 1                   CROSS EXAMINATION--Resumed

2                   BY MR. CUNNINGHAM:

3                 Q     It is my understanding that your position with  
4 relation to the Federal Emergency Management Agency is that  
5 the EBS warning is going to be the critical warning to be  
6 given to the public, and not the rumor control center and  
7 911 system.

8                 A     (WITNESS ADLER) Yes.

9                 Q     Okay. I will turn to questions 43 through 44,  
10 dealing with Contention EP-6A. The Contention is probably  
11 best stated: "There is an inadequate provision in the York  
12 County plan for providing medical services for contaminated  
13 individuals for training persons providing these services  
14 and for transporting radiological victims to medical  
15 facilities."

16                 And I believe it is the Federal Emergency  
17 Management Agency's position that this is an inadequate  
18 provision within the York County plan; is that correct?

19                 A     (WITNESS ADLER) Yes.

20                 Q     And it is also not true that in your direct  
21 testimony that you admit that your review of the emergency  
22 plan for York County makes no provision for local backup  
23 hospital medical services for individuals exposed to  
24 radiation?

25                 A     (WITNESS ADLER) Excuse me, did you say "local

1 backup"? I missed the middle of the last sentence.

2 Q Local backup hospital medical services for  
3 individuals exposed to radiation.

4 A (WITNESS ADLER) Yes.

5 Q Further in that line of testimony you indicated  
6 the Department of Health --

7 A (WITNESS ADLER) Pardon me. Could you speak just  
8 a little more slowly? I could get it better just a little  
9 bit.

10 Q Further in your direct testimony you establish  
11 that you are of the opinion that the Commonwealth is  
12 establishing a plan that will, in effect, bring the York  
13 County plan into compliance with NUREG-0654; is that  
14 correct?

15 A (WITNESS ADLER) Yes.

16 Q Has that plan been developed at this point?

17 (Panel of witnesses conferring.)

18 A (WITNESS BATH) The State Department of Health has  
19 provided a listing of numerous hospitals which could, in  
20 fact, provide the material information or the data  
21 information for York County to adopt and utilize. In that  
22 sense, it has been done.

23 Q And your -- and your opinion would be that York  
24 County still has to adopt that particular listing of the  
25 plan in order to bring York County's plan into compliance

1 with NUREG-0654?

2 A (WITNESS ADLER) Yes.

3 Q And that will be one of your areas that you will  
4 be critiquing in your final determinations?

5 A (WITNESS ADLER) Assessing in our final  
6 determinations, yes.

7 Q Will it be a requirement that that be included  
8 within the plan in order to meet the criteria of 0654 in  
9 your review?

10 (Panel of witnesses conferring.)

11 A (WITNESS ADLER) We are troubled by the word  
12 "requirement." It would be highly desirable. I am not  
13 sure, without going back through 0654 and reading very, very  
14 carefully that requirement, that guidance, whether in fact  
15 it is a requirement in meeting that guidance.

16 Q Obviously, if it is a requirement, then you will  
17 -- it will be met?

18 A (WITNESS ADLER) Definitely.

19 Q The next question I had in this area is one which  
20 I think you answered yesterday. And so that I do not have  
21 to restate it, because I think it is repeated again in my  
22 cross-examination plan.

23 Wherever the county plans indicate that they have  
24 either vehicles, transportation methods available, and they  
25 have listed those methods, is it my understanding FEMA takes

1 their word for it on face that those vehicles are available  
2 to the risk counties and they have not investigated whether  
3 those services in fact exist?

4 A (WITNESS ADLER) As far as the plan review  
5 process, the answer is affirmative. But I do not want to  
6 leave the Board with the impression that that is as far as  
7 we go. There is continuing dialogue follow-up, and we  
8 attempt to satisfy ourselves that what is in the planning  
9 document is a real living thing.

10 Q Is that one of the processes that you are going to  
11 go through between now and when you make a final  
12 determination in order to satisfy yourself that these  
13 services do in fact exist?

14 A (WITNESS ADLER) On a sampling basis only.

15 Q The next area involving question 45, it is  
16 Contention EP-6-B. It involves records and field services  
17 to risk counties. The Federal Emergency Management Agency,  
18 in response to this Contention, states that the initial fuel  
19 and wrecker services will be provided by the local community  
20 "thin the risk counties. I assume you are referring to the  
21 municipal bodies, townships, and boroughs?

22 A (WITNESS ADLER) Yes.

23 Q Has FEMA studied whether these local counties,  
24 communities, and municipalities have any plans which set  
25 forth the way in which initial fuel and wrecker services

1 will be procured?

2 A (WITNESS ADLER) We have not received municipal  
3 plans that either -- period.

4 Q Okay. Therefore, your answer would have to be  
5 also, to that question, "There is no local plan how these  
6 services would be paid for at this particular point"?

7 A (WITNESS ADLER) True.

8 Q Are you aware of any agreements made between the  
9 local municipalities, communities, boroughs, and townships,  
10 and local businessmen regarding the use of their wreckers  
11 and fuel supplies?

12 A (WITNESS ADLER) We are not aware of any special  
13 arrangements in that regard.

14 Q Would --

15 A (WITNESS ADLER) We rely on the existing  
16 relationships in those communities to be effective  
17 instruments in an emergency.

18 Q In relation to that answer, has FEMA made any  
19 study to determine whether -- I would hate to say what is  
20 the wrecker population in each one of the townships or  
21 communities involved. I mean you have no idea of how many  
22 wreckers there are in any one community upon which local  
23 communities can draw; do you?

24 (Panel of witnesses conferring.)

25 A (WITNESS ADLER) We do not.

1 Q Now, I believe that in your testimony you indicate  
2 that the local risk counties must indicate locations for  
3 emergency services. But have the local risk counties  
4 indicated those locations where emergency services,  
5 including first aid, wrecker, and fuel services will be  
6 located?

7 (Panel of witnesses conferring.)

8 A (WITNESS ADLER) Yes. The plans do state that  
9 these points will be at reception centers.

10 Q And those reception centers are all outside of the  
11 ten-mile EPZ; is that correct?

12 A (WITNESS ADLER) They are.

13 Q In FEMA's review of the risk county plans, in  
14 making a final determination, will the determination require  
15 that these local plans indicate the location of such  
16 emergency services within the municipalities themselves, or  
17 what will your review entail in that regard?

18 A (WITNESS ADLER) In NUREG-0654 it is Planning  
19 Standard C. It states that "Each organization shall  
20 identify nuclear and other facilities, organizations, or  
21 individuals which can be relied upon in an emergency to  
22 provide assistance. And such assistance shall be identified  
23 and supported by appropriate letters of agreement."

24 Q That does not appear in the plans at this time;  
25 does it?

1        A      (WITNESS ADLER) No.

2        Q      In your review for a final determination that  
3 criteria will hbe to be met in order to meet your approval;  
4 is that correct?

5        A      (WITNESS ADLER) That is correct.

6        Q      Does the Commonwealth plan that you refer to in  
7 the answer to question 45 state how the Commonwealth of  
8 Pennsylvania will procure the fuel and wrecker services  
9 needed for an emergency?

10                  (Panel of witnesses conferring.)

11        A      (WITNESS ADLER) The plan assures that a reserve  
12 of resources, such as gasoline, will be available. And that  
13 is the kind of arrangement that is reflected in the plan.

14                  The National Guard, for example, would draw from  
15 stockpiled resources in assisting to meet the needs of the  
16 Department of Transportation.

17        Q      Is there within the county plan that that is their  
18 understanding of how they will provide these fuels, any  
19 estimate with regard to the time that "ill be necessary in  
20 order to effect that type of arrangement and provide that --  
21 those types of fuel services and wrecker services?

22        A      (WITNESS ADLER) No.

23        Q      Does there appear to be within the Commonwealth  
24 plan any coordination as to how these resources will be  
25 notified that there is a need by the Commonwealth and then

1 transporting the need to the site area?

2 A (WITNESS BATH) Yes. In the fact that a response  
3 team will be provided by these emergency services, the  
4 Department of Transportation and the National Guard at the  
5 State EOC for coordination in applying these augmenting  
6 forces is required.

7 Q Okay. I turn your attention to question 46. It  
8 is a very short question. This is Contention EP-D. And  
9 basically, it is a reviewing of the various organizations  
10 that are set forth in the York County plan as being support  
11 services.

12 And the question is whether letters of agreement  
13 have been received in compliance with NUREG-0654, section A3  
14 from these areas. Your answer to the question was that two  
15 of the service organizations listed -- namely, State Civil  
16 Defense and York County USDA Disaster Emergency Board -- do  
17 not require letters; with regard to eight others listed, you  
18 stated no letter had been received.

19 Is this, to this date, still a correct statement?

20 A (WITNESS ADLER) That is still the current status.

21 Q And your answer as to whether in your final  
22 determination that these criteria will be required, criteria  
23 in order to receive your approval would depend on the  
24 reading of NUREG-0654?

25 (Panel of witnesses conferring.)

1        A     (WITNESS ADLER) I have difficulty with the sense  
2 of finality in your question. If you would rephrase it?

3        Q     My question is: Will the agreements have to be  
4 received from these other aid organizations in order to meet  
5 the criteria of 0654?

6        A     (WITNESS ADLER) Not necessarily in all cases. We  
7 will seek them in every case, however, and have to make a  
8 judgment based upon what we get and what is still due,  
9 deficient, for the overall judgment.

10      Q     Question 47 regards -- regarding EP-14-I, it  
11 involves the list of impaired persons within a community.  
12 From your answer, I understand that the Federal Emergency  
13 Management Agency's position is that the Contention is valid  
14 and that there is a deficiency in the local communities and  
15 boroughs because they have not prepared lists of such  
16 impaired persons. Is that a fair statement?

17      A     (WITNESS ADLER) That is true.

18      Q     Will that be required to be met in your review for  
19 final determination of whether there has been compliance  
20 with the local and county plans with NUREG-0654?

21      A     (WITNESS ADLER) Consistent with NUREG-0654, yes.

22      Q     While we are on that point, it appears -- and I  
23 know that the Board and Intervenors have had discussions  
24 about the relationship of the local plans to the county  
25 plans -- is this an area where there just be in place in

1 your review at at least a provision for identification of  
2 these homebound or invalids to meet the criteria of 0654?

3 A (WITNESS ADLER) It is.

4 (Pause.)

5 Q Turn to question 48. Before we do that, that  
6 would be a criterion of all the risk counties also, with  
7 individuals who are invalids or homebound within the  
8 ten-mile EPZ; is that correct?

9 A (WITNESS ADLER) I am sorry, I did not understand  
10 the question.

11 Q Along the same lines that applies equally to the  
12 other risk counties, not only York but the other risk  
13 counties within the ten-mile EPZ, would have to have such  
14 lists forwarded for your review before the criterion of 0654  
15 is met; is that correct?

16 A (WITNESS BATH) It requires a particular look at  
17 each individual county plan to determine that in fact the  
18 county is depending upon the municipalities for that  
19 resource. And I could not tell you off the top of my head  
20 that all plans in fact depend on municipalities.

21 Q York County does rely upon --

22 A (WITNESS BATH) Yes, it does.

23 Q Now to question 48. Question 48 involves  
24 Contention EP-14-K. It involves the so-called "situation  
25 analysis group" contained within the York County plan. And

1 it, the Contention, then goes on to indicate that the  
2 situation analysis group has not the necessary equipment  
3 with which to monitor various radiological events that are  
4 taking place at the time.

5               And I understand that the Federal Emergency  
6 Management Agency's position with regard to this Contention  
7 is that the Contention is correct and that the assertion is  
8 that the situation analysis group of York County does not  
9 have sufficient radiological monitoring equipment to provide  
10 -- to perform its assigned functions. Is that a fair  
11 statement?

12           A     (WITNESS ADLER) We know no change from the status  
13 identified in the direct testimony.

14           Q     Is this a criterion which will have to be met in  
15 order -- in your review, final determinations of the local  
16 plans, in order to meet any criteria within 0654,  
17 NUREG-0654?

18               (Panel of witnesses conferring.)

19           A     (WITNESS BATH) With -- with respect to an  
20 inventory of radiological monitoring equipment for services  
21 to be performed by York County, yes. With respect to the  
22 needs for specialized equipment to do the kind of off-site  
23 monitoring that is going to be provided by BRP, since we  
24 recognize that the State has accepted that role and in fact  
25 will be providing that information to the county, no, it may

1 not be an essential element in the decision on York County's  
2 adequacy.

3 Q But the adequacy of the plan is dependent upon  
4 whether the State follows through with its supplying of such  
5 information; is that correct?

6 A (WITNESS BATH) Essentially, the only deficiency  
7 that we cited in that was that we wanted a statement by the  
8 -- within the York County plan that in fact they would rely  
9 upon ERP and PEMA for its assessment is essentially our  
10 deficiency in that area.

11 Q This line of questioning then flows naturally into  
12 questions 49 through 51, I believe. And as I understand  
13 your answer to this particular series of questions, your  
14 answer is that the plan does not provide for radiological  
15 monitoring equipment to be placed within the county.

16 But if I understand your testimony on cross  
17 examination, if the county is going to rely upon ERP for  
18 that information, then there would be no requirement to  
19 supply such equipment.

20 A (WITNESS ADLER) True.

21 A (WITNESS BATH) Yes.

22 Q Now, if I can work on the assumption that the plan  
23 stands as present and will not change, my next question is:  
24 In that series of testimony within the context of the  
25 testimony, you indicate that although there may not be

1 available monitoring equipment at the time, it is your  
2 opinion that local firemen have been trained in its use  
3 because of other programs, I think, basically Civil  
4 Defense. Is that -- is that correct?

5 A (WITNESS BATH) Yes.

6 Q Now, how did you come to that conclusion? Do you  
7 have any evidence that there are firemen trained within the  
8 ten-mile EPZ with that type of equipment?

9 A (WITNESS BATH) In making that statement, we were  
10 envisioning that York County would in fact recognize its, I  
11 will say, dependency on BRP and, therefore, would be  
12 adjusting, that the role of the firemen would be such as  
13 would follow in the monitoring for contamination,  
14 decontamination, and, therefore, solely using a geiger  
15 counter for the detection rather than the quantifying of  
16 specific radiation values.

17 And we felt that the type of training provided as  
18 a radiological monitor under Civil Defense or the type of  
19 training as a first responder to an accident under the  
20 Department of Transportation was a reasonable level of  
21 training for the detection of radiation.

22 Q Okay. Now, as I understand your testimony in a  
23 nutshell, what you are saying is that as you envision the  
24 plan, if amended according to your suggestion -- suggestions  
25 -- the firemen would just go out with the geiger counters

1 and make a reading and not attempt to interpret what they  
2 are reading, just report it back so you would have some type  
3 of sample. Is that correct?

4 A (WITNESS BATH) As I read and studied the York  
5 County plan, I felt that the firemen were an applicable  
6 resource that York County might use in the function at peak  
7 contamination centers where they were going to wash cars,  
8 firemen may be utilized in mass care centers, as for the  
9 detection of a contamination, not for quantifying. When you  
10 say "make a reading," that assumes that they can make an  
11 accurate reading with that. But they can, in fact, find  
12 source, or, in fact, they will get some kind of reading or  
13 indication.

14 Q Is there any requirement that FEMA will make upon  
15 the county to make a showing that the firemen that will be  
16 involved in that type of service at least have minimum  
17 qualifications or even a showing that they know how to use  
18 the equipment?

19 A (WITNESS ADLER) We have no requirement to do that  
20 that I am aware of.

21 Q Okay. Will you turn then to questions 52 through  
22 55. Basically, the thrust of this Contention involves the  
23 transportation coordinator duties within the York County  
24 emergency plan.

25 As I understand the Federal Emergency Management

1 Agency's statement with regard to this Contention, that in  
2 making its final determinations and issuing those  
3 determinations, York County's plan will have to indicate  
4 that the transportation coordinator has provided a written  
5 statement or some type of statement that his plan for  
6 coordination of transportation resources during an  
7 evacuation exists. Is that correct?

8 A (WITNESS ADLER) Yes.

9 Q Now -- go ahead.

10 A (WITNESS ADLER) Oh, well, that sounds very cut  
11 and dried. We would like to see such a plan. We consider  
12 it important -- I would even say vital -- to seeing such a  
13 plan. We consider it important, I would even say vital, to  
14 see such a plan.

15

16

17

18

19

20

21

22

23

24

25

1       Q     Now, I believe the important aspect of the  
2 transportation coordinator's job is to be able to coordinate  
3 his resources, such as tow trucks, fuel trucks, mass  
4 transportation, et cetera. Is it going to be -- is it in  
5 the review of the York County plan -- is the Federal  
6 Emergency Management Agency going to require that that plan  
7 articulate how these resources are going to be coordinated  
8 and how they will interface with state and -- state  
9 agencies, federal agencies, et cetera?

10      A     (WITNESS ADLER) To the extent that the plan  
11 standards of 0654 dictate this, we will, period.

12      Q     In your direct testimony in this area, the Federal  
13 Emergency Management Agency indicates that various bus  
14 drivers can be expected to return to a risk area as needed  
15 to accomplish their assigned missions. Now, is it your  
16 assumption that by "bus drivers" you mean school bus  
17 drivers?

18      A     (WITNESS ADLER) Not --

19      Q     No?

20      A     (WITNESS ADLER) I am sorry, finish your --

21      Q     Let's start with school bus drivers.

22      A     (WITNESS ADLER) One element, definitely, but not  
23 to the exclusion of augmenting resources which might be  
24 called into action, other drivers.

25      Q     Other professional drivers, such as municipal bus  
drivers, et cetera; is that to whom you are referring?

A     (WITNESS ADLER) To the extent that bus drivers

1 are professional in bus driving, yes. But the word  
2 "professional" troubled me a bit.

3 Q Well, I mean people who know how to drive a bus.

4 A (WITNESS ADLER) Indeed, yes.

5 A (WITNESS PAWLOWSKI) The experience of FEMA over  
6 the years is that people assigned responsibility for  
7 carrying out emergency missions do in fact carry out their  
8 missions.

9 Q Now, this brings me back to another point --  
10 brings us back into local plans in some ways, and by "local  
11 plans" I mean municipal plans. Is it FEMA's position that  
12 in order for the local county plans to be in compliance with  
13 NUREG-0654, that the local school evacuation plans be  
14 drafted and articulated and attached as an appendix to the  
15 risk county plans in order to meet the criteria?

16 A (WITNESS BATH) I am bothered. There was some  
17 twisting around in there of local, municipality and county  
18 plans. We envision that county is the responsible level of  
19 government for the risk planning. To the extent that  
20 municipal plans are required -- municipal plans would be  
21 required, if there is an assignment of responsibility within  
22 the county plan.

23 Now you are talking about a school plan, which is  
24 not necessarily a municipal school plan but an individual  
25 school plan or district plan, and should that be appended to

1 the county plan.

2 Q That is correct.

3 A (WITNESS PAWLOWSKI) The important interpretation  
4 here is looking at it from the standpoint of standard  
5 operating procedure or procedure for implementing a plan.  
6 These in fact will be examined in the field by FEMA and  
7 supporting resources of the RAC to indeei see that these  
8 exist.

9 Q In order to be specific, the York County plan  
10 specifically indicates that local school district plans  
11 shall indicate how the buses will be used in the event of an  
12 emergency, if evacuation is warranted?

13 A (WITNESS PAWLOWSKI) Yes, to the extent that that  
14 is part of a standard operating procedure for implementation  
15 of the plan, yes, FEMA will review the procedure.

16 Q And in the final part of that question, would that  
17 be required to be articulated in any manner within the  
18 plan?

19 A (WITNESS PAWLOWSKI) FEMA will determine whether  
20 or not the procedure exists.

21 Q And how would that be accomplished?

22 A (WITNESS ADLER) The county plan is our guide. If  
23 there is substantive description in that plan about such  
24 school plans, that might be all that is needed.

25 (Pause.)

1           Q     Now, within your direct testimony it appears as  
2 though the Federal Emergency Management Agency states that  
3 school districts have initiated their own explicit plans for  
4 evacuation. Now, what I gather from your testimony today is  
5 you do not know whether that is exactly a full statement, a  
6 correct statement, at this time.

7           A     (WITNESS BATH) I was advised by an officer of  
8 PEMA that in fact such a letter has been drafted and  
9 provided by the Department of Education to the district  
10 persons, superintendents or supervisors, to initiate and to  
11 cause such plans to come into effect and to be in  
12 coordination with the local county. And it is on the basis  
13 of that statement that I made that reference, because there  
14 was -- there was a suggested format which in a sense sets up  
15 a premise that planning is under way.

16          Q     Okay. I guess the thrust of my questioning in  
17 this area is that -- is FEMA going to, in its review for  
18 final determinations, require that if the local county plan  
19 makes a reliance upon individual either municipal plans or  
20 school district plans, that they be coordinated?

21          A     (WITNESS ADLER) Yes.

22          Q     Now, if there is going to be a requirement for  
23 coordination, isn't there a basic assumption that whatever  
24 the resources are that are going to be relied upon in the  
25 plan, that those resources understand what their duties are,

1 what their responsibilities are in a situation where a  
2 radiological emergency in this case exists and they may be  
3 called upon?

4 A (WITNESS ADLER) That is part of the coordination  
5 assessment, assessment of coordination. The answer is yes.

6 Q Okay. Where the county plan incorporates the --  
7 these types of resources, is it FEMA's position that letters  
8 of agreement indicating at least there is an understanding  
9 that these resources that are being relied upon and  
10 coordinated would be required?

11 A (WITNESS BATH) That -- that is true in some  
12 cases. In other cases, it would not be true. If -- if the  
13 service providing -- if the organization providing the  
14 service is a normal portion of government and that the  
15 services are the normal resources of that given  
16 organization, I do not see why there needs to be a specific  
17 letter of agreement in order to comply to a fixed nuclear  
18 facility emergency over any other.

19 If in fact it is something that is outside of the  
20 country of that local government and in fact it appears to  
21 be, you know, an extension of their services, yes, we would  
22 like to see letters of agreement as well as procedures.

23 Q Okay. The reason I asked you the question is that  
24 within the school districts and the West Shore School  
25 District, which services northern York County, and other

1 school districts within the five-mile or ten-mile EPZ, some  
2 of those buses are leased from companies and there is lease  
3 agreements between the school districts and the bus owners,  
4 and in fact between the owners and the bus drivers.

5 That type of relationship you say is one which is  
6 then outside of the control of the school district, because  
7 the buses are not owned by the district and would require  
8 this form of agreement, letter of agreement.

9 A (WITNESS ADLER) I think the answer is no, because  
10 these lease agreements exist and therefore, as Mr. Bath  
11 points out, are an integral part of existing -- of an  
12 existing modus operandi. If FEMA is satisfied that that is  
13 in fact the case, we will not require such letters of  
14 agreement.

15 Q Okay. I don't really want to get into the  
16 technicalities of the lease, because obviously -- obviously  
17 we do not have the lease in front of us to review what the  
18 obligations are. But if the lease is just for a period of  
19 time in which to use the buses specifically for the use of  
20 transporting school children during normal school hours, et  
21 cetera, sets forth those types of types, and there is no  
22 provision as to their use in an emergency situation such as  
23 is envisioned in the York County plan, that they be used for  
24 mass transportation, if that is the case then would your  
25 opinion be that there must be a letter of agreement between

1 the bus owner and the county?

2 A (WITNESS ADLER) It would have to be reviewed on  
3 an individual basis using the county and/or PEMA  
4 coordination. In other words, an assessment on a case by  
5 case basis would be appropriate.

6 Q That leads me -- is that going to be done before  
7 the final determinations are reached by FEMA?

8 A (WITNESS ADLER) Not necessarily.

9 Q Is that because of a matter of time and/or  
10 logistics or because it is not a requirement in your view  
11 that FEMA do that?

12 A (WITNESS ADLER) They are not mutually exclusive.  
13 If it were in fact a requirement hard and fast, we would  
14 make sure that there was time to do it. In the scheme of  
15 the priorities, noting the amount of time that remains, it  
16 is not necessary.

17 Q I understand your answer is that at this point we  
18 do not know whether it is required to be reviewed at this  
19 particular point in time.

