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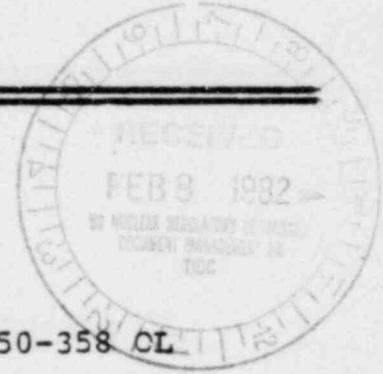
In the Matter of:

THE CINCINNATI GAS & ELECTRIC
COMPANY, ET AL.

(William H. Zimmer Nuclear
Power Station)

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DOCKET NO. 50-358 OL



DATE: February 5, 1982

PAGES: 6865 - 7132

AT: Cincinnati, Ohio

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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 In the Matter of: :
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 THE CINCINNATI GAS & ELECTRIC :
 COMPANY, et al., :
 :
 -and- :
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 WILLIAM H. ZIMMER NUCLEAR :
 POWER STATION, UNIT 1 :
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Docket No. 50-358 OL

United States Courthouse,
5th and Walnut Streets,
Courtroom 805,
Cincinnati, Ohio,

Friday, 5 February 1982.

The hearing in the above-entitled matter was reconvened,
pursuant to adjournment, at 9:00 a.m.

BEFORE:

JOHN H. FRYE, III, Chairman
Atomic Safety and Licensing Board

DR. FRANK F. HOOPER, Member
Atomic Safety and Licensing Board

DR. STANLEY LIVINGSTON, Member
Atomic Safety and Licensing Board

APPEARANCES:

Appearing on behalf of the Applicant:

TROY B. CONNER, JR., Esq.
MARK WETTERHAHN, Esq.
Conner & Moore
1747 Pennsylvania Avenue, Northwest
Washington, D. C. 20006

- and -

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1 APPEARANCES (Continued):

2 JEROME A. VENNEMANN, Esq.
 3 In-House Counsel
 4 Cincinnati Gas & Electric Company
 4th and Main Streets
 Cincinnati, Ohio 45202

5 Appearing on behalf of the NRC Staff:

6 CHARLES A. BARTH, Esq.
 7 MYRON KARMAN, Esq.
 8 Office of the Executive Legal Director
 U.S. Nuclear Regulatory Commission
 Washington, D. C.

9 Appearing on behalf of Intervenor Miami Valley Project:

10 JAMES H. FELDMAN, JR., Esq.
 11 Fifth Floor Barrister House
 216 East Ninth Street
 Cincinnati, Ohio 45202

13 Appearing on behalf of Intervenor Zimmer Area
Citizens of Ohio and Kentucky:

14 ANDREW B. DENNISON, Esq.
 15 Dennison & Eckerson
 200 Main Street
 Batavia, Ohio 45103

17 Appearing on behalf of Intervenor Citizenry of Mentor:

18 DEBORAH FABER WEBB
 19 Attorney at Law
 7967 Alexandria Pike
 Alexandria, Kentucky 41001

20 Appearing on behalf of Intervenor County of Clermont:

21 LAWRENCE R. FISSE, Esq.
 22 Assistant Prosecuting Attorney
 Clermont County, Ohio
 462 East Main Street
 Batavia, Ohio 45103

- more -

APPEARANCES (Continued):

Appearing on behalf of Intervenor Dr. Fankhauser:

JOHN D. WOLIVER, Esq.
Legal Aid Society
Clermont County Office
Post Office Box 47
500 Kilgore Street
Batavia, Ohio 45103

Appearing on behalf of the Federal Emergency
Management Agency:

BRIAN P. CASSIDY, Esq. and GEORGE JFTT, Esq.
Office of the General Counsel
Federal Emergency Management Agency
500 C Street, Southwest
Washington, D. C. 20472

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JUDGE FRYE: Good morning.

Can we go back on the record, please.

Any preliminary matters before we begin?

MR. CASSIDY: Just one, your Honor. I would like to note for the record that joining us at the counsel table this morning on my left is George Jett, who is the General Counsel for the Federal Emergency Management Agency.

JUDGE FRYE: Very happy to have you with us, Mr. Jett.

MR. JETT: Thank you.

JUDGE FRYE: Mr. Cassidy, are your witnesses ready? I see we have one witness.

MR. BARTH: Your Honor, among us we decided that we would put on the NRC's participation in the direct evidence matters so we would have continuity with the FEMA people. We propose to address Kentucky 20(x). Whereupon,

THOMAS J. MC KENNA

was called as a witness by and on behalf of the NRC Staff and, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. BARTH:

Q Would you please state your name for the record, sir.

A My name is Thomas McKenna, M-c-K-e-n-n-a.

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1 Q By whom are you employed?

2 A I am employed by the Nuclear Regulatory Commission.

3 Q I hand you a document, Mr. McKenna, and ask that
4 you identify that document for the record.

5 A It's an eight-page document entitled "Direct
6 Testimony of Thomas J. McKenna, Regarding Zimmer Area Citizens
7 Contention that Brown County, Ohio Must Have a Radiological
8 Emergency Plan." It contains the testimony I prepared in response
9 to this issue.

10 Q Are there any changes or corrections of substance
11 that need to be made in that document, sir?

12 A One.

13 Q Will you please tell us what that change is?

14 A On page 2, eighth line, insert the word "review"
15 after the word "onsite," so that that sentence now reads:

16 "I have conducted onsite reviews of emergency
17 equipment, instruments, notification systems," et cetera.

18 Q Is the information contained in that document, sir,
19 true and correct, to the best of your knowledge and belief?

20 A Yes.

21 Q Mr. McKenna, at my request did you examine the
22 location of the EPZ boundary as it lies between Brown County,
23 Ohio and Clermont County, Ohio from a point of view of
24 demographic, topographic, land use and access routes?

25 A Yes.

1 Q Have you been present throughout these hearings, sir,
2 in the last two weeks?

3 A Yes.

4 Q Have you heard the discussions between Dr. Hooper
5 and myself regarding these characteristics?

6 A Yes.

7 Q Have you made a review of the location of the EPZ
8 between the Brown County and Clermont County affected by these
9 characteristics?

10 A Yes.

11 Q Will you please state for us what your review
12 consisted of, and what you found?

13 A I reviewed the topographical road evacuation routes
14 for the Clermont County, Brown County boundary. I have driven
15 the area and discussed the process used to establish the
16 boundary of the plume exposure EPZ with Mr. Williams, the
17 state of Ohio, to determine if there were any local conditions
18 such as demography, topography, land characteristics, access
19 routes or jurisdictional boundaries that should clearly have
20 been considered in determining the exact location of the plume
21 EPZ, and were not.

22 I reviewed the boundary to determine if there were
23 any demographic conditions such as bisecting a densely populated
24 area that might have indicated that the plume exposure EPZ
25 boundary as established was not appropriate.

1 While driving the roads in the area, I found this
2 to be a rural area. The rural nature of Brown County can be
3 seen by the fact that according to 1980 Census data, Brown
4 County had a population density of 66 persons per square mile.

5 By contrast, Clermont County had a density of 263
6 persons per square mile. The largest community in Brown County
7 is the village of Georgetown, the county seat, with a 1980
8 population of 3466, and is located 17 miles east of the station.

9 The largest communities within 15 miles of Zimmer
10 station in Brown are Hammersville, with a population of 690, which
11 is located 13.5 miles from the site; and Higginsport, with a
12 population of 343, which is located 15 miles from the station.

13 There are no towns or densely populated areas
14 bisected by the plume exposure area EPZ as defined by the Brown
15 and Clermont County boundaries.

16 The largest group of homes that I observed through
17 the review of the maps and by driving the area on this boundary
18 was at the intersection of State Route 774 and Maple Road.
19 This consisted of approximately 30 homes, two thirds of which
20 were outside of the plume exposure EPZ as designated.

21 This point was approximately 11 miles from the site.
22 Since the population in this area is small -- talking again
23 about this group of homes--not including all the homes in the
24 plume EPZ will not affect -- I do not believe it will impact
25 the prompt implementation of protective actions within the plume

1 EPZ.

2 I examined the boundary to determine if there were
3 any topographic or land characteristics such as natural barriers,
4 i.e., rivers, ravines, that sort of thing located about 10 miles
5 that might provide a more reasonable demarcation of the planned
6 EPZ.

7 I found this area near the boundary is characterized
8 by a series of ravines that run up from the Ohio River to a
9 plateau of rolling terrain that is approximately 400 feet above
10 the valley floor.

11 This plateau is at essentially constant elevation
12 along the Ohio side of the river, from near the Zimmer station
13 into Brown County, varying from about 820 feet to 900 feet.

14 None of these ravines was found to form a natural
15 barrier or feature that would demarcate the zone more clearly
16 than the political boundary that is being used.

17 I found no land feature in this area that would
18 clearly be superior to the county boundary for demarcating the
19 zone.

20 I examined the plume exposure EPZ boundary to
21 determine if access roads in the Brown County area were such
22 that they would impact local response and, therefore, influence
23 the selection of the EPZ boundary.

24 The NRC requires that pre-planned protective actions
25 to include evacuation planning be performed only for the

1 population within the plume EPZ. Therefore, there is no requirement
2 for such planning in Brown County unless local planning
3 considerations in Clermont County warrant the inclusion of part
4 of Brown County into the plume EPZ.

5 Such a local condition might be access routes that
6 require a portion of the population just beyond the generic EPZ
7 planning distance which is 10 miles to use a route that came
8 close to the site or that affected Clermont County evacuation
9 routes.

10 Such is not the case here. The population in this
11 area is too small to impact a prompt evacuation of the plume
12 EPZ population.

13 An examination of the road network in the area of
14 Clermont and Brown County lines shows a well established network
15 of roads. Examples are State Route 774, State Route 756 and
16 U.S. 52 that could be used to evacuate away from the site
17 without going into Clermont County, if such an evacuation
18 beyond the plume EPZ was necessary.

19 There would be no need for Brown County residents,
20 or certainly a large number of Brown County residents, to
21 evacuate by routes that would take them close to the site.

22 I see no reason, based on these considerations,
23 to conclude that state and local planners have improperly
24 established the plume EPZ boundary at the Brown County line.

25 However, in accordance with 10 CFR 50.47, the Staff's

1 final determinations will be made following review of FEMA
2 findings and determinations submitted to the NRC, following
3 their review of final state and local plans.

4 Q Mr. McKenna, have you visited the area approximating
5 the political boundary between Brown County and Clermont County?

6 A Yes.

7 Q Have you personally examined the roads which you
8 discussed in your statement, sir?

9 A Yes.

10 Q Do you recall the trilogue between Mr. Cassidy,
11 myself and Dr. Hooper, regarding whether there could be
12 facilities located outside of Clermont County which were
13 necessary for the Clermont County radiological emergency response
14 plan?

15 A Yes.

16 Q Is Anderson High School such a facility, sir?

17 A Yes.

18 Q Where is Anderson High School located?

19 A Hamilton County.

20 Q Does Hamilton County, to the best of your knowledge,
21 have a radiological emergency response plan?

22 A No.

23 Q Will you please tell the Licensing Board and ourselves
24 what role Anderson High School plays in the radiological
25 emergency response plan for Clermont County and the Zimmer

1 facility?

2 A It's a relocation center for the plume EPZ evacuation.

3 Q A relocation center, sir?

4 A Yes.

5 Q Are any of the relocation centers for the Zimmer

6 facility located within the EPZ?

7 A No.

8 Q Do you also recall the questions by Dr. Hooper as
9 to whether an EPZ could be extended beyond 10 miles because of
10 some special characteristic of land, population or geography?

11 A Yes.

12 Q Is there a reactor whose EPZ has been so extended
13 beyond 10 miles?

14 A Yes.

15 Q What is the name of that reactor, sir?

16 A An example would be Maine Yankee.

17 Q Would you please explain to us why the EPZ at
18 Maine Yankee was extended beyond 10 miles in regard to such
19 considerations as demography, that is population, topography,
20 land characteristics and access routes?

21 A In this case the local planners, upon --

22 Q Pardon me, sir. When you say "in this case"?

23 A In Maine Yankee. In the case of Maine Yankee,
24 the local planners, because of the townships -- there were 23
25 townships involved in the planning -- realized that the site sits

1 at -- approximately 15 miles from the Atlantic Ocean, but
2 radiating down from the site to the Atlantic Ocean are a
3 series of finger peninsulas, and the evacuation routes for
4 these finger peninsulas are away from the ocean, perpendicular
5 to the ocean towards the site, taking a large portion of that
6 population close to the site if an evacuation was required.

7 In addition, there would be no other evacuation
8 routes for the small populations at the end of these peninsulas.
9 So, therefore, the local planners decided to include the entire
10 peninsulas down to the ocean in the EPZ, and if I recall correctly,
11 the distances were 15 to 17 miles, I think, in some cases.

12 Q Are there any unusual population distributions or
13 geographic considerations in the area of Zimmer, which would
14 require, in your judgment, extending the EPZ beyond 10 miles
15 in the direction of Brown County, sir?

16 A No.

17 Q Do you recall the questioning by Mr. Dennison
18 regarding using Highway 52 going east as an evacuation route,
19 turning left at Road 133 and going north?

20 A Yes.

21 Q Have you reviewed using Highway 52 as an evacuation
22 route continuing on, going into Brown County?

23 A No.

24 Q Do you have any opinion regarding the use of Highway
25 52, going into Brown County as an evacuation route at this time,

1 sir, in its present state of the record?

2 A No.

3 MR. DENNISON: Objection. I understood his response
4 that he was not familiar with --

5 JUDGE FRYE: I'm sorry, I couldn't hear you.

6 MR. DENNISON: I thought his response was before
7 he was solicited for an opinion, that he was not familiar with
8 U.S. 52. If he's not familiar with U.S. 52, I don't see how
9 he has a factual basis for any opinion.

10 MR. BARTH: The question has been asked and answered,
11 your Honor. The record stands where it is. If he wishes to
12 strike -- I would suggest before we do this, we have the
13 reporter reread the question and the answer, because that is not
14 the way it was done, sir.

15 JUDGE FRYE: Would you read it?

16 (The reporter read the record as requested.)

17 MR. DENNISON: I would move to strike.

18 MR. BARTH: It's a statement of fact, your Honor.

19 JUDGE FRYE: It's a statement of opinion. We'll
20 grant that.

21 MR. BARTH: What opinion? Wait a minute, fellows.
22 We're all lost. The question was, have you reviewed it. That's
23 a statement of fact. The answer is no, I have not reviewed it.
24 That's a statement of fact. That's not opinion. You can't
25 strike the fact, your Honor.

1 MR. DENNISON: That's not the question and answer
2 being stricken, Mr. Barth. It was your next question, does he
3 have an opinion of 52 as an evacuation route into Brown County
4 and he said yes and presented that opinion. I objected and
5 move to strike because he had no basis for the opinion.

6 MR. BARTH: Your Honor, it is a fact whether he has an
7 opinion or not. Whether he can give that opinion is something
8 else. But as a statement of fact, do you have an opinion?
9 That's a statement of fact.

10 JUDGE FRYE: All right, we'll allow the statement
11 of fact that he has an opinion. But we don't want the opinion.

12 MR. BARTH: Fine. I agree with your Honor's ruling.
13 And that was answered, your Honor, no.

14 I have no further questions of Mr. McKenna. At
15 this time I move that the Licensing Board accept into evidence
16 the written prepared testimony of Mr. McKenna which he has
17 previously identified as being "Direct Testimony of Thomas J.
18 McKenna, Regarding Zimmer Area Citizens Contention That Brown
19 County, Ohio Must Have a Radiological Emergency Response Plan"
20 as evidence in this proceeding, and ask permission that it be
21 bound in the record and set forth as read at length.