20 A (WITNESS ADLER) Are you asking me if FEMA  
21 believes it is a requirement or --

22 Q I guess that is my question, yes.

23 A (WITNESS ADLER) It is not a requirement that I am  
24 aware of.

25 Q Not to press the issue or drag it out, but Mr.

1 Bath, do you have an example of the type of agency that  
2 would not be under, or type of organization, that would not  
3 be under contract or under direct control of the risk  
4 county, that then would require a letter of agreement to be  
5 issued in order to bring that part of the plan into  
6 compliance with NUREG-0654?

7 A (WITNESS BATH) I -- yes, I -- I believe my  
8 testimony in fact says that we will seek some letters of  
9 agreements of identified agencies. I am trying to find the  
10 page.

11 (Witness reviewing document.)

12 Q I think it appears on page 29, the list. I think  
13 it goes back to question 46.

14 A (WITNESS BATH) And I think that gives a  
15 reasonable cross-section.

16 Q Okay, thank you.

17 Move on to question 56. This contention involves  
18 a part of the York County plan that at the time the plan was  
19 submitted there was an Annex L of the plan, and it was a  
20 part of the plan that was entitled resource requirements and  
21 it had not been completed at the time the plan was  
22 submitted.

23 You answer that question. But then again, you  
24 really do not approach the real problem that was brought up  
25 by the contention. If Annex L is not complete, how will the

1 emergency response personnel which you refer to and which is  
2 designated in the York County emergency plan deploy  
3 identified resources which are to be identified in that  
4 annex, when such resources have not been yet identified?

5 (Pause.)

6 A (WITNESS BATH) What we are looking for in Annex L  
7 is an inventory. A collection of three sources under the  
8 various operating organizations or services under York  
9 County provides for a capability of our assessing the  
10 resources to do the role. If in fact we have an emergency  
11 today, the firemen or the firepersons in charge would  
12 generally know what resources they have, and the police as  
13 well.

14 I think that is why we really cannot critically  
15 say that Annex L immediately describes an absolute  
16 deficiency in the county plan.

17 Q But isn't Annex L actually what you are asking in  
18 part the transportation coordinator to do, to articulate  
19 what his resources are and how he is going to coordinate?

20 A (WITNESS BATH) Yes, we are.

21 Q Now, you -- and I have seen this; I think it is  
22 even in the plan itself: Unmet resources will be required  
23 through the Pennsylvania Emergency Management Agency at the  
24 state EOC. Does the state plan have an inventory of  
25 resources that they will have to meet the unmet resource

1 requirements of the local risk counties?

2 A (WITNESS BATH) The state has some 16 state agency  
3 response teams. Each of these response teams in fact  
4 provides the support and services which are within the  
5 control of their department, and it is my understanding that  
6 it is going to be from these resources that unmet needs will  
7 be met.

8 Q In its final determination, since the risk county  
9 plan, specifically York County, mentions that it will seek  
10 PEMA's aid, that is Pennsylvania Emergency Management's aid,  
11 in meeting the unmet resources, does that require that the  
12 Commonwealth delineate what the resources are in order to  
13 bring the county plan into compliance with NUREG-0654?

14 A (WITNESS BATH) No, I do not see that. What --  
15 what we are more specifically looking for is that if York  
16 County can in fact determine unmet needs in advance of --  
17 and that is our major concern, for unmet needs, and that  
18 there is a chain of command and a methodology by meeting  
19 unmet needs during an incident -- we would be satisfied.

20 We cannot expect to anticipate all the  
21 contingencies and anything that might have to be listed in  
22 every state agency and come up with such a list.

23 A (WITNESS ADLER) I would like to clarify further.  
24 This philosophy extends on up to the Federal Government,  
25 where for example, if PEMA were not able to respond

1 adequately to a county's needs they could in turn turn to  
2 FEMA, which would then tap into other federal agencies to  
3 meet unmet resources.

4 Q Now if I understand Mr. Bath's comments, are you  
5 saying that in review of your final determination you expect  
6 to see some type of articulation by the local risk counties  
7 as to what they expect their unmet needs to be in order to  
8 receive approval in the final determination?

9 A (WITNESS BATH) No, we do not. If a local county  
10 has no unmet needs, it has no unmet needs. If the local  
11 county has identified an unmet need and we are aware of it  
12 in the review, then we would then seek to see how the state  
13 is going to meet that or in fact if it has been met.

14 Q But there is no requirement for the county to say  
15 that it does have unmet needs?

16 A (WITNESS ADLER) There is no requirement.

17 Q We can move to question --

18 CHAIRMAN SMITH: If you are done with this  
19 particular question, let's take our noon break. We will  
20 return at 1:00.

21 MR. TROWBRIDGE: Mr. Chairman.

22 CHAIRMAN SMITH: Mr. Trowbridge.

23 MR. TROWBRIDGE: For the information of the Board,  
24 the Court of Appeals has issued two one-line orders on the  
25 PANE issue of psychological stress. One order denied the

1 Commission's motion to dismiss the petition. The other  
2 denies Licensee's motion to expedite the proceeding.

3 CHAIRMAN SMITH: Thank you, Mr. Trowbridge.

4 We will return at --

5 MR. ZAHLER: Mr. Smith, I have one preliminary  
6 matter. I understand from talking with Mr. Cunningham that  
7 he is going to attempt to get in touch with Mrs. Aamodt in  
8 terms of scheduling the agriculture agents. In view of the  
9 way that the testimony was presented from the veterinarians,  
10 I would request of the Board to reaffirm and to instruct Mr.  
11 Cunningham to relay to Mrs. Aamodt that the subpoenas that  
12 were issued were not to be used for the purposes of  
13 discovery, but the testimony of the agriculture agents which  
14 is to be elicited relates to that which has been identified  
15 to the parties to date, and that is whether they have  
16 knowledge with respect to the agriculture plan.

17 CHAIRMAN SMITH: Yes, that is correct. I have had

18 --

19 (Board conferring.)

20 CHAIRMAN SMITH: Mr. Brenner points out that the  
21 Board had issued those directions to Mrs. Aamodt at  
22 transcript 17985 in a discussion that continued to 17988,  
23 and that should be emphasized, because I have also had, in  
24 the presence of Mr. Trowbridge, additional conversations off  
25 the record with Mrs. Aamodt. And on several occasions she

1 has demonstrated confusion about that order. She simply has  
2 not understood it on the several occasions which I have  
3 discussed it with her.

4 So the problem is that she may not bring those  
5 agricultural agents here for any purpose other than to  
6 testify that they do not know about -- they have not had  
7 information about emergency planning from the counties.  
8 However, if she has additional information she wishes to  
9 produce, they have additional evidence, she has to timely  
10 get it in in outline or written form.

11 The proceedings -- the process used with Dr.  
12 Samples will not be acceptable. We made a great exception  
13 there. We will not do it again.

14 This has been explained to her several times, but  
15 maybe you can explain it to her in a different -- from a  
16 different point of view.

17 MR. CUNNINGHAM: Let me make sure that I have  
18 received the Board's instructions properly.

19 CHAIRMAN SMITH: Okay.

20 MR. CUNNINGHAM: Mrs. Aamodt, as I understand your  
21 order -- and I think I was here the day that you put the  
22 admonitions on the transcript.

23 CHAIRMAN SMITH: Yes. And now I elaborated on  
24 them somewhat to put on the record that it has been  
25 explained to her several times off the record, and in each

1 instance she has demonstrated the possibility that she does  
2 not understand the admonition.

3 MR. CUNNINGHAM: As I understand your ruling at  
4 this point, the agricultural agents can be brought to  
5 testify for the purpose that they are unaware of what is  
6 required of them under the plans.

7 Now, am I also to understand that she is to  
8 present direct evidence in written form as to that  
9 particular point? And I believe --

10 CHAIRMAN SMITH: No, she is excused from  
11 presenting direct evidence on that one very limited point.

12 MR. CUNNINGHAM: And if she wants to present any  
13 other type of evidence from those two gentlemen, she must do  
14 so in written form and remain within the confines of the  
15 scope that they are not aware of what their responsibilities  
16 are?

17 CHAIRMAN SMITH: No. If she is going to -- she  
18 does not have to remain within the scope of they are not  
19 aware.

20 MR. CUNNINGHAM: Just present the general direct  
21 testimony that will be required of any witness?

22 CHAIRMAN SMITH: In writing. However, that raises  
23 another problem. That is the time, the timeliness of doing  
24 it, has not been addressed, you see. What has been  
25 explained to her before is that she cannot go outside the

1 very narrow scope of the lack of information on the county  
2 agents unless she complies with our rulings about written  
3 testimony.

4 And we are not ruling about the timeliness. I  
5 guess if she comes in with a reasonably short and discrete  
6 testimony beyond that scope promptly, immediately, we would  
7 be inclined to say that it is timely. But we would also  
8 hear objections.

9 Do you understand the problems? There are two  
10 problems.

11 MR. CUNNINGHAM: I understand the problems. What  
12 you are saying is you will reserve your judgment as to  
13 timeliness to appropriate objections at the time the  
14 testimony is offered.

15 CHAIRMAN SMITH: Yes.

16 MR. CUNNINGHAM: Very good.

17 CHAIRMAN SMITH: You expressed it much better than  
18 I. So you understand it quite well.

19 MR. CUNNINGHAM: Okay.

20 CHAIRMAN SMITH: All right. Yes, we have a  
21 limited appearance at 1:00 o'clock, at which time we will  
22 resume the hearing.

23 (Whereupon, at 12:05 p.m., the hearing was  
24 recessed, to reconvene at 1:00 p.m. the same day.)

25

## 1                   AFTERNOON SESSION

2                   (1:04 p.m.)

3                   CHAIRMAN SMITH: Is Martha McCurdy present?

4                   Keep the microphone very close to your mouth.

5                   MS. McCURDY: Can you hear me?

6                   CHAIRMAN SMITH: Yes.

7                   MS. McCURDY: Are you ready?

## 8                   LIMITED APPEARANCE STATEMENT

## 9                   OF MARTHA McCURDY

10                  MS. McCURDY: I live in Middletown, and my concern  
11 about evacuation is simply that we have a number of elderly  
12 people right downtown within two miles or three miles of the  
13 island. It includes two nursing homes and the Interfaith  
14 Apartments and Essex Apartments, in which there are both  
15 elderly and handicapped.

16                  Among those handicapped are people who cannot move  
17 by themselves and cannot be moved in cars. They would  
18 require ambulances. Middletown has three ambulances,  
19 Swatara Township has one and Londonderry has one. I cannot  
20 quite see how the population of these four institutions  
21 could be moved in any period of time which would save their  
22 lives.

23                  Also, within five miles we have the Hummelstown  
24 child care center, in which there are a number of mentally  
25 defective and also - they are no longer really children;

1 they are adults, but who have to be treated as children.

2 How they would be gotten out I do not know.

3 Now, in addition to these people we also have in  
4 the downtown area a number of elderly people living in their  
5 own homes. Many of them do not have transportation. That  
6 includes my mother. If I am not home, there is no way, as a  
7 semi-invalid, that she could get out.

8 Now, in comparison, when you consider the time it  
9 took to get the people away from Edwards Air Force Base  
10 after the landing of the Columbia, this rather struck me.  
11 These are healthy young people who went out to Edwards to  
12 watch the landing of the Columbia. It took 12 hours to free  
13 the area of these people.

14 Now, I do not know what the number of people were  
15 that were watching it. But still, these were all healthy  
16 people with their own cars, not under stress, happy because  
17 they had seen a successful landing of the shuttle. And yet  
18 it took 12 hours to move them.

19 How are we going to move people under stress in  
20 any period of time in which we can actually save their  
21 lives? In addition to this, we have some idea of what to do  
22 in Middletown, not really a good idea. They tell us to go  
23 to certain areas to be picked up. We have no guarantee that  
24 even if we get there there will be any buses or trucks or  
25 bicycles to take us anywhere.

1 Plus, the highways are limited out of Middletown.  
2 441 is a two-lane highway. All we know is one crack-up.  
3 Say it happens in the wintertime, someone slides on the ice,  
4 another car plows into that one. I have seen six-car  
5 pileups because one car slid on the ice. Now how do we get  
6 around that?

7 Those are my basic concerns as far as evacuation  
8 is concerned. I frankly do not think it can be done.

9 Thank you.

10 CHAIRMAN SMITH: Thank you, Ms. McCurdy. Those  
11 very questions are the questions that are being presented to  
12 the witnesses these days, and you are very welcome to remain  
13 and listen to the examination.

14 The Board -- excuse me.

15 (Board conferring.)

16 CHAIRMAN SMITH: The Board has determined that,  
17 with the exception of approximately six outstanding requests  
18 for oral limited appearance statements, we will not receive  
19 any additional oral limited appearance statements. We have  
20 had this second session of receiving limited appearance  
21 statements, a period that has extended from March 5 through  
22 this morning. That is, all requests that have been received  
23 to make oral statements through this morning have been  
24 arranged for and granted, with the exception of six.

25 These six are still outstanding. The reason they

1 are outstanding is that we have not been able to reach them  
2 or they have failed to call back when they said they would  
3 to make arrangements. We will continue to try to  
4 accommodate those six, and if we can do so before the end of  
5 the hearing they will have an opportunity.

6 All right. Ms. Bradford, I received your note.  
7 And I wonder if you could -- the note about the York College  
8 Library. My memory is that I reported to you that -- I  
9 reported to you that Mrs. Sutter had stated that there had  
10 been not much interest in the York County PDR, but when she  
11 received a demonstration of interest that she would  
12 establish it again.

13 And we cannot find that communication. I am sure  
14 I served a letter or something to that effect. Can you give  
15 us an approximate date on that?

16 Ms. Bradford has stated that the last transcript  
17 at the York College Library PDR is November 17, 1979. '80 I  
18 guess is what you mean, yes.

19 MS. GAIL BRADFORD: No, it is 1979.

20

21

22

23

24

25

1 CHAIRMAN SMITH: You mean there are no  
2 transcripts of the hearing, of the evidentiary hearing,  
3 whatever, at York College?

4 MS. GAIL BRADFORD: The most recent one is the  
5 limited appearance statements in Hershey way back in the  
6 beginning of time.

7 CHAIRMAN SMITH: And this is true as of April 15.

8 MS. GAIL BRADFORD: Yes. It is approximately page  
9 1200, 1500.

10 CHAIRMAN SMITH: As I recall, the communications I  
11 had with Mrs. Sutter on that subject matter was  
12 approximately the first of the year. But can you --

13 MS. GAIL BRADFORD: Yes, I would say that it was  
14 the end of January.

15 CHAIRMAN SMITH: The end of January?

16 MS. GAIL BRADFORD: Yes.

17 CHAIRMAN SMITH: All right. We will follow  
18 through. I do not know if it is going to be possible, if it  
19 has been dropped out of sight. I do not know if it is going  
20 to be possible to rectify it if it is an error. I do not  
21 know if there are full copies of the 19,000 pages of  
22 transcript that are sitting around someplace available to be  
23 placed in that TBR. We will have to address that problem,  
24 if that is the case, when it comes up. But we will inquire  
25 and see what can be done.

1 (Board conferring.)

2 DR. JORDAN: Ms. Bradford, the session yesterday  
3 you asked for a copy of a report to look at overnight. And  
4 there were some questions that I thought I might have on the  
5 report. I have not seen it, and I do not want to. But I  
6 just wanted to warn you that I may have some questions  
7 whether you do or not. I hope perhaps you will.

8 MS. GAIL BRADFORD: Yes, I did receive. I forgot  
9 to ask Mr. Gray for it yesterday. I did receive it this  
10 morning. I have it here.

11 DR. JORDAN: All right. I just wanted to let you  
12 know.

13 CHAIRMAN SMITH: Also, the Board has copies of the  
14 two initial decisions that we had identified that might be  
15 good guidance for proposed findings. And we have made them  
16 available to Intervenors who have requested them, and we  
17 will continue to do so.

18 MR. COSGROVE: Mr. Chairman, FEMA has obtained  
19 copies of the conditional findings and determinations in the  
20 Farley and Sequoyah plants which you requested yesterday.  
21 The copies are photostatic copies of a telefax. They are  
22 not very good, but I would like to present them now.

23 CHAIRMAN SMITH: That would be fine. I would  
at appreciate it.

1 DR. LITTLE: I would also like to put on the  
2 record that the Board intends to make physical exhibits of  
3 the maps which were prepared by USGS, and we will assign  
4 identifying letters or numbers to them.

5 CHAIRMAN SMITH: If there are any objections to  
6 that, they should be made timely. Well, soon.

7 MS. GAIL BRADFORD: Do we get copies?

8 CHAIRMAN SMITH: No. That is why they are called  
9 "physical exhibits."

10 (Board conferring.)

11 CHAIRMAN SMITH: Because there will only be the  
12 copy or copies received into evidence.

13 (Board conferring.)

14 CHAIRMAN SMITH: You have seen the small handouts,  
15 haven't you?

16 MS. GAIL BRADFORD: Yes, I have.

17 CHAIRMAN SMITH: Yes.

18 DR. LITTLE: It turns out that getting multiple  
19 copies of maps of this type is not an easy procedure.

20 CHAIRMAN SMITH: Okay, Mr. Cunningham, is there  
21 anything further before we resume the testimony?

22 (No response.)

23 CROSS EXAMINATION--Resumed

24 BY MR. CUNNINGHAM:

25 Q I believe we broke off at the beginning of

1 questions 57 through 59 that appears in the FEMA's direct  
2 examination. Questions 57 and 59 deal with Contention  
3 EP-14-X, which deals with a question of coordination of  
4 manpower and chain of command.

5 After a review of the risk county plans, including  
6 York and Dauphin Counties, specifically, has the Federal  
7 Emergency Management Agency been able to determine whether  
8 any coordination exists within the risk county plans between  
9 fire, police, State, and National Guard units with -- within  
10 the plans themselves?

11 A (WITNESS ADLER) The plans call for the normal  
12 conduct of these organizations in an emergency. As such,  
13 yes, they are coordinated.

14 Q Now, as I understand your answer in your direct  
15 testimony that each one of these forces, be it a state  
16 police force or a local police force or a National Guard  
17 unit, will remain under their commander's command, whoever  
18 is in charge of that particular force. Is that correct?

19 A (WITNESS ADLER) Yes.

20 Q Is there anywhere in the plan that a person has  
21 direct command, the ability to command over all of these  
22 groups?

23 (Panel of witnesses conferring.)

24 Is there anybody delineated that has the authority  
25 within the county to direct these forces regardless of what

1 their local commanders say?

2 A (WITNESS ADLER) The conventional chains of  
3 command are those in effect.

4 Q So in the situation with the National Guard, it  
5 would be whoever is in charge of the National Guard,  
6 whatever officer in the county up to the general in charge  
7 of the State National Guard and then, above him, the  
8 governor, for example. Is that correct?

9 A (WITNESS ADLER) Correct.

10 Q Now, what I am trying to get at is that within the  
11 York County plan there is mention of an individual who is in  
12 charge of all law enforcement within the county. What I am  
13 trying to visualize is how do you deal with the situation?  
14 How does National Guard interface with Newberry Township  
15 police or Goldsboro police or Pennsylvania State Police? Is  
16 there an interface within the risk county plans for that?

17 A (WITNESS BATH) Would you name this person?

18 Q Name him?

19 A (WITNESS BATH) Are you talking about the police  
20 coordinator on the EOC staff?

21 Q THat is correct.

22 A (WITNESS BATH) I believe his role, as I  
23 understood it, was to be -- was to coordinate the resources  
24 as to command.

25 Q Well, if he is going to coordinate the resources,

1 how does he interface with the chain of command?

2 A (WITNESS BATH) They interface at the state level,  
3 if in fact you have a problem. The county has a resource  
4 requirement. They would communicate it to state level.  
5 State level would see that the forces go to augment that,  
6 and they would be under the command of the unit that they  
7 were discharged from and also under the command of a field  
8 commander.

9 Q Okay. Now, that would be National Guard that you  
10 are making reference to at this point?

11 A (WITNESS BATH) Yes, that is correct.

12 Q I guess what -- what bothers me and what I do not  
13 -- that you have approached in this testimony is if you have  
14 a general evacuation and a local -- I mean the local county  
15 risk plans indicate, as does York, that local police  
16 agencies will be called upon for traffic control and other  
17 types of security work.

18 How does a policeman from Newberry Township who is  
19 ordered to evacuate, to help in the evacuation past the  
20 ten-mile EPZ and now he finds himself not in Newberry  
21 Township but somehow disjointed from his police chief and he  
22 finds himself in Manchester Township aiding Manchester  
23 Township police, how do -- who does that individual look to  
24 for command?

25 MR. ZAHLER: Mr. Chairman, I have an objection at

1 this point. It is one I made yesterday. The specific piece  
2 of testimony, the specific Contention that is being  
3 discussed here is limited specifically to the National  
4 Guard. There are an enormous number of Contentions in  
5 emergency planning, 150 or something, very specific and very  
6 precise. And I am going to object to questions and findings  
7 that might be proposed at a later date that go beyond the  
8 Contentions that are discussed in the testimony.

9                 The testimony was not prepared to respond to  
10 that. I do not think it is appropriate inquiry at this  
11 point in the proceeding.

12                 MR. CUNNINGHAM: Well, my response to that is I do  
13 not have a full list of the Contentions before me, but I  
14 believe there was a York County Contention with regard to  
15 local -- not only National Guard units but, I think, local  
16 police units.

17                 There is also, although we may not have come to it  
18 yet in the direct testimony, I believe there is a question  
19 regarding the coordinator that we are referring to  
20 specifically.

21                 MR. ZAHLER: If that is the case, Mr. Chairman, I  
22 would request that the examiner direct the witnesses to that  
23 testimony and not examine them with respect to a piece of  
24 their direct testimony and then switch to something else  
25 with the introduction that, "What I found missing in this

1 piece of testimony was the following."

2 MR. CUNNINGHAM: Well, if that --

3 CHAIRMAN SMITH: I do not quite understand your  
4 last point.

5 MR. ZAHLER: Mr. Jordan's last question to these  
6 witnesses started off by saying, "What I do not see in this  
7 piece of testimony is how this relates." And he was talking  
8 about the testimony on pages 36 and 37, which address the  
9 National Guard. And then his question goes on to talk about  
10 the local police. Now, he has identified that there may be  
11 another Contention someplace that talks about the local  
12 police.

13 If that is the case, I would request that the  
14 examiner direct the witnesses' attention to that piece of  
15 testimony and frame his contentions in the context of that  
16 piece of testimony and not the piece of testimony on the  
17 National Guard.

18 MR. CUNNINGHAM: Mr. Chairman, if Mr. Zahler's  
19 argument holds, then what we have is a situation where there  
20 is no spontaneity at all to the cross examination. Those  
21 areas are covered. Question 70 on page 46 and question 72.  
22 We will be coming to them. And the problem is, I think, if  
23 we limit it now, the purpose of cross examination sometimes  
24 is the spontaneity that is involved.

25 What Mr. Zahler wants to do is limit that to a

1 situation where, okay, we deal with the National Guard at  
2 this point and maybe 15 minutes later we will come upon the  
3 same area which logically would have followed after the  
4 National Guard.

5 If that is the intent of his motion, I think he is  
6 unduly limiting or asking for the Board to unduly limit the  
7 spontaneity of cross examination.

8 MR. ZAHLER: Mr. Cunningham, I am not making any  
9 motion with respect to the order that you take up these  
10 things if you do as follow-up move into another area. I  
11 think, however, in fairness to the witnesses and the  
12 accuracy of the record, you identify the piece of testimony  
13 that relates to it and your questions not relate back to  
14 testimony that does not relate to the question once you have  
15 changed gears.

16 CHAIRMAN SMITH: Well, I do not think that your  
17 objection is sustainable technically, for the initial  
18 grounds that you gave, because I do think that there are  
19 Contentions in the direct -- I mean that the direct  
20 testimony does cover the point. And it is a correct area of  
21 examination.

22 However, I think it would be more appropriate for  
23 you not to suggest that the void is attached to the  
24 Contention being examined. And I did not take that as being  
25 a purposeful effort at all. It just is the way you happened

1 to organize your cross examination. I do not think we  
2 should have to rule on anything here. I think you have  
3 expressed a legitimate concern. I am sure Mr. Cunningham  
4 will appreciate what your problem is.

5 MR. CUNNINGHAM: Okay.

6 BY MR. CUNNINGHAM: (Resuming)

7 Q Well, I believe the last question -- I am trying  
8 to remember exactly what the last question was. I guess I  
9 had a situation where the local policemen find themselves  
10 outside of the chain of command of their local police  
11 chief. And the thrust of the question is: Is there one  
12 person in the county who has total control over these  
13 security forces?

14 A (WITNESS ADLER) No.

15 Q And I assume that the Federal Emergency Management  
16 Agency does not have a position as to whether that is a  
17 requirement or not at this point in NUREG-0654?

18 A (WITNESS ADLER) We have no position with respect  
19 to whether or not it is a requirement. However, it is  
20 consistent with our understanding of such coordinated forces  
21 in an incident, as is reflected in later testimony.

22 Q Okay. Move to question 60. I believe this has  
23 been covered in previous testimony. It regards Contention  
24 EP-CC. And it is a question about the cataloging of  
25 towtrucks available in York County. If your answer is

1 consistent, why, I believe that you have not verified  
2 whether these towtrucks exist; you are accepting that they  
3 do exist at this point and will subject it to a spot  
4 sampling to see if it is accurate within the plan itself.  
5 Is that right?

6 A (WITNESS ADLER) As stated in the direct  
7 testimony, experience is relied upon and history and perhaps  
8 a sampling, as you suggested, is worthwhile. But it is  
9 certainly not a requirement.

10 Q Now, to question 61 regarding Contention EP-11,  
11 which involves the American Red Cross' ability to provide  
12 for distribution of foodstuffs, clothing, and other personal  
13 articles, FEMA indicates in response to that Contention that  
14 the Red Cross has in the past been able to respond to actual  
15 disasters. And, therefore, you find that the plan is  
16 satisfactory, with reliance upon the Red Cross.

17 Does FEMA have any information that -- how many  
18 individuals of the Red Cross in York County, how many would  
19 they be able to take care of within the mass shelters? Is  
20 it well within your projections?

21 A (WITNESS BATH) We do not -- we do not envision  
22 that the Red Cross Chapter of York would have to take care  
23 of the mass care. We envision that the National Red Cross  
24 organization, as it is set up, will in fact assist through  
25 its normal emergency methodologies.

1       Q     Okay. Thank you. Question 62 involves a  
2 Contention EP-16-G regarding security of individuals within  
3 pickup areas for mass transportation. In response to this  
4 Contention, the Federal Emergency Management Agency has  
5 stated in the past that with experience with mass  
6 evacuation, that personal security has not been a  
7 significant problem. What experience are you referring to  
8 at that point?

9       A     (WITNESS ADLER) Experience with conventional  
10 disasters.

11      Q     These are natural disasters?

12      A     (WITNESS ADLER) Some. Some not.

13      Q     The type of disasters that you are indicating are  
14 not natural. I assume they were manmade; is that correct?

15      A     (WITNESS ADLER) Well, I am conjecturing at this  
16 point, because I would have to go back to other resources to  
17 actually look at documentation of how accidents and  
18 disasters were in fact handled on a case-by-case basis.

19                  Your question is extremely specific and difficult  
20 in that respect.

21      A     (WITNESS PAWLOWSKI) The general -- the general  
22 context of the statement, as prepared in the testimony, is  
23 correct from the standpoint of experience in natural  
24 disasters.

25      Q     This leads us back into an area which was touched

1 upon earlier in other testimony. Has the Federal Management  
2 -- Federal Emergency Management Agency, with respect to this  
3 piece of testimony, taken into consideration the perception  
4 of the public to a radiological disaster versus the other  
5 type of natural disasters you have had experience with?

6 A (WITNESS ADLER) Yes.

7 Q Okay. Now, what studies did you conduct in order  
8 to come up with a statement that you expect the general  
9 public in this area not to experience or have a different  
10 type of experience than other individuals?

11 A (WITNESS ADLER) I really think the only way I can  
12 answer you, or the best way I can answer you, is to say that  
13 it has been FEMA's experience that when a disaster occurs,  
14 not only does the public respond in an orderly fashion, but  
15 emergency workers will do their jobs as assigned. People  
16 behave in a responsible way. And that is a generic  
17 position.

18 Q Okay. I realize that. But in specifics to my  
19 question, you do not have an independent study of how  
20 individuals would react to a radiological situation versus a  
21 natural disaster situation?

22 CHAIRMAN SMITH: Is this still with respect to  
23 security and the need for police?

24 MR. CUNNINGHAM: Yes.

25 CHAIRMAN SMITH: Well, could you -- the trouble I

1 had with that Contention when I first read it, and still  
2 have, is that I do not -- I cannot postulate what the  
3 particular problem is that you have in mind. And  
4 particularly now, I cannot postulate how it would be  
5 different from another type of evacuation problem.

6 MR. CUNNINGHAM: There were two aspects to the  
7 Contention. One was sheltering, and one was the security in  
8 the area.

9 CHAIRMAN SMITH: That is the one that I just  
10 cannot -- you know, I have no feeling for that Contention at  
11 all.

12 MR. CUNNINGHAM: My feeling was that if we have a  
13 situation where we have a pickup point and you only have a  
14 limited number of buses and you have a situation where only  
15 80 people can get on the bus and you have 120 people there,  
16 because if it was a natural disaster such as, let's say, a  
17 hurricane, something people have experience with, they may  
18 know that -- they know what to expect, there is no unknown  
19 fear at this point. You still may have a problem at that  
20 point with security: Who gets on the bus and who does not  
21 and who controls the situation.

22 But our contention is there may even be a  
23 perception or a lack of perception on behalf of the public  
24 that what is this radiological danger. Now, we have a  
25 situation where security is a bigger problem.

1 CHAIRMAN SMITH: I understand. I was thinking  
2 security in terms of crime. But you were thinking about it  
3 in terms of control?

4 MR. CUNNINGHAM: That is the perspective. Right.

5 BY MR. CUNNINGHAM: (Resuming)

6 Q I guess my question was: Have you done any  
7 specific studies -- and it does not have to be site-specific  
8 to this area, but any studies -- that you can relate that  
9 the public's perception in a radiological situation will not  
10 differ from that in a natural disaster situation?

11 A (WITNESS ADLER) The assessment of people's  
12 behavior in accidents of all kinds experienced -- and that  
13 means drawing from the existing data base -- dictates that  
14 people behave in an orderly manner, on the whole, that they  
15 seek intelligent information for survival on a rational  
16 basis regardless of their state of stress and that they  
17 respond to intelligent information given by people in  
18 authority for whom they have respect.

19 Q Okay. One last question in this area. Your data  
20 base that you are referring to does not include a  
21 radiological disaster situation; is that correct?

22 A (WITNESS ADLER) Fortunately, that is true.

23 (Pause.)

24 Q Within FEMA's data base that you have been  
25 referring to, has there ever been a situation within that

1 data base where you have used mass transportation for  
2 evacuation?

3 A (WITNESS ADLER) One moment, please.

4 (Panel of witnesses conferring.)

5 A (WITNESS ADLER) Mr. Cunningham, would you please  
6 rephrase the question for us?

7 Q Within the data base you have been referring to,  
8 is there any information within that data base that includes  
9 situations where you have utilized mass transportation for  
10 evacuation?

11 A (WITNESS ADLER) None come to mind. I would have  
12 to research it.

13 Q So if you have none that comes to mind and you  
14 prepared the testimony, then is it your assumption, your  
15 personal assumption, that you are not going to have a  
16 control security problem at the pickup points; is that  
17 correct?

18 A (WITNESS ADLER) My personal assumption has  
19 nothing to do with it. It is drawing from the experience of  
20 the agency as it has been explained to me and as I have  
21 reviewed it with other people within the agency. There is  
22 no such difficulty. There has been no such difficulty.

23 Q But that also could be because you do not have any  
24 data to base an assumption -- to make that assumption upon.  
25 Correct?

1           A     (WITNESS ADLER) One source, one major source,  
2 that we are drawing upon -- and I think we referenced it in  
3 our testimony -- is a perspective on disaster planning which  
4 was prepared for the Defense Civil Preparedness Agency by  
5 the Ohio Center. And we have -- we would have to go back  
6 and look at it specifically as to whether or not the 132  
7 incidences reviewed for persons' sociological attitudes and  
8 psychological effects in fact had bus and so forth. It  
9 would be a reasonable assumption that buses were used in  
10 numerous of these disasters. And the conclusions would,  
11 therefore, bear out that buses did not add any -- anything  
12 different.

13          A     (WITNESS BATH) I know that the Mississagi, I  
14 believe, accident or disaster involved movement of many  
15 thousands. What I cannot -- what I am having difficulty  
16 with, Mr. Cunningham, is to say how many buses were involved  
17 or might have been involved and associated with thousands of  
18 those persons being moved. I am unable to answer that  
19 question at this time.

20          Q     The critical point is not the buses, but the  
21 reaction of the people who were at the bus sites. I guess  
22 what I am looking for is FEMA is not aware of any studies to  
23 indicate that there would or would not be a control problem  
24 at the pickup points. Is that correct?

25          A     (WITNESS PAWLOWSKI) I can state from personal

1 experience, being involved with the chlorine barge incident  
2 in Louisville seven years back in the early '70s, that there  
3 was, in fact, no problem with moving the people and control  
4 points where people got on buses to be evacuated from the  
5 surrounding environment due to the hazard that was posed by  
6 the chlorine barge which was on the -- stuck on one of the  
7 locks and posed a threat.

8                 The mayor made the decision to evacuate certain  
9 sections of the City of Louisville, and I, in fact, was  
10 involved in that situation on the Indiana side. There was  
11 no problem. People reacted in a normal, controlled way,  
12 listening to the guidance that was provided by public  
13 officials and emergency management personnel.

14                 Q         Turning to question 63 through 64, this Contention  
15 deals with a part of the Dauphin County plan which provides  
16 that one person would lead mass evacuation vehicles to an  
17 EOC reception area, et cetera. The Federal Emergency  
18 Management Agency, in responding to this particular  
19 Contention, indicates that they are of the position that  
20 suggesting that one person lead various vehicles to an EOC  
21 reception area from the staging area is a deficiency. Is  
22 that correct at this point?

23                 MR. ADLER: We say it is not a deficiency.

24                 Q         Okay. Not a deficiency. I believe it is also  
25 your position that there should be more than one person to

1 lead these vehicles in the event that those individuals are  
2 not in place or cannot be reached in the event of an  
3 emergency; is that correct?

4 A (WITNESS ADLER) I am sorry, Mr. Cunningham, your  
5 words are running together. I am having difficulty  
6 understanding your question.

7 CHAIRMAN SMITH: Mr. Cunningham, you know, it has  
8 occurred to me late in this examination that it probably  
9 would be harmless if they had a copy of your  
10 cross-examination plan. Since your approach is not -- is to  
11 actually gain information and not to confound or confuse or  
12 surprise, I do not think you would be prejudiced by it.

13 MR. CUNNINGHAM: That is all right. I think we  
14 have one extra here, too. We are on page 12.

15 CHAIRMAN SMITH: Start on the top of page 12. He  
16 has been reading these sentences rather faithfully. They  
17 are not all complete; he makes some changes. But you can  
18 pick up where it is otherwise difficult to hear.

19 (Counsel handing documents to witnesses.)

20 MR. CUNNINGHAM: For the sake of the witnesses, I  
21 have been deleting parts of the question that would be  
22 redundant or have been asked or answered previously in their  
23 testimony.

24 BY MR. CUNNINGHAM: (Resuming)

25 Q So I think where I -- what I was asking -- maybe I

1 misread your testimony -- is it your position that within  
2 the Dauphin County plan there does not exist a deficiency  
3 with having one person lead these mass transportation  
4 vehicles from the staging areas to the EOC areas?

5 A (WITNESS ADLER) Yes; there is no deficiency.

6 Q Now, this question was asked previously with  
7 regard to the York County plan, and I believe that I did not  
8 ask it with regard to the Dauphin County plan at that time,  
9 because of the objections that were previously raised by Mr.  
10 Zahler.

11 But with regard to the Dauphin County plan, is  
12 there any agreement with various local proprietors as to the  
13 payment for services rendered for such things as wrecker  
14 services or refueling of buses or ambulances that are to be  
15 used in an emergency?

16 CHAIRMAN SMITH: You are going very fast now.

17 Most of us have cross-examination plans, but not everybody  
18 so -- well, not most of us, either.

19 WITNESS BATH: Where are you in the Contentions,  
20 please?

21 BY MR. CUNNINGHAM: (Resuming)

22 Q I am at page 12. Oh, in the Contentions. I am  
23 sorry. Question 63 through 64.

24 MR. ZAHLER: Mr. Chairman, might I suggest -- it  
25 is up to the witnesses -- it may well be that using Mr.

1 Cunningham's cross-examination plan in front of them cuts  
2 down their attention to the question. And the document may  
3 actually impede their understanding of what is going on.

4 CHAIRMAN SMITH: If that is their experience, that  
5 is fine. But my experience is I found the cross-examination  
6 plan very helpful, in that if I do not hear a word clearly  
7 or miss it, I can go back to it. They can experiment in  
8 whatever works better for them.

9 Listen to the oral question, use the written  
10 cross-examination plan only as a guide to the oral  
11 question. If you cannot identify the oral question from the  
12 cross-examination plan, forget the written one and listen.

13 But I have been able to follow very closely his  
14 oral questions once I -- once you catch up with the  
15 questions on the cross-examination plan.

16 WITNESS ADLER: Thank you, Mr. Smith.

17 CHAIRMAN SMITH: I would suggest that one of you  
18 follow the cross-examination plan. And you can understand  
19 the written question and use it that way.

20 MR. GRAY: Yes. Please listen very carefully to  
21 the questions.

22 BY MR. CUNNINGHAM: (Resuming)

23 Q Okay, let me help you out where we are. Now you  
24 have three documents to look at. I am referring to, I  
25 believe it is, question 64 specifically. The question is

1 how will the county provide for refueling of buses and  
2 ambulances used in an emergency? And your answer is that  
3 the refueling will be conducted through local resources.

4 And my only question is, in that area, is: Is  
5 there any agreement between the providers and the county  
6 that payment for services will be waived at the time the  
7 services are requested and that there will be an easy  
8 facility for procurement of those vehicles and services?

9 A (WITNESS ADLER) I do not know personally.

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 Q Would that be the type of an agreement that would  
2 be required by NUREG-0654?

3 A (WITNESS ADLER) No.

4 (Pause.)

5 Q Turning to question 65, which involves contention  
6 EP-00 --

7 A (WITNESS ADLER) 14-00?

8 Q Question 65. This contention involves the  
9 National Guard and its being put on duty by the Governor of  
10 Pennsylvania, and also the situation with looting occurring  
11 within the ten-mile EPZ if an evacuation was ordered. You  
12 state that: "Federal Emergency Management Agency, in its  
13 experience with mass evacuation situations, has noted that  
14 looting is not a significant problem."

15 From which experience do you draw that conclusion  
16 and what were the circumstances of the evacuation?

17 A (WITNESS ADLER) Dr. Dynes provided or presented  
18 testimony here. Dr. Dynes was the head of a research -- the  
19 center for research at Ohio State University. Most of the  
20 surveys and studies that he performed were paid for by the  
21 Defense Civil Preparedness Agency, and it was those surveys  
22 and that type of base that caused us to draw the same  
23 conclusions as he presented, in that there is not  
24 significant looting.

25 Q So your answer to this question, you give

1 deference to Dr. Dynes' testimony in this area?

2 A (WITNESS ADLER) No, that is not accurate. That  
3 is one point of reference.

4 Additionally, it is FEMA's experience that in such  
5 situations there is a high presence, visible presence of law  
6 enforcement personnel. And without going into psychological  
7 speculation, we think or we believe that that too is a  
8 mitigating aspect of limited or minimal looting occurring,  
9 aside from the fact that the people who might choose to  
10 break the law are indeed jeopardizing their own lives in the  
11 same way that the citizenry might be.

12 C Okay.

13 Question 56 involves the Dauphin County plan,  
14 contention EP-16(o). The plan indicates that approximately  
15 600 ambulances are required for an evacuation of all members  
16 of the exposed populace, and it indicates only 45 are  
17 available within the county. But the county could also  
18 obtain from other sources some 226 additional ambulances,  
19 leaving an approximate shortfall of 300 ambulances at this  
20 point.

21 Now, in answering that question FEMA has indicated  
22 that Dauphin County at this time has not been able to  
23 determine a precise number of individuals who would need the  
24 ambulances to remove them in the event of an evacuation. Is  
25 that a correct statement?

1       A     (WITNESS ADLER) Well, we have responded to the  
2 contention as it was stated and --

3                     (Pause.)

4       CHAIRMAN SMITH: Well --

5       MR. CUNNINGHAM: I do not know where that leaves  
6 us.

7                     BY MR. CUNNINGHAM: (Resuming)

8       Q     I guess my real question is, is there an  
9 assumption within your plan that within Dauphin County  
10 somebody has an idea of the exact number of ambulances  
11 required?

12      A     (WITNESS ADLER) Somewhere there is a number, is  
13 that --

14      Q     You indicate in your answer to the question 66  
15 that there should be a sufficient -- sufficient ambulances  
16 should be available to evacuation severely incapacitated  
17 residents. That appears on the very last lines of your  
18 direct testimony.

19      A     (WITNESS ADLER) Yes. The presumption is by  
20 utilization of these resources and conversion of other  
21 vehicles as may be needed, that there would be no  
22 shortfall.

23      Q     Okay. Now, at this point do you know whether  
24 Dauphin County has indicated who the invalids are, the  
25 people who are so severely incapacitated they could not be

1 removed, by no other source but ambulance?

2 A (WITNESS ADLER) No.

3 Q Would that be a requirement that you would have to  
4 -- or you would require in your final determination under --  
5 when you are reviewing the plan under NUREG --

6 A (WITNESS ADLER) Mr. Cunningham, it will be very  
7 important, but FEMA does not require nor impose  
8 requirements.

9 Q That is a requirement of NUREG-0654, though, that  
10 you will be looking at; is that correct?

11 A (WITNESS ADLER) It is a criterion within the  
12 planning standards.

13 Q Will that criterion have to be met by the counties  
14 to receive your approval in the final determination?

15 A (WITNESS ADLER) Yes.

16 (Pause.)

17 Q I think you just answered the next steps in my  
18 cross-examination plan, which were questions 67 through 68.  
19 There is one point that you brought out further in that  
20 direct examination, and that was, with regard to contention  
21 EP-14(c).

22 A (WITNESS ADLER) Excuse me. What page are you on  
23 in your --

24 Q Cross-examination plan?

25 A (WITNESS ADLER) Yes.

1           Q     Page 12 at the bottom, and going over to page 13.  
2     It appears as though your direct testimony is that if there  
3     is a need that is greater than the resources available, that  
4     there must be a provision in municipal planning to provide  
5     for required resources.

6                 Now, I believe this was in response to the York  
7     County plan, which is -- which is EP-14(c). And I assume --  
8     I think maybe we covered this earlier with Mr. Bath.

9                 If I am correct, Mr. Bath, you stated because York  
10    County relies upon municipal plans for the identification of  
11    these invalids you will be looking for that in your final  
12    review, making final determinations?

13          A     (WITNESS BATH) EP-14(c) was filed on February  
14    23rd. I feel our direct testimony is consistent.

15          Q     Okay, thank you.

16                 With regard to question 69, which concerns an ECNP  
17    contention EP-10, it involves the state plans. It really  
18    involves Appendix D of the state plans, and I assume they  
19    are referring to the Commonwealth's emergency plan. It  
20    contains reference to the need for decontamination of  
21    radiologically contaminated individuals. But it does not  
22    provide information as to how many of the people may be  
23    contaminated, the kind and degree of contamination to be  
24    expected or to be planned for, or the number of facilities  
25    and the medical personnel appropriately trained in

1 decontamination and radiation injury treatment techniques,  
2 whichever may be necessary.

3 My question to that is, is it correct that FEMA's  
4 position is that the Commonwealth's plan is defective and  
5 that procedures for mass care centers will have to be  
6 included in the county plans in order to meet the criterion  
7 of 0654 in your review for final determination?

8 A (WITNESS ADLER) No.

9 Q You state in the last sentence of your testimony:  
10 "The procedures for decontamination at mass care centers  
11 have been developed for inclusion in the county plans and  
12 will be reflected in revised county plans to be submitted by  
13 mid-April."

14 You say that that is not required in order to meet  
15 your approval for final determination when you review the  
16 plan against the criteria of 0654?

17 A (WITNESS ADLER) I think the key is in "will be  
18 reflected in." Depending upon the degree of assurances  
19 stated and documented in the county plan revisions, we do  
20 not feel it is incumbent upon us to look at the procedures  
21 at this time.

22 (Pause.)

23 Q Okay. The next set of questions, 72 through 74.

24 A (WITNESS ADLER) Excuse me. Could I just have a  
25 moment to confer?

1 CHAIRMAN SMITH: Sure.

2 (Panel of witnesses conferring.)

3 WITNESS ADLER: Thank you, Mr. Chairman.

4 BY MR. CUNNINGHAM: (Resuming)

5 Q Okay. Questions 72 through 74, and I will ask you  
6 to look at your direct testimony so we do not have a  
7 problem. These questions concern -- consider certain  
8 aspects of contentions EP-14(h) and (r). Now, in the York  
9 County plan, Annex F, Section II, there is a contention that  
10 that provision is inconsistent with Appendix 2, subsection  
11 III, subsection A, in that the assistant director of police  
12 operations is stated to be responsible for all management of  
13 law and order, traffic control and security, whereas Annex F  
14 provides that the Pennsylvania State Police are responsible  
15 for coordinating all law enforcement and traffic control,  
16 and the Pennsylvania National Guard is responsible for  
17 providing security for evacuated areas.

18 I guess this gets back to the major question that  
19 I have for you in this area. If in fact the director of  
20 police operations is responsible for all management of law  
21 and order, is it FEMA's position that that is to be  
22 interpreted as coordination, or is he responsible for  
23 management and command?

24 A (WITNESS BATH) I guess I would have problems with  
25 the word "management." I perceive that the role of the York

1 County police personnel as being that of coordination.

2 Q So it is a question of semantics.

3 A (WITNESS BATH) As I provided in my -- in my  
4 direct testimony, but to state that the York County police  
5 officer at the EOC had management, i.e., direction or  
6 command authority over state police, would be counter to  
7 state legislation.

8 Q Well, I guess -- go ahead, Mr. Adler.

9 A (WITNESS ADLER) I was simply going to refer you  
10 to the answer on the bottom of page 72, which cites the  
11 public law.

12 Q I guess I realize that, and maybe it is  
13 redundant. And if it is I am sure the Board will rule. But  
14 I guess my problem with all of this is, you say there is an  
15 interface on the state level with the counties. Where is  
16 that interface? Where is it stated what the interface is?  
17 Is there anywhere where we can find that interface  
18 articulated?

19 A (WITNESS BATH) Within the state plan of PEMA?

20 Q That is correct.

21 A (WITNESS BATH) It is in their concept of  
22 operations, within the Annex E, as to the methodologies for  
23 the interface of the response teams at the state level, at  
24 the state EOC.

25 Q And is there any assurance that the folks on the

1 bottom rung of the ladder, say the local township police,  
2 understand that relationship? Has FEMA looked at that?

3 A (WITNESS BATH) The bottom line I guess is I would  
4 have to say I have been at the state EOC in disasters as  
5 well as TMI and the incident, and I have no experience which  
6 would show me that they have a problem interfacing at any of  
7 these levels of government that resulted in a failure -- in  
8 the mission's failure.

9 Q Okay. So your position is articulated and it is  
10 somewhere, we can find it, and it is what you indicated it  
11 is?

12 A (WITNESS '4) Yes.

13 Q You are indicating that is correct?

14 A (WITNESS ADLER) (Nods in the affirmative.)

15 Q Question 75, the first two contentions, EP-14(11)  
16 and EP-16(b). Both contentions -- one is specifically  
17 referenced in York and one to the Dauphin County plan, but  
18 they both refer to staffing of the emergency response  
19 teams.

20 Am I correct that with regard to these contentions  
21 Federal Emergency Management Agency agrees that the  
22 Intervenors have correctly set forth deficiencies within the  
23 Dauphin and York County emergency plans as set forth in the  
24 contention?