22 Copies have been served upon all counsel, parties
23 and the Board, your Honor.

24 JUDGE FRYE: Any objections or voir dire, Mr.
25 Dennison?

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MR. DENNISON: No, your Honor.

JUDGE FRYE: Without objection, it will be incorporated into the transcript as if read.

(The testimony of Mr. McKenna follows:)

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Q.4. What are your present duties?

A. I am responsible for the review of the emergency preparedness programs for nine nuclear reactors. In addition, I have participated in emergency preparedness appraisals as a team leader and have been an observer at several emergency preparedness exercises. I have worked extensively with power plant licensees, State and local emergency plans and planners and the Federal Emergency Management Agency (FEMA). I have conducted onsite ^{reviews} of emergency equipment, instruments, notification systems, personnel training and performance, procedures and interfaces with offsite officials.

Q.5. Have you had any courses in emergency preparedness?

A. I have attended courses in reactor systems, safety analysis and emergency preparedness. The emergency preparedness courses consisted of an in-house course on all emergency preparedness topics, a two week course on response to radiological emergencies which was taught by Reynolds Electrical Engineering Company at the Nevada Test Site (Nuclear Explosive Tests). In addition, I attended a course at Harvard University on planning for nuclear emergencies.

Q.6. Are you the NRC staff reviewer for emergency preparedness for the Zimmer facility?

A. Yes.

Q.7. Have you visited the site?

A. Yes. I have visited the site several times in the course of my reviews on emergency preparedness for the Zimmer site and recently in connection with preparing this testimony.

Q.8. Have you read the ZAC contentions?

A. Yes.

Q.9. Does one of them relate to the size of the Emergency Planning Zone (EPZ)?

A. Yes, Zimmer Area Citizens (ZAC) contention 20X state as follows:

"Authority for the requirement that Brown County, Ohio, be included into the emergency planning response of the plume exposure zone (EPZ) is as follows: Brown County is situated approximately 10 and 1/8th miles generally east from the Zimmer Station; the current plume exposure zone, depicted on emergency planning zone maps presented in local plans terminates the plume exposure EPZ at the Brown and Clermont Counties boarder; the conditions of the topography and land characteristics placing the involved areas of Brown County in an elevation plane in excess of 400 ft. above the Zimmer Station; access routes for the affected Brown County population are, in part, common for certain affected populations in Clermont County (particularly U.S. 52 and the population of the Clermont County involved in Designated Sector SE(G), ESE(F) and E(E) involving an approximate Clermont County population of 2,518 [Clermont Plan, §II-I, at pp. II-I-17 and II-I-22] in which that affected population is routed from U.S. 52 to S.R. 133 and subsequently alternate S.R. 222 and 232 [Clermont Plan § II-I, at p. II-I-18] requiring a greater distance and travel time within the plume exposed area); the condition that in Brown County there are no response needs, capabilities or implementation of emergency resource personnel for an emergency response to a Zimmer accident or event; and 10 CFR § 50.47(c)(2), which provides, inter alia:

"generally, the plume exposure pathway EPZ for nuclear power plants shall consist of an area about 10 miles [16 km] in radius****The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries." (Emphasis supplied by writer.)

See also 10 CFR § 50.33(g) to the same effect."

Q.10 Did the Licensing Board order that this issue be addressed?

A. Yes. The Licensing Board's Prehearing Conference Order dated December 5, 1981 (page 3) directed that this contention be addressed, limited to the considerations set forth in 10 CFR § 50.47(c)(2) and the "specifics" alleged by ZAC.

Q.11. Did the Commission explain or comment on its new emergency preparedness rule when that rule was published?

A. Yes. The supplementary information contained in the Federal Register Notice that published the Final Rule on Emergency Planning (45 FR 55402), August 19, 1980 explains and provides the basis for adoption of the Emergency Planning Zones. It states:

"The Commission notes that the regulatory basis for adoption of the Emergency Planning Zone (EPZ) concept is the Commission's decision to have a conservative emergency planning policy in addition to the conservatism inherent in the defense-in-depth philosophy. This policy was endorsed by the Commission in a policy statement published on October 23, 1979 (44 FR 61123). At that time the Commission stated that two Emergency Planning Zones (EPZs) should be established around each light water nuclear power plant. The EPZ for airborne exposure has a radius of about 10 miles; the EPZ for contaminated food and water has a radius of about 50 miles. Predetermined protective action plans are needed for the EPZs. The exact size and shape of each EPZ will be decided by emergency planning officials after they consider the specific conditions at each site. These distances are considered large enough to provide a response base that would support activity outside the planning zone should this ever be needed." (Emphasis supplied).

Q.12 Are there other Commission statements which would help in understanding the EPZ referenced in 10 CFR § 50.47?

A. Yes. The above-referenced Commission policy statement of October 23, 1979 (44 FR 61123) states:

"NRC STAFF concurs in and endorses for use the guidance contained in the task force report (NUREG-0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans In Support of Light Water Nuclear Power Reactors)."

In addition, 10 CFR Part 50.33(g) and 50.54(s)(1) refer to NUREG-0396 for a discussion of EPZs.

Q.13. What does NUREG-0396 state that relates to the selecting of an EPZ?

A. The Task Force report (NUREG-0396) on pages 15 and 16 states:

"The Task Force agreed that emergency response plans should be useful for responding to any accident that would produce offsite doses in excess of the PAGs (Protection Action Guides). This would include the more severe design basis accidents and the accident spectrum analyzed in the RSS (Reactor Safety Study-WASH 1400). After reviewing the potential consequences associated with these types of accidents, it was the consensus of the Task Force that emergency plans could be based upon a generic distance out to which predetermined actions would provide dose savings for any such accidents. Beyond this generic distance it was concluded that actions could be taken on an ad hoc basis using the same considerations that went into the initial action determinations." (Emphasis supplied).

The generic distance specified by the Task Force for which explicit detailed planning was recommended to assure prompt and effective action to reduce exposure from the plume (plume exposure planning zone) was about 10 miles. (NUREG-0396, page 17).

NUREG-0396, page 14 states:

"It is expected that judgement of the planner will be used in determining the precise size and shape of the EPZs considering local conditions such as demography, topography and land use characteristics, access routes, jurisdictional boundaries, and arrangements with the nuclear facility operator for notification and response assistance."

Q.14. How does the above referenced NUREG-0396 impact upon 10 CFR § 50.47?

A. It clarifies the following statement found in 10 CFR Part 50.47:

"The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries" (Emphasis supplied).

The factors listed above (10 CFR 50.47(c)(2)) are to be considered by State and local planners as they affect local planning and

are not to be applied in such a way as to establish site specific Emergency Planning Zones. See page III-7 of NUREG-0396 which states:

"the Task Force concluded that the size of the EPZs need not be site specific."

Therefore, the Commission did not intend that site specific factors such as engineered safety features or meteorology be considered for the purpose of establishing site specific EPZs.

Q.15. How has the NRC defined the EPZ, and whose responsibility is it to set the actual boundaries?

A. The NRC has established a generic plume exposure EPZ distance of about 10 miles and it is the responsibility of State and local emergency planners to determine, based on their local planning needs, the exact size and shape of the plume EPZ and for FEMA to review the boundary.

In the case of Zimmer the exact boundary of the plume EPZ has been established in such a way as to encompass the required generic planning distance.

Q.16. Does the staff have an opinion regarding whether the EPZ selected for the Zimmer station conforms to 10 CFR § 50.47(c)(2), and if so, what is the staff's conclusion?

A. Having considered the location of the boundary of plume exposure EPZ and the factors set forth in 10 CFR Part 50.47(c)(2), it is the staff's conclusion that the Commission's regulations do not require that any part of brown County be included in the plume EPZ or that Brown County have a radiological emergency response plan. However, the suitability of the exact location of the plume EPZ boundary is determined by FEMA.

1 MR. BARTH: Thank you, your Honor. I have no
2 questions of Mr. McKenna, and suggest it would be appropriate
3 that he be offered for cross-examination at this time.

4 Thank you.

5 JUDGE FRYE: Fine. Thank you.

6 CROSS EXAMINATION

7 BY MR. DENNISON:

8 Q Mr. McKenna, when did you have your visual observa-
9 tions in the company of Mr. Williams of some of the roadways
10 in Clermont County?

11 A I was not accompanied by Mr. Williams.

12 Q I thought in your direct examination you had
13 indicated that you had been directed by Mr. Williams to this
14 particular area. Was I mistaken?

15 A Yes.

16 Q What was Mr. Williams' role or part in assisting you,
17 as it were?

18 A I had a phone conversation with Mr. Williams.

19 Q And was that about Brown and Clermont Counties?

20 A Yes.

21 Q I take it in the course of that conversation, Mr.
22 Williams indicated some position that he was taking as to Brown
23 County, that position whether it should be in or out of the
24 emergency planning?

25 A He basically described the process used in

1 determining whether it should or should not be included.

2 Q Okay. Did he indicate to you that there was a
3 process of review by the state involving direct roadways as
4 the most direct means of gaining distance between population and
5 the Zimmer power station?

6 A No.

7 Q Now, on your knowledge, Mr. McKenna, the most direct
8 route to get 15 miles from the Zimmer power station, if you live
9 in the southeastern portion of Clermont County, would be to
10 proceed on U.S. 52 and continue on that thoroughfare; is that
11 not correct?

12 MR. BARTH: Objection, your Honor. The question was
13 asked at the end of direct whether he had any opinions in that
14 regard and he said no. The question has been asked and answered.

15 JUDGE FRYE: I don't believe this asked for an
16 opinion.

17 MR. DENNISON: Let me rephrase the question.

18 BY MR. DENNISON:

19 Q Based upon your review of maps, Mr. McKenna, in that
20 review of mapping, the most direct route of the southeastern
21 portion of Clermont County population to remove themselves a
22 distance of 15 miles from the Zimmer station would be to transverse
23 U.S. 52, would it not?

24 A With the amount of information you gave me, it's
25 difficult for me to answer that question. I'd have to know

1 which portion of the population and what point 15 miles away.

2 Q All right. The populations which are located in
3 the I and south sector -- let us do it this way, Mr. McKenna.
4 Do you have a copy of the Clermont plan there?

5 A One second, please.

6 (Pause.)

7 Could you give me the page reference, please?

8 Q Yes, it would be II-I-22, which is in the section of
9 the plan captioned "Protective Response."

10 A I'm ready.

11 Q All right, now, in that they indicate a sector S,
12 they indicate a sector SSE, they indicate a sector SE, which
13 continues on to the Brown County line; is that correct?

14 A Yes.

15 Q All right, now, the populations involved in those
16 two sectors or those three sectors, their most direct means
17 of obtaining a distance by direct route 15 miles from the
18 Zimmer station would be to proceed on U.S. 52 until you come
19 to the Brown County line?

20 MR. BARTH: Point of clarification. 15 miles from
21 the Zimmer station in what direction?

22 MR. DENNISON: That would be in an easterly direction
23 in order to find Brown County.

24 THE WITNESS: Based on a cursory review of the map,
25 yes.

1 BY MR. DENNISON:

2 Q All right. Now you're aware that Felicity is located
3 7-1/2 miles, airborne miles, from the Zimmer station?

4 A Yes.

5 Q All right. The evacuation routing as proclaimed by
6 the county indicates that those individuals which are involved
7 in the sectors east-northeast, east, east-southeast, southeast
8 and south-southeast and south, will all generally proceed, looking
9 at your -- do you have the map still before you?

10 A Yes.

11 Q -- the individuals in those sectors are to proceed
12 along 52, unless they are high enough that they would go
13 directly to 133, 222 or 232. Those below Felicity would all
14 funnel into U.S. 52 and would proceed to near Chilo, where they
15 would make a left-hand turn at a 90-degree angle and proceed up
16 133, coming into the village of Felicity; is that not correct?

17 A Yes.

18 Q All right. And at the village of Felicity, roads
19 would split as to 133 or 222, and as one proceeds on,
20 then would split with 233. Have you done any computations or
21 driven the roadway miles of the distance one would travel in
22 the plume area by following the county's designated routing of
23 U.S. 52 to 133, continuing on 133 through Felicity, to 125
24 or at Felicity taking 222 and continuing to 125? Or the
25 third alternative is continuing on 222 and then taking 232

1 until one would emerge on 125? Have you given any consideration
2 to the mileage distance that is involved in those routings?

3 A No.

4 MR. BARTH: Point of clarification, your Honor. The
5 statement by counsel was plume area. I assume he means the EPZ.

6 MR. DENNISON: That's correct.

7 BY MR. DENNISON:

8 Q The plume EPZ, as the county has designated it,
9 the boundary line being for our purposes State Route 125.

10 A As described, no.

11 Q Now, if this mileage by way of evacuation routes,
12 which I would also term access routes -- and would you have
13 any differences with me in using access routes and evacuation
14 routes interchangeably?

15 A Yes.

16 Q All right. Why?

17 A An access route, as it's used for our purposes, is
18 any roadway that can be used for access, egress, et cetera,
19 to the area -- to the planning area. It could be the plume
20 exposure area, it could be another area.

21 An evacuation route is a product of planning. In
22 other words, these are the areas that had been designated as
23 evacuation routes.

24 Q All right. Then leaving this in the realm of a
25 planning product, the planners have required that those persons

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1 in the areas east-northeast, east, and east-southeast, rather
 2 than utilizing access routes directly into Brown County, in
 3 some instances less than a mile, some a mile, none over three
 4 miles from the Brown County line, rather than using those
 5 access routes to go the opposite direction from Zimmer, they're
 6 called upon by the planning in the evacuation route to proceed
 7 towards Zimmer in order to avail themselves of the services of
 8 State Route 133, 222 and 232, as you have defined it, as a planned
 9 evacuation route?

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1 MR. BARTH: Objection, Your Honor. The plan speaks
2 for itself. This is really not, at this stage of the game, time
3 to start reading the provisions of the plan. The plan has been
4 moved into evidence and it's already evidence.

5 For Mr. Dennison to say those plans say X, Y, Z, and
6 he says yes, it says X, Y, Z --

7 JUDGE FRYE: Yes. I'm sure the next objection, if
8 he didn't do that would be a lack of foundation. I think I'll
9 allow it.

10 MR. BARTH: In that case, Your Honor, I object because
11 of the best evidence rule. This plan is in evidence and it
12 speaks for itself.

13 JUDGE FRYE: Overruled.

14 MR. BARTH: In order to save time, Your Honor, if you
15 want, I will refrain from objections to asking what the plan
16 says and then reading from the plan back and forth and I'll
17 refrain from objecting, if you want, so we can save time.

18 JUDGE FRYE: Your objections are entirely up to you.

19 BY MR. DENNISON: (resuming)

20 Q Do you recall the question, Mr. McKenna?

21 A Not specifically.

22 Q Let me state it again. For the Clermont population in
23 the east-northeast sector, the east vector, the east-southeast
24 sector and the lower portions of the southeast sector, between
25 State Route 133 and the Brown County line, do you want to refer

1 to a plan map or to a county map?

2 A Yes, I think I've got it all together here.

3 Q Okay. Individuals in that sector which are located
4 to the east of State Route 133, rather than going from the
5 Zimmer plant within the plan or going toward the Zimmer plant
6 for the purposes of utilizing the designated evacuation route,
7 are they not?

8 MR. BARTH: Objection, Your Honor. The plan is in
9 evidence and it speaks for itself.

10 THE WITNESS: That's not clear to me from the sectors.

11 JUDGE FRYE: It's the same objection to the same
12 question. It is overruled.

13 BY MR. DENNISON: (resuming)

14 Q Let me put the question this way. Do you have a
15 county map there?

16 A Yes.

17 Q Do you see a segment of Clermont County which is to
18 the east of State Route 133?

19 A Yes.

20 Q As it would go east from 133 to the Brown County
21 line and from the Ohio River to State Route 125, have you located
22 that on the county map you have before you?