25 A (WITNESS ADLER) We believe that these county

1 plans should be modified to identify and provide for  
2 substituting emergency management coordinators. I am  
3 reading from our testimony on page 49.

4 Q Now, would that be the type of advisory -- the  
5 type of thing that you would be looking for in your review  
6 to make a final determination in order to determine whether  
7 those two plans in that area meet the criterion of  
8 NUREG-0654?

9 A (WITNESS ADLER) We will be looking for that kind  
10 of information.

11 Q Is that required in order to receive your approval  
12 for final determination -- in making your final  
13 determination?

14 (Panel of witnesses conferring.)

15 A (WITNESS ADLER) If the planning standards are met  
16 in that way or in any other way, there would be no  
17 deficiency in our findings. In any -- in other words, if  
18 the standards met -- maybe more direct with these -- with  
19 you, Mr. Chairman, the planning standard is the item that we  
20 are addressing.

21 The criteria within these 16 planning standards as  
22 set forth provide guidance to the state.

23 Q Well then, specifically I guess my question is,  
24 will the counties have to provide a list of individuals and  
25 substitutes in order to receive your approval in making a

1 final determination?

2 A (WITNESS BATH) If in fact they do not, it may be  
3 noted as a deficiency. As for it being a final determining  
4 factor on approval, that is what we have problems with. It  
5 would be noted since we are aware of it and we have made  
6 comment on it.

7 Q Okay. Thank you.

8 I will delete questions 79 and 80. We have  
9 answered those. Question 81, I believe we have answered  
10 that also. It is an ANGRY contention. It is EP-6(f). It  
11 is regarding the preparation of a list of homebounds and  
12 invalids. I believe we have been over that testimony.

13 One question I had for you with regard to that,  
14 you mentioned that there had been a distribution in York  
15 County of a brochure entitled "How to Get There." Do we --  
16 does FEMA have any information to determine how many of the  
17 invalids in York County within the ten-mile EPZ received  
18 that booklet?

19 A (WITNESS BATH) No.

20 Q Do we know whether it was distributed, or does  
21 FEMA know whether it was distributed in your county?

22 A (WITNESS ADLER) Yes. I understand that those  
23 copies which have been given to the emergency management  
24 coordinator have been distributed in both York and in  
25 Lebanon Counties, using local means of distribution. And I

1 asked in what time frame has it been done and was assured it  
2 had been done recently. That would be within recent months,  
3 I presume.

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1           MR. ZAHLER: Mr. Chairman, there is going to be  
2 some confusion on the record. The brochure is not how to  
3 get there. The brochure is the one that the Board has and  
4 it has been marked as Commonwealth Exhibit No. 5 in this  
5 proceeding and has a paragraph entitled "How to Get There."

6           CHAIRMAN SMITH: Thank you, Mr. Zahler.

7           MR. CUNNINGHAM: Yes, I just noticed that.

8           (Pause.)

9           BY MR. CUNNINGHAM:

10          Q       One further question with regard to this  
11 contention. It seems to indicate that FEMA expected an  
12 upgrading in this part of the county plan by April 15,  
13 yesterday, 1981. Was there an upgrading filed, do you know?

14          A       (WITNESS BATH) We have received before we came  
15 down here this week a Lancaster County plan. I have not  
16 checked back with my office to see if the others are here.

17          A       (WITNESS ADLER) I did, and the Dauphin County  
18 plans are at my office. I do not know that we have as yet  
19 received the York County plan.

20          Q       Okay, thank you. Move then to question 85. This  
21 question involves Contention EP-14(AA). The contention was  
22 that the emergency plan in York County did not require, that  
23 the concept of the Operations Division of that Plan, which  
24 is Annex O, does not require mandatory preparation of local  
25 plans for emergency notification of bus drivers and the

1 organization and mobilization of transportation necessary to  
2 meet the needs of evacuating the student populations.

3           If I understand FEMA's testimony in this area,  
4 that it agrees that that is a deficiency within the York  
5 County plan, is that correct?

6           A     (WITNESS ADLER) I was reading my testimony and  
7 trying to find what you were reading in your cross  
8 examination plan. I am sorry. Could you just paraphrase the  
9 question for me?

10          Q     Yes. I was reading the contention --

11          A     (WITNESS ADLER) Oh.

12          CHAIRMAN SMITH: By making the cross examination  
13 plan available to you, I mean if it is causing confusion --  
14 sometimes it confuses me also. But the most important thing  
15 is listening to the oral question.

16          WITNESS ADLER: If I understand your question  
17 correctly, the response is on the last line of page 57 in  
18 our answer. "Therefore, FEMA's view at this time is that  
19 additional planning on the issues of school evacuation and  
20 bus rerouting should be included in the York County plan."

21          BY MR. CUNNINGHAM:

22          Q     By stating that this "should be," are you saying  
23 or stating at this point that the school plans for the use  
24 of their buses in the event of an emergency must be attached  
25 some way to the York County plan because of the way the plan

1 is written in order to meet your criterion for reviewing for  
2 final determination?

3 A (WITNESS ADLER) No, primarily because that  
4 version of the York County plan that we have yet to receive  
5 has not been received, and it may have been structured in a  
6 way whereby this is not a necessity. I cannot prejudge it.

7 Q Okay. Move to question 86, then.

8 DR. LITTLE: I think we need to back up a second.  
9 The plan as it now stands is deficient in this area, is that  
10 correct? If there are not changes in the plan that you  
11 expect to receive -- in other words, if that portion of the  
12 plan is the same as it is in the plan you now have, it would  
13 be defective; is that right?

14 WITNESS BATH: The problem was it should be  
15 attached in some way. We would say yes. The information  
16 could be extrapolated from several school plans that would  
17 satisfy our inquiry as to the adequacy of the planning or  
18 they could have attached or on file in the county the school  
19 plans. In some way we would have to be satisfied that there  
20 is adequate implementing procedure to implement those  
21 measures. It was the way the question was phrased. We were  
22 having a little trouble exactly what he was looking for.

23 (Board conferring.)

24 DR. LITTLE: What you presently have in hand right  
25 now are known to exist at this moment in time, not based on

1 what you were going to get. It is not satisfactory.

2 WITNESS ADLER: Yes.

3 WITNESS BATH: That is right.

4 BY MR. CUNNINGHAM: (Resuming)

5 Q Question 86 deals with the same subject matter in  
6 the Dauphin County plan. To make it short and to the point,  
7 the plan you now have in hand is deficient; correct?

8 (Pause.)

9 WITNESS ADLER: Yes.

10 Q Okay. For the record, that was Contention  
11 EP-16-J.

12 Questions 87 and 88 are next on the cross  
13 examination plan. It involves Contention EP-16 or it  
14 involves the Dauphin County plan, and I believe that you  
15 have indicated in your direct testimony -- the Dauphin  
16 County plan provides for one staging area. I believe you  
17 indicate that that is satisfactory but two staging areas  
18 would be preferable.

19 I am sorry. The Dauphin indicates two, but the  
20 York County indicates one. That would be the Vo-tech school  
21 located east of York.

22 A (WITNESS BATH) Would you rephrase the question  
23 you have?

24 Q Okay. My question is that with regard to this  
25 contention, specifically the Dauphin County plan contention,

1 the contention was that it involved staging areas, and one  
2 part of it was the individuals leading the vehicles out of  
3 the areas being dispatched in this particular point. It  
4 refers to community leaders.

5               But the way in which you answered it, you  
6 indicated that while the Dauphin County plan has two staging  
7 areas, that it would be preferable that during an evacuation  
8 that there would be increased staffing of police officers to  
9 perform traffic control and security functions, which is  
10 interesting because that is in contradiction to your  
11 previous testimony that you did not feel that your  
12 experience indicated you needed security officials.

13               First of all, I guess my first question after  
14 reading that is how do you jibe that piece of testimony with  
15 what you testified to today?

16               A      (WITNESS BATH) What is provided in that section  
17 that you are referring to is what in fact is in the Dauphin  
18 County plan in their preparations of how they are going to  
19 control their staging areas. It is not said that FEMA is  
20 saying this is required or that this is necessary. The same  
21 thing with the two staging areas. We see no reason in our  
22 review of Dauphin County plan to feel that their two staging  
23 areas are inadequate. We see no reason in our review of the  
24 York County plan to determine that their one staging area is  
25 inadequate.

1       Q     As I understand it there is no requirement that  
2 the staging areas be located within a certain distance  
3 within the edge of the ten-mile EPZ. Is that correct?

4       A     (WITNESS BATH) That is correct.

5       A     (WITNESS ADLER) Yes.

6       Q     Yes, that is correct?

7       A     (WITNESS ADLER) Yes, that is correct.

8       Q     Finally, questions 89 through 90 in the cross  
9 examination plan which refer to EP-16-T and Contention  
10 EP-16-N.

11              In the direct testimony filed by the Federal  
12 Emergency Management Agency with regard to Contention  
13 EP-16-T, it states that the Dauphin County plan should  
14 include additional planning with regard to school  
15 evacuation, early notification to bus drivers by school  
16 officials, and district plans which provide for school bus  
17 use beyond the EPZ.

18              Has FEMA obtained any information as to how either  
19 the Dauphin County transportation officer or the York County  
20 transportation coordinator will be able to communicate with  
21 various transportation resources in the event of an  
22 emergency?

23       A     (WITNESS ADLER) No. Excuse me.

24       A     (WITNESS BATH) I am quite certain that Dauphin  
25 County has listed the telephone numbers of those units, and

1 we would envision that they would do it by telephone.

2 Q Okay.

3 Has FEMA any information as to how local  
4 transportation sources will be able to communicate the needs  
5 to their employees in an emergency situation? For example,  
6 how will the employees know that they are needed in order to  
7 operate the mass evacuation transportation?

8 A (WITNESS BATH) I think it would be reasonable  
9 that they would be communicated to by telephone.

10 Q And this would be some time after the warnings  
11 have been given and the EBS stations have come on the air,  
12 et cetera, is that correct?

13 A (WITNESS BATH) Not necessarily.

14 Q Okay. One question that goes back to maybe  
15 testimony that you had yesterday and testimony that was  
16 presented this afternoon or this morning, not by yourself  
17 but by Mr. Urbanik.

18 Yesterday I asked you a question directly whether  
19 as an agency FEMA supported the findings made by the  
20 Licensee's time evacuation study, and then earlier today I  
21 believe Mr. Adler -- I believe the complete panel was in the  
22 room when Mr. Urbanik was asked on cross examination whether  
23 he felt that the access points to limited access highways,  
24 that if in the area outside of the EPZ, traffic control  
25 personnel were placed at the access points to direct traffic

1 to other routes but not onto the access routes, that that  
2 would be sufficient.

3           Does FEMA have any information or have a position  
4 that that would be sufficient?

5           (Panel of witnesses conferring.)

6           A     (WITNESS ADLER) I think our testimony tied the  
7 adequacy of that study to the guidelines in 0654. Beyond  
8 that we would have to look at the plan in the context of  
9 what the state, that is, the study in the context of what  
10 the state plans say on a comparative basis.

11          If you would restate your question, I will try to  
12 give you a yes or no.

13          Q     Well, I do not know whether you can answer the  
14 question because the question is: You as a witness, do you  
15 adopt Mr. Urbanik's position that if you place a law  
16 enforcement official or somebody in authority at the point  
17 of access onto the interstate highways, outside of the  
18 ten-mile EPZ, will that be enough to ensure that traffic  
19 will not enter upon that evacuation route?

20          A     (WITNESS ADLER) As a personal judgment you are  
21 asking.

22          Q     That FEMA has a position. If not --

23          A     (WITNESS ADLER) FEMA's position is only that  
24 stated in 0654.

25          Q     Then what is your personal opinion, if you have

1 one?

2 CHAIRMAN SMITH: You have expressed with respect  
3 to other similar questions that people respect authority and  
4 do in fact comply with the directions of law enforcement  
5 people. Is that the gist of your question? I mean will  
6 they go onto the interstate notwithstanding the fact that  
7 the policeman is telling them not to or he is regulating the  
8 flow onto it?

9 MR. CUNNINGHAM: What I am trying to do is get an  
10 answer because that is one of the basic assumptions of the  
11 time evacuation plan.

12 CHAIRMAN SMITH: I think the problem is you are  
13 asking them the same general question in an extremely  
14 particular way and they are looking for what the particular  
15 circumstances are that might influence the answer.

16 MR. CUNNINGHAM: Maybe I can set up a hypothetical  
17 situation that may help them.

18 BY MR. CUNNINGHAM: (Resuming)

19 Q Let's say there has been a general evacuation  
20 ordered of an area and let's say we are just on the edge of  
21 the ten-mile EPZ. For example, there is an exit on route 83  
22 which is one of the access routes that appears to be right  
23 on the edge of the ten-mile EPZ. It may be eleven miles.  
24 It is called the New Cumberland exit and it is called a  
25 diamond exit, if you are familiar with the access routes on

1 and off the interstate. It is shaped in the configuration  
2 of a diamond.

3 Now, as I understand Mr. Urbanik's testimony, it  
4 is that that is an evacuation route. What you do is you  
5 just put four policemen or somebody in authority at those  
6 four points of the diamond and you just do not allow traffic  
7 onto the interstate. My point is does FEMA believe -- do  
8 they adopt that testimony as it being adequate or do you  
9 have an opinion that differs from that?

10 A (WITNESS BATH) I think FEMA would adopt the  
11 opinion of him in that traffic control can affect the amount  
12 of persons moving onto major arteries outside the ten-mile  
13 EPZ as such. Since we have not reviewed the particular  
14 study against the evacuation routes -- and I think it was  
15 rather hypothetical the way you presented it to Mr. Urbanik  
16 and he put it up as a general statement not specific to a  
17 diamond-shaped type intersection or the use of that  
18 particular road.

19 A (WITNESS ADLER) The answer is yes.

20 Q Does Mr. Pawlowski agree with that?

21 A (WITNESS PAWLOWSKI) Do I -- ?

22 Q Do you agree with Mr. Adler's answer?

23 A (WITNESS PAWLOWSKI) . . . Adler is speaking from  
24 the standpoint of the region, and from the standpoint of the  
25 region I endorse his statement.

1 (Counsel for Newberry Township are conferring.)

2 CHAIRMAN SMITH: How do you understand his  
3 question to differ from the other questions which relate to  
4 the performance of the population in general to comply with  
5 the directions from law enforcement people?

6 WITNESS PAWLOWSKI: My understanding of the  
7 question is basically that people respond to instructions  
8 from law enforcement officials and people in authority. The  
9 bottom line to that is yes. People do take instruction  
10 during evacuation.

11 CHAIRMAN SMITH: Now, even if the instruction is  
12 in this case assuming you are right at the perimeter of the  
13 EPZ, even though the instruction says to an individual that  
14 you may not go the most direct route away from the reactor,  
15 that you have to go a direction not of your choosing but of  
16 the choosing of the law enforcement officer, the traffic  
17 controller.

18 WITNESS PAWLOWSKI: Yes because the law  
19 enforcement officers would be reacting to specific guidance  
20 based upon judgment of officials geared into a  
21 decision-making process.

22

23

24

25

1 CHAIRMAN SMITH: It is not the wisdom of the law  
2 enforcement officer involved. It is the willingness of the  
3 population to comply with his directions not to go where  
4 they want to go.

5 WITNESS PAWLOWSKI: I do not think there is any  
6 question in that regard. I think that if you look on the  
7 basis of past experience, people do respond to law  
8 authority.

9 BY MR. CUNNINGHAM: (Resuming)

10 Q Let me ask you this question, Mr. Pawlowski.  
11 Again going back to this data base from which you are  
12 drawing, unfortunately -- fortunately, as Mr. Adler says, we  
13 do not have in your data base a radiological emergency. And  
14 I guess the point of it is, Mr. Smith is saying you have  
15 somebody sitting there watching everybody else evacuate and  
16 you are told either to stay there and not get into the  
17 evacuation route or go to a different route.

18 I guess the question is, is that reality? Will  
19 that take place?

20 A (WITNESS PAWLOWSKI) Let us back up a second and  
21 look at reality. We have had instances involving radiation  
22 emergencies, if you would classify transportation accidents  
23 involving radioactive material. People have responded to  
24 law enforcement officials in specific instances where  
25 emergencies existed involving radiation accidents.

1 CHAIRMAN SMITH: Tell us about the experience that  
2 you might, or your agency collectively might have had with  
3 chlorine problems. I would think that, other than another  
4 radiologic incident, that the chlorine problem would  
5 probably be the most similar. It would be the most similar  
6 for the attitude of the population about going to it or away  
7 from it and how fast and all the other considerations.

8 WITNESS PAWLOWSKI: People have acted in an  
9 orderly manner because of the fact that they have looked to  
10 public officials to give them guidance on how to exit or  
11 egress from a specific area.

12 CHAIRMAN SMITH: And you believe that in those  
13 other incidents the public is willing to take directions  
14 from authority, even though the direction may not be to the  
15 immediate best interest of the public involved? That is the  
16 gist of it, or as they perceive it to be?

17 WITNESS BATH: That is the point that I think I  
18 was trying to get at. If there is a manned barrier on the  
19 road where the public is seeking to go, it is empty, it is  
20 going to be difficult for the public to perceive why it  
21 cannot enter onto that road. If there is a reason for them  
22 not to, meaning that that road doubles back and goes to the  
23 plant, it is up to that traffic officer to make sure they do  
24 not.

25 If in fact in his position at that time these

1 people can safely be moved onto that route and on down, I  
2 think that is why you put a man there, to do it. But if it  
3 is not in their safety to allow them to move onto a stream  
4 of traffic where it probably will cause an accident and  
5 persons will not get out, then in fact he will have to cause  
6 them to do it. And I think people will recognize that.

7 CHAIRMAN SMITH: Even though the immediate  
8 direction, the short-term direction given by the law  
9 enforcement officer is not to the immediate benefit of the  
10 person who is being directed?

11 WITNESS ADLER: Yes. You know, Mr. Chairman, we  
12 are not speaking of 100 percent of the persons flowing  
13 through, and neither was Mr. Urbanik, if I recall  
14 correctly.

15 CHAIRMAN SMITH: Then of course, you are not  
16 talking about always having a situation where nobody can get  
17 on, as opposed to everybody getting on. There are degrees.  
18 But I do think that the Intervenors do have a right to  
19 inquire thoroughly into what experience FEMA has in the  
20 willingness of the public to comply with the directions of  
21 law enforcement authorities even though they might perceive  
22 in any particular instance that it is not to their best  
23 interest to do that.

24 And I think that you have been asked many  
25 questions along that line, and I think that it is an

1 appropriate area of inquiry. And any help that you can give  
2 the parties along that line would be quite appropriate.

3 (Board conferring.)

4 WITNESS ADLER: Mr. Chairman, I will confer with  
5 my colleagues at the recess and we will come back to you  
6 with an idea after the break about documented resources at  
7 FEMA that can be made available to the Board on this point.

8 CHAIRMAN SMITH: All right. I think that would be  
9 helpful.

10 BY MR. CUNNINGHAM: (Resuming)

11 Q Mr. Adler, one final -- it is a general question  
12 in this area. All three of you have been raising the same  
13 point. You say that people follow instructions if they  
14 believe that the instructions they are believing are true  
15 and are accurate. Is that the key to the proposition?

16 A (WITNESS ADLER) That is the key to the  
17 proposition, sir.

18 Q But also, I am asking a particular stress on it  
19 and that is, given truthfulness and accuracy, will they  
20 comply with an order which they know or perceive to be  
21 inconsistent with their immediate best interests? That is  
22 the --

23 WITNESS ADLER: Mr. Smith, I believe they will  
24 inquire when possible, which is why I prefer to see an  
25 individual law enforcement officer rather than an inanimate

1 barricade in that hypothetical question. I would even  
2 prefer there be two law enforcement officials, depending  
3 upon the traffic flow in egress.

4 The answer, with that qualification, is yes.

5 CHAIRMAN SMITH: Okay.

6 WITNESS PAWLOWSKI: Perhaps we need to narrow down  
7 the field a little bit. People respond in emergency  
8 situations to directions.

9 DR. LITTLE: Mr. Pawlowski or whoever else can  
10 answer, there was a question raised this morning about  
11 possible deference being given to those closest to the point  
12 source. Now, the chlorine spill would have been a point  
13 source type accident. In that situation was any preference  
14 given to those closest to the point source, or was it  
15 considered in the long run too complicated to do that?

16 WITNESS PAWLOWSKI: During the chlorine barge  
17 incidents, there was selective evacuation of specific areas  
18 that were thought to be subject to -- in the event that the  
19 chlorine was released from the tanks, there was an  
20 assessment then as to the area of the hazard for the  
21 population that could be affected, okay, within a certain  
22 perimeter. That specifically affected perimeter was  
23 evacuated.

24 DR. LITTLE: Well --

25 CHAIRMAN SMITH: As a priority over others? You

1 see, that is the gist of what we are trying to get at.

2 WITNESS PAWLOWSKI: Okay. There were -- my  
3 recollection of the incident was that evacuation was decided  
4 on the basis of an analysis of the threat. And if you are  
5 asking me whether or not the threat was considered on an  
6 equal 360-degrees basis --

7 CHAIRMAN SMITH: The gist of the question is, in a  
8 disaster situation where you have a segment of the public  
9 more at risk than another segment, has the literature and  
10 your experience indicated a capability of taking care of the  
11 needs of the segment of the population at the greatest risk,  
12 at the -- with a priority over those with less risk?

13 WITNESS PAWLOWSKI: Correct. Yes. But all -- you  
14 mean, selective -- maybe you had better repeat the  
15 question.

16 CHAIRMAN SMITH: We are trying to get at the  
17 situation where law enforcement officials and emergency  
18 workers may require a portion of the public to act not in  
19 their best interest, so that a portion of the public at  
20 greater risk may be accommodated. This has been the thread  
21 of quite a few questions, and Dr. Jordan's question, mine  
22 and several of Mr. Cunningham's. And I do think that you  
23 answered it several times, and I think maybe the fact that  
24 you are getting the same question over and over again might  
25 lead you to believe that you have not answered it

1 satisfactorily.

2                 But what you have done is, you said you -- over  
3 the break you would look at the literature. But I want to  
4 stress the important part of the question, and that is the  
5 hypothesis given to you requires that a certain set of  
6 people at risk have a need less than another set of people  
7 at risk, and the set of people with the less need are asked  
8 to and do obey orders, which is not to their immediate best  
9 interest, so that those who have the greater risk may be  
10 accommodated.

11                 The thing we are trying to get at is, in the  
12 emergency management concept is it your belief that people  
13 will respond to orders not in their immediate best interest  
14 if directed to by respected law enforcement people? You  
15 understand, the example of the interstate is very good. I  
16 get to the interstate, I want to get on, it is the fastest  
17 way out of here. A policeman says, no, you cannot because  
18 we have to keep it open for people closer to the reactor.

19                 Well, I recognize that my best interest  
20 immediately is to run over the policeman and to get on there  
21 anyway. But I'm being asked to take another route, at the  
22 policeman's direction. If I have general confidence, I  
23 think the hypothesis -- the premise is we have confidence in  
24 law enforcement people. That is the experience that you  
25 have and the experience -- the history that FEMA relies

1 upon, that is the type of thing.

2 WITNESS PAWLOWSKI: Yes. Thank you for your  
3 example.

4 (Laughter.)

5 CHAIRMAN SMITH: I am not suggesting it is  
6 risk-free to run over a policeman, but I was talking about  
7 the immediate -- the immediate benefit.

8 (Laughter.)

9 CHAIRMAN SMITH: Now, if you can consider that  
10 question, any ideas over the recess, and we will take you up  
11 on your offer to look to see what examples that FEMA has and  
12 you individual gentlemen have, I think it would be helpful  
13 to the Intervenors and the board and all the parties.

14 DR. JORDAN: There is a corollary that may  
15 actually come up. If the state decides that a certain  
16 sector from zero to two miles on the north-northeast should  
17 be evacuated first and starts the evacuation there, there  
18 are other people that are going to know about this evacuation  
19 that are in the north by east sector or whatever the next  
20 sector, or the two to three mile sector. And it will be to  
21 their advantage to get the people out from two to three  
22 miles and the people from two to three miles not move  
23 because they would interfere.

24 So there may well, you see, be an actual practical  
25 example. There could well be. So this is the kind of thing

1 we want you to think about during the intermission.

2 CHAIRMAN SMITH: In addition, while we are on this  
3 subject matter, I think an explanation might be in order.  
4 As I recall the tenor of Ms. Bradford's question, I  
5 suggested earlier or I asked, when you responded, that you  
6 could not expect a population to be altruistic on their  
7 own. That is, the population in general will react in each  
8 individual's best interest, and the population at five  
9 miles, for example, will not voluntarily stay behind while  
10 the population of one mile goes out.

11 And then if you recall, I posed the question,  
12 well, policemen, could they accomplish that purpose,  
13 recognizing that the population will not act  
14 altruistically. Ms. Bradford followed up with a line of  
15 questions asking if that was a reality. And by the tenor,  
16 the tone of her voice, it suggested that she did not believe  
17 that my question might have been appropriate and your  
18 answers might not have been appropriate.

19 But the point I am getting to at long last is, our  
20 approach is not whether we suggest that this is reasonable  
21 or impractical or whatever, but to make sure that whatever  
22 is useful is considered. And I would not believe that  
23 anyone would wish to have plans and not take into account  
24 whatever is useful.

25 Do you understand the point?

1 MS. GAIL BRADFORD: Yes.

2 CHAIRMAN SMITH: Did I correctly perceive your  
3 reaction?

4 MR. CUNNINGHAM: I believe it was my reaction, not  
5 Ms. Bradford's. But that is correct, I think you did.

6 CHAIRMAN SMITH: All right. We will take the  
7 afternoon break.

8 (Recess.)

9 CHAIRMAN SMITH: All right. Let's proceed.

10 Gentlemen, do you have anything in addition -- any  
11 additional information you want to provide?

12 WITNESS ADLER: Yes, sir. During the break we  
13 talked to people in Washington at our headquarters, as I  
14 said we would. Of course, the question is basic to human  
15 psychology and the behavior of people under various  
16 circumstances. It makes it a rather difficult question to  
17 answer, you realize that.

18 Assuming, with the premise that you stated, Mr.  
19 Smith, that people are in the right frame of mind, for  
20 example, that the information provided through the emergency  
21 broadcast system and the media as a whole preparatory to  
22 that policeman doing his job at that hypothetical crossroad,  
23 on the whole we think human behavior would be to follow that  
24 policeman's guidance.

25 Despite the fact that it would appear to be in

1 their immediate disinterest, they would have the perspective  
2 that it would be in their longer-range overall interests.  
3 There are always exceptions, but the majority of the  
4 populace would be expected to behave in accordance with that  
5 law enforcement officer's dictates.

6 We do in the Federal Emergency Management Agency  
7 post-disaster critiques, and the way we left it with  
8 Washington is that they will search through and, if  
9 appropriate experience has been documented in any of these  
10 critiques, make it available to the Board. Unfortunately, I  
11 could not get you a specific answer at this moment because  
12 the organization that will do this search has yet to be  
13 contacted. But I will keep the Board informed.

14 CHAIRMAN SMITH: That is very helpful. Thank you,  
15 Mr. Adler.

16 MR. CUNNINGHAM: Mr. Chairman, could I defer to  
17 Ms. Bradford for several questions that she has at this  
18 point?

19 CHAIRMAN SMITH: All right.

20 BY MS. GAIL BRADFORD: (Resuming)

21 Q Thank you for taking the time to study that a  
22 little more. And when you are consulting, also I wish you  
23 would look at the situation that -- and just assume that  
24 some people may also be expected to sit at a checkpoint for  
25 a period of time. There may be a half hour, a couple of

1 hours, when they are caught in traffic, and the added stress  
2 of that kind of a situation.

3 And also, examine the consequences if someone, one  
4 of the crowd does panic. What is the effect on the rest of  
5 the people?

6 CHAIRMAN SMITH: Is this a question?

7 MS. GAIL BRADFORD: No, sir. He said he was going  
8 to do more finding on that.

9 MR. COSGROVE: Excuse me, Mr. Chairman. It was my  
10 understanding that we were going to search the files and  
11 that we were not going to do any more investigation into  
12 that particular question; is that correct?

13 CHAIRMAN SMITH: We are requesting nothing more  
14 than that, yes, yes.

15 And that is what you have requested too, isn't it,  
16 Ms. Bradford?

17 MS. GAIL BRADFORD: Yes. And when they are  
18 looking in the files, if they could keep an eye out for  
19 that.

20 CHAIRMAN SMITH: Yes.

21 MS. GAIL BRADFORD: I am not suggesting that they  
22 create a study or anything else.

23 WITNESS ADLER: The --

24 CHAIRMAN SMITH: Do you have other questions?

25 MS. GAIL BRADFORD: Yes, sir.

1 BY MS. GAIL BRADFORD: (Resuming)

2 Q Do you have before you a copy of NUREG/CR-1215,  
3 which is called "The Social and Economic Effects of the  
4 Accident at Three Mile Island, Findings to Date"? It is  
5 done by Mountain-West Research, Incorporated, with Social  
6 Impact Research, Incorporated?

7 A (WITNESS ADLER) I do have it in front of me.

8 MS. GAIL BRADFORD: Mr. Chairman, this line of  
9 questioning relates to psychological stress. I would like  
10 to explain to the witnesses what my idea is about the  
11 limitation of psychological stress in this hearing, and I  
12 wish you would correct me if I did not get it right this  
13 time.

14 CHAIRMAN SMITH: Yes, I will.

15 BY MS. GAIL BRADFORD: (Resuming)

16 Q What I am asking about is the impact of  
17 psychological stress, including fear or demoralization,  
18 panic, whatever, on the effectuation of evacuation or  
19 sheltering or other protective action. Looking at page 21  
20 --

21 CHAIRMAN SMITH: As I look around the room, I see  
22 no one else has it except you and the witness. You are  
23 going to have to be careful to explain what the content is  
24 and the information that you are examining on. And if it is  
25 going to be very much I think we should have a chance to get

1 the documents.

2 MS. GAIL BRADFORD: Perhaps that would be a good  
3 idea.

4 CHAIRMAN SMITH: Well, how much is it? Maybe it  
5 is not going to be very much. Maybe it is not going to be  
6 as much as you think.

7 MS. GAIL BRADFORD: Okay. I could just read this  
8 part. I think that would be clear enough. The question is  
9 pretty obvious, I guess.

10 BY MS. GAIL BRADFORD: (Resuming)

11 Q There are -- there is a quotation in the middle of  
12 the page there. It is a quotation from a resident speaking,  
13 perhaps, speaking for many who evacuated. Quote:

14 "On Friday a very frightening thing occurred in  
15 our area. A state policeman went door to door telling  
16 residents to stay indoors, close all windows, turn all air  
17 conditioners off. I was alone, as were many other  
18 homemakers. My thoughts were focused on how long I would  
19 remain a prisoner in my own home and whether my husband  
20 would be able to come home after teaching school that day.

21 "Suddenly I was scared, real scared. I decided to  
22 get out of there while I could. I ran to the car, not  
23 knowing if I should breathe the air or not. And I threw  
24 suitcases in the trunk and was on my way within an hour."

25 It continues, but I can see just from my

1 experiences in dealing with people in this area that if a  
2 sheltering order were given that this reaction described  
3 might be fairly common. I could not say how many people  
4 would have that reaction.

5           But what impact do you think that would have on  
6 the effectuation -- effectiveness of sheltering as a  
7 protective action?

8           CHAIRMAN SMITH: Now, first, I suggest that you  
9 either identify whether you can accept that as being a  
10 significant reaction. I mean, in terms of quantity and a  
11 problem to deal with. And if you can, say so. If you  
12 cannot, then for the purpose of the question assume it.

13           WITNESS ADLER: I only wish that I had a degree in  
14 psychology at this moment, because I really do not know.

15           WITNESS PAWLOWSKI: One of the most important  
16 things which we believe is essentially toward emergency  
17 planning is prior public information and education on the  
18 emergency plans. If people are educated -- one of the  
19 criteria of 0654 is adequate public information program,  
20 distribution of emergency information as to what residents  
21 are to do in the event of an emergency.

22           Then they will respond in the manner prescribed by  
23 public officials to best look out for their interests and  
24 well-being.

25           BY MS. GAIL BRADFORD: (Resuming)

1 Q Mr. Pawlowski, are you familiar with the document  
2 that is, I think, Exhibit 3 in this hearing, which is a PEMA  
3 pamphlet on -- general information on what to do in case of  
4 a nuclear incident?

5 A (WITNESS PAWLOWSKI) I am familiar with it from  
6 the standpoint I have looked at it very briefly. I have  
7 looked at it in the past.

8 (Counsel handing document to witness.)

9 A (WITNESS PAWLOWSKI) Okay, yes.

10 Q The question is whether the kind of information  
11 contained in that booklet, if someone receives a copy once  
12 or whether that is printed in his phone book or has some  
13 access, whether that is enough to counteract or inform  
14 people enough so that people who had this reaction last time  
15 would not have this reaction again. Do you have any opinion  
16 on that?

17 A (WITNESS PAWLOWSKI) In our previous testimony, we  
18 stated that we felt that the material combined in the state  
19 pamphlets should be combined with the material provided in  
20 the county pamphlets together as an integrated -- as an  
21 integrated form of public education.

I am not an expert on psychology and the  
psychological reaction of personnel.

Q At the bottom of page 21, there is a sentence  
which, at the beginning of the paragraph, it says: "In a

1 few households, the absence of a clear order for everyone to  
2 evacuate resulted in disagreement over whether to  
3 evacuate."

4 Can -- that was the experience in my family.

5 There was a disagreement about whether or not to evacuate.  
6 We were outside of the five-mile area.

7 And can you say whether -- how that kind of  
8 disagreement in a family will affect the amount of time a  
9 family will need to prepare for evacuation?

10 A (WITNESS ADLER) No, I cannot.

11 (Pause.)

12 Q Would you agree that that kind of disagreement  
13 within a family would have add to tension and add to stress  
14 at the time of an evacuation? Or do you have any basis for  
15 --

16 A (WITNESS ADLER) I am sorry, Ms. Bradford. Would  
17 you please rephrase your question?

18 (Pause.)

19 CHAIRMAN SMITH: The question I do not think needs  
20 to be rephrased. I think the question is clear enough. The  
21 question is where there is a disagreement within families as  
22 to whether to evacuate or not, would, number one, that in  
23 itself cause stress; and that if it does, would it add to  
24 the stress which is caused by evacuation itself.

25 Does that --

1           WITNESS ADLER: I know from my own personal  
2 experience that when there is a disagreement in my family it  
3 creates and enhances stress. I do not know whether you are  
4 calling for a personal judgment or a FEMA position.

5           CHAIRMAN SMITH: I think the difficulty with this  
6 line of questions is we had better relate them to something  
7 within the scope of what FEMA does and the direct testimony  
8 and not invite the personal observations of the witnesses,  
9 who have disavowed an expertise in psychology.

10          MS. GAIL BRADFORD: Okay.

11          CHAIRMAN SMITH: Unless, also -- unless they have  
12 specific experience from other emergency plans that might  
13 add. I mean, you might hit upon that. But just  
14 intuitively, I do not think that they have an answer to that  
15 question as an agency.

16          Of course, you are able to establish that if you  
17 wish. I think it is really too fine to expect these people  
18 to answer in terms of agency expertise. But that in itself  
19 is an appropriate cross-examination goal, if that is what  
20 your purpose is.

21          I think I have confused you.

22          MS. GAIL BRADFORD: No, sir. I was going  
23 someplace else.

24          BY MS. GAIL BRADFORD: (Resuming)

25          Q       Is the Chairman's statement accurate?

1 CHAIRMAN SMITH: I am afraid I have made a lot of  
2 them.

3 WITNESS ADLER: The Chairman's statement is  
4 accurate, yes.

5 CHAIRMAN SMITH: What is my accurate statement?  
6 Would you restate it? Which particular one, not all?

7 (Laughter.)

8 WITNESS ADLER: You're the Chairman. It is  
9 accurate by definition.

10 The point that I was accepting, sir, is your  
11 observation that if there is FEMA experience that may bear  
12 on answering this question I would be delighted to offer  
13 it. But in lieu thereof, I have to only offer a personal  
14 judgment.

15 BY MS. GAIL BRADFORD: (Resuming)

16 Q Okay. In reviewing these plans for the TMI area,  
17 does FEMA take into account the effect of psychological  
18 stress on the effectiveness of evacuation?

19 (Panel of witnesses conferring.)

20 A (WITNESS PAWLOWSKI) The most important aspect of  
21 emergency planning is education of the public as to, number  
22 one, what they are expected to do during a period of crisis  
23 or emergency. If the public is sufficiently informed and  
24 educated in advance of that emergency, experience has shown  
25 that the public will respond.

1 CHAIRMAN SMITH: I think she is entitled -- do I  
2 help or -- the interruption -- that is a part of the  
3 answer. Now I think she is entitled to the rest of it, if  
4 there is any, as far as the actual performance of the public  
5 in evacuation situations.

6 Do you take into account in planning any  
7 psychological stress caused by the situation itself?

8 WITNESS PAWLOWSKI: In terms of the planning?

9 WITNESS ADLER: May I --

10 CHAIRMAN SMITH: In terms of any aspect of your  
11 agency that relates to radiological responses.

12 WITNESS ADLER: I believe that in the case of the  
13 state and local plans which FEMA reviews, we rely heavily  
14 upon all of the thought processes that the state and local  
15 governments have built into those plans. They may include  
16 what you have pointed out, but I cannot state for a fact  
17 because I have not asked them that question.

18 CHAIRMAN SMITH: Now, this might have been a good  
19 question to have put to the traffic engineer, whether there  
20 is a rating which is given in evacuation times as compared,  
21 for example, to leaving a football game, which would add a  
22 delay factor because of psychological stress, that type of  
23 consideration.

24 WITNESS PAWLOWSKI: One of the things that I have  
25 had related to me by several law enforcement officials as a

1 result of evacuations of people during stress is that in  
2 some instances the stress of the situation has made the  
3 evacuees more alert and more careful in the way they leave  
4 an area in respect to specifically obeying the speed limits  
5 and responding to directions. That is personal  
6 communications that I have received.

7 CHAIRMAN SMITH: All right. Now that you have  
8 gone into it -- and your experiences I think are helpful --  
9 would you give us the entire spectrum of what you have  
10 observed in other situations? Police officers have told you  
11 that the stimulation of stress in some instances has been  
12 helpful.

13 Have they also observed that the stress has been  
14 an impediment toward orderly evacuation and orderly  
15 protective actions by the public?

16 WITNESS PAWLOWSKI: Not that I -- not that I can  
17 speak of. I have not been privy to that specifically.

18 CHAIRMAN SMITH: And is the experience that you  
19 have had in discussing this with policemen and other  
20 emergency workers in other situations, is it a broad enough  
21 experience to give you any feeling of any confidence in that  
22 conclusion?

23 WITNESS ADLER: I think we can say it has been  
24 FEMA's experience that emergency workers do, in a crisis  
25 situation, the jobs they have been assigned to do.

1 CHAIRMAN SMITH: That is a little bit different  
2 direction. They were able to overcome stress, or maybe even  
3 with the help of stress they can do their job. But now I am  
4 just trying to get a full balance of Mr. Pawlowski's  
5 experience in other emergency situations, the full spectrum  
6 of what your perception has been as to the effect of stress  
7 in emergency situations.

8 WITNESS PAWLOWSKI: From the standpoint that the  
9 public in advance has been given direction and notice as to  
10 what they are specifically expected to do, okay, the  
11 performance has been -- the performance of the public in  
12 carrying out those instructions, provided they are clear,  
13 they know specifically what is expected of them, they do  
14 perform.

15 CHAIRMAN SMITH: What problems have been  
16 identified with the type of person, if any, who simply  
17 panics in emergency situations? How is that identified and  
18 how is that handled, and what effect does it have upon the  
19 overall situation?

20 First, has that -- to what extent within your  
21 experience has that been a problem?

22 WITNESS PAWLOWSKI: From the standpoint of my  
23 experience, I have not really delved into that specific  
24 aspect of it. And in several situations where we have had  
25 debriefings, the other subject which you have brought up has

1 not been drawn to my attention.

2 CHAIRMAN SMITH: All right. This is something  
3 that has been an observation that I have made, and I do not  
4 know how many others have shared it. But Professor Dynes  
5 also had a void in his testimony as to any problem which is  
6 created about -- from -- certainly from my experience, there  
7 must be some portion of the population, no matter how small,  
8 who do not perform well under stress.

9 Now, given that there are some who do perform well  
10 under stress and some who perform better under stress, it  
11 seems to me that there has to be, in a large group of people  
12 of the numbers we are talking about, a certain number of  
13 those who perform poorly under stress. And of all of the  
14 testimony that we have received so far, we have had no  
15 testimony which I have been able to identify which  
16 identifies the existence of a subset of people of that  
17 temperament or orientation and any problem that it creates.

18 This is something which seems to me to be a void  
19 in the considerations, and unless you are just saying that  
20 it all averages out and wipes out and is handled on an  
21 individual ad hoc basis, I do not know. I do not see how it  
22 is being addressed or dealt with by anybody.

23 And maybe my perception is wrong. Maybe there is  
24 no significant portion of the population, even small, who do  
25 not perform -- who perform poorly under stress. I just have

1 a hard time accepting that, but maybe that is wrong.

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1        A     (WITNESS ADLER) I would have a great deal of  
2 difficulty accepting that myself. I think our difficulty is  
3 in providing any kind of quantification to a question that  
4 deals with human behavior as broadly as this.

5              I can at least offer some perspective, in that the  
6 degree of mission failure or accomplishment, the degree of  
7 any mission failure, we know from experience, can be reduced  
8 by training, periodic drills, and exercises. This, in the  
9 face of that small subset to which you referred and their  
10 behavior, the overall mission, the overall evacuation.

11             CHAIRMAN SMITH: Apparently, in the search, the  
12 collective history of FEMA, there has been no category known  
13 as "panic" which has been identified, evaluated, and  
14 assessed in their program.

15             WITNESS BATH: Sir, I have a document here in  
16 which there are several pages dealing with panic. It is  
17 just that I would be very -- I am a little afraid of being  
18 it forward, because I have not really screened this against  
19 what we are presently talking about. I would be glad to  
20 allow the Board to read over this document and see if -- I  
21 do not know if it is directly applied into REP planning, it  
22 is pertinent to the issue, or whatever.

23             I think what is most pertinent is we have thought  
24 over years of experience that panic has been a very low  
25 experience situation and that the means on preparing

1 reasonable progress towards what we want them to do is  
2 through public education, information, drills, planning, and  
3 so forth, which is what we are trying to put forward.

4           But I will be glad to let you look this over.

5           CHAIRMAN SMITH: Well, this panic and poor  
6 performance under stress has been a theme of the Intervenors  
7 in this proceeding right along. And until this moment,  
8 really, in the hearing it has not been directly addressed by  
9 the witnesses, at least not very well by the witnesses that  
10 have come here on emergency planning.

11           And I think that the type of answer you are giving  
12 one way or the other that it is a problem or it is not a  
13 problem is quite helpful, and I think it is something that  
14 the Intervenors are entitled to. And I think that they have  
15 been -- they have not up to now been very successful.

16           But I do not want to adopt the Intervenors'  
17 position and state it, but I would invite you to explore it,  
18 Ms. Bradford. If you have information on it, we certainly  
19 want it.

20           DR. LITTLE: Along this line, the Board is aware  
21 that there is a substantial body of literature dealing with  
22 response to disasters, response of the public to disasters,  
23 much of which was federally funded. And there are a number  
24 of recent reviews on that very subject. And I refer to you  
25 the certification that we made to the Commission on

1 psychological stress issues, dated February 22, 1980, which  
2 refers to some of those forces of information on public  
3 response during disasters of various types.

4           And I think our question is whether or not within  
5 FEMA there is any kind of group that deals with this type of  
6 issue and whether this information is factored into FEMA  
7 guidance on planning for emergencies.

8           MR. COSGROVE: Dr. Little, the personnel at the  
9 Region, the personnel you have here before you, use 0654 as  
10 their planning standard review, and they did not put that  
11 together. The factors that go into that would be known by  
12 people in FEMA headquarters. If you would like, we can  
13 address that to them.

14           (Board conferring.)

15           CHAIRMAN SMITH: The extent that the existence of  
16 panic in the population at risk in an emergency situation in  
17 radiological incidents has been factored into the  
18 NUREG-0654, if it has, should be addressed, in my view, in  
19 this hearing. And it is only as it relates to NUREG-0654  
20 and the effectiveness of emergency planning and not in any  
21 respect are we inquiring into the residual psychological  
22 stresses from an emergency.

23           Mr. Bath?

24           WITNESS BATH: It would not fit that category,  
25 sir, this material.

1 CHAIRMAN SMITH: It would be residual stress that  
2 you are talking about, or after the emergency?

3 WITNESS BATH: No, sir. This is talking about the  
4 perception of persons' actions when in fact they are blocked  
5 from a means of flight and whether or not their behavior is  
6 panic. It talks about the psychological-type stresses that  
7 Dr. Dines was talking about, and I do not think it goes to  
8 the point that you are seeking information on.

9 CHAIRMAN SMITH: I think that is a subpart of it.  
10 I mean that is a portion of the problem, I believe.

11 WITNESS ADLER: We will make this available if  
12 this is what you would like. That is no problem.

13 CHAIRMAN SMITH: Well, we have accepted  
14 Contentions, and we have allowed a lot of cross examination  
15 on that issue, and the Commission has not, when they decided  
16 to strike psychological stress as such from the hearing,  
17 they preserved that aspect of the inquiry as it related to  
18 emergency planning. And we think the record should --  
19 whatever you have on it.

20 WITNESS BATH: Sir, the main point I want to make  
21 is I am a regional employee. This is a document which was  
22 provided to me in preparation of civil defense planning as a  
23 working document and also provided to state and local  
24 government in order to help them assist. It is not  
25 considered the views of FEMA. It is a DCPA document. And I

1 do not want to present it as such; that is my problem.

2 CHAIRMAN SMITH: All right. I think Mr.

3 Cosgrove's offer is probably the best approach.

4 Ms. Bradford, do you have -- do you want to  
5 continue to inquire?

6 MS. GAIL BRADFORD: I would just like to make a  
7 statement -- and I will keep it really short -- that when  
8 Dr. Dines was testifying about his ideas about the reaction  
9 people had to the evacuation here, I can remember being  
10 involved in hurricanes and having experience of an  
11 exhilarating feeling or whatever he was talking about. I  
12 can kind of associate with other kinds of events.

13 I have been involved with a tornado watch in  
14 downtown Washington, I mean things like that. It is just  
15 totally different; our experience around here at the time of  
16 the accident was completely different from anything I have  
17 ever experienced before. And I know, as someone who is a  
18 member of and on the board of directors of five antinuclear  
19 groups -- if you can believe it -- I know a lot of people in  
20 this area, a lot. And I am not the only one who has this  
21 experience that it was just completely different.

22 And I do not see any effort from the county or the  
23 state or FEMA to take into account our state of mind or our  
24 residual stress in emergency planning, let alone in the  
25 restart of the reactor. And it is really important.

1 CHAIRMAN SMITH: Yes, certainly.

2 Okay, do you have any further questions?

3 BY MS. GAIL BRADFORD: (Resuming)

4 Q You were talking about the -- if people are well  
5 enough trained and informed -- and I think there is another  
6 part of that, which is whether or not there was enough  
7 credibility, whether people believe, generally have a  
8 feeling of credibility about the information they are  
9 getting, whether it is from the State or the Licensee or  
10 whomever it is from.

11 Do you think that is also an equally important  
12 factor?

13 A (WITNESS ADLER) Credibility is very important.

14 Q This pamphlet, Commonwealth Exhibit 3, in my mind  
15 contains a number of things that make me think it is a  
16 laughable document. We have been through this pamphlet ad  
17 nauseum in this hearing.

18 Have you examined this pamphlet from the idea of  
19 whether it would improve the State's credibility to  
20 distribute this pamphlet?

21 A (WITNESS ADLER) We examined the pamphlet from the  
22 standpoint of the guidance provided by NUREG-0654.

23 Q Does that include credibility, specifically?

24 (Panel of witnesses conferring.)

25 A (WITNESS ADLER) If memory serves, it is not cited

1 as a specific criterion within the planning standard. I  
2 would have to reread it just to make sure. Would you give  
3 me just a moment?