23 A Yes.

24 Q All right. The population that is located in that
25 area that I have just described, that population, to follow the

1 directions of the preplanning of the county for the evacuation
2 directions that are placed in this plan, and I understand to be
3 placed in the Circle of Safety, and I further understand to be
4 placed in telephone books and other modes of dissemination of
5 such materials, they will all indicate to that population that
6 they are to go toward the Zimmer plant rather than away from it
7 during an evacuation. Is that not correct?

8 A Yes.

9 Q Now the object of all planning that I understand that
10 is under the Nuclear Regulatory Commission and, by mutual
11 agreement, with FEMA, is that evacuations are to go away from
12 the area of radioactive discharge and not toward it. Am I
13 correct?

14 A No.

15 Q All right. In what instances do you evacuate into the
16 plant?

17 A I don't understand the question.

18 Q The question, simply stated, again, is this: The
19 concept of planning is one that goes from the site of radioactive
20 discharge, not towards it. Am I correct?

21 A Not in every instance.

22 Q All right. In what instances would one go toward
23 radioactive plume discharge?

24 A When local planners felt that it provided a greater
25 dose savings.

1 Q Did Mr. Williams or anyone else indicate to you that
2 you are going to have a greater dose savings by directing portions
3 of the Clermont population towards the Zimmer station?

4 A No.

5 Q All right. So we have to sort of rule that out, don't
6 we, Mr. McKenna?

7 A No.

8 Q Why not?

9 A At the time of an accident, these decisions would have
10 to be made by the local planners, taking into consideration the
11 conditions at that specific time, number one.

12 Number two, you would have to conduct an analysis to
13 determine if this routing provided a more rapid egress from the
14 area.

15 Number three, you would have to take into considera-
16 tion the accident conditions -- things like plume direction,
17 height, et cetera.

18 Q All right. And would you also have to give consider-
19 ations to evacuations which may occur in foul weather?

20 A Yes.

21 Q All right. Now as I recall your direct testimony,
22 you had inspected topographical maps as well as county maps of
23 the eastern portion of Clermont County in this area that we have
24 been describing as well as the portion in the west of Brown
25 County, where the two come together. Am I correct?

1 A Yes.

2 Q All right. You noted that from U.S. 52 there was an
3 elevational rise of 4-500 feet into plateauing areas in Clermont
4 and Brown County. Is that not correct?

5 A Yes.

6 Q All right. You -- by the way, did you look at State
7 Route 133 from its intersection of 52 as one proceeds towards
8 Felicity or essentially to the north?

9 A Yes.

10 Q All right. You noticed that one had an elevational
11 rise from U.S. 52 on 133 over a course of less than a mile to
12 approximately 3-400 feet, did you not, in order to achieve that
13 plateau status?

14 (Pause.)

15 A I'd like to check the map.

16 (Pause.)

17 Yes.

18 Q All right. Also, as you look at that topographical
19 map that you have before you, there is no elevational rise or
20 decline on U.S. 52 as your map reflects U.S. 52, both in Clermont
21 and Brown Counties, is that not correct?

22 A Yes.

23 Q This would then require, in this preplan by the local
24 and state governments of the evacuation route, indicated as
25 52 to 133, that those evacuees on 52 are required to go up an

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1 elevational rise onto 133, which you and I, I believe, could come
2 to agreement is rather steep. Is that not correct?

3 MR. BARTH: There are two questions, Your Honor. I
4 object to the compound question. One at a time.

5 JUDGE FRYE: Yes, I think it would be better one at
6 a time.

7 BY MR. DENNISON: (resuming)

8 Q Reviewing your topographical map and the responses
9 that you gave to me previously, can we come to agreement for
10 expediency of word choice that the area 133, as you leave 52,
11 would be characterized as steep?

12 A Yes.

13 Q Okay, now preplanning by the local and state govern-
14 ments in Ohio is requiring the population on an evacuation
15 route, preplanning, to leave a flat surface roadway without
16 substantial incline or decline to go up a steep hill.

17 MR. BARTH: Objection, Your Honor. The plan that is
18 in evidence speaks for itself. I will make a continuing objec-
19 tion to the recitation between these two people as to what the
20 plan states, which is already in evidence, which we've already
21 admitted, which is the best evidence rule.

22 I have a continuing objection to the reading back and
23 forth of what the plan states, which is in evidence.

24 JUDGE FRYE: I really think that point has been
25 covered. He has agreed it is steep and the plan is in the record.

1 BY MR. DENNISON: (resuming)

2 Q Now, Mr. McKenna, you have had the opportunity to be
3 here during the course of these two weeks of hearing and hear
4 the witnesses as they testified, have you not? You have been in
5 attendance these two weeks of hearings, have you not?

6 A Yes.

7 Q Have you been able to listen to what the witnesses
8 have testified to on many, many subjects?

9 A Yes.

10 Q I assume that you have resorted to review of the
11 written testimony that has been filed by the Applicant and the
12 Intervenor. Is that correct?

13 A Some.

14 Q All right. Now what has emerged here, Mr. McKenna,
15 is there has been no disagreement whatsoever in the evidence
16 that U.S. 52 is a superior roadway to 133.

17 MR. WETTERHAHN: Objection.

18 MR. BARTH: Objection, Your Honor, this grossly mis-
19 characterizes the evidence.

20 JUDGE FRYE: You are obviously going to have some
21 markings on that one.

22 MR. DENNISON: I'll withdraw it.

23 BY MR. DENNISON: (resuming)

24 Q Now, Mr. McKenna, reviewing the county plan and
25 viewing the relocation centers, does it appear that the evacuation

1 routing was prepared in order to facilitate the relocation
2 centers rather than to evacuate the public to the environs of
3 the Zimmer station using the most direct routes?

4 A As I stated earlier, we have -- I'm not sure I did
5 state it earlier, but at this point in time the Staff has not
6 reviewed the Clermont County plan in toto, and such a review
7 will not be completed until all the information requested in our
8 January 22 and February 2 letters have been received, to include
9 findings and determinations from FEMA.

10 Q Now my question, perhaps, simply stated is this, Mr.
11 McKenna. You have viewed the evacuation route that is set forth
12 in the Clermont plan?

13 MR. BARTH: Objection, Your Honor. 20(X) is related
14 to Brown County as requiring an evacuation plan, a radiological
15 emergency response plan, in view of the criteria of 50.47. This
16 was explicitly set forth in Your Honor's order. The questions
17 in the purview of that I have no objections to, but the question
18 of evacuation routes in the entire plan is beyond the purview
19 of that order of Your Honor.

20 (Board conferring.)

21 JUDGE FRYE: I don't think it can be separated that
22 easily. I think the evacuation routes are intimately tied up.

23 MR. BARTH: May I point out to Your Honor that the
24 evacuation routes from New Richmond leading to Hamilton County
25 have nothing to do with Brown County as required in the

1 radiological emergency response plan, and I would like the Board
2 to reconsider its ruling.

3 MR. DENNISON: Let me simply limit this question, then,
4 to the eastern portion of Clermont County only.

5 BY MR. DENNISON: (resuming)

6 Q For our purposes, Mr. McKenna, we are referring to the
7 eastern portion of Clermont County and we will use the division
8 line at the Moscow area. Anything east of Moscow is what we
9 will be discussing. Fair enough?

10 A Yes.

11 Q All right. Now in the plan, at II-I-18 is the
12 evacuation map. Do you observe that in the plan?

13 A Yes.

14 Q All right. That proceeds toward Brown County and
15 then turns and goes at and near and through Bethel, Ohio, and
16 then continues on to relocation centers that are designated on
17 that map at II-I-18, is that not correct?

18 MR. BARTH: Objection, Your Honor. It mischaracterizes
19 the map. This really supports the basis of my previous objection.
20 If Your Honor will look at the map on II-I-18, at the bottom,
21 there is an arrow through right of the word "Chilo", and a
22 heavy black line, which is 52. If you will look at the legend,
23 the heavy black line is primary evacuation route. This does
24 nothing but add further support for my previous objections that
25 the plan speaks for itself.

1 He has mischaracterized --

2 JUDGE FRYE: Which page of the plan are you looking
3 at?

4 MR. BARTH: I am looking at page II-I-18. I am looking
5 at the bottom of the map, at the bottom of the line which is
6 U.S. 52, and you will notice immediately to the right C-h-i-l-o.
7 There's a heavy black line and an arrow. That is highway 52.
8 The heavy black line, according to the legend is the primary
9 evacuation route.

10 His statement was that evacuation routes turns at
11 133 and 52 and goes north. This is not true, Your Honor.

12 JUDGE FRYE: On my map I do not see C-h-i-l-o.

13 MR. BARTH: At this point I think we should have a
14 bench conference to compare the maps.

15 JUDGE FRYE: All right. I think we better.

16 (Bench conference.)

17 (Pause.)

18 MR. BARTH: Your Honor, if we may go back on the
19 record for a minute, as a result of our bench conference it is --
20 at page II-I-18 in the Clermont County Radiological Emergency
21 Response Plan does not show a continuation of highway 52 as an
22 evacuation route beyond 133. As Mr. Dennison stated in his pre-
23 vious questions, he is correct that the map shows that the
24 evacuation route takes 52 east and turns, going north on 133.

25 MR. CASSIDY: Your Honor, for the record, FEMA would

1 have a different view of that because the plans that my people
2 have reviewed, each and every one of them, has the map that we
3 just reviewed in the bench conference with the same pagination --
4 that is, II-I-18 -- which in fact does show the evacuation route
5 according to that map going into Route 52. And I believe the
6 testimony of the Ohio people previously also reflected that.

7 So for the record the map that the FEMA people have
8 reviewed and the testimony that they have prepared is based on
9 the map that we were showing the bench in the conference, which
10 does have Route 52 as a primary evacuation route with an arrow
11 pointing in the direction of Brown County. I just wanted to make
12 that clear for the record.

13 JUDGE FRYE: Okay. So I understand it, in other words,
14 you are saying that in the review that FEMA has conducted to
15 date, you have assumed that Route 52 is a designated evacuation
16 route to the Brown County line?

17 MR. CASSIDY: The map, and I would again say -- and
18 I'm not sure which map is in the plan that is in evidence, and
19 perhaps we should look at the one that has been filed in
20 evidence to see which map is in that book.

21 JUDGE FRYE: Can you, Mr. Wetterhahn? Could you take
22 a look and see?

23 MR. CONNER: It isn't there, Mark.

24 (Pause.)

25 JUDGE FRYE: Let's go off the record while we check

1 the exhibits.

2 MR. CASSIDY: Perhaps a ten-minute recess would be in
3 order, Your Honor.

4 JUDGE FRYE: Yes, let's do that. We'll take a ten-
5 minute recess.

6 (A brief recess was taken.)

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1 JUDGE FRYE: Shall we go back on the record, please?
2 Have we gotten the great map controversy sorted out?

3 MR. BARTH: I believe Mr. Dennison was in the middle of
4 his cross and it would probably be appropriate to continue with
5 the cross examination.

6 BY MR. DENNISON: (resuming)

7 Q Mr. McKenna, as I understand the circumstances, you
8 were supplied with an incorrect map. Is that correct?

9 A No.

10 Q Do you have the correct map evidencing the evacuation
11 routing which does not direct anyone to Brown County?

12 A I have what I believe is the latest revision, yes.

13 Q Okay, now that would also be the revision that is set
14 forth in evidence in this matter as part of the Circle of Safety
15 contention as a map to be set forth in telephone directories for
16 the involved population.

17 MR. BARTH: Objection, Your Honor. During the break
18 counsel examined the maps which are in evidence and I confirmed
19 the statement of Mr. Dennison. It's a matter which the witness
20 did not review. Counsel reviewed these maps and Mr. Dennison
21 corrected the statement.

22 MR. WETTERHAHN: We, as the Applicant, I think we can
23 stipulate that the map which does not show a line between the
24 routes that go north and the Brown County border and that has a
25 notation of evacuation centers on the right side, is the most

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1 current map and is the same map that appears in the telephone
2 book insert which follows Circle of Safety in the Applicant's
3 testimony and is also in evidence.

4 JUDGE FRYE: Yes, I think I understand what you are
5 saying, and what I am concerned about is how we can adequately
6 identify it so that there's no confusion in the record.

7 I note that in the lower righthand corner of the map
8 that I am looking at there is a very fine print which I cannot
9 read. Does that identify that --

10 MR. BARTH: Your Honor, may I make a suggestion? The
11 map which is in evidence shows no continuation of Route 52 as
12 an evacuation route beyond Route 133. That pretty well identifies
13 it.

14 JUDGE FRYE: Yes, I think it does. Okay.

15 MR. BARTH: Thank you, Your Honor.

16 BY MR. DENNISON: (resuming)

17 Q Now, Mr. McKenna, in your prepared written direct
18 testimony you place reliance on NUREG-0396, is that not correct?

19 A Yes.

20 Q All right. Now in NUREG-0396 the circumstances of that
21 NUREG is a task force involving themselves with considerations
22 of evacuation planning, the distances of different emergency
23 planning zones and things of that nature. Is that not correct?

24 A No.

25 Q What is it, then?

1 A It was a task force to determine the planning basis
2 for development of state and local radiological plans, i.e., to
3 identify the primary factors that should be considered by planners
4 -- distance, time and characteristics, i.e., isotopic mixes of
5 releases during accidents.

6 Q All right. Now this task force, at page 29 of the
7 NUREG -- and I assume you have it before you, is that correct?

8 A Yes, sir.

9 Q Okay, the task force, in its rationale for a planning
10 basis and general considerations, indicates that a risk rationale
11 -- that sort of approach -- to establish a planning guidance
12 cannot be used or compared with the risk associated with non-
13 nuclear accidents. Is that not correct?

14 MR. BARTH: Point of order. May we take a look at the
15 document to which the witness is referring?

16 JUDGE FRYE: Surely. I assume it's the NUREG, but
17 I think you should take a look at it.

18 MR. BARTH: Your Honor, there is no page 29 to which
19 reference was made. That's been our problem. There is no page
20 29 in NUREG-0396.

21 MR. DENNISON: Let me qualify that with great humility.
22 It's Appendix 1 following page 81. I assumed they were consecu-
23 tively numbered. I apologize.

24 JUDGE FRYE: The government does not always work in
25 logical ways.

1 BY MR. DENNISON: (resuming)

2 Q Following page 28, Mr. McKenna, what is designated
3 as Appendix 1, that is indicated as a rationale for planning
4 basis under paragraph (a), general considerations, the task
5 force elects not to indulge in a planning guidance which could
6 be compared with risk associated with non-nuclear hazards. Is
7 that not correct?

8 MR. BARTH: Objection. It's a negative question.
9 What they did not go is impossible to answer -- object to the
10 form of the question and the substance. He can ask what they
11 did so, which is set forth here, unless there is an explanation
12 -- we did not do X, Y, and Z -- and there is none, Your Honor.

13 JUDGE FRYE: I don't have the document in front of me.
14 Does the task force make a statement that they did not do that?
15 Let me ask the witness.

16 Does the task force make the statement?

17 MR. BARTH: I think, Your Honor, it's Mr. Dennison's
18 question. He should make the statement.

19 THE WITNESS: I think the concluding statement for
20 that paragraph or that section, which is found on page I-4,
21 without reading the entire text, characterizes the task force
22 judgment as stating -- this is a quote on page I-4 of NUREG-0396
23 -- "The task force, therefore, judged that the consequences of
24 a spectrum of accidents should be the principal rationale behind
25 the planning base." I.e., meaning that the spectrum of nuclear

1 planning accidents should be the rationale. And if I remember
2 correctly the document, the argument is that even though these
3 probabilities are very, very small, the public's perception,
4 et cetera, of nuclear events is such that we should plan even
5 for small likelihood events.