4 (Witness reviewing document.)

5 CHAIRMAN SMITH: Do you have a cross-examination  
6 plan?

7 MS. GAIL BRADFORD: No, sir. I have several  
8 questions I have jotted down here.

9 CHAIRMAN SMITH: I beg your pardon?

10 MS. GAIL BRADFORD: I have several questions I  
11 have jotted down here. I am going to the issue of  
12 credibility at the moment.

13 WITNESS ADLER: I eyeballed it very quickly, Mr.  
14 Smith, and I do not see the word "credibility" in any of the  
15 planning standard or specific criterion within G referred to  
16 as "Public education and information." It may very well be  
17 an implicit part of that planning standard. I cannot see  
18 writing something without it being so.

19 BY MS. GAIL BRADFORD: (Resuming)

20 Q I think the phrase we pointed to most often here  
21 is how does radiation affect us, think how some might  
22 behave. Right from there, I think, in my personal opinion,  
23 it goes off the scale. But where -- can you point in this  
24 document or in the county pamphlets, where in the  
25 educational material would you say that the local residents'

1 fears are allayed and credibility is restored?

2 (Panel of witnesses conferring.)

3 WITNESS ADLER: I am having an awful lot of  
4 trouble, Mr. Smith. I am sorry. It may just --

5 CHAIRMAN SMITH: I did not get the question  
6 either.

7 DR. JORDAN: I am having trouble all the time.

8 CHAIRMAN SMITH: Would you restate the question,  
9 Ms. Bradford?

10 BY MS. GAIL BRADFORD: (Resuming)

11 Q Where in the educational material would you say  
12 that local residential fears are allayed and credibility is  
13 restored?

14 CHAIRMAN SMITH: Okay. Now, that, first it  
15 assumes a loss of credibility to be restored. And I will  
16 allow you to make that hypothesis. And it assumes fears,  
17 and I think we can take official notice from the limited  
18 appearance statements that have been made that there is a  
19 level of community fear.

20 So that you can accept as an hypothesis solely for  
21 the purpose of the question that there is a credibility  
22 problem. You can also accept from the -- from the  
23 information we have received in the course of this hearing  
24 limited appearance statements that there is a certain amount  
25 of community fear. I am not trying to quantify it, but you

1 can accept that there is some.

2 WITNESS ADLER: With those assumptions, is your  
3 question -- your question then is: Where in this pamphlet  
4 do I see restoration of credibility, presumed lost at the  
5 outset?

6 BY MS. GAIL BRADFORD: (Resuming)

7 Q Yes. Yes, sir.

8 (Witness reviewing document.)

9 MR. ZAHLER: Mr. Smith, this is for purposes of  
10 effecting an adequate emergency response, not in general; is  
11 that correct?

12 CHAIRMAN SMITH: That is right. The only purpose  
13 of any of this questioning is the emergency response.

14 WITNESS ADLER: I may be missing something. But  
15 the instructional aspects, as a part of the overall program  
16 outlined in NUREG-0654, would go a long way in my mind  
17 toward restoring credibility if the instructions were -- if  
18 the validity of the instructions were not undermined by the  
19 presumption that the reader started with no credibility or  
20 little credibility or -- I mean I am having a lot of  
21 trouble, Mr. Smith.

22 CHAIRMAN SMITH: In the first place, ANGRY Exhibit  
23 3 --

24 MS. GAIL BRADFORD: Commonwealth Exhibit 3.

25 CHAIRMAN SMITH: Commonwealth Exhibit 3, designed

1 with the idea in mind that there was a credibility loss  
2 which must be restored?

3                   WITNESS ADLER: I do not know if that was a  
4 presumption in the design of the booklet.

5                   CHAIRMAN SMITH: Okay. All right. But, sir, it  
6 is my understanding that that document has been in draft for  
7 a number of years, even preceding the TMI-2 incident. And  
8 it was published after the incident and distributed after  
9 the incident. But in fact, it had already been printed.

10                  So I can say that we can assume that it was not  
11 written with that direction in mind.

12                  CHAIRMAN SMITH: Dr. Little has pointed out part  
13 of the statement at the foreword from Lieutenant Governor  
14 Scranton, "Heretofore, the likelihood of a serious accident  
15 occurring at a nuclear power plant was thought to be very  
16 small. The recent incident at Three Mile Island changed  
17 that. The Commonwealth of Pennsylvania believes it has the  
18 responsibility to publish the basic facts and to inform the  
19 people of the measures they could be advised to take."

20                  The area of inquiry is appropriate. But the  
21 extent you are going to get much testimony, valuable  
22 testimony from this panel, I do not think you are going to.

23                  MS. GAIL BRADFORD: Well, sir, they either have  
24 examined the pamphlet from the -- from the point of view of  
25 looking to see whether it restores or creates or allows

1 there to be credibility sufficient that people will believe  
2 what they are told to do, so that an evacuation could be  
3 effected. And I do not know if they have looked at it from  
4 that point of view. I can see maybe they have not.

5 CHAIRMAN SMITH: They have said they have not.  
6 And they have also testified that as individuals they do not  
7 have expertise in the area of human behavior and  
8 psychology. Now, you are going to have to ask them: Has  
9 FEMA, as part of its program, approached the public  
10 information from that -- public information program -- from  
11 that vantage point?

12 WITNESS BATH: I would like to --

13 MR. COSGROVE: Chairman Smith, it might be easier  
14 for these people to ask them if that is an issue that they  
15 would comment on in forwarding their analysis of the plan to  
16 headquarters for formal approval -- or, excuse me, formal  
17 findings and determinations. That might be easier for  
18 them.

19 CHAIRMAN SMITH: That is very helpful. That is  
20 very good.

21 Is, in part of your review process, would you  
22 answer Mr. Cosgrove's statement -- question?

23 WITNESS BATH: To my understanding, no, it is not  
24 an issue.

25 CHAIRMAN SMITH: All right.

1           Well, Ms. Bradford, the problem is I am  
2 sympathetic to your line of approach. I mean it is  
3 appropriate in the hearing and in the Contentions which have  
4 been received. It is just that with this panel it is not  
5 going to be productive. This is not their approach to the  
6 plan. And I think they have made it very clear now.

7           MS. GAIL BRADFORD: Could I just summarize then --

8           CHAIRMAN SMITH: All right.

9           MS. GAIL BRADFORD: -- and see whether they  
10 disagree with it?

11           BY MS. GAIL BRADFORD: (Resuming)

12           Q       That credibility on behalf of the public is a  
13 necessary part of the public frame of mind -- I do not know  
14 what the rest of that sentence was.

15           CHAIRMAN SMITH: And I think they have conceded  
16 that it is, several times. Go ahead.

17           BY MS. GAIL BRADFORD: (Resuming)

18           Q       And that FEMA has not studied whether or not that  
19 credibility has increased or decreased or effected by the  
20 public information available and whether that credibility,  
21 the level of credibility necessary, exists in this area in  
22 order for an evacuation to be effected.

23           CHAIRMAN SMITH: Do you agree with her summary?

24           WITNESS ADLER: I got the thread of it. And I am  
25 thinking very hard for the right answer to this question,

1 the honest and truthful answer to this question. Put I  
2 would really like to hear it one more time.

3 CHAIRMAN SMITH: I think she wants you to  
4 summarizes by saying that you have not taken credibility  
5 into account in reviewing pamphlet Commonwealth Exhibit 3.

6 WITNESS ADLER: Okay. This is a State pamphlet  
7 being reviewed by a federal agency. The people who are  
8 empowered and responsible to write this are the elected  
9 representatives of the citizenry. Therefore, it is an  
10 implicit assumption in our review of this that credibility  
11 exists.

12 CHAIRMAN SMITH: All right. You will accept the  
13 judgment of the local and the state government as to what  
14 the credibility problem is and what is needed to address  
15 it?

16 WITNESS ADLER: We do. However, we do -- I would  
17 be willing to work with the State as we do on a sustained  
18 basis, this document, county leaflets, and the plans in the  
19 updating process and in the public information and the  
20 public education program. I do not want to give the  
21 impression to this Board that FEMA is unininvolved. We are  
22 very interested and very involved and will be participative  
23 in upgrading such documents where flaws and inadequacies are  
24 made known to us.

25 CHAIRMAN SMITH: You should not draw any

1 inferences from the questions that the Board asks as to what  
2 our judgment is along that line. We are trying to help Ms.  
3 Bradford construct the record as she is entitled to  
4 construct it as a party to the proceeding.

5 WITNESS ADLER: I am sorry.

6 CHAIRMAN SMITH: Ms. Bradford, I believe you have  
7 exhausted the area with this panel.

8 MS. GAIL BRADFORD: I am just trying to think  
9 whether I got an answer to the question. I think I got an  
10 answer to a different question.

11 CHAIRMAN SMITH: It was a very complicated  
12 question.

13 BY MS. GAIL BRADFORD: (Resuming)

14 Q So you do not assess whether or not credibility  
15 exists in this area? You assume it?

16 A (WITNESS ADLER) Yes.

17 (Pause.)

18 CHAIRMAN SMITH: You mean you assume it, or you  
19 accept the Commonwealth's assumption?

20 WITNESS ADLER: I accept the Commonwealth's  
21 assumption.

22 (Pause.)

23

24

25

1 BY MS. GAIL BRADFORD:

2 Q Would you turn to page 22 in the NUREG/CR-1215?  
3 What I want to establish here is that according to this  
4 document many, many more people actually evacuated than were  
5 advised by the Governor to evacuate. I do not find it in  
6 this document but I think the number of pregnant women and  
7 preschool children within the five-mile radius is estimated  
8 to be about 2500, and this document says halfway down that  
9 paragraph on page 22, "Thus within 15 miles of TMI it  
10 appears that a total of 144,000 persons or about 39 percent  
11 of the total population living within 15 miles of the  
12 station evacuated."

13 Does that seem to be accurate from any other  
14 information you have had about the accident?

15 A (WITNESS ADLER) I do not know. I have not made  
16 the comparison.

17 Q Do you have any other information which would  
18 indicate that substantially more people evacuated than just  
19 pregnant women and preschool children from the five-mile  
20 area?

21 A (WITNESS ADLER) I do not know. We have not  
22 studied it.

23 Q Mr. Bath, weren't you here at the time?

24 A (WITNESS BATH) Was I here? Yes. But my basic  
25 role was dealing with the administration of the federal

1 agency and not in keeping tabs on what the population was  
2 doing. I have not been part of nor have I had time to sit  
3 down and to study this Mountain West, which in testimony I  
4 said I have read, but I have not had time to sit down and to  
5 study this and make comparisons against any other resource  
6 as to what was the amount of persons that did move out.

7 A (WITNESS ADLER) The NUREG-0654 deals with an  
8 approximate ten-mile radius, and we have been listening very  
9 intently to testimony about the emergency evacuation  
10 planning study performed by Parsons, Brinckerhoff. We look  
11 forward very much to an accommodation of that study in  
12 concert with the state as an integral part of our planning.

13 Q That has nothing to do with this question.

14 A (WITNESS ADLER) Sorry.

15 CHAIRMAN SMITH: That is not the witness's fault.  
16 The question is -- I mean I do not know how they can figure  
17 out where you are going or what kind of responses you want,  
18 nor does the Board. I am going to ask again, what is your  
19 cross examination objective and what is your justification  
20 for proceeding without a cross examination plan?

21 I have asked you this and you are putting me off,  
22 really.

23 (Counsel handing document to Board.)

24 MR. GRAY: Mr. Chairman, I would like to ask where  
25 within the scope of the direct examination this line of

1 questioning is related -- tied in.

2 MS. GAIL BRADFORD: The question is --

3 CHAIRMAN SMITH: You di' have a cross examination  
4 plan.

5 MS. GAIL BRADFORD: If you look at that plan, it  
6 does have two blanks in it, and I have been looking for  
7 another document which I thought I had which I cannot find,  
8 so I did not submit the plan until I found the documents,  
9 and I did not find the documents.

10 The answer to Mr. Gray's question is that I think  
11 that the evacuation of an area immediately outside the  
12 ten-mile zone will affect the evacuation of the ten-mile  
13 zone.

14 CHAIRMAN SMITH: Okay.

15 MS. GAIL BRADFORD: And the question is whether  
16 FEMA has considered that, and one way to consider that is to  
17 consider the experience of the accident. A five-mile  
18 evacuation was advised, and 40 percent of the people within  
19 fifteen miles, which is three times the radius, evacuated.

20 This is an example of a phenomenon that the other  
21 document called "evacuation shadow" since they have to give  
22 it some title. That is a document published in "Geographic  
23 Review" by Donald Siegler. It is referenced in this NUREG  
24 on page 91 in the appendix. It is a final report on a  
25 social survey of Three Mile Island area residents, Michigan

1 State University Department of Geography.

2 There are also six other studies which in addition  
3 to this NUREG documented that substantially more people left  
4 the area than those who were advised to leave, and I would  
5 like to have some way of getting that into the record. I  
6 guess I am prepared to present testimony from Mr. Goldstein  
7 who did one of these studies if I am allowed to.

8 CHAIRMAN SMITH: I think we can address that as a  
9 separate problem. Right now we are concerned with your  
10 examination of this panel, and I think that they have  
11 answered your question that they had not taken into  
12 consideration the numbers in the study.

13 BY MS. GAIL BRADFORD: (Resuming)

14 Q And have they also not taken into consideration  
15 the other six studies?

16 CHAIRMAN SMITH: They have not taken into  
17 consideration the concept, regardless of where it comes  
18 from. Is that correct? The concept of the number of people  
19 who actually evacuated and from where during the accident.

20 WITNESS ADLER: It is not dealt with in the  
21 planning standards of O654 to my knowledge.

22 CHAIRMAN SMITH: And is it dealt with in your  
23 review of the particular plans that are involved here?

24 WITNESS ADLER: No.

25 CHAIRMAN SMITH: Okay.

1 BY MS. GAIL BRADFORD: (Resuming)

2 Q There is just one other thing which has come up,  
3 and I do not think we ever had a contention about it, that  
4 appears on page 28 of this document. It is about banking.

5 CHAIRMAN SMITH: Banking?

6 MS. GAIL BRADFORD: Banking. Getting money out of  
7 a bank.

8 CHAIRMAN SMITH: Yes, we have had a lot of  
9 testimony on that.

10 BY MS. GAIL BRADFORD: (Resuming)

11 Q There is nowhere in any of these county plans that  
12 I have read the assumption that people will go to a bank and  
13 take out money before they leave, and numerous studies show  
14 that that is what people did last time before they left.  
15 And yet that complicating feature of an evacuation does not  
16 seem to be accounted for anywhere in any of the plans.

17 Have you noted that? Do you think that is a  
18 problem?

19 A (WITNESS ADLER) To the extent with which we have  
20 become familiar with evacuation planning time estimates, the  
21 Parsons, Brinckerhoff study seems most responsive to the  
22 NUREG-0654 guidelines. I do not, however, recall banking as  
23 a parameter in that study. I do not view it as a deficiency  
24 because it is not a requirement of our guidelines in 0654.

25 Q Yes. In their specific study they did say that

1 they did not take that into account, and I am not even sure  
2 why they would in the kind of study that they do, but what I  
3 am saying, it is not in any of the county plans or anywhere  
4 that people will divert their route of egress in order to go  
5 past their bank.

6       A     (WITNESS ADLER)   What is -- could you state the  
7 question.

8               CHAIRMAN SMITH:   The question is: If the  
9 evacuation time study does not take into account delays and  
10 diversions caused by certain need of people to go get money  
11 for an evacuation, extended absence and expenses, can you  
12 still say that the study is in conformance with 0654?

13              WITNESS ADLER:   Yes.

14              CHAIRMAN SMITH:   And can you explain that,  
15 assuming that there is a banking problem?

16              WITNESS ADLER:   Assuming that there is a banking  
17 problem, the diversion of people to accomplish what you have  
18 outlined is not an integral part of the guidance provided by  
19 0654, and as such it is therefore not a deficiency.

20              BY MS. GAIL BRADFORD: (Resuming)

21       Q     And further, just going to the county plans,  
22 people are expected to take particular routes as they leave  
23 town, and it may be that their bank would be in a different  
24 area. It would just mean that they had to change the egress  
25 route or somehow disrupt the traffic flow.

1            Aside from the considerations how that affects the  
2 evacuation time estimate study by Parsons, Brinckerhoff,  
3 that has an effect on the effectiveness of the evacuation  
4 plan itself.

5            A      (WITNESS ADLER) You are saying it does.

6            Q      That is my assumption, and do you agree or  
7 disagree with that?

8            A      (WITNESS ADLER) Well, I have no reason to agree  
9 nor to disagree. It is extraneous to the guidance provided  
10 by 0654.

11          A      (WITNESS BATH) My recollection may be in error,  
12 but I thought that the Parsons, Brinckerhoff in presenting  
13 its testimony on this in fact discussed these kinds of  
14 things which people would do, they would do, and therefore  
15 they would not necessarily be the first - the ones that  
16 leave in 20 minutes, and that they would take that time, and  
17 so there is some kind of factoring in there as to what  
18 individual families would do, which would determine whether  
19 they were the first to leave or the last to leave.

20            CHAIRMAN SMITH: That is how they addressed the  
21 time factor. You are exactly correct.

22            BY MS. GAIL BRADFORD: (Resuming)

23          Q      But the time estimate study is not the county  
24 plan. I mean the time estimate study is just a thing in  
25 itself. It is a useful tool, whatever. Whatever it is.

1 But it is not the county plan.

2 A (WITNESS ADLER) That is correct. It is not the  
3 county plan.

4 Q So address the question in terms of county plans  
5 and not in terms of whether or not it is a deficiency in the  
6 time estimate study.

7 A (WITNESS ADLER) It is not a deficiency in the  
8 county plans.

9 (Pause.)

10 MS. GAIL BRADFORD: I have three other areas of  
11 questioning which I can identify.

12 CHAIRMAN SMITH: Would you, please?

13 MS. GAIL BRADFORD: Yes, sir. One relates to the  
14 local telephone system. One relates to the use of Emergency  
15 Broadcasting System by one county before the others. The  
16 third is a list of analyses that I think FEMA needs to  
17 complete before they can present their final findings and  
18 determinations, and that I wanted to confirm with them.

19 CHAIRMAN SMITH: Okay, but Ms. Bradford, I still  
20 have not heard from you an explanation as to why you do not  
21 have a cross examination plan, why it was not consolidated,  
22 and I have not heard a request for an exception or a  
23 justification for it or anything, and this is the third or  
24 fourth time I have asked you to address it. It is my  
25 fault. I allow you to evade me each time, but I am not

1 going to this time. I am going to be persistent.

2 Now, either you are going to have to ask for an  
3 exception and justify it or we are going to have to stop  
4 your cross examination. Maybe you have explained and I  
5 missed it, but if you have, do it again, would you please?

6 MS. GAIL BRADFORD: Yes, sir. These are questions  
7 that I did think of today while I was listening to the other  
8 answers and I did jot them down today. I did not prepare  
9 them in advance.

10 CHAIRMAN SMITH: They just occurred to you.

11 MS. GAIL BRADFORD: Yes, sir.

12 CHAIRMAN SMITH: I have to consult with the Board  
13 to see if as a matter of discretion we should allow you to  
14 proceed. I am inclined to allow you to go to your last  
15 category, but let's see what the Board feels. Let's see  
16 what the Board feels.

17 (Board conferring.)

18 CHAIRMAN SMITH: The Board would encourage you to  
19 inquire into the last area. That is the category of  
20 outstanding items before the final consideration. But the  
21 other two, I just do not believe -- we do not believe that  
22 you have justified departure from our rules and you have  
23 demonstrated the importance of it or that the record is void  
24 without it. There has been a lot of testimony on it. Unless  
25 there is something you can point to as very important and

1 that is essential, we do not see what is is. But the last  
2 category you should begin with.

3 MS. GAIL BRADFORD: All right, I will begin with  
4 that one.

5 CHAIRMAN SMITH: We will leave it open to you to  
6 make a representation that this is a very important subject  
7 matter. The other two categories that we are cutting out is  
8 information we should have, but just as an afterthought when  
9 you think of the very lengthy cross examination you have  
10 already had and our repeated admonitions to have plans and  
11 to coordinate, we do not think that we can exercise the  
12 discretion and allow you to inquire.

13 MS. GAIL BRADFORD: I hope you are not under the  
14 impression that I did not contribute at all to the cross  
15 examination plans with Mr. Cunningham.

16 CHAIRMAN SMITH: Yes, not at all. We observed you  
17 working and everything else. Understand, if you can say  
18 that this is information you just have to have, it is so  
19 important, then we will take your representation. It does  
20 not seem to be that, Ms. Bradford. It seems to be simple  
21 afterthought.

22 MS. GAIL PRADFORD: There is a real advantage to  
23 typing them out in advance.

24 (Pause.)

25 BY MS. GAIL BRADFORD: (Resuming)

1       Q     Would you say that in order to prepare your final  
2 findings and determinations, you would need to evaluate  
3 whether the assumptions of the evacuation time estimate  
4 study prepared by Parsons, Brinckerhoff are the same as the  
5 assumptions of the county and municipal planning?

6       A     (WITNESS ADLER) No.

7       Q     Do you need to evaluate the municipal and school  
8 plans to the extent relied upon by the counties, that they  
9 are relied upon by the counties?

10           CHAIRMAN SMITH: My memory is that both of these  
11 very questions were asked and answered by Mr. Cunningham,  
12 and I think I can even recall the answer.

13           (Board conferring.)

14           CHAIRMAN SMITH: Oh, I see. I overlocked the  
15 purpose of it. This is a summary of outstanding items. Or  
16 it seems to me that these very questions were asked and  
17 answered by Mr. Cunningham. I think the first one was asked  
18 in two ways and answered in two ways. The second one was  
19 asked in two ways and answered in two ways about the school  
20 and county plan and what type of county plan they would  
21 accept and if they had a functional equivalent it would be  
22 all right.

23           Is it different? You see, one of the problems  
24 with repetitive questions is that the witnesses and the  
25 other parties and the Board believe it is a different

1 question and that you mean to have a different point, so if  
2 it is repetitive, we do not want it.

3 MS. GAIL BRADFORD: I think the question has been  
4 asked before, and what we have gotten so far, as you say, is  
5 two answers, but we have gotten a yes and a no.

6 CHAIRMAN SMITH: Oh, all right.

7 MS. GAIL BRADFORD: I am getting to the point  
8 where we spend so much time discussing whether or not I can  
9 ask these questions that I cannot remember how to ask them.

10 CHAIRMAN SMITH: All right, go ahead.

11 MS. GAIL BRADFORD: I do not think I can, sir.

12 CHAIRMAN SMITH: We will give you an opportunity  
13 to come back. This has been a very fatiguing day for  
14 everybody. There have been a lot of questions, and we will  
15 give you an opportunity to come back and organize yourself  
16 and look over the earlier cross examination plan and think  
17 about what has been asked and organize it better.

18 MS. STRAUBE: Chairman Smith, I may be wrong but I  
19 think what Ms. Bradford might do is establish a list of  
20 things that are still open and have to be reviewed in the  
21 future by FEMA before they make their findings. Is that  
22 correct? And it might be possible just to ask one question,  
23 are these things on the list, and just go down the list.

24 I do not know if that would be easier.

25 CHAIRMAN SMITH: Do you have a prepared list?

1 Otherwise, I think you are tired, and I think that you could  
2 do that thing better after you organize it and think about  
3 it. Do you have a list already prepared?

4 MS. GAIL BRADFORD: Well, I have this little list  
5 of three things. I am not saying it is an exhaustive list  
6 of all the things they have to do. I would not want that to  
7 be represented.

8 CHAIRMAN SMITH: It will be your pleasure,  
9 whatever you want to do, proceed now or defer it later until  
10 you have an opportunity to think about it.

11 MS. GAIL BRADFORD: I would rather defer it till  
12 later, thank you.

13 CHAIRMAN SMITH: All right.

14 Ms. Straube, if you know what Ms. Bradford is  
15 going to ask and you have discussed it with her, go ahead.

16 MS. STRAUBE: No, I do not know. I only had the  
17 idea that she was trying to do essentially the same thing  
18 that I am going to try to do. I do not know that mine is  
19 going to be very well prepared either, but essentially the  
20 point of the cross examination plan is to identify areas in  
21 the direct testimony which had been left open and just to  
22 determine when it is and how it is that those things are  
23 going to be resolved.

24 CHAIRMAN SMITH: Okay.

25 MS. STRAUBE: A lot of them have already been

1 covered by Mr. Cunningham, and I want to skip -- it is not  
2 voir dire, but going into the background and education of  
3 Mr. Pawlowski because he did not really provide many answers  
4 yet. If he starts answering a lot, I would like to reserve  
5 those for the end if necessary.

6 CHAIRMAN SMITH: All right. Okay.

7 BY MS. STRAUBE: (Resuming)

8 Q You state at the beginning of your additional  
9 direct testimony, I guess, that the testimony was based on  
10 what you are calling current versions of the county plans  
11 which are all from 1980, is that correct?

12 A (WITNESS ADLER) Yes.

13 Q Okay. Do you intend to change your testimony or  
14 amend this testimony based on these contentions once you  
15 have reviewed the new county plans, the new five-county  
16 plans?

17 A (WITNESS ADLER) The RAC review of those plans is  
18 under way. It continues outside of the context of this  
19 hearing. We will be filing our findings May 15 in the form  
20 of an interim findings and determinations document.

21

22

23

24

25

1           Q     Okay. Essentially, then, what I'm going to be  
2 doing is going through the direct testimony identifying what  
3 I saw as open issues and ask you whether those are going to  
4 be addressed in the findings that will be coming out,  
5 whether the interim findings or the final findings. Do you  
6 understand?

7           A     (WITNESS ADLER) I do.

8           Q     Okay. The other thing I wanted to ask was what is  
9 the role of the regional advisory committee in coming up  
10 with the FEMA findings?

11          A     (WITNESS ADLER) The regional advisory committee  
12 is chaired by a FEMA person within the region's division of  
13 plans and preparedness. The members of that committee are  
14 representatives of the Department of Transportation, the  
15 Nuclear Regulatory Commission, the Environmental Protection  
16 Agency, FEMA as chairman, and the Department of Energy. Oh,  
17 and Health and Human Services.

18          Q     Okay. What is their role -- well, I understand  
19 that they review the county plans and the state plans. What  
20 is their role in coming up with the FEMA findings?

21          A     (WITNESS ADLER) They put together a document  
22 because they provide each an area of expertise. They are  
23 separate reviews of the documents. FEMA is responsible for  
24 that package and transmittal to PEMA. And PEMA, together  
25 with the counties, iterate in those areas where deficiencies

1 are spelled out by upgrading their plans responsive to that  
2 package of comments.

3 Q Okay. The findings that will be made by FEMA, I  
4 just want to clarify. I'm not sure it is clear on the  
5 record yet whether the municipal plans are part of what is  
6 going to be considered in the FEMA findings. So if I can  
7 try to summarize, what I think you said is, to the extent  
8 that the county plans rely upon the municipalities or school  
9 boards or any other smaller level agency, then either the  
10 municipal plan or whatever plan it is actually has to be  
11 attached to the county plan or the substantive portions of  
12 it have to be included in the county plan; is that correct?

13 A (WITNESS ADLER) That is correct. The emphasis is  
14 on the latter, after your "or." An adequate  
15 characterization of those subordinate, if I may use the  
16 word, plans by the county or the state is consistent with  
17 NUREG-0654 guidance.

18 Q Okay. In other words, FEMA will then be, if not  
19 reviewing the exact municipal or lower level plans, will be  
20 reviewing the substance of those plans through what is in  
21 the county plan; is that correct?

22 A (WITNESS ADLER) Yes.

23 Q Okay. I'm starting with your testimony dated  
24 February 23, 1981. Okay, on page 6, the first answer, which  
25 I guess is answer number 6, it states that York County has

1 been requested to modify its procedures to provide a  
2 sequential notification list separating the municipal  
3 emergency management coordinators within the plume EPZ from  
4 those beyond the plume EPZ.

5 Is this something that will be reviewed in the  
6 context of the FEMA findings?

7 (Pause.)

8 A (WITNESS ADLER) Yes. Where is it on page 6? I  
9 want to make a notation myself.

10 Q It is the first -- well, the first line there is  
11 answer, and it would be the last sentence of that answer on  
12 page 6.

13 If this is not done in the York County plan, would  
14 that be listed as a deficiency with the FEMA findings?

15 A (WITNESS ADLER) It will be noted in the FEMA  
16 findings.

17 Q As being something that has not been done?

18 A (WITNESS ADLER) Correct.

19 Q Okay. I do not want to belabor the evacuation  
20 time study very long, but on page 10 you discuss the  
21 evacuation time study. Is a review of the Parsons,  
22 Brinckerhoff study going to be done in terms of comparing  
23 the state and county plans to the assumptions that are in  
24 the Parsons, Brinckerhoff study?

25 (Pause.)

1        A     (WITNESS ADLER) No. If I understand your  
2 question correctly -- where are you looking on page 10?  
3 "Results should be made available"? I am sorry.

4        Q     Page 10 is actually the place where the evacuation  
5 time study is discussed. The question really goes beyond  
6 the answer on page 10. My question is whether FEMA is going  
7 to conduct a review of the Parsons, Brinckerhoff study to  
8 compare the state and county plans with the assumptions that  
9 are in that study.

10      A     (WITNESS BATH) PEMA also will be interested, on  
11 the basis of the Parsons, Brinckerhoff study, as to whether  
12 the state has adopted it, whether or not there have been  
13 adjustments. In other words, a review of PEMA to the  
14 Parsons, Brinckerhoff is of greater interest to us in seeing  
15 such a review or the adoption of it. Then we will seek to  
16 confirm that the planning, as is provided by the state and  
17 the study, is in fact compatible and allows a good base for  
18 protective action decisions or for the evacuation planning  
19 routes as are established.

20      Q     So would I be correct in stating, then, for  
21 purposes of the FEMA findings of adequacy of the state  
22 plans, the evacuation time study would have to have the same  
23 assumptions in it as the facts that are contained in the  
24 county and local plan?

25      A     (WITNESS ADLER) No, not necessarily. The state

1 plan itself will have to show how it has resolved those  
2 differences which might be significant between its basis for  
3 its plans and those in the Parsons, Brinckerhoff study. The  
4 plans themselves must show that.

5 (Pause.)

6 DR. LITTLE: Let me ask a quick question here.

7 Are you assuming that the state plans have to be  
8 reconciled to the Parsons, Brinckerhoff study or vice versa,  
9 or if it is some accommodation on both sides?

10 WITNESS ADLER: The last, accommodation.

11 BY MS. STRAUBE: (Resuming)

12 Q Did you say the Parsons, Brinckerhoff -- which  
13 accommodation was the last one you listed?

14 DR. LITTLE: I asked if the state had to be  
15 reconciled to Parsons, Brinckerhoff or vice versa or whether  
16 it was a mutual accommodation.

17 WITNESS ADLER: A reconciliation by the state in  
18 its plans of significant differences between the plans and  
19 the study is what is to be required.

20 BY MS. STRAUBE: (Resuming)

21 Q All right. Let me ask it this way. The  
22 evacuation -- if the plans were to be reviewed as they are  
23 presently, with the evacuation time study as it is now and  
24 the state plans and the county plans as they are now, would  
25 there be a deficiency in the planning?

1       A     (WITNESS BATH) In my opinion, I do not see how,  
2 with the testimony that I heard, that unless there were  
3 changes of some of the routes within York County, that it  
4 was stated that he felt it would take 12 hours on the  
5 planned routes that are now in the plan. And so if the  
6 state submitted the Parsons, Brinckerhoff study and said the  
7 worst or the upper limits is nine hours, and yet one of the  
8 gentlemen with the Parsons, Brinckerhoff study said that if  
9 the ultimate routes provided in certain sections of the plan  
10 were not adopted it would be 12 hours, then I would have  
11 reason to question the acceptability of that study for the  
12 purpose that you are using it.

13       Q     Okay. Thank you. That answers that.

14                Okay. On page 18 you are talking about the time  
15 required to notify the public in the plume exposure EPZ, and  
16 I believe it is also discussed in your March 16 testimony on  
17 page 12. I do not know that you necessarily need to look at  
18 it. I am just saying that for the record.

19               And your answer consistently throughout the  
20 testimony was that this was a deficiency in the plans which  
21 you anticipate will be corrected by the siren notification  
22 system which is going to be installed by Licensee; is that  
23 correct?

24       A     (WITNESS ADLER) Yes.

25       Q     Okay. And I believe you also stated that you have

1 not yet reviewed the plans for that siren notification  
2 system; is that correct?

3 A (WITNESS ADLER) Yes.

4 Q Is that review of that -- of the Licensee's siren  
5 notification system part of the -- going to be done before  
6 the FEMA findings come out?

7 A (WITNESS ADLER) Give me a moment.

8 (Panel of witnesses conferring.)

9 A (WITNESS ADLER) I do not know whether we will be  
10 able to do that before the final findings and determinations  
11 are required.

12 Q Well, are you saying, then, that FEMA could even  
13 reach a decision as to the adequacy of the emergency  
14 planning without reviewing that siren notification system?  
15 As I understand it, that is the only notification system --  
16 well, that is the notification system that is going to be  
17 used. So are you saying that you could actually review the  
18 adequacy of the state and local plans without having  
19 reviewed that siren notification system?

20 A (WITNESS ADLER) Well, the other --

21 MR. COSGROVE: Mr. Chairman.

22 CHAIRMAN SMITH: Yes.

23 MR. COSGROVE: It should be noted that FEMA has on  
24 two occasions already approved plans and findings and  
25 determinations by the associate director and the acting

1 associate director for plans and preparedness conditioned  
2 upon an acceptable siren warning notification system being  
3 installed at other plants.

4 CHAIRMAN SMITH: I noticed that with respect to  
5 --

6 (Board conferring.)

7 MS. STRAUBE: I could ask an additional question.

8 BY MS. STRAUBE: (Resuming)

9 Q Would that be a possibility, that you would then  
10 have a conditional FEMA finding and determination?

11 A (WITNESS ADLER) It is a possibility.

12 CHAIRMAN SMITH: The reference by Mr. Cosgrove was  
13 on the letter -- two letters with respect to Farley and the  
14 Tennessee multi -- Sequoyah, which we will have to get into  
15 the record one way or the other.

16 MS. STRAUBE: Should I continue?

17 CHAIRMAN SMITH: Yes, please.

18 BY MS. STRAUBE: (Resuming)

19 Q If you were to issue such a conditional finding  
20 and determination, or if FEMA were to issue such a  
21 conditional finding and determination, would it be  
22 conditional on installation of the siren notification  
23 system? Would I be correct, then, in assuming that FEMA  
24 would ultimately review the siren notification system?

25 A (WITNESS ADLER) Yes.

1           Q     Okay. On page 19 it states, about the seventh  
2 line down, that the state and counties will have to develop  
3 appropriate implementation and activation procedures for  
4 such a system. And I believe this is referring to the siren  
5 notification system; is that correct?

6           A     (WITNESS BATH) That is correct.

7           Q     Is that something that would have to be reviewed  
8 prior to the FEMA findings and determinations or, if it were  
9 a conditional finding and determination, is that something  
10 that would be part of the condition that will have to be  
11 reviewed later?

12          A     (WITNESS ADLER) Yes.

13                 CHAIRMAN SMITH: Wait a second.

14                 (Board conferring.)

15                 CHAIRMAN SMITH: Didn't you ask for an either-or  
16 answer and didn't you get a yes?

17                 WITNESS ADLER: I am sorry. Yes, we would have to  
18 review it.

19                 BY MS. STRAUBE: (Resuming)

20          Q     Well, okay. Would you -- the reason I asked it  
21 that way, would you review it before you issued the FEMA  
22 findings and determinations?

23          A     (WITNESS ADLER) Not necessarily.

24                 MS. STRAUBE: That is why I asked it that way. I  
25 could ask the next point --

1           WITNESS BATH: Wait a minute.

2           (Panel of witnesses conferring.)

3           BY MS. STRAUBE: (Resuming)

4           Q     Okay. Okay. Is the reason that you only might  
5 review it prior to issuing FEMA findings and determinations  
6 a question of timing?

7           A     (WITNESS ADLER) Indeed it is.

8           Q     And would the FEMA -- if you had not reviewed it  
9 prior to issuing FEMA findings and determinations, would the  
10 findings and determinations be conditional upon a review of  
11 the implementation and activation procedures for the siren  
12 notification system?

13          A     (WITNESS ADLER) Yes.

14          MS. STRAUBE: Does that clarify it?

15          CHAIRMAN SMITH: Yes. Well, in fact, I am not  
16 real sure that there was any clarification needed. I think  
17 I may have heard the question incorrectly. Nevertheless, it  
18 should be cleared up.

19          MS. STRAUBE: You are right, it was an either-or  
20 question.

21          BY MS. STRAUBE: (Resuming)

22          Q     All right. On page 22 at the end of the first  
23 paragraph, and I quote, it says -- oh, I think it means --  
24 "Though the public education program still to be  
25 implemented" -- no.

1                   Quote: "Through the public education program  
2 still to be implemented, the public will be educated on what  
3 to do any time they hear the siren alerting signal."

4                   My first question is, has the public education  
5 program been implemented?

6                   (Panel of witnesses conferring.)

7         A       (WITNESS BATH) Has it been implemented? We have  
8 an understanding that York County has provided, and another  
9 county has provided, a brochure which discusses the signals,  
10 that other counties in fact have brochures which discuss the  
11 signals and actions to be taken.

12                  However, we do not have any information that they  
13 have been disseminated beyond that, nor do we have  
14 confirmation as to how far York County has disseminated its  
15 documents.

16         Q       Is implementation in all five counties of the  
17 public education program a requirement for the FEMA findings  
18 and determinations?

19         A       (WITNESS ADLER) Consistent with NUREG-0654, it  
20 is.

21                  (Pause.)

22         Q       Okay. On page 31, this is really a matter of  
23 clarification more than anything else. At the end of the  
24 answer, you discuss procedures to treat persons who have  
25 received significant but not large doses. The next sentence

1 says, quote: "This treatment would normally be limited to  
2 blood tests and the collection of urine and feces samples  
3 for analysis."

4           And my question is, isn't blood tests and the  
5 collection of that type of samples more diagnostic than  
6 treatment?

7           (Panel of witnesses conferring.)

8       A     (WITNESS ADLER) You are correct.

9       Q     Okay. Then are the hospitals -- are the medical  
10 facilities that you are referring to in this paragraph  
11 capable of treating the people after the diagnostic tests  
12 have shown that they have been exposed to radiation? I  
13 point out, I believe you are referring to any medical  
14 facility would be able to do this.

15           So would any medical facility be able to treat  
16 these people?

17       A     (WITNESS ADLER) No, not any medical facility --  
18 it would be selective medical facilities that would be able  
19 to conduct treatment. All medical facilities would be able  
20 to, as you clarified, handle the diagnostic aspect.

21           (Panel of witnesses conferring.)

22       A     (WITNESS ADLER) It is true that these diagnostic  
23 steps, once completed, would be the basis upon which  
24 individuals would be sent to those specific medical care  
25 facilities that are specialized and can treat.

1       Q     Okay. So just to clarify the testimony that is in  
2 this direct testimony, the medical supplies for treatment of  
3 radiation victims would only be available at those special  
4 facilities.

5              I believe there are three, but you can correct me  
6 if I am wrong, that are able to treat radiation victims; is  
7 that correct? And they would not -- answer that first.

8              (Panel of witnesses conferring.)

9       A     (WITNESS BATH) I am having a little problem in  
10 that the state has come in with, in addition to the State  
11 Department of Health, which has listed numerous other  
12 hospitals other than the Baltimore Hospital, the Hershey  
13 Medical Center and so forth, which does the bone marrow  
14 transplant and that type of advanced treatment.

15              The Pennsylvania Department of Health knows better  
16 than I what hospitals are capable of treating patients which  
17 have been exposed to radiation. They have listed numerous  
18 hospitals. We are waiting to see that the counties have  
19 picked up on these hospitals and will go to these  
20 facilities.

21              It would seem prudent that if a person has been  
22 exposed he should go to a hospital that is prepared to treat  
23 them, rather than just any hospital. And that is why that  
24 list was prepared and the asterisks were put there.

25              But it appears to be much more than three

1 hospitals we are talking about.

2 (Pause.)

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1       Q     Are you aware -- I am going to start on page 39  
2 with question 49 and the answer. And it relates to  
3 distribution of thyroid-blocking agents. I will start  
4 with: Are you aware of the change in the Commonwealth's  
5 plans on distribution of potassium iodide?

6       A     (WITNESS BATH) Which change is that? There have  
7 been several changes. Are you talking about the change from  
8 -- okay.

9       Q     Yes. From a small pill to a large bottle with  
10 liquid Lugol, I believe it is, in it. The change -- okay,  
11 the Commonwealth's plans for the distribution of potassium  
12 iodide, as I understand them now, are for distribution to  
13 the three special categories: emergency workers,  
14 institutionalized, and a third category that I cannot  
15 remember right now. And the change is from pill form to  
16 liquid form. Are you aware of that change?

17      A     (WITNESS BATH) I am aware of the first through  
18 plan submittal. I am aware of the second through discussion  
19 here before the Board. I am not aware of that through a  
20 plan statement. In other words, it is not part of a plan,  
21 not part of any planning I have seen yet.

22      Q     It is true it is not typed yet. Am I correct in  
23 stating that the five county plans would have to reflect  
24 this change in distribution policy for potassium iodide?

25      A     (WITNESS BATH) To what degree the county plans

1 have to be modified, it is -- they were still in development  
2 for the distribution of the tablet at the time the  
3 modification changed and to what degree the liquid doses and  
4 how the liquid doses can be done to the same groups of  
5 people through the same process, yes, that would have to be  
6 reconsidered.

7 Q Okay. And would the five county plans, the  
8 changes in the five county plans to reflect the new  
9 distribution of potassium iodide by the State, would those  
10 changes have to be in place prior to FEMA findings and  
11 determinations?

12 A (WITNESS ADLER) I would like to see them. They  
13 seem to be simple changed pages. We would like to have  
14 them.

15 (Pause.)

16 Q Okay. On page 44 you discuss traffic  
17 coordination. Well, it is the first answer on that page.  
18 You discuss coordination will be conducted by the State  
19 Police who are responsible for assuring that traffic  
20 congestion will not occur within the plume ETZ. Do you see  
21 where I am?

22 A (WITNESS ADLER) Yes.

23 Q Do you anticipate there would have to be  
24 additional State Police personnel outside of the ETZ to  
25 effectuate this?

1       A     (WITNESS BATH) There has been some anticipation  
2 in the discussion of the traffic control around reception  
3 centers and so forth to keep it moving. There has not been  
4 any discussion between myself and any state planner as to  
5 traffic control, identified bottlenecks, populations who  
6 might choose to evacuate outside of the ten-mile ETZ. I  
7 have not received any instructions to the point of that  
8 consideration.

9                  However, as a result of being here, I am sure that  
10 Region III is going to take it under advisement and look to  
11 see if we have a problem in that area.

12       Q     Is that going to be -- if a problem is identified  
13 in that area, will it have to be provided for in the State  
14 plans prior to the FEMA -- the state and county plans prior  
15 to the FEMA findings and determinations?

16       A     (WITNESS ADLER) If the problem causes an  
17 inadequacy in compliance with NUREG-0654, yes. We would  
18 have to see the nature of the problem to make that judgment.

19                  MR. COSGROVE: Mr. Chairman, there seems to be  
20 some confusion here about exactly what the Region is going  
21 to do and what has to be in effect prior to the time the  
22 decision is made on findings and determinations by FEMA,  
23 final findings and determinations.

24                  Our regulations provides -- excuse me -- 44 CFR  
25 350, which we are using, provides that the Region will

1 provide comments but no recommendation to the associate  
2 director of plans and preparedness in Washington, and in  
3 making his decision he will look to certain criteria. But  
4 there is no requirement that all of those things be there  
5 exactly the way they are being stated by Ms. Straube, before  
6 he can make a decision.

7                 So, when these witnesses are talking, I would  
8 assume they would be talking about they are going to put  
9 this in their comments to the associate director. They are  
10 not making findings.

11                 CHAIRMAN SMITH: I think that that explanation is  
12 particularly about the relative roles. That is helpful. I  
13 think they made it clear before about the determinations or  
14 the -- I hesitate to use any particular word, because some  
15 of them have magic significance in the rules.

16                 But whatever it is they do, they have made it  
17 clear that it is not a "No" or "Yes" proposition.

18                 MS. STRAUBE: If I could respond to that. I am  
19 not trying to put words into the witnesses' mouths. The  
20 problem that I am having is that there are a lot of  
21 unresolved items, and I think everyone would like to know  
22 when and in what context they are going to be resolved. And  
23 that is really all I am trying to establish.

24                 CHAIRMAN SMITH: It was not suggested, I do not  
25 think, that you were trying to do that, put words in their

1 mouths or control their answers or misconstrue them. But I  
2 do think that some clarification is needed or was needed,  
3 and maybe there should even be some more about the way in  
4 which you arrived at your recommendations.

5 (Counsel for the Commonwealth conferring.)

6 BY MS. STRAUBE: (Resuming)

7 Q Okay. Would it be better if I asked the questions  
8 instead of saying will that be part of the FEMA findings and  
9 determinations, if I would ask it in the context of will  
10 that be part of the recommendations or something considered  
11 in the recommendations of the RAC when they send it?

12 A (WITNESS ADLER) That would be very helpful to me.

13 Q Okay. I wonder if I can do it for the previous  
14 answers, just generally. When you answer that it would be  
15 part of the FEMA findings and determinations, did you mean  
16 to answer that it would be part of the recommendations of  
17 the RAC to whoever you make your recommendations to?

18 A (WITNESS ADLER) Part of the recommendations of  
19 the RAC, which is chaired by -- I am sorry, my colleague  
20 corrected me -- comments.

21 Q I am sorry?

22 A (WITNESS ADLER) Of the RAC, which is chaired by  
23 FEMA Region III.

24 Q Okay.

25 DR. JORDAN: Comments?

1           WITNESS ADLER: Comments.

2           BY MS. STRAUBE: (Resuming)

3           Q       If we could get back then on page 44 to the  
4 problem or potential problem of additional personnel,  
5 traffic control personnel outside of the ETZ, is this a  
6 thing that will be considered by the RAC in its review of  
7 the state and local plans prior to makin comments to -- who  
8 is you make your comments to?

9           A       (WITNESS ADLER) Excuse me one moment.

10              (Panel of witnesses conferring.)

11           A       (WITNESS ADLER) On all of these matters that you  
12 are delineating, I will personally bring to the attention of  
13 the RAC for their comment, all of them. It may assist them  
14 in homing in specifically in order that they do generate  
15 comments in these areas.

16           DR. JORDAN: Before you go to another item, that  
17 last sentence and the answer there on page 44 bothers me.  
18 "Traffic coordination will be conducted by the State Police,  
19 who are responsible for assuring that traffic congestion  
20 will not occur with the plume ETZ."

21              The testimony that we heard this morning assured  
22 us that there would be traffic congestion within the ETZ no  
23 matter what, that there would be queuing, and that that  
24 would be the main problem in the evacuation time.

25           WITNESS ADLER: In retrospect, I would have

1 clarified our testimony to say "will ameliorate" rather than  
2 "will not occur."

3 DR. JORDAN: Fine.

4 CHAIRMAN SMITH: How are you clarifying it?

5 WITNESS ADLER: It is a matter of degree, sir.

6 CHAIRMAN SMITH: Yes.

7 WITNESS ADLER: "Will ameliorate" or "mitigate."

8 CHAIRMAN SMITH: This is where a helpful lawyer  
9 term might have come in handy: "undue congestion."

10 (Laughter.)

11 CHAIRMAN SMITH: I think your approach is better.

12 WITNESS ADLER: That is better.

13 MS. STRAUBE: Okay?

14 BY MS. STRAUBE: (Resuming)

15 Q Okay. On page 48, just wanted to make one small  
16 correction to your testimony. In the answer -- well, in  
17 fact, the first line of the answer already states that "The  
18 State Department of Agriculture Extension Agent" -- it is  
19 repeated again -- no, it is not repeated again.