6 JUDGE FRYE: Fine. Thank you.

7 BY MR. BARTH: Did you rule on the objection, Your
8 Honor?

9 JUDGE FRYE: I think we got the answer. He did not
10 indicate that there was a negative statement in there. I don't
11 have the document in front of me, but I think Mr. Dennison can
12 legitimately ask about what it says.

13 MR. BARTH: The objection was he asked about what it
14 doesn't say. That's the objection.

15 JUDGE FRYE: Let's move on. Well, hold on a second.
16 Let's go off the record.

17 (A discussion was held off the record.)

18 JUDGE FRYE: All right. We've looked at the document.
19 We will sustain the objection.

20 BY MR. DENNISON: (resuming)

21 Q Now, Mr. McKenna, in Appendix I that I have been
22 referring to, does the task force state there that reactors are
23 unique in this regard, referring to its previous sentence that
24 risk is not generally thought of in terms of probability and
25 consequences, rather, it is an intuitive feeling of a threat posed

1 to the public?

2 MR. BARTH: Objection, Your Honor. I will try to make
3 this brief in order to move on.

4 Appendix I consists of 53 pages. Counsel cannot sit
5 here in five seconds and sort through 53 pages to find out where
6 these questions come from. I object to a question relating to a
7 document unless you identify in that document where this is
8 stated. Then we can all follow and have a clear record. I
9 cannot follow trying to guess where in 53 pages this comes from,
10 Your Honor, so I can determine whether it's in there or not in
11 there or what.

12 MR. WETTERHAHN: Mr. Chairman, I wonder if we could
13 find out from counsel where we're going with this now. It's
14 really related to Brown County. That may help in the Board's
15 deliberation.

16 JUDGE FRYE: We have the document in front of us and
17 we have no difficulty in finding that statement on the first
18 page of Appendix I, which is what we have been talking about,
19 and we're going to let this continue for a while, so it's over-
20 ruled.

21 BY MR. DENNISON: (resuming)

22 Q Do you have a response, Mr. McKenna?

23 A I'm not sure where we are.

24 Q Okay. Do you find the area that I just quoted?

25 A Yes.

1 Q Okay. Now the task force states that risk is not
2 generally thought of in terms of probability and consequences.
3 Rather, it is an intuitive feeling of the threat posed to the
4 public. Does that statement appear there?

5 A Yes, it's a quote.

6 Q Now the task force continues and states, does it not,
7 that reactors are unique in this regard. Radiation tends to be
8 perceived as more dangerous than other hazards because the
9 nature of radiation effects are less commonly understood and
10 the public generally associates radiation effects with the fear
11 of nuclear weapons effects. Is that correct?

12 A Yes.

13 Q And, skipping a sentence, on I-2 the task force states:
14 "Choosing a risk comparable to non-nuclear events, therefore,
15 was not directly used as the rationale for an emergency planning
16 basis." Is that correct?

17 A Yes.

18 Q Mr. McKenna, it would seem to me with that statement
19 of the task force that some due regard must be given in the
20 planning circumstances for the Zimmer station as to how accidents
21 are perceived at the Zimmer station by those residents of Brown
22 County which are ten, eleven and twelve miles from that station
23 at and near the Clermont County-Brown County line, within a
24 distance of two miles from that line. Would you or would you
25 not agree?

1 MR. BARTH: Objection, Your Honor. Mr. McKenna is
2 not qualified to testify as a matter of fact to what Mr. Dennison
3 perceives.

4 MR. WETTERHAHN: Objection, too. This is, if anything,
5 this would be a general consideration for all nuclear power
6 plants. It does not go toward showing special circumstances with
7 regard to Brown County.

8 JUDGE FRYE: What is Mr. McKenna's area of expertise?
9 What's he being offered for?

10 MR. BARTH: He is being offered, Your Honor, as having
11 been the Staff reviewer on emergency planning and having -- the
12 prospectus of his credentials, which are set forth in the
13 testimony, as an expert in emergency planning. He has addressed,
14 particularly, Contention 20(X). He is not being offered as a
15 psychologist to read the mind of Mr. Dennison.

16 JUDGE FRYE: If he is an expert in emergency planning
17 he should be able to answer that question in light of this
18 document. We will overrule it.

19 MR. CASSIDY: Your Honor, I would object on the
20 additional ground that the question Mr. Dennison asked, as far
21 as the perception of the persons living in Brown County, is
22 beyond the scope of the contention. The contention deals with
23 whether or not Brown County needs a radiological emergency plan.
24 The requirements for whether some radiological emergency plan are
25 set forth in NUREG-0654, and that is what the testimony with

1 regard to 20(X) is limited to, not the perception of people in
2 Brown County.

3 JUDGE FRYE: Well, we're going to overrule it. If
4 you want to continue to object, we'll ask it ourselves. I think
5 we want this answered. He is offered as an expert on emergency
6 planning. We want his answer on this planning.

7 MR. BARTH: Sir, it's been such a large time, would
8 you ask the reporter to reread the question, sir, so we have it
9 fresh in our minds and give a good answer to this question?

10 MR. WETTERHAHN: For the basis, let me state the
11 basis of my objection. 0396 and 06 -- 0396 in particular was
12 considered by the Commission in setting the ten-mile EPZ line
13 which appears in the regulation. Therefore, this being one of
14 the considerations, I believe that consideration is binding
15 on the Board and unless there are special circumstances here
16 which are not present at other nuclear reactors this is a
17 prohibited challenge of the regulations and the question should
18 not be permitted.

19 JUDGE FRYE: Overruled. Will you answer the question?

20 THE WITNESS: If I understand it, no.

21 BY MR. DENNISON: (resuming)

22 Q Okay. Now considering that same observation by the
23 task force and given the Clermont County's population as it is
24 in that eastern sector, as we have defined it, and further given
25 that they view that same map in their telephone directories and

1 observe the distances of travel that they must take within
2 Clermont County rather than traveling into Brown County, does
3 this or does it not raise, Mr. McKenna, the question of
4 credibility in the minds of that public in so viewing?

5 MR. BARTH: Objection, Your Honor. Mr. McKenna is
6 not offered as an expert in psychology to determine the credibility
7 in the minds of the people in Clermont County.

8 JUDGE FRYE: Is he or is he not an expert in emergency
9 planning?

10 MR. BARTH: That's not my objection. My objection is --

11 JUDGE FRYE: If he is an expert in emergency planning
12 he should be able to answer that question. I think the credibility
13 in the minds of the public is a legitimate inquiry. Overruled.

14 THE WITNESS: I don't know.

15 BY MR. DENNISON: (resuming)

16 Q Okay. Now, Mr. McKenna, in the planning discipline --
17 meaning planners who are involved in creating certain sets of
18 circumstances beforehand and aspiring to accomplish certain
19 goals for the protection of the public -- those planners must
20 take into account behavioral patterns of the public as they under-
21 stand that public. Would you not agree?

22 A Yes.

23 Q All right. The public that we have been discussing
24 east of State Route 133, their behavioral conduct in an emergency
25 at Zimmer would be to leave by the most direct routes to get away

1 from the threat which they then and there understand. Would you
2 not agree?

3 A Yes.

4 Q Getting away from that threat as they are so advised,
5 they would operate in their flight by access roads which are
6 immediately present and being most direct to relieve themselves
7 from that threat, would they not?

8 A I don't understand the question.

9 Q The question is simply this, that upon being advised
10 of evacuation because of a Zimmer station accident, that popu-
11 lation which is located east of State Route 133 will travel
12 roadways which will remove them in the most immediate routing
13 and direction from the threat posed at Zimmer, will they not?

14 A It would be impossible for me at this point in time to
15 project what the reactions of a person would be during an
16 accident, not knowing the conditions and all the other factors
17 that would influence such a decision by a person.

18 Q All right. As a planner would you not take into
19 account human behavioral characteristics by which, if someone is
20 going to get away from a potential threat, they will get away
21 from it using the most direct means to evade that risk, will
22 they not?

23 MR. BARTH: Objection, Your Honor. This question has
24 been previously asked and answered. It is cumulative, redundant.

25 JUDGE FRYE: I think he answered that one.

1 BY MR. DENNISON: (resuming)

2 Q Viewing your map that you have there, Mr. McKenna,
3 the population located east of 133 and assuming that that
4 population is generally aware of the different roadways that are
5 available to them in the event of a nuclear -- pardon me, a
6 Zimmer-related accident, that eastern population that we have
7 identified will use access roads leading directly into Brown
8 County, will they not?

9 A I would suspect some, yes.

10 Q Utilizing those access routes into Brown County,
11 whether it be a continuation of U.S. 52 or other roadways which
12 lead from that eastern sector into Brown County, they emerge
13 into a county which has no plan preparedness or otherwise for
14 the influx of those Clermont evacuees, would that be correct?

15 MR. BARTH: Objection to the form of the question.
16 We'd like to know what "or otherwise" means so we can get an
17 accurate answer.

18 JUDGE FRYE: Can we just leave out the "or otherwise"?

19 MR. DENNISON: Yes, sir.

20 THE WITNESS: Yes. I might have been confused. Did
21 you preface that with radiological?

22 BY MR. DENNISON: (resuming)

23 Q For a Zimmer-related emergency.

24 A The answer for that would be no, then.

25 Q Then for a radiological emergency, if you are making

1 some sort of distinction, what would your answer be?

2 A I think I'm confused. My answer would be that it's
3 my understanding that there are no radiological emergency plans
4 for Brown County, period.

5 Q And do you have any knowledge, Mr. McKenna, whether or
6 not Brown County even has a Disaster Service agency?

7 A I don't know other than from the testimony.

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end 3

1 Q Do you recall that testimony as indicating
2 whether it does, or it doesn't?

3 A My understanding is, "no."

4 Q From your recall of that testimony, do you
5 have a recall as to whether Brown County has any type or
6 form of emergency resources, personnel, or planning, whether
7 it be nuclear or otherwise?

8 A Yes, they do.

9 Q Now, Mr. McKenna, are you aware that by airborne
10 miles, say 10, we come onto the Brown County line? Is that
11 not correct?

12 A Yes.

13 (Pause.)

14 Q Now would you say, Mr. McKenna, that as to
15 this eastern sector of the Clermont population that we have
16 identified there is an emergency response need to that
17 population as it would affect access routing from the network
18 of -- that is, the access routes of this population would
19 take to remove themselves from the Zimmer-related emergency?

20 A I don't understand the question.

21 Q The question is this: That in the considera-
22 tion of local emergency response needs, we have come to
23 understand from you that at least a portion of the eastern
24 Clermont population will utilize access roads and travel into
25 Brown County? As to that population utilizing those access

1 access roads, is there not a circumstance of the local
2 emergency response needs for that evacuating population that
3 finds itself in Brown County?

4 MR. BARTH: Objection, your Honor. The
5 question mischaracterizes the testimony. The testimony was
6 that some may go into Brown County.

7 JUDGE FRYE: The question was "at least a
8 portion of." I am going to overrule the objection.

9 THE WITNESS: Would you repeat the question?

10 (The reporter read the record as requested.)

11 THE WITNESS: No.

12 BY MR. DENNISON:

13 Q Are you aware of any plan which takes into
14 account that population present in Brown County that has
15 evacuated from Clermont County utilizing the access roads
16 which lead from Clermont into Brown?

17 A Yes.

18 Q Beg your pardon?

19 A Yes.

20 Q Okay. Now what is that plan?

21 A Clermont. The Clermont County Plan, I believe.

22 Q All right. Now does the Clermont County Plan
23 in any manner provide any emergency resource personnel by
24 access control points, decontamination centers,
25 decontamination surveillance within Brown County?

4-3 jwb

1 A. No.

2 Q. Is it your supposition, then, Mr. McKenna,
3 that this population from Clermont, whatever its size may
4 be that enters Brown County using access roads, will somehow
5 return to Clermont County?

6 A. Yes.

7 Q. All right. As to the Brown County population
8 within 11 miles, is there any information, any plan, or
9 anything that involves that population, to advise them or
10 otherwise within Brown County as to what their conduct
11 should be in the event of a Zimmer-related emergency?

12 MR. BARTH: Objection.

13 MR. WETTERHAHN: Objection.

14 MR. BARTH: There is no showing that they
15 have any role to play or to take, and there is no founda-
16 tion for the question.

17 MR. WETTERHAHN: We have a further objection
18 that it is beyond the scope of 20(X). The Board specifically
19 ruled there had to be a showing before we got into questions
20 relating to evacuation of Brown County residents.

21 JUDGE FRYE: Yes. I think I will sustain that
22 one. I think that one is correct.

23 BY MR. DENNISON:

24 Q. From your expertise as a planner, given the
25 circumstances that the Clermont population, by some portion

1 of it, is evacuating into Brown County on the access roadways
2 that go from the one county to the other, would you tell us
3 that this would have no influence upon the Brown County
4 residents in the area in which these evacuees are utilizing
5 their roadways and coming into their county?

6 (Pause.)

7 A As I indicated earlier, we haven't conducted --
8 I don't know whether I indicated this earlier or not -- but
9 we haven't conducted any study of evacuating routing,
10 traffic, et cetera, et cetera, in that area since it is not
11 required by our regulations.

12 Q So your answer, then, Mr. McKenna, is that you
13 don't know?

14 A I don't know.

15 MR. DENNISON: I have nothing further.

16 MR. WETTERHAHN: The Applicants have no
17 questions of this witness.

18 MR. CASSIDY: FEMA has no questions, your
19 Honor.

20 MR. BARTH: We have no redirect, your Honor.

21 JUDGE FRYE: No redirect?

22 MR. BARTH: No, your Honor.

23

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XXXX 1

BOARD EXAMINATION

2

BY JUDGE HOOPER:

3

Q. Mr. McKenna, how long have you been involved

4

in the planning, emergency planning for this plant?

5

A. Off and on for two-and-a-half years.

6

Q. Did you work closely with the States of Ohio

7

and Kentucky in making these plans?

8

(Pause.)

9

A. We at the NRC, as you know, are not planners,

10

per se. I have been involved -- I guess I should have

11

characterized it -- in the review process. So as far as

12

"planning," no.

13

Q. You didn't -- Well, coming directly to the

14

point, who actually laid out these evacuation routes in

15

Ohio? Do you know? Do you have that information?

16

A. It is my understanding from conversations

17

with Mr. Williams, Mr. Conover, and the testimony here, that

18

it was done by Mr. Conover.

19

Q. And do you know the relationships of what, if

20

any, relationships there existed between the relocation

21

centers and the evacuation routes?

22

A. It is standard practice in all emergency

23

planning to develop evacuation routes that do lead to

24

relocation centers.

25

Q. In your capacity as a planner in setting up

1 such routes, is it necessary to consider political
2 boundaries?

3 A. The regulations -- the only specific reference
4 to jurisdictional boundaries is addressed toward the
5 identification of the plume EPZ boundary, and in connection
6 with the relationship of the plume EPZ boundary and
7 relocation centers is addressed in 0654.

8 It basically states that the relocation
9 center should be 5 to 10 miles beyond the plume EPZ
10 boundary -- i.e., they should be far enough away so that
11 you would not expect that you would have to re-evacuate.
12 So therefore, the political boundaries are not specifically
13 a requirement, or to be considered in identifying evacuation
14 routes.

15 Q. In your opinion as a planner, should the
16 political boundaries be the dominant item in determining
17 the location of relocation centers?

18 A. Not necessarily.

19 Q. All right. Were you here the other day when
20 the Kentucky panel was on, and we had the testimony from
21 the General who said that -- he said that he agreed that
22 political boundaries should not be the dominant feature in
23 laying out evacuation routes?

24 A. Yes, sir.

25 Q. And do you agree with his statement?

1 A. I think political boundaries -- oh, in
2 relationship to evacuation routes?

3 Q. Evacuation routes and relocation centers.

4 A. I think we would have to look at each case,
5 but as I stated previously I think the jurisdictional
6 boundaries are primarily important for identification of
7 populations, and so that the populace themselves can
8 understand the plan, and can understand whether they are
9 affected or not affected beyond that. Therefore, that is
10 a role for demarcating plume EPZ. They are not that
11 important.

12 Q. Another matter. Does the plume EPZ for the
13 Zimmer plant go into any counties other than Clermont in the
14 State of Ohio? Does it enter any other counties?

15 A. Not to my knowledge.

16 Q. One other matter which is -- I don't know
17 whether you did this sort of a survey or not, but in your
18 inspection of the situation at the Brown County-Clermont
19 County line, by any chance were there any places that
20 housed infirm people such as hospitals or anything like
21 that? I have no information. I am just asking you if you
22 do have any -- if you looked to see whether there were
23 hospitals or other institutions where there might be large
24 numbers of people to be evacuated?

25 A. I drove all the roads that interfaced between

1 the two counties, and up and down on either side a couple of
2 miles within the boundary. I definitely did not see any
3 large institutional structures, period. I remember reviewing
4 the Environmental Impact Statement, et cetera, in the
5 docketed documents, and I would have to review it again but
6 it is my understanding and recollection that there are no
7 such facilities. That does not preclude small nursing homes
8 with one or two people, or anything like that.

9 JUDGE HOOPER: I think that's enough. Thank
10 you.

11 MR. BARTH: Your Honor, I would ask a few
12 questions of the witness based upon Judge Hooper's questions,
13 if I may?

14 JUDGE FRYE: Surely. Since he is your
15 witness, I wonder if anyone else has questions, and let you
16 follow it up last?

17 (No response.)

18 REDIRECT EXAMINATION

19 BY MR. BARTH:

20 Q Earlier you testified, sir, that Anderson High
21 School was a relocation center in Hamilton County, Ohio. Is
22 that correct?

23 A Yes, sir.

24 Q Does an evacuation route from Clermont County
25 lead to that high school?

4-9 jwb

1 A Yes.

2 Q And is that evacuation route influenced by any
3 political boundary?

4 A No.

5 MR. BARTH: Thank you. No further questions.

6 RE CROSS EXAMINATION

7 BY MR. DENNISON:

8 Q Mr. McKenna, viewing the map that you have
9 before you, the Hamilton County relocation center, the
10 Anderson Middle School or High School, whatever it be,
11 indicated as No. 14 on the block --

12 JUDGE FRYE: Excuse me, Mr. Dennison. Which
13 map are we on right now?

14 MR. DENNISON: I'm sorry, your Honor. That
15 would be in the plan, II-I-18. "

16 BY MR. DENNISON:

17 Q That is some distance from the EPZ marking is
18 it not?

19 A Yes.

20 Q And observing the map, it would appear to me to
21 be approximately twice the distance from the Zimmer station
22 as the Zimmer station is located to the Brown County line?

23 A Yes.

24 Q There is no EPZ zone for the Zimmer station to
25 the west, which is within less than three miles, is it?

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4-10 jwb

1 A From where?

2 MR. BARTH: Your Honor, this goes beyond --

3 MR. DENNISON: From the end of the EPZ.

4 MR. BARTH: Your Honor, this goes way beyond
5 any kind of redirect. The redirect was solely to the
6 Anderson facility relating to Dr. Hooper's question. It
7 had nothing to do with anything else. They were two very
8 short questions.

9 JUDGE FRYE: I think it has fairly been opened
10 up. Overruled.

11 BY MR. DENNISON:

12 Q The question, Mr. McKenna, is that there is a
13 distance of at least three miles from the edge of the plume
14 EPZ designated on the map to the Hamilton County border? Is
15 that not correct?

16 A One second.

17 (Pause.)

18 Why don't we just characterize it as "more
19 than two."

20 Q I will settle for "more than two." To the
21 eastern portion, however, the edge of the EPZ is on the
22 Brown-Clermont line, is it not?

23 A Yes.

24 Q The relocation centers, the evacuation routing
25 to the western side, and also including Hamilton County all

4-11 jwb

1 proceeds away from the Zimmer station? Is that not correct?

2 A. That is incorrect.

3 Q. That is incorrect?

4 A. Yes.

5 Q. All right. Now where on the map is there the
6 indication of any route going towards the Zimmer station by
7 way of an evacuation route toward the Zimmer station?

8 A. The statement was "away from." There are
9 sections of route 275 which are -- which appear to follow
10 an arc which would keep them in approximately the same
11 distance from the site, and may actually proceed closer to
12 the site.

13 Q. All right. That would be an approximate
14 distance of perhaps 15 or 20 miles from the site?

15 A. Yes.

16 Q. And on the western side of the map, all other
17 routing proceeds away from the station. Is that not correct?

18 A. Clarify "western side" for me once again.

19 Q. That would be what we -- I'm sorry. That was
20 quite some time ago that we made this division, east and
21 west. Going from Moscow, Ohio, in a generally northerly
22 direction.

23 A. That's incorrect.

24 Q. Okay. What routing would be going toward the
25 Zimmer station?

4-12 jwb

1 A. There are --

2 Q. On the western side?

3 A. -- one or two, maybe three short sections that
4 proceed off Route 28, which proceeds to relocation centers
5 towards the plant.

6 Q. Route twenty -- that's up in --

7 A. But it's west of Moscow.

8 Q. It's west of Moscow, and it's probably 20 or
9 30 miles from the plant, isn't it?

10 A. Yes.

11 Q. Between Milford and Goshen.

12 A. Yes.

13 Q. In fact, that would be a connecting roadway
14 between two relocation centers? Isn't that correct?

15 A. That's not what it appears to be.

16 Q. However, 28 from the northeastern tip of
17 relocation center 7 is connected to a southwestern tip of
18 relocation center 11, is it not?

19 (Pause.)

20 A. The routes, depending upon how you view it,
21 reconnect all the relocation centers.

22 Q. Okay, as to 8 and 9 as well?

23 A. Yes.

24 Q. And all of those would be approximately 20
25 miles from the site? Is that correct?

26 A. Yes.
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end JWB 26

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1 Q Okay. Other than those relocation centers, such as
2 14 and, perhaps, 12, in which one would go in a general direction
3 on Route 275, perhaps 125 toward the plant, which would be
4 approximately 50 or more miles from the plant, other than those
5 two, everything to the west and particularly within the plume
6 area evacuation routing leads away from the plant, is that not
7 correct?

8 A Yes.

9 Q In fact, it is capable by way of access routes to
10 evacuation routes to the western portion that the plume EPZ
11 population could go to evacuation routes by going away from the
12 station. Is that not correct?

13 A Yes.

14 Q This is not true for the eastern side?

15 A That's incorrect.

16 Q All right. Then going back to our 133, east of 133,
17 in order to utilize that evacuation route, the population to the
18 east of it would have to travel in an easterly direction, would
19 they not?

20 A Not -- I probably misrepresented my thoughts. What
21 I was thinking is there is no requirement that they go up 133.
22 They could evacuate out 52.

23 Q In fact, they could evacuate right out 52 into Brown
24 County, couldn't they?

25 A Yes.

1 Q They could evacuate out 125 into Brown County, couldn't
2 they?

3 A Yes.

4 Q And between 125 and 52 they could use all these other
5 access routes evacuating into Brown County, is that not correct?

6 A Yes.

7 MR. WETTERHAHN: Objection, asked and answered.

8 MR. DENNISON: I have nothing further.

9 JUDGE FRYE: Are we ready for our next witnesses?

10 MR. CASSIDY: I have no further questions of this
11 witness, Your Honor.

12 MR. WETTERHAHN: Neither does the Applicant.

13 JUDGE FRYE: All right.

14 Mr. McKenna, thank you very much. We appreciate your
15 testimony.

16 MR. CASSIDY: Your Honor, may I suggest we take a
17 brief break which would allow us to have more continuity and
18 perhaps go through to 12:30 or 1:00 if we have a break now?

19 JUDGE FRYE: Yes, that would be all right. For your
20 planning purposes, let me let you know that we're going to need
21 to take a little bit longer lunch hour than we have been taking
22 today.

23 MR. CASSIDY: I was going to suggest that perhaps
24 we forego our lunch today, if we could.

25 (Laughter.)

1 MR. CASSIDY: I realize based on yesterday's conver-
2 sation of everyone's plans today, I think the understanding was
3 that Mr. Dennison intended to be able to get through the entire
4 FEMA panel today with all the contentions and everybody,
5 including the Board, as I understand it, based their plans as
6 far as planes and such on that situation.

7 I would suggest that it is now 11:00 or ten minutes
8 to eleven, that based on the two hours we have spent with Mr.
9 McKenna on 20(X), that we have 85 pages of FEMA testimony to
10 be cross examined. I would suspect that we would go without
11 breaking at least five or six hours, and I would suspect,
12 depending on everybody else's plane arrangements we may have some
13 problems.

14 JUDGE FRYE: Do you have any --

15 MR. DENNISON: Your Honor, I have a suggestion. That
16 suggestion is -- and I recognize Mr. Barth's concerns -- but
17 my examination of the FEMA witnesses can proceed much more
18 rapidly if I simply pose questions to them concerning their
19 testimony and not do it categorically by each contention. I
20 think that we may not have -- I don't think we're going to have
21 five or six hours. I would say perhaps 1-1/2, twice as long
22 as with 20(X). 20(X), I think it's realized, is a rather
23 sensitive issue to this Intervenor and thus a little more time
24 was spent with it than normally would have been.

25 JUDGE FRYE: So you would estimate what, an hour-and-a-

1 half, two hours?

2 MR. DENNISON: I would hope to do it in that -- outside,
3 three.

4 JUDGE FRYE: Okay.

5 MR. DENNISON: I don't know what you anticipate as to --

6 JUDGE FRYE: The answers.

7 MR. DENNISON: Objections, how many people are going
8 to argue objections and how many times you have to come back to
9 a witness and ask the same question. Assuming that we move
10 along, I don't think it will take too long.

11 JUDGE FRYE: Okay.

12 MR. CASSIDY: I would concur with Mr. Dennison's
13 representation, although I suspect, given our track record thus
14 far as far as objections to questions, we may be a little longer
15 on that point.

16 I would suggest, though, with regard to his suggestion
17 of going through and asking general questions with regard to the
18 testimony that I think yesterday afternoon's exercise pointed
19 out the expediency of going through contention by contention.
20 We had a number there were just no questions on and for clarity
21 of the record and also, I would suggest, for clarity of
22 understanding the questioning, the contentions have all been
23 answered in the order that they have been set up by the Board
24 and that it would certainly -- the witnesses have been prepared
25 to respond based on the situation, the way we have proceeded so

1 far. So my intention would be to proceed contention by contention
2 and if there are contentions that Mr. Dennison does not have
3 questions on I think that would be fine.

4 MR. DENNISON: Your Honor, there is some difficulty
5 in following the format of the previous witnesses insofar as
6 FEMA starts off and they devote several pages to simply general
7 questions. They get into a contention and they have different
8 responses, that is, different responders to the same contention
9 rather than, you know, doing this click, click, click, I think
10 we can expedite matters simply those questions that I don't
11 ask pertaining to contentions I think is noted by the face of
12 the record itself.

13 Those that I do I will attempt to keep basically
14 chronological in the course of the contention sequence.

15 JUDGE FRYE: You are going to present the witnesses
16 as a panel, are you not?

17 MR. CASSIDY: That's correct, Your Honor.

18 JUDGE FRYE: Okay. Well, I think we will just go down
19 the testimony. I think it is organized somewhat differently than
20 the Applicant's testimony was, so I'm not sure it really lends
21 itself to the same sort of procedure we were using for the
22 Applicants.

23 As to the lunch, we do need to take about -- we are
24 going to need to take about an hour and a half, so let's take
25 a short recess now and then come back and go until, I would say,

4a:6

1 12:30.

2 MR. BARTH: Could we recess for lunch and do them both
3 right now? It would save us ten minutes.

4 JUDGE FRYE: It's up to the parties. If you don't
5 want to recess it doesn't matter.

6 MR. CASSIDY: I think the suggestion was for continuity
7 sake why don't we break for lunch now, then, if we're going to
8 do that, and we can have continuity on the basis of the testimony.

9 JUDGE FRYE: I think your continuity will be in the
10 record. Do you want to break now or not?

11 MR. CASSIDY: Yes.

12 (A brief recess was taken.)

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end 4a

1 JUDGE FRYE: Can we go back on the record, please?

2 I take it your witnesses are in the witness box,

3 Mr. Cassidy?

4 MR. CASSIDY: Yes, Your Honor, and they are ready

5 to be sworn.

6 Whereupon.

7 RICHARD W. MEYER

8 PALMER T. FROST

9 JOHN C. HEARD, JR.

10 and

11 BERNARD E. WILLIAMS

12 were called as witnesses on behalf of the Federal Emergency

13 Management Agency and, having been duly sworn by the

14 Chairman, were examined and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. CASSIDY:

17 Q Gentlemen, for the record, and starting from my
18 left to the right with Mr. Williams, will you please state
19 your name for the record?

20 A (Witness Williams) Bernard E. Williams.

21 Q And where are you employed, Mr. Williams?

22 A I work for the U.S. Department of Transportation,
23 Federal Highway Administration, in Columbus, Ohio.

24 Q And if I could ask you to keep your voice up,
25 please, and in what capacity are you employed, Mr. Williams?

1 A I am a highway engineer.

2 Q Mr. Frost, would you state your full name for the
3 record?

4 A (Witness Frost) The name is Palmer T. Frost,
5 Federal Emergency Management Agency, Federal Center, Battle
6 Creek, Michigan.

7 Q And what is your capacity with the Federal
8 Emergency Mangement Agency?

9 A Communications specialist.

10 Q Mr. Meyer, would you state your full name for the
11 record?

12 A (Witness Meyer) William Richard Meyer.

13 Q Where are you employed, Mr. Meyer?

14 A I am employed in Battle Creek, Michigan by the
15 Federal Emergency Management Agency, a management specialist.

16 Q Mr. Heard, would you please state your full name
17 for the record?

18 A (Witness Heard) John C. Heard, Jr.

19 Q Where are you employed, Mr. Heard?

20 A Federal Emergency Management Agency, Region IV,
21 Atlanta, Georgia.

22 Q In what capacity?

23 A I am chief of the Technological Hazards Branch.

24 Q Gentlemen, I would like to show you a document
25 captioned "Testimony of Richard W. Meyer, Palmer T. Frost,

1 and John C. Heard, Jr. of the Federal Emergency Management
2 Agency, and Bernard E. Williams of the Department of
3 Transportation, Federal Highway Administration."

4 Do you have copies of that document in front of
5 you, gentlemen?

6 A (Witness Williams) Yes.

7 A (Witness Meyer) Yes.

8 A (Witness Frost) Yes.

9 A (Witness Heard) Yes.

10 Q I would ask you to please take a look at that. Do
11 each of you recognize that document?

12 A (Witness Heard) Yes.

13 A (Witness Meyer) Yes.

14 A (Witness Frost) Yes.

15 A (Witness Williams) Yes.

16 Q And is that the testimony that each of you
17 prepared, in part, for the purpose of this hearing?

18 A (Witness Heard) Yes.

19 A (Witness Meyer) Yes.

20 A (Witness Frost) Yes.

21 A (Witness Williams) Yes.

22 Q Now, Mr. Heard, I would show you a document
23 captioned "Testimony of Richard W. Meyer, Palmer T. Frost,
24 and John C. Heard, Jr. of the Federal Emergency Management
25 Agency and Bernard E. Williams of the Department of

1 Transportation, Federal Highway Administration" and ask you
2 if you can identify that, please.

3 A (Witness Heard) Yes.

4 Q Is the second document a list of corrections to
5 the testimony that you previously identified?

6 A It is.

7 Q I would ask you to take a look at that document
8 that I have just handed you and you have just identified,
9 and does that consist of two pages?

10 A Yes.

11 Q And is that a list of technical changes to the
12 testimony, typographical errors, et cetera?

13 A Yes.

14 MR. CASSIDY: Your Honor, I have supplied the
15 Board a copy of the two-page document that was just
16 identified and all the parties have a copy of it, as well.

17 BY MR. CASSIDY: (resuming)

18 Q Mr. Meyer, I would direct your attention to page
19 10 of the testimony, the document that you first
20 identified. Could you take a look at page 10, please, Mr.
21 Meyer?

22 A (Witness Meyer) Yes.

23 Q In response to question 33 in the middle of that
24 page are there any corrections that you wish to make at this
25 time to the answer to that question?

1 A Yes.

2 Q And what is the correction that you would make to
3 that answer at this time?

4 A The answer to question 33, yes, period. Brown
5 County is located to the east of the ZPS. The arc of ten
6 miles -- a ten-mile radius, and insert the word "does not"
7 intersect Brown County, period.

8 Q You would wish to strike the rest of that sentence?

9 A I would strike the rest of that sentence and the
10 following sentence.

11 Q Okay. So your answer to that question now would
12 end after "intersects Brown County." Is that correct?

13 A Correct, "does not intersect Brown County."

14 Q "Does not intersect Brown County." What is the
15 basis for your correction to that answer at this point in
16 time?

17 A After talking to Mr. Williams of the Ohio Disaster
18 Services Agency and finding out that it was actually 672
19 feet beyond the ten miles and hearing Mr. Ficke's testimony
20 that it was 10.04 miles from the power plant, it's out of
21 the EPZ.

22 Q Did you also review a topographical map and
23 determine that the ten-mile radius, air miles, did not
24 intersect the Brown County line?

25 A Yes, I did.

1 Q And it's on the basis of those facts that you wish
2 to correct this testimony?

3 A Correct.

4 Q Thank you.

5 Mr. Heard, I would ask you to look at page 84 of
6 the prepared testimony in the document that you first
7 identified.

8 A (Witness Heard) I have it.

9 Q In the first paragraph on page 84, are there any
10 corrections that you wish to make to your testimony in that
11 paragraph?

12 A Yes.

13 Q And what is that correction, please?

14 A The last sentence, starting with the words "since
15 a large portion" and ending with page 3-6 should be deleted.

16 Q And what is the basis for you deleting that
17 portion of your testimony at this point?

18 A Well, the statement is partially incorrect and it
19 is not a requirement of 0654.

20 Q Are there any other corrections you wish to make
21 on that page?

22 A No.

23 Q And, Mr. Meyer, I would ask you to take a look at
24 the statement of qualifications.

25 A (Witness Meyer) Yes.

1 Q With regard to Richard W. Meyer, which appears
2 after Attachment 1, which is two pages -- for the
3 convenience of counsel and the Board, it's two pages -- and
4 after page 85 of the written testimony.

5 MR. DENNISON: I'm sorry, Mr. Cassidy?

6 MR. CASSIDY: The professional qualifications of
7 Richard W. Meyer, which -- yes.

8 WITNESS MEYER: It's a few pages farther than that.

9 BY MR. CASSIDY: (resuming)

10 Q Mr. Meyer, was there some material that was
11 inadvertently deleted with regard to your educational
12 experience?

13 A (Witness Meyer) Yes, there was.

14 Q Are there a list of courses you have taken that
15 was inadvertently deleted from that?

16 A Yes.

17 Q Do you have a copy of that list with you now?

18 A Yes.

19 Q Could you please read that for the record to
20 complete your professional qualifications in this matter?

21 A I'll read the courses first: The Red Cross
22 National Disaster Course, First National Representative on
23 the Scene; Red Cross National Disaster Course, Disaster Case
24 Work; Red Cross National Disaster Course, Disaster
25 Administration; Red Cross National Disaster Course,

1 Disaster-Mass Care; Red Cross National Disaster Course,
2 Administrative Supervisory Course; Red Cross National
3 Course, Principles of American Red Cross Social Welfare; Red
4 Cross National Course, Working with Volunteers.

5 I'm just bringing the courses that are relevant to
6 disaster. The Office of Civil Defense National Training
7 Course, Industrial Civil Defense Management; Office of Civil
8 Defense National Training Course, Civil Defense Planning and
9 Operations. There was a course 1 and a course 2. I
10 attended both.

11 Office of Civil Defense National Training Course,
12 Community Sheltered Planning for Planners; another Red Cross
13 National Course working creatively with groups in the
14 community; Office of Civil Defense Correspondence Course,
15 Civil Defense USA. I also attended a Radiological Emergency
16 Planning course in Emmettsburg, Maryland.

17 Just one second.

18 Q Certainly.

19 A I took the Career Development Course sponsored by
20 the Office of Civil Defense. It amounted to four phases
21 plus a seminar. Each phase was two weeks in length, plus
22 the seminar. I took all of those courses.

23 Also, in addition to my list of disasters of 33
24 that I -- go ahead. I'm sorry.

25 Q That completes the list of courses and all those

1 courses are related to emergency --

2 A Disaster work.

3 Q Fine. Do you also belong to any professional
4 associations?

5 A Yes, I do. I'm a member of the American Society
6 for Professional Planners.

7 Q Thank you, Mr. Meyer.

8 MR. CASSIDY: Your Honor, at this time I would
9 move to introduce the testimony and the two-pages of
10 corrections that have been identified by the witness as FEMA
11 Exhibit 1.

12 MR. DENNISON: Your Honor, before doing that,
13 could I request voir dire?

14 JUDGE FRYE: Yes.

15 VOIR DIRE EXAMINATION

16 BY MR. DENNISON:

17 Q Mr. Williams, from the standpoint of your
18 employment with the Department of Transportation, have you
19 been advised or are you aware of the responsibilities that
20 would be imposed upon FEMA in the review and analysis of
21 plans as they would be reflected in 44 Code of Federal
22 Regulations, Part 350?

23 A (Witness Williams) Briefly I have, yes.

24 Q Okay. In that briefness has there been any
25 extensive explanation to you of the role -- duty, if you

1 will -- of FEMA which has been imposed by 44, Part 350 of
2 the Code of Federal Regulations?

3 A No.

4 Q Now is your sole purpose here from the expertise
5 of a traffic engineer merely to make commentary based upon
6 your expertise as to roads, roadway capacities -- things of
7 that nature -- as opposed to the planning basis or the
8 planning concept as those planning bases and concepts would
9 be subject to review under the criterion set forth in 44
10 Code of Federal Regulations, Part 350, and such critiques,
11 criterion being imposed as a responsibility upon FEMA staff?

12 A I reviewed the plans as a highway engineer and
13 with my familiarity with NUREG-0654.

14 Q All right. Prior to your testimony did you
15 participate in any critiquing of time estimate studies,
16 circumstances of highways within the planning zones?

17 A Are you asking specifically about Zimmer?

18 Q About Zimmer, yes.

19 A No.

20 Q Would it be your understanding, Mr. Williams, that
21 FEMA staff have previously given some position as to the
22 significance -- not the significance, the degree as being
23 satisfactory or unsatisfactory of the roadway capacities as
24 reflected in the Stone and Williams -- or, pardon me, Stone
25 and Webster evacuation time study?

1 MR. CASSIDY: Your Honor, I would object at this
2 point. I believe these are proper questions for cross
3 examination, but we're on voir dire, is my understanding, as
4 to his qualifications and the purpose for which he is being
5 offered. I think these may be proper for cross but not for
6 voir dire.

7 JUDGE FRYE: Yes, I am inclined to agree that this
8 is more appropriate to cross.

9 BY MR. DENNISON: (resuming)

10 Q Mr. Heard?

11 A (Witness Heard) Yes, sir.

12 Q I note in your qualifications that you had
13 completed a United States Department of Agriculture
14 Radiological Monitors course, February 1961. During the
15 course study was there any involvement by way of training as
16 to livestock as opposed to just simply monitor training?

17 A Very briefly, the course was conducted -- among
18 the instructors for the course was a veterinarian from the
19 U.S. Department of Agriculture. There were some discussions
20 relative to monitoring livestock. It was more -- the course
21 itself was designed specifically to train U.S. Department of
22 Agriculture personnel to be radiological monitors, but there
23 was some -- it alluded to monitoring of livestock, yes, sir.

24 Q All right. Did this monitoring limit itself
25 simply to animal milk?

1 A No, sir.

2 Q It was the monitoring of all livestock production
3 destined for human consumption, whether it be as meat, egg
4 or milk product?

5 A It was more designed for field monitoring of
6 radioactive contaminants in the atmosphere. It was not
7 designed specifically for livestock or as opposed to water
8 or air.

9 Q As a part of your course of study were you
10 involved at all in the different modes of livestock
11 production, what we used to call animal husbandry and we now
12 call animal science?

13 A No, sir.

14 Q Now what I would like to do is proceed, basically,
15 with Mr. Frost, you, Mr. Heard, and Mr. Williams on just
16 questions directed to you.

17 MR. CASSIDY: May I inquire if we are still on
18 voir dire?

19 MR. DENNISON: We're still on voir dire.

20 BY MR. DENNISON: (resuming)

21 Q Now from the standpoint of your background, do
22 each of you feel qualified in that you possess an expertise
23 in the findings and determinations of state and local plans
24 for nuclear-related emergencies as to whether those plans
25 are adequate and capable of being implemented?

1 MR. CASSIDY: Your Honor, I would object to the
2 question in that form. The various witnesses, as is clear
3 from the written testimony, are being offered for various
4 purposes. As Mr. Dennison already elicited, Mr. Williams,
5 for example, is responding specifically to those contentions
6 dealing with roadways and road capacity based on his
7 expertise as a highway engineer; Mr. Frost, with regard to
8 those questions on communications within the Ohio-Clermont
9 County plans.

10 I don't object to the line of questioning if he
11 breaks them down because I think to ask a general question
12 like that makes it very difficult to respond.

13 MR. DENNISON: Agreed.

14 BY MR. DENNISON: (resuming)

15 Q As I would understand it, Mr. Frost, you are
16 present here from the standpoint of your knowledge within
17 communication systems, correct?

18 A (Witness Frost) That's correct.

19 Q You, Mr. Meyer, would be offered from the
20 standpoint of the Ohio planning, that being in Region V, is
21 that correct?

22 A (Witness Meyer) Yes.

23 Q And, Mr. Heard, I assume that you would be here
24 from the standpoint of Kentucky planning as it would involve
25 Campbell, Pendleton, Bracken Counties and the State of

1 Kentucky related to emergency planning for the Zimmer
2 station?

3 A (Witness Heard) That is correct.

4 Q With the understanding of each of your respective
5 approaches to this planning, my question is: Irrespective
6 of your circumstance as to whether you are reviewing
7 Ohio-Kentucky plans or communication factors, do each of you
8 bring to us an expertise as to findings and determinations
9 concerning these respective state and local plans, as to
10 them being adequate and capable of being implemented?

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MR. CASSIDY: Your Honor, I would object to the question for several reasons. One, I believe it is beyond the scope of voir dire, and that it asks an ultimate question that is up to the Board to determine as far as their expertise.

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Secondly, I would like to point out, as Mr. McKenna had indicated in his testimony and as has been stated to the Board previously, and specifically yesterday morning, the role that FEMA plays in the review of these plans. It is FEMA's role to review the plans, and to make such findings and conclusions of adequacy, as Mr. Dennison has stated, once the final plans have been proffered to FEMA.

14

As has been stated throughout the testimony, those plans have not been proffered to FEMA for final review and analysis as of yet, and that the plans -- Kentucky's General Buntin has indicated in his testimony that they may be submitted in May or June of this year, and I do not recall that the Ohio panel indicated a date that they may submit the plans.

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The purpose of these witnesses being here is not to determine at this stage the adequacy of these plans, since they don't have the final plans before them. The purpose of their testimony is to specifically address the contentions that are raised with regard to the interim plans

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1 that are before this Board.

2 And again, as far as any determination of
3 their expert qualifications, that is certainly for the Board
4 to determine based on a number of factors and really asks an
5 ultimate question with regard to an ultimate fact and with
6 regard to the weight of the testimony that the Board may
7 give to their testimony, regardless of what their opinions
8 are or of their own expertise. I suspect their answer to
9 the question would be: Yes, they are all qualified in
10 their various disciplines. But I would suggest that that is
11 for the Board to determine after the testimony has been
12 presented.

13 MR. DENNISON: Your Honor, if I could respond?
14 Specifically from the standpoint of the comments of
15 Mr. Cassidy, I think we have come to the very heart of
16 these witnesses' testimony in the area of voir dire as to
17 whether or not they should be permitted to testify from the
18 standpoint that unless -- and this is what the voir dire was
19 being directed to -- they are in a position to inform us in
20 the course of their testimony, and at this instance the
21 qualifications to so advise, that it has been upon their
22 findings and determination that these plans are adequate and
23 capable of being implemented, that there has been a finding
24 and determination with respect to the adequacy of the plans
25 and their capabilities of the state and local governments to

1 effectively implement those plans; and also, that these
2 individuals have evaluated and assessed, from the standpoint
3 of findings and determination of these plans as to their
4 adequacy and capabilities; if that is not the case, then
5 I would seek to simply strike the testimony and the panel
6 from the standpoint that the contentions all address
7 themselves to the adequacy of the plans and their
8 capabilities to be implemented.

9 And that is why I have started at this juncture
10 of voir dire to find out whether we are applying the
11 criterion of 44 Code of Federal Regulations Part 350, which
12 lays all of this out; or whether that is something for the
13 future for which these contentions can never reach. And if
14 we can never reach them, this hearing is indeed premature.

15 MR. WETTERHAHN: Mr. Chairman, may I be heard?

16 JUDGE FRYE: Yes.

17 MR. WETTERHAHN: The question as to the general
18 adequacy of the plans and the decision of FEMA and the NRC
19 with regard to them is beyond the scope of the jurisdiction
20 of this Licensing Board at the operating license stage.

21 That decision, as we have heard before, is to
22 be made after these plans are formalized, sent to the
23 Governor, and following specific procedures. This Board
24 has been constituted at the operating license stage to
25 decide the contested issues.

1 These witnesses have addressed these issues
2 in their testimony. Therefore, they are perfectly qualified
3 to address the specific issues. We all recognize that the
4 findings of the adequacy of the plan is to be made at a
5 later point, and the decision as to the ultimate adequacy
6 is to be made by the NRC based upon FEMA findings. That
7 decision is being made by the Staff based upon all the
8 evidence.

9 MR. BARTH: Your Honor?

10 JUDGE FRYE: Is it your position,
11 Mr. Wetterhahn, that if we were to determine that these
12 plans are inadequate it would have no influence upon the
13 issuance of an operating license?

14 MR. WETTERHAHN: Sir, certainly not. The
15 only place, or the only sections that the Board could make
16 findings on would be on the contested issues.

17 JUDGE FRYE: On the contested issues; yes.
18 That is what I am speaking to. I am not speaking to any
19 sort of a general finding outside of the contested issues.

20 MR. WETTERHAHN: Well, if I denied this Board
21 had the jurisdiction to make the Power -- I would question
22 why we were sitting here all last week.

23 JUDGE FRYE: Yes. I would, too.

24 MR. WETTERHAHN: But the general matter of
25 the adequacy of the plans is one for the Staff to make upon

1 consideration of the formal FEMA findings. We don't have
2 those --

3 JUDGE FRYE: Outside the scope of the
4 contentions.

5 MR. WETTERHAHN: That's correct.

6 JUDGE FRYE: Mr. Barth?

7 MR. BARTH: The Staff fully concurs with the
8 statement of Mr. Wetterhahn as representing what the law
9 is, and fully concurs with the Board's comments thereon,
10 your Honor.

11 We have an objection to Mr. Dennison's line
12 of questioning and what his purpose was, and both the Board
13 and Mr. Wetterhahn well understand that and have addressed
14 it. So we have nothing to add to the dialogue between
15 Mr. Wetterhahn and the Board, your Honor.

16 (Board conferring.)

17 JUDGE FRYE: Mr. Dennison, I think that this
18 objection and the responses to it raise some fairly sensitive
19 issues.

20 I think, after having conferred, the Board
21 would prefer to have you go ahead with your cross and voir
22 dire, but I think what we would like to do is have them
23 combined, if the parties don't object. You can go through
24 your voir dire, pick up your cross, and when we are all
25 through with it, if you think that there are grounds there

1 are grounds to strike the testimony, we will entertain a
2 motion at that time.

3 MR. DENNISON: Thank you, your Honor.

4 MR. CASSIDY: If I may, your Honor, I am not
5 quite sure I understand what the Board is saying. Are you --

6 JUDGE FRYE: Basically I think what I am doing
7 at this point is saying that we want to hear the answers to
8 his questions that he has posed, but we think that there is
9 probably a fine line here between whether it goes to the
10 weight or whether it goes to admissability. I think it
11 would be much easier, if there is going to be a question as
12 to admissability, to address it at the end rather than at
13 the beginning.

14 MR. CASSIDY: I think I'm with you there. So
15 in other words, just so I'm clear on the process, I assume
16 there may be other parties who have voir dire. And then if
17 not, I would introduce the written testimony and ask that it
18 be bound and placed in the record as if written, and then
19 Mr. Dennison will cross and have an opportunity to voir dire
20 on specific contentions? Is that correct?

21 JUDGE FRYE: Well, to get into his cross,
22 obviously. Then when he is through with his cross, if he
23 wants to strike, we would entertain a motion at that time.
24 But we would accept the testimony right now.

25 MR. CASSIDY: The question has just been raised

1 as to for what purpose are you accepting the testimony at
2 this time? I am just confused as far as the procedure that
3 the Board has outlined at this point. It is somewhat unique
4 to this proceeding, and I just want to be clear and have the
5 record clear on how we are proceeding.

6 JUDGE FRYE: We are simply deferring any
7 question as to admissability of the evidence until the end
8 of the cross-examination.

9 MR. DENNISON: Your Honor, if I could? It
10 would be my understanding -- which is not an uncommon
11 practice in litigation -- to proceed provisionally with the
12 testimony. If during the course of the examination it is
13 discovered that that testimony has no foundation, then it is
14 subject to being stricken at its conclusion. It would be my
15 understanding that that is what the Board is now doing.

16 JUDGE FRYE: That is what I had in mind.

17 MR. BARTH: Your Honor, I would like to speak
18 for the Staff. Why is this testimony any different than the
19 other testimony? We have testimony here by Mr. Dennison and,
20 if nothing else, he is foreclosed from challenging the
21 admissability of the testimony and the issue being raised
22 except beyond qualifications. He has filed his own.

23 He did, your honor.

24 JUDGE FRYE: I am not following you. That is
25 why I looked puzzled. I am not following your point.

1 MR. BARTH: He has filed testimony on a
2 contention without any kind of problem. This is no different
3 than his testimony, your Honor. He is estopped from raising
4 any kind of issue outside of the issues that he has raised
5 himself. He cannot say: My testimony can get admitted, but
6 somebody else's can't, except for qualifications.

7 The issue before us --

8 JUDGE FRYE: Okay, I agree with you. I agree
9 with you. I am not arguing with that.

10 MR. BARTH: Let's go to the second step.
11 Everybody else has filed testimony. Why is this testimony
12 any different than any other? We are tremendously bothered
13 by saying that if you raise in voir dire the issue of
14 qualifications, and you do not rule on the qualifications
15 but do not admit the testimony in evidence.

16 MR. DENNISON: May I respond?

17 JUDGE FRYE: Yes.

18 MR. DENNISON: The simple state of the matter
19 is that these gentlemen present themselves as automatic
20 experts by virtue of their governmental employment.
21 Therefore, from the standpoint of, except in sensitive areas
22 which require another expertise such as Mr. Williams and his
23 traffic engineering expertise, these gentlemen are being
24 offered with the obligation and responsibility of a series
25 of regulations which have been imposed upon them. Thus, if

1 they have complied with the regulations from the standpoint
2 that they had made findings, they have made determinations
3 as to the adequacy, the capabilities of implementation and
4 so forth and so on, then certainly their testimony ought to
5 be received.

6 However, if we come to find, as we have so
7 often found in the course of this proceeding, "I don't know,"
8 "I didn't look," "that's beside my knowledge," and so forth,
9 then they have not discharged the responsibility imposed
10 upon them by regulation and their testimony would thereby
11 be stricken.

12 I want to hear from them, as well as everybody
13 else. However, I don't want to get into a circumstance again
14 that these gentlemen are premature in their testimony simply
15 because they do not have foundations for it.

16 That is the reason that I started voir dire,
17 and that is the reason we have come to this point.

18 MR. BARTH: Your Honor, may I --

19 JUDGE FRYE: That was what I thought you were
20 doing, and that is why I thought it would be better to get
21 the testimony in, and the cross, before we addressed the
22 question of its admissability.

23 MR. BARTH: Your Honor, may I address that
24 very briefly? These people are being brought in by my
25 Agency as experts addressing the contentions by Mr. Dennison

1 relating to the Zimmer Emergency Plan. They have no
2 function here in regard to FEMA's relationship with the
3 Nuclear Regulatory Commission, subject to the memorandum
4 of understanding between these two agencies, as to the
5 ultimate findings of acceptability of radiological
6 emergency response plans.

7 As pointed out by Mr. Wetterhahn, those plans
8 and their acceptability is not here in issue; only these
9 contentions. These people were brought in as experts to
10 address the contentions. The only matter before this Board
11 at the moment is: Are these people qualified, or not
12 qualified, to give that kind of testimony. Not the plans,
13 your Honor. Not the relationship between FEMA and the NRC.

14 JUDGE FRYE: How can you separate these
15 contentions from the plans?

16 MR. BARTH: Very easily, your Honor. You did
17 that yourself when you admitted them. They raised specific
18 aspects of the plans.

19 JUDGE FRYE: All right. I will ask you the
20 same question I asked Mr. Wetterhahn: If we think that any or
21 all of these contentions are well taken, what effect does
22 than have on the plans?

23 MR. BARTH: Would the Reporter read that back
24 so that I may be very careful with the answer?

25 (The Reporter read the record as requested.)

1 MR. BARTH: Your Honor, the Licensing Board
2 has the authority and the jurisdiction to find that the
3 Intervenor is well taken and the plans are defective in the
4 specifics that are before the Board. You have that
5 jurisdiction and authority. There's no question about that.

6 And you also have the authority, going
7 further, to recommend that the Director of Nuclear Reactor
8 Regulation not issue a license until those defects that
9 you have found are recorrected.

10 JUDGE FRYE: "Recommend"?

11 MR. BARTH: Yes, your Honor.

12 JUDGE FRYE: What would happen if we said,
13 because we found one or more of the contentions were well
14 taken, that we would not authorize him to issue a license?

15 MR. BARTH: There may be a difference between
16 the word "authorize" and "recommend." I believe your Honor
17 has more correctly used the language. The license would not
18 be issued.

19 JUDGE FRYE: That's what I thought. I wanted
20 to be sure we are operating under the same --

21 MR. BARTH: Yes, we are, in regard to those
22 contentions; not in regard to the overall plan.

23 JUDGE FRYE: No, we're not trying to get into
24 the overall plans. We are focusing strictly on the
25 contentions. But I don't think that you can say that the

1 contentions are totally separated from the plan. If we
2 found that the contention was well taken, that automatically
3 seems to me to mean that the plan is inadequate and that
4 the license cannot issue.

5 MR. BARTH: The last statement of your Honor
6 I fully concur with. But the issue raised by Mr. Dennison
7 was the overall acceptability of the plans. That is not --
8 as he pointed out, in regard to 44 CFR Part 350, in regard
9 to the relationship between my agency regarding the FEMA
10 findings that the plans are acceptable or not -- that is not
11 in issue here; only these contentions.

12 But the last statement of your Honor, I have
13 thought of that very carefully and I think you are fully
14 correct that should you find that there is substantial
15 probative and reliable evidence to support the proposition
16 that one of these contentions is valid, it follows therefore
17 that the plan was defective and you are fully authorized
18 by the Agency's regulations to make a determination not
19 authorizing the issuance of a license until this matter is
20 remedied.

21 JUDGE FRYE: Let me pursue that with you a
22 little farther. How would the defect be remedied?

23 MR. BARTH: Let us assume, your Honor -- of
24 course the answer is, that's a matter for the local
25 planners, but --

1 JUDGE FRYE: Well, I am talking about the
2 procedural aspects. Obviously the local planners are the
3 ones who have to deal with the plan.

4 MR. BARTH: Well, I think that procedurally
5 this would follow of course your writing of an initial
6 decision, which of course is subject to review. But putting
7 that all aside, and assuming you were sustained, I think
8 that procedurally that matter is remedied and a hearing
9 would then be reconvened on that individual matter.

10 JUDGE FRYE: To demonstrate that the defect
11 had then been cured, and that the plan was then adequate.

12 MR. BARTH: Yes. Now I bite at something I
13 tell all my witnesses and all lawyers never do, I'll make
14 an analogy.

15 (Laughter.)

16 MR. BARTH: Let us assume, your Honor, that
17 you found that one more fireman was needed at a fire station.
18 You issue an initial decision not authorizing the license.
19 The matter goes to appeal. You are sustained. And then
20 the local planners and everybody has to sit down: Can we
21 find another local fireman or not? If they could never find
22 another local fireman -- assuming the Board is upheld on
23 appeal -- there will never be a license issued for Zimmer.
24 There's no question about that.

25 But then on the other hand, procedurally the

1 local planners find this other fireman. It's all explained
2 and things are done. We would reconvene a hearing to find:
3 Has the defect found by the Licensing Board, which has been
4 sustained on appeal to the Commission, been remedied?

5 And at that point, we would again go through
6 proposed findings, and an initial decision by this Board,
7 and you would then authorize the issuance of a license.

8 On the other hand, there is another matter
9 which was done earlier, with the Federal Water Pollution
10 Control Act Amendments. You could issue an initial decision
11 which would state that you find there was substantial,
12 probative, reliable evidence that one more fireman is needed,
13 and upon the local plan being revised to provide for that
14 additional fireman, a license may be issued forthwith. This
15 is often done -- not in this kind of area because we haven't
16 fully -- but it's often done in the safety area, and it was
17 earlier done in the Federal Water Pollution Control Act
18 Amendments, in which discharge limits were in the initial
19 decision, and when the power company adequately demonstrated
20 that it could reduce the discharge of residual chlorine to
21 .2ppm, that the license could be issued.

22 This kind of condition "to be satisfied in
23 the future" also has been in previous Licensing Board orders.

24 MR. WETTERHAHN: May I --

25 JUDGE FRYE: I recognize that. I think the

1 Board is in basic agreement with your discussion of the
2 situation.

3 MR. WETTERHAHN: May I bring two facts to
4 the attention of the Board? I think we are treating this as
5 a case of first impression, which it is not. Other
6 Licensing Boards have proceeded without formal FEMA findings.
7 I am not aware of a case where formal FEMA findings were in
8 place prior to the consideration by a Licensing Board of
9 the issues before it.

10 If I understand what the Board was suggesting
11 as a possible alternative, if we wait until we get formal
12 FEMA findings before we proceed on these contentions, we are
13 in the situation we were yesterday as explained by
14 Mr. Conner. We will have this Board delaying this license
15 by days, weeks, or months.

16 JUDGE FRYE: Well, we did not suggest that at
17 any time, to my recollection.

18 Mr. Dennison, does that discussion clarify the
19 matter? Or do you want to -- I think you may be in
20 essence raising a legal proposition here that we cannot
21 proceed without formal FEMA findings. Am I correct in
22 that?

23 MR. DENNISON: Not necessarily that, your
24 Honor. All I am raising at this juncture is the admiss-
25 ability of the evidence based upon its weight. Whether this

1 Board needs its testimony or does not need the testimony is
2 something that the Board will weigh in its ultimate
3 findings. The only thing that I have ever talked about was
4 the circumstances of these four witnesses, as I think we
5 will come to find as we commence the examination, whether or
6 not they do have foundations for some of their conclusions.

7 JUDGE FRYE: Fine.

8 MR. DENNISON: That's the heart of it.

9 MR. CASSIDY: Your Honor, now that we have a clear
10 understanding of the Staff's position, the Applicant's
11 position, and Mr. Dennison's position, we are still left
12 with my problem, which is, given the state of affairs that
13 everybody has agreed as to how to proceed on the substantive
14 points, if you will, with regard to the requirements of FEMA
15 findings, et cetera, we are still left with the problem of,
16 based on all that discussion there is no reason to treat
17 these witnesses any different from anyone else.

18 The rules of evidence provide that counsel has an
19 opportunity to voir dire the witnesses with regard to their
20 qualifications.

21 JUDGE FRYE: Okay, we'll do it your way, then.

22 Mr. Dennison, do you want to proceed with your
23 voir dire and we will overrule the objection that you made
24 initially.

25 MR. DENNISON: Thank you, Your Honor.

1 MR. CASSIDY: I'm not sure there was an objection,
2 Your Honor.

3 JUDGE FRYE: Yes, there was.

4 BY MR. DENNISON: (resuming)

5 Q Mr. Meyer, in the preparation of your testimony
6 and in response to the questions which will be subsequently
7 put to you have you previously made a finding and a
8 determination as it relates to the respective contentions as
9 to whether the State and local plans, in this instance Ohio,
10 are adequate and capable of being implemented?

11 MR. CASSIDY: Objection, Your Honor. We are now
12 going into the weight of the evidence. We are going into
13 the substance of the evidence of what Mr. Meyer considered
14 behind his testimony.

15 JUDGE FRYE: I'm going to overrule it.

16 MR. CASSIDY: May I have grounds for that, Your
17 Honor, because the issue on voir dire is whether or not
18 these persons are qualified to render expert opinion. That
19 is what they are being offered for in their various
20 disciplines.

21 Mr. Dennison is going to admissability. There is
22 an appropriate time and place for that. The juncture we are
23 at is whether or not the individuals are qualified as
24 experts, period. Mr. Dennison is allowed to go into their
25 education, training, all those elements that a court uses to

1 determine whether or not a person is an expert. Hence, he
2 may inquire as to their educational background, their work
3 experience, et cetera.

4 The area that he is going into is an issue not of
5 their qualifications but what weight the Board should give
6 to the evidence.

7 JUDGE FRYE: He is going to the foundation for
8 their testimony as we have discussed earlier. Since you
9 wanted to approach it in this way we're going to let him
10 answer those questions. Overruled.

11 MR. CASSIDY: Your Honor, that has nothing to do
12 with the qualifications. I just wanted to make that on the
13 record, Your Honor.

14 JUDGE FRYE: Overruled. Overruled.

15 BY MR. DENNISON: (resuming)

16 Q Mr. Meyer, do you recall the question? Maybe I
17 had better restate it.

18 A (Witness Meyer) Would you please?

19 Q The question, Mr. Meyer, when you reviewed the
20 contentions of this Intervenor and in the preparation of
21 your testimony in its written form and your preparation to
22 respond to questions which will be subsequently put to you,
23 had you, prior to that time and prior to now, made findings
24 and determinations as to whether the State of Ohio and the
25 Clermont County plans, as it relates to those identified

1 contentions, are adequate and capable of being implemented?

2 MR. CASSIDY: Objection.

3 MR. BARTH: The Staff joins in the objection, Your
4 Honor. This does not go to the qualifications.

5 JUDGE FRYE: I overruled that before and I am
6 going to overrule it again.

7 BY MR. DENNISON: (resuming)

8 Q Can you respond, Mr. Meyer?

9 A (Witness Meyer) Let me get this right. When I
10 reviewed the plan with the specific contentions before me,
11 is that right?

12 Q That is correct. That is a part of it.

13 A Would you repeat the question once more? I'm
14 sorry.

15 Q Let me perhaps put it this way, Mr. Meyer. In the
16 evaluation assessment review leading to approval or
17 disapproval, it is necessary that one have a certain degree
18 of factual basis to be juxtaposed or placed side-by-side
19 with a written document and the realities of that written
20 document from the standpoint of is there people to do this,
21 are they there, how are they there, where are they -- these
22 sorts of things -- which lead to findings and determinations
23 as to the adequacy and capability of implementing a plan.

24 That is my question. Did you obtain factual
25 backgrounds and frameworks for your analysis in assessing of

1 the plans as they relate to the contentions?

2 MR. CASSIDY: Your Honor, I would respectfully
3 object that this is beyond voir dire.

4 MR. BARTH: The Staff joins in the objection, Your
5 Honor.

6 JUDGE FRYE: It's overruled again.

7 WITNESS MEYER: In most cases I had the plan and
8 the 0654, which is the criteria against the plan. Where I
9 couldn't -- where things were not specific in the plan, I
10 made some contacts to get additional information so I could
11 make an intelligent decision.

12 BY MR. DENNISON: (resuming)

13 Q Now in those circumstances where you made the
14 comparison leading from the contention to the plan and to
15 0654, you found that the written statement in the plan
16 related identical to 0654 provisions. Did you go any
17 further to find out whether that plan, in its writing, had
18 the means and manners of implementing and being capable of
19 doing what it said it was doing?

20 MR. CASSIDY: Your Honor, again I respectfully
21 object on the grounds of this being beyond the scope of voir
22 dire.

23 JUDGE FRYE: Your objection has been noted and is
24 going to be overruled again.

25 MR. BARTH: Staff joins in the objection, Your

1 Honor.

2 JUDGE FRYE: I understand that.

3 WITNESS MEYER: I lost the train of thought.

4 BY MR. DENNISON: (resuming)

5 Q I know, Mr. Meyer, this is getting a bit
6 difficult, not between you and me but simply because we have
7 something that intervenes each time.

8 MR. BARTH: I object to the personal remarks of
9 counsel, Your Honor.

10 JUDGE FRYE: I think the remarks of counsel are
11 well taken.

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1 BY MR. DENNISON:

2 Q My question, Mr. Meyer, was, you're given a conten-
3 tion, we'll call that A, and it says the plan is not capable
4 of being implemented. You took a look at the plan, and the plan
5 says thus and such will occur, and this is the way it will be
6 done, and then you went over, as I understand it, and checked
7 with 0654 and said that that is required.

8 Did you go the next step and find out if there
9 were personnel, if there was equipment, if there was training
10 and other things present in the county or in the state for which
11 they could do what they claimed they were going to do?

12 MR. CASSIDY: Respectfully, I object on the ground
13 of being beyond voir dire.

14 MR. BARTH: The Staff would join.

15 JUDGE FRYE: Overruled.

16 WITNESS MEYER: Not necessarily, because those
17 would be contained in SOPs.

18 BY MR. DENNISON:

19 Q Now, not having a factual background or basis in
20 these areas that you have just identified for us, you would
21 have no ability to assess whether personnel, systems, circum-
22 stances were capable of being implemented, and therefore being
23 in a situation of carrying forth the claimed standard of the
24 plan?

25 MR. CASSIDY: I object to being beyond voir dire.

1 MR. BARTH: The Staff joins in the objection, your
2 Honor.

3 JUDGE FRYE: It's overruled.

4 WITNESS MEYER: Would you repeat it once more, Mr.
5 Dennison?

6 MR. DENNISON: If I could, your Honor, I'll recognize
7 the objection noted, and ask the question.

8 BY MR. DENNISON:

9 Q Mr. Meyer, in assessing the contenticn as it
10 related to the plan and the planned 0654, where you did no
11 other investigation to determine whether or not there was a
12 basis by way of personnel, systems, things of this nature, to
13 carry forth that plan as claimed, were you able in your
14 assessment to look to any factual basis, as to whether or not
15 the wherewithal was present or absent to carry forth the plan?

16 MR. CASSIDY: Again, objection; beyond the scope of
17 voir dire.

18 MR. BARTH: The Staff joins in the objection, your
19 Honor.

20 JUDGE FRYE: We note you have a continuing objection.
21 Do you feel it's necessary to jump up each time
22 it comes up?

23 MR. CASSIDY: The questions have been different. At
24 some point Mr. Dennison may ask an appropriate question for
25 voir dire, and I may not have any objection.

1 JUDGE FRYE: That's up to you. Overruled.

2 BY MR. DENNISON:

3 Q You were starting to respond, Mr. Meyer.

4 A (Witness Meyer) In most instances, I was able to
5 -- a plan is a general plan. An SOP is a specific. For
6 example -- and I should not use comparisons -- police departments
7 have a broad -- they protect the people. They have specific
8 SOPs on how they protect the people, but I don't go down to the
9 police department specifics.

10 You know, I assume they know what their job is.

11 Q Okay. Now there is a contention which relates
12 to the prompt communication among principal response organizations
13 to emergency personnel and to the public. Using that
14 illustratively only, and recognizing that there is a contention
15 dealing with the telephone systems going to school districts,
16 and from school districts to bus drivers, did you make any
17 independent finding and determining as to the capabilities
18 of that phone system and other matters as it would influence
19 the adequateness and the capability of implementing that portion
20 of the plan where the plan says the bus driver -- rather, that
21 the schools will be notified by phone and it parallels
22 satisfactory as written to NUREG 0654?

23 MR. CASSIDY: Your Honor, I would object. May
24 counsel approach the bench for a moment, all counsel?

25 (Bench conference, off the record.)

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JUDGE FRYE: Okay, we are back on the record.

BY MR. DENNISON:

Q Mr. Meyer, from the standpoint of your background before your present employment, as I would understand your background, it was -- at least as it would relate to planning and disasters, was related to employment or association with the American Red Cross?

A (Witness Meyer) That's correct.

Q And if I understand it correctly, this was basically in the areas of the states of Kansas, Oklahoma and Texas?

A That's correct.

Q You had indicated that you had participated on the scene at 33 disasters?

A That's correct.

Q Those, I assume, were in the three states identified?

A No.

Q Okay, what states?

A United States of America.

Q Any state where there was a disaster?

A (Witness nodding affirmatively.)

Q Of these 33, were any of them dealing with the release of a chemical or anything else which would have an untoward health effect?

A Yes.

1 Q In how many of the 33 would you have been so involved?

2 A Would you just wait one second?

3 Q And we can deal, Mr. Meyer, in approximates as well.

4 A Actually the one disaster that I participated in was
5 the chlorine barge incident of 1972 in Louisville, Kentucky, and
6 at that time I was not with the Red Cross at that time, I was
7 with the Office of Civil Defense.

8 Q And other than that one, was there another one in
9 which there would be a chemical release in which there would be
10 an inhalation problem to the public, or threat to the public?

11 A We had a threat to the public not long ago in
12 Terre Haute, Indiana, and actually the local Civil Defense
13 director happens to be an excellent man, and he evacuated a
14 portion of the town where this railroad car turned over, and
15 as soon as everything was safe for the people to go back, he
16 put them back. But this was strictly by phone, I wasn't
17 actively participating there.

18 Q Were there any of the 33 disasters which involved
19 radiation?

20 A No.

21 Q In any of the 33 disasters, were you present before
22 or at the time of the event which caused the disaster?

23 A Yes.

24 Q And what sort of events or event was this, or were
25 they?

1 A Hurricanes.

2 Q Hurricanes?

3 A Hurricanes.

4 Q And in the hurricane circumstances, had there been
5 any type of preplanning or any sort of protective action to be
6 taken?

7 A Yes.

8 Q And that was common in each instance?

9 A Well, we had hurricane watch plans throughout the
10 whole coast of Texas. That was one of the states I was responsible
11 for, but we did have a complete hurricane watch which became
12 invoked when the weather service informed us that the hurricane
13 was coming in, and then we stationed people down in the areas.

14 Q And these people that were stationed in the areas,
15 were they stationed there as some sort of an alert observer?

16 A They were there to organize all the Red Cross
17 chapters and make sure they were thoroughly prepared for whatever
18 came in, because when you have hurricanes, you get spin-offs
19 which are tornadoes which make them even much, much worse than
20 normal.

21 Q Okay. Now the Red Cross function in those circum-
22 stances, was this a function of preparedness for the reception
23 of evacuees from a disaster area?

24 A Yes.

25 Q Okay. It had nothing to do with the preparation

1 for the purposes of protecting the public as to safeguards
2 that that public should take before and after the disaster as
3 opposed to making ready reception sites for the --

4 A Correct. The other was governmental.

5 Q Did you have any of these experiences in which you
6 were involved in the before-disaster as opposed to the Red
7 Cross-related assistance of persons involved in the disaster
8 afterward?

9 A Would you clarify that a little bit more? I don't
10 understand the question.

11 Q Okay. If I could use this sort of analogy. From
12 the standpoint of emergency planning for a nuclear reactor,
13 you have really got what we might call two phases.

14 One is the preparedness for the people, let's say,
15 in the 10-mile area to take protection action under certain
16 circumstances.

17 Then you've got a second phase which is your reloca-
18 tion centers, and the Red Cross and people coming in to care for
19 these people from the first phase who are now evacuated to the
20 second phase.

21 Using that sort of analogy, I'm just trying to
22 understand whether you were involved in second phase or first
23 phase.

24 A In hurricanes, we would be there before the hurricane
25 came in. We would even station mobile vans, so that we could

ar7-8

1 do more efficient mobile feeding on the coastline. We prepared
2 the chapters to be -- depending -- we had feeding units stationed
3 all over the whole area, because we didn't know where the
4 hurricane was going to come in, but we tried to get as much
5 disaster personnel in to assist the chapters as humanly possible.

6 Then after the hurricane came in, we gave
7 rehabilitation assistance to the families which we participated
8 in.

9 Q What I'm trying to get to, Mr. Meyer, is from
10 this background and experience, whether you were involved in a
11 planning role to prevent injury or harm to a member of the
12 public because of a disaster, as opposed to planning to take
13 care of that individual's need after a disaster?

14 A No, I did not do governmental planning. I just
15 did Red Cross planning.

16 Q As to the Red Cross planning, which way was it?

17 A Red Cross planning was not an evacuation. They
18 were -- Red Cross -- it was helping to evacuate, if they
19 could not get sufficient resources in the community.

20 Q Okay. I think you've answered my question, Mr. Meyer.
21 And the follow-up to it would be, if I understand you correctly,
22 your experience has not been in the planning for, oh, movements
23 of large segments of the public, for education of large segments
24 of members of the public, for purposes of evacuation or
25 removing themselves from the disaster area?

1 A Receiving the large segments of the public and
2 sheltering.

3 Q Okay. That would be your experience?

4 A Yeah.

5 Q Now, Mr. Heard, I note that a good deal of your
6 experience has been in monitoring, understanding radiation; things
7 of that nature.

8 Have you had any experience, Mr. Heard, by virtue
9 of course training or being part of your employment in the
10 past, in which you would be involved either before or after a
11 disaster?

12 A (Witness Heard) Both before and after, sir.

13 Q Okay. And from the standpoint of before a disaster,
14 have you been involved in any course study dealing with preparation
15 to minimize or eliminate harm to large segments of the public
16 before the disaster strikes, as it were?

17 A Yes, sir.

18 Q Okay. And in what sort of circumstances?

19 A Well, it was the Civil Defense Staff College course
20 at the University of South Carolina in '61. It was a formal
21 course.

22 From an experience standpoint, I was employed by
23 the state of South Carolina from '61 to '70 in an exclusively
24 planning role for various types of disasters.

25 From 1970 till 1973, I was employed by the Office

1 of Emergency Preparedness in the Executive Office of the
2 President as a disaster assistance coordinator in that role,
3 and at that time they also -- Emergency Preparedness was a
4 disaster relief agency for the federal government.

5 In that role, if we did not go to the scene of
6 a disaster prior, if it was a hurricane, we generally tried
7 to place ourselves not in the direct path of it, but close
8 enough that we could be on the scene shortly thereafter.

9 If we did not arrive on the scene immediately
10 afterwards, we arrived as soon as it was safe. We coordinated
11 the disaster relief activities of the federal government, all
12 agencies of the federal government were coordinated by the
13 Office of Emergency Preparedness, and I was in that role, as I
14 say, from May of '70 until July of '73, when that office was
15 abolished and divided into several other agencies.

16 Q Okay. Now during that experience, Mr. Heard, did
17 you get into planning for evacuations of large segments of
18 populations?

19 A In my employment with the state of South Carolina
20 with the coastal areas, Beaufort, Charleston, Myrtle Beach, we
21 did from the state standpoint coordinate and plan for the
22 movement of people from the coastal areas inward. In the
23 federal employment we did not -- I did not become detail-
24 involved in the evacuation planning:

25 Q Okay. And Mr. Frost, I recognize your background

ar7-11

1 in communications. My only question to you -- or perhaps a
2 few questions -- is, do you have any experience in planning
3 in the disaster circumstance that I have been discussing with
4 Mr. Meyer and Mr. Heard?

5 A (Witness Frost) No, sir.

6 Q And do you have any background or experience in
7 creation of plans of the nature that we have generally been
8 discussing this afternoon?

9 A No, sir.

10 Q And Mr. Williams, other than planning as it would
11 relate to construction of highways and this sort of thing within
12 your discipline as a traffic engineer, do you have any experience
13 planning for large movements of people or that sort of thing
14 in evacuation circumstances?

15 A (Witness Williams) Not except for review of other
16 evacuation plans.

17 MR. DENNISON: I have nothing further.

18 JUDGE FRYE: Ms. Webb, do you have anything?

19 MS. WEBB: Just a few questions, your Honor, for Mr.
20 Heard.

21 VOIR DIRE EXAMINATION

22 BY MS. WEBB:

23 Q Mr. Heard, I noticed in your professional
24 qualifications, one of your duties that you list is responsibility
25 of conducting exercises to test the REPs.

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Did you help write the exercise that the Campbell
County personnel --

A (Witness Heard) No, I did not. We reviewed the
scenario, but we did not assist in the preparation of it.

Q And I also notice that you list conducting public
hearings as one of your responsibilities. With regard to these
radiological emergency plans for Kentucky, Pendleton, Campbell
and Bracken Counties, did you yourself try to coordinate or set
up any public hearings?

A No, I did not.

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end 7

1 MS. WEBB: That's all.

2 MR. CASSIDY: I have a few on redirect, if I might.

3 JUDGE FRYE: Surely.

4 REDIRECT EXAMINATION

5 BY MR. CASSIDY:

6 Q Mr. Heard, with regard