20 Are you aware that agricultural extension agents  
21 are federal employees and not state employees?

22 A (WITNESS BATH) Yes.

23 Q Are they defined to be emergency workers, do you  
24 know?

25 A (WITNESS BATH) There is discussion that allows

1 for the county to provide dosimeters and KI to such  
2 agricultural personnel who will be expected to perform  
3 functions, and it is our interpretation in reading that  
4 within the county plans that the agricultural extension  
5 agent might be one of these persons. And therefore, I  
6 listed him as an emergency worker.

7           But I do not think that the development of the  
8 county plans had gotten to the point that he was  
9 specifically assigned as an emergency worker other than an  
10 emergency responder at the EOC.

11          Q      In your opinion, does the agricultural agent need  
12 to be assigned as an emergency worker and put into the  
13 category of emergency worker?

14          A      (WITNESS BATH) It would depend on a particular  
15 mission. If he was in an EOC and he remained in that EOC to  
16 perform his function, he would not be. If he was to operate  
17 out of his extension office which is within the ETZ and  
18 there was not room enough for him in the county ECC to  
19 function, then I definitely feel, since he has an assigned  
20 role, that he should be an emergency worker to carry out  
21 that function.

22          Q      Okay. If you could turn to page 55, please, where  
23 you are discussing school evacuation plans. My only  
24 question on that is whether the school evacuation plans are  
25 that type of lower-level plan that has to be either

1 discussed or appended to the county plans for them to be  
2 adequate?

3 A (WITNESS ADLER) It should be addressed.

4 Q Okay. That is the end of the February testimony.

5 CHAIRMAN SMITH: Is Mr. Brooks present?

6 MR. BROOKS: I am here, Mr. Chairman.

7 CHAIRMAN SMITH: Okay. I suggest that we give the  
8 panel a break, a recess, while we take Mr. Brooks' limited  
9 appearance statement. And then we will begin again, if it  
10 is all right with you. Whatever you prefer, Ms. Straube.

11 MS. STRAUBE: That is fine.

12 CHAIRMAN SMITH: Okay, Mr. Brooks, you have seen  
13 the procedure. If you have an extra copy of your statement,  
14 it would be helpful if you provide it to the reporter.

15 LIMITED APPEARANCE STATEMENT OF STEVE BROOKS

16 MR. BROOKS: Is this one? There we go.

17 CHAIRMAN SMITH: You do not have a written version  
18 of your statement?

19 MR. BROOKS: No. I do not have an organized  
20 version of it.

21 CHAIRMAN SMITH: Okay.

22 MR. BROOKS: Mr. Chairman, members of the Board, I  
23 would like to direct my limited appearance statement this  
24 evening to the general topic of limited appearance  
25 statements. I am not going to discuss the social or

1 political ramifications of limited appearance statements,  
2 because we have discussed this before and the Board is  
3 fairly familiar with it.

4           What I would like to discuss is the value of the  
5 limited appearance statements can have to this Board as far  
6 as ensuring a useful and adequate record.

7           The first thing I would like to note as far as the  
8 development of the record is that the Board itself has noted  
9 in the past that limited appearance statements often serve  
10 to call to the attention of the Board and of the parties  
11 issues which otherwise would have been overlooked in the  
12 hearing.

13           As we are well into the emergency planning portion  
14 of this hearing, the Board is aware that emergency planning  
15 is an issue about which the average citizen has a great deal  
16 more comprehension than a lot of the more obtruse technical  
17 issues which require a great deal of familiarity with the  
18 topic.

19           People of this area have gained quite a bit of  
20 familiarity with the topic of emergency planning through  
21 experience. So limited appearance statements are  
22 specifically relevant to these emergency planning  
23 Contentions. It is individuals, often unexpectedly and  
24 innocently, who have informed the parties of deficiencies in  
25 the plans, a number of deficiencies of detail.

1               For example, on March 5, a teacher from Steelton  
2 High testified in a limited appearance statement before the  
3 Board and mentioned that his school had had no staff  
4 discussions on emergency planning since the accident.

5               On April 4, a member of the public who had been  
6 denied the opportunity to make a statement that day passed  
7 on to Ms. Bradford, and she put on the record the  
8 information on her school district's plans for moving  
9 children in Freuhof vans, which stimulated a line of cross  
10 examination. The York League of Women Voters, a few days  
11 before that, provided information on the York County plan  
12 which otherwise would not have been entered into the record.

13               Another point is that a number of witnesses in the  
14 emergency planning Contention, particularly those involved  
15 with time-estimate studies, have based their planning on  
16 assumptions that the behavior of the public during nuclear  
17 emergency situations, such assumptions range from Dr. Dines  
18 and the exhilaration of evacuation to yesterday's FEMA panel  
19 assuming that all members of the public will proceed  
20 directly to their TVs or radios upon hearing the siren.

21               While the majority of these witnesses have had  
22 little or no firsthand experience in nuclear emergencies,  
23 the people of this area have had much more firsthand  
24 experience than any of them ever wished. Their experiences  
25 have often contradicted the assumptions of the expert

1 witnesses who have testified, and the statements of local  
2 people need to be on the record to provide a necessary  
3 context for your evaluation of the experts' testimony.

4 I would just like to close with a few words that  
5 were put on the record by the Board yesterday. They are in  
6 the context of emergency planning. I moved the words around  
7 a bit, although every one of them is taken from the record,  
8 and generalized the statement just a bit.

9 "As tryers of the facts, we cannot divorce  
10 ourselves from what we know to be the realities of living.  
11 You can plan and plan, but the most dependable method of  
12 planning is to encourage each individual citizen to look at  
13 his own position and identify in relation to the overall  
14 planning and encourage that citizen to either make a  
15 judgment or speak out when adjustments cannot be made.

16 "For example, if I work in a factory where I know  
17 I cannot hear sirens, I complain to my foreman. The foreman  
18 complains to the general manager. And somehow they identify  
19 the need. The identification of the need comes from the  
20 population at risk rather than from the planning  
21 authorities.

22 A basic problem is all the questions have been  
23 dealing with working from the top down and not working from  
24 the population-at-risk up. Responsibilities rest all over  
25 at every level, down to the individual. And that is the

1 real fine-tuning of any community problem. And that is to  
2 have the individual citizen have opportunity for input."

3               That is the conclusion, with the quotation from  
4 the record. And it has come to my attention since this  
5 afternoon that members of the Board, there are reports that  
6 members of the Board have stated to a couple of individuals  
7 that there will be no more opportunities for limited  
8 appearances, for oral limited appearances during the  
9 remainder of this hearing.

10              And I submit my comments in this light and  
11 respectfully request that the Board continue to make  
12 available opportunities for limited appearances and make  
13 another effort to provide an opportunity at times when the  
14 majority of working people can be here.

15              In looking back over the record this morning, I  
16 noted that there were some 60 people who signed up to make  
17 statements on March 5, and at a time when it was possible  
18 for them to come. There were something like 15 or 20 people  
19 in the audience on the day that the Board held its only  
20 Saturday hearing, on April 4. And in looking back over the  
21 record, for the people who have made -- who have appeared  
22 before the Board to make statements at 5:00 o'clock or 1:00  
23 o'clock on weekdays subsequent to the March 5 session, I can  
24 only come up with a little over a dozen.

25              Thank you.

1 CHAIRMAN SMITH: All right. Let me give you some  
2 information on your observations. One is that you are  
3 exactly right. Not only have we permitted but we have  
4 encouraged and urged members of the public to come forward  
5 and give us their views on limited appearances, and  
6 particularly on this issue. I think you have identified an  
7 area where the local members of the public know a lot and  
8 their views have been helpful to us.

9 With respect to the opportunity there have been --  
10 on the March 5 evening to which you refer there were 41  
11 persons who signed up, out of which 25 gave statements. On  
12 April 5 -- April 4, there were approximately 16 to 20  
13 persons who signed the paper requesting an opportunity for  
14 oral statements. Every one of those persons will be given  
15 an opportunity to the extent that we can, and there are only  
16 six remaining out of everybody who has requested to make an  
17 oral statement that have not been able to make a time.

18 There are absolutely no requests pending at this  
19 moment, that is, zero requests pending at this moment to  
20 make an oral statement that we have cut out. We can  
21 identify no person as of today as of this moment who has  
22 requested to make a limited oral statement that we have not  
23 committed at least a fair chance of making one.

24 The reason why we have announced that we can no  
25 longer accept requests to make oral statements is that we

1 can no longer commit to the individual members of the public  
2 that we will have an opportunity to give it to them. The  
3 record is coming to an end. We have had an open period of  
4 approximately five weeks. We have requested and received  
5 assistance from our Public Information Office to make the  
6 opportunity known in the local press.

7 Mr. Brooks, you have had an opportunity to make a  
8 statement. We can identify at this moment no member of the  
9 public who wishes to make a statement who has not been  
10 afforded an opportunity or is not in the process of working  
11 it out. But I appreciate your counseling on it. You are  
12 correct. Members of the public, on this issue in  
13 particular, have been very helpful.

14 Also there is the other point, and that is we  
15 still urge that if you know anybody who wishes to make a  
16 written statement on these issues or any issue, you may  
17 assure them that the members of this Board will read every  
18 word that they write and give it full consideration. It will  
19 be a matter of record. I think my address is well known,  
20 Nuclear Regulatory Commission, Washington, D.C. 20555. We  
21 will get it or they can be brought into the hearing room.

22 Thank you very much.

23 MR. BROOKS: May I add a couple of notes, Mr.  
24 Chairman?

25 CHAIRMAN SMITH: I am sorry, I did not hear you.

1           MR. BROOKS: I would like to add a couple of  
2 comments on what you just said, with your permission.

3           CHAIRMAN SMITH: Sure.

4           MR. BROOKS: For one thing, I would like to note  
5 that the reason I am able to appear here tonight is that I  
6 work in Harrisburg. I live in York, and for the majority of  
7 the people who live there, 25 miles south of here, apart  
8 from the League of Women Voters, many members of which do  
9 not work during the day, people from York have not found it  
10 possible to come up here at 5 o'clock to make limited  
11 appearance statements.

12           CHAIRMAN SMITH: Okay. Well, that is a good  
13 point. I am glad you mentioned it. The announcement to the  
14 public and the information given to the public and everybody  
15 who has called is that yes, we will set 5 o'clock. As you  
16 saw, we set 1 o'clock. We will set early and we will still  
17 make an effort to accommodate people on an individual  
18 basis.

19           The fact still remains there are no persons who  
20 have requested an opportunity to make a limited appearance  
21 statement who are still not in the process of trying to work  
22 it out. So there just is no one that you are referring to  
23 that has been denied an opportunity to make a statement, no  
24 one.

25           Thank you for your comments, however.

1           MR. BROOKS: One last request I would like to make  
2 of the Board and then I will end my comments.

3           CHAIRMAN SMITH: Sure.

4           MR. BROOKS: I have a friend here named Keith  
5 Bentz who has appeared at hearing sessions on two previous  
6 sessions with the intention of making a limited appearance  
7 statement, and on both occasions he was not able to. On the  
8 evening of March 5 he had to leave before his name came up.  
9 He was kind of late in line.

10          CHAIRMAN SMITH: Did he sign the paper?

11          MR. BROOKS: Yes, he did.

12          CHAIRMAN SMITH: All right. You are one of the  
13 people I am referring to among the six that we have been  
14 trying to reach. We have made an effort to identify  
15 everybody on that list, and I am glad that you identified  
16 yourself because we most certainly will receive your  
17 statement and you can make it now if you wish. You were one  
18 of the persons that signed up, yes. Yes. This is one of  
19 the things that we have -- as a matter of fact, I think I  
20 had a conversation with you about it. Yes. As a matter of  
21 fact, I earlier assured you we would accommodate you one way  
22 or the other. I am glad that you came.

23          MR. BENTZ: I appreciate the chance to be able to  
24 make it, Mr. Chairman. The reason why I did not get in  
25 contact with you was the fact that there has been a person

1 in my warehouse sick and I am taking over his job now in my  
2 driving capacity.

3 LIMITED APPEARANCE STATEMENT OF KEITH BENTZ

4 MR. BENTZ: First I have three things I would like  
5 to say in particular to the evacuation plans. I believe it  
6 was Friday when I first became aware of what had happened at  
7 Unit 2 two years ago, and the reason or the way I became  
8 aware of it was the fact that I had gone out and tried to  
9 get a vegetarian meal for a person that I had taken out on a  
10 date that night. We went to three restaurants and none of  
11 them were open because no one came to staff their  
12 facilities.

13 The point I would like to make in relation to that  
14 is some assumptions have been made here that people will be  
15 willing to volunteer to do their jobs, like policemen and a  
16 few emergency people. Okay. And the fact is I am beginning  
17 to wonder whether they will have that willingness to  
18 volunteer their time in a matter of crisis. Will they think  
19 of their jobs or will they they think of their families  
20 first?

21 The other point being after I dropped my date off  
22 that night, I was going downstreet about 10 o'clock and  
23 these streets were bare. I am not used to seeing the Kalayo  
24 Pike, which is in Mechanicsburg, a bare street at that time,  
25 and it had a grave effect on me in that respect.

1                 Earlier when we were driving around, we noticed a  
2 lot of gas stations in fact that the RVs were filling up the  
3 gas tanks and families packing their trailers and leaving,  
4 and I am wondering what type of contingency -- I am not  
5 involved in the hearings now -- are being made for like the  
6 people who are outside, you know, the area that you speak of  
7 as far as the original evacuation area, what kind of plans  
8 are being made for people outside of the area that want to  
9 leave beforehand.

10                In other words, some places, like a ten-mile  
11 radius, I believe, was what has been designed for the  
12 evacuation. When the sirens go off and people go to their  
13 televisions and radios, are they going to be willing to do  
14 as they are told and not leave and create this massive  
15 traffic jam, which will not be the ten-mile radius area? It  
16 will be a massive kind of mess is what I propose.

17                And the last thing that I would like to say is  
18 concerning a conversation with a Mechanicsburg police  
19 officer. After driving around all that night wondering what  
20 was going on and what was in people's heads, I pulled into  
21 one of the -- there was a bank parking lot near one of my  
22 favorite establishments, and this lone police officer was  
23 parked in that parking lot.

24                I went up to him and I asked him what exactly are  
25 the plans you have or what are we supposed to do if we are

1 to evacuate? He told me all he was told was that he was  
2 going to be the last person to leave and that he would take  
3 his car and drive away, like off into the sunset, which is,  
4 I feel, totally inadequate. He had no safety gear to deal  
5 with if he was caught up in the problem that would ensue as  
6 far as, like, a respirator or a cloak which he would need to  
7 protect him, and I feel these are concerns that really  
8 bother me because there is this man by himself, just he and  
9 I in the streets of Mechanicsburg wondering about our fates.

10 So I guess really more or less that is kind of an  
11 impromptu statement.

12 CHAIRMAN SMITH: These very questions you are  
13 asking are being asked this panel of witnesses and other  
14 witnesses, and those are appropriate questions. I am aware  
15 that you have gone to a great deal of trouble to come and  
16 make your statement, and I appreciate your interest. I hope  
17 you can come back and listen to the testimony and perhaps  
18 get some answers to some of the questions.

19 MR. BENTZ: Right now it is an 11-1/2 hour day's  
20 drive, and I just can't. Thank you for your time, Mr.  
21 Chairman.

22 CHAIRMAN SMITH: Okay. We are back. Do you want  
23 to proceed? We will go until 5:30. Is that all right?

24 MS. STRAUBE: Fine.

25 BY MS. STRAUBE: (Resuming)

1        Q     On your March 16, 1981 testimony, if you could  
2 turn to page 1, which is actually the first page of the  
3 outline so I guess it is unnumbered, it is the first page of  
4 the outline, the first paragraph, it states that FEMA  
5 asserts the need for a sensitivity analysis. I was  
6 wondering what you mean by that, what you mean by  
7 sensitivity analysis.

8        A     (WITNESS ADLER) We are referring to the  
9 evacuation time estimate study.

10      Q     Okay. The sentence if I leave out a clause says a  
11 sensitivity analysis which includes evacuation time  
12 estimates. Did you have anything else in mind?

13      A     (WITNESS ADLER) The considerations which follow,  
14 adverse weather and road conditions, in particular, as well  
15 as, well, the rest of the sentence applies.

16      Q     Okay, but that is all part of the evacuation time  
17 estimate; is that correct?

18      A     (WITNESS ADLER) Correct.

19      Q     Okay. On page 6, which I believe is numbered page  
20 6 of your testimony, it says in the answer to question 5,  
21 the third sentence, "Based on the size of the nonresident  
22 work force, special measures may be needed to evacuate or to  
23 shelter them." And am I correct in stating that the  
24 Parsons, Brinckerhoff study does delineate the size of the  
25 nonresident work force?

1 A (WITNESS ADLER) Yes.

2 Q Okay. Will there be any consideration as to any  
3 special measures that might be needed to evacuate or shelter  
4 these people now that the size has been identified?

5 (Panel of witnesses conferring.)

6 A (WITNESS ADLER) I do not know that special  
7 measures will be needed.

8 Q Okay. I understand that you probably do not know.  
9 My question is whether someone now has the responsibility to  
10 look at that and who that someone might be.

11 A (WITNESS BATH) Yes, this was one of the areas  
12 that the Department of Transportation representative who was  
13 interested in -- the measures to move transients who might  
14 be in an area and so forth, and that is what we were looking  
15 at.

16 A (WITNESS ADLER) So the answer is yes.

17 Specifically the DOT member of the Regional Assistance  
18 Committee will look at that.

19 Q Okay. So this is something that will be  
20 considered by the RAC in reviewing the plans.

21 A (WITNESS ADLER) Yes.

22 Q On page 9 in the second paragraph of the answer,  
23 it says that it is expected that responsible officials will  
24 consider alternatives, and I was wondering if you would just  
25 delineate who the responsible officials are.

1 A (WITNESS ADLER) Where on page 9 are we?

2 Q If you start with A, which is the answer, it is  
3 the second paragraph at the answer.

4 A (WITNESS ADLER) "During periods of"?

5 Q Yes.

6 (Panel of witnesses conferring.)

7 A (WITNESS ADLER) We are really referring to the  
8 Bureau of Radiation Protection's discussions which follow  
9 from their relationship with the Pennsylvania Emergency  
10 Management Agency in this area.

11 Q Okay. On page 13 you are talking about public  
12 information programs, and I guess in the last sentence of  
13 the answer to question 16 it discusses redistribution  
14 annually of the brochures.

15 What I am wondering: Is there a requirement to  
16 update the brochures, the public information brochures  
17 before redistribution?

18 A (WITNESS ADLER) May I read NUREG-0654 on this? I  
19 don't know if it is annual or periodic.

20 (Witness reviewing document.)

21 Oh, we said annual right here. I am sorry.

22 Would you tell me your question again?

23 Q Okay. Is there a requirement to update the public  
24 information brochures before they are redistributed?

25 (Panel of witnesses conferring.)

1        A     (WITNESS ADLER) You see, the difficulty is that I  
2 would like to see it updated if it is required, and that has  
3 to do with the state's judgment about its contents at this  
4 time. I would say the answer is no until such time as it is  
5 required.

6        A     (WITNESS BATH) As required can also mean that if  
7 you change the plan or you change documentation that is  
8 represented in it, it would require updating. I am reaching  
9 for the Public Information Appendix of Annex E, which  
10 forecasts that it would be updated annually. That is what I  
11 was looking for.

12      Q     Okay. That brings me to my next question, which  
13 relates to something you said on page 14, where it states  
14 that FEMA will monitor state and local programs to ensure  
15 that the programs are carried out, and I believe that again  
16 refers to the public information or public education  
17 programs.

18      A     (WITNESS ADLER) It does.

19      Q     Okay. How is it that FEMA is going to monitor  
20 those programs?

21      A     (WITNESS ADLER) There has got to be a continuing  
22 dialogue between our Public Information Office at the  
23 minimum from the region in Philadelphia together with the  
24 public information people at the state and at the county  
25 levels as well. It is an iterative process.

1 (Panel of witnesses conferring.)

2 Mr. Bath points out that perhaps the first effort  
3 at monitoring will take place as an integral part of the  
4 exercise to be conducted in June.

5 Q Well, okay. Am I to infer from that that after  
6 the exercise there might be comments from FEMA as to how the  
7 public information could be improved?

8 A (WITNESS ADLER) Yes.

9 Q Okay. On page 15, just following on now a little  
10 bit on what Mr. Cunningham did on cross examination, I  
11 believe you stated that the York County plan was deficient  
12 with respect to providing information to transients; is that  
13 correct?

14 A (WITNESS ADLER) We were referring to distribution.

15              Well, okay. My actual question is is this an  
16 issue that is going to be considered by the RAC or going to  
17 be considered by FEMA?

18 A (WITNESS ADLER) It will be considered by the RAC,  
19 and of course RAC is chaired by FEMA, so the answer is yes  
20 to both questions.

21 Q I guess I really ought to ask is it going to be  
22 considered in the context of coming up with findings and  
23 determinations?

24 A (WITNESS ADLER) I am sorry, I was not paying  
25 attention.

1           Q     Okay. The question is really as to the timing. I  
2 assume it is going to be considered in the context of making  
3 FEMA's findings and determinations.

4           A     (WITNESS ADLER) Yes.

5           MR. ZAHLER: Mr. Chairman, maybe I was not paying  
6 attention to the first question in this series but I thought  
7 it was referring to page 15. They were talking about a  
8 deficiency in the education program to transients, and I  
9 guess I am at a loss as to where it is on 15 we are talking  
10 about.

11          MS. STRAUBE: I have to admit I have page 15  
12 written down on the basis of Mr. Cunningham's .  
13 examination. I may have written it down wrong.

14          MR. ZAHLER: I am concerned that, you know, in  
15 some ways we are going to get a record that is seriously  
16 defective because the witnesses did not look at their  
17 testimony or they got led along as to something. I just do  
18 not understand the last series of questions in relation to  
19 page 15.

20          CHAIRMAN SMITH: I think part of the problem is  
21 tonight I think there has been an unusual fatigue factor for  
22 some reason. Everyone seems to be tired. I have observed  
23 it in the parties, the lawyers, the witnesses, and I  
24 certainly am tired. I think maybe it might be a good idea  
25 to adjourn and start fresh with that problem in the morning.

1           MR. GRAY: By the way, I believe the response to  
2 question 15 should be referred to.

3           MS. STRAUBE: Yes.

4           CHAIRMAN SMITH: All right. We will adjourn until  
5 9 a.m. Is there any business before we adjourn?

6           MS. STRAUBE: I had an answer to Dr. Little's  
7 question about the two brochures for Lancaster County, and  
8 the answer is that the one that is similar or exactly the  
9 same as all the other counties does not have the  
10 commissioner's name on it. That is the correct one. And  
11 which has the phone number 717-299-8378.

12           DR. LITTLE: And the age is correct?

13           MS. STRAUBE: Age is correct.

14           DR. LITTLE: What is the fate of the brochures  
15 that were printed up with the commissioner's name and the  
16 wrong telephone number?

17           MS. STRAUBE: I do not know. I will find out.

18           CHAIRMAN SMITH: All right.

19           MS. GAIL BRADFORD: Sir, I have a request that the  
20 Commonwealth enter as an exhibit the Dauphin County plan --  
21 I mean information sheet also.

22           MS. STRAUBE: Yes. I will have to get copies of  
23 it. If you would like me to offer it right now as  
24 Commonwealth's Exhibit No. 7, I believe I could do that and  
25 provide copies.

1 CHAIRMAN SMITH: All right. Why don't you do it  
2 whenever you have them. Then we will receive it.

3 MS. STRAUBE: Okay.

4 CHAIRMAN SMITH: Anything further this evening?  
5 (No response.)

6 Okay, we are adjourned until 9 a.m. -- 8:30, 8:30  
7 tomorrow, Friday.

8 (Whereupon, at 5:30 p.m. the hearing was  
9 adjourned, to reconvene at 8:30 a.m. the following day,  
10 Friday, April 17, 1981.)

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

---

in the matter of: Metropolitan Edison Company (TMI Unit 1)

Date of Proceeding: April 16, 1981

Docket Number: 50-289 (Restart)

Place of Proceeding: Harrisburg, Pennsylvania

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

---

David S. Parker

---

Official Reporter (Typed)



(SIGNATURE OF REPORTER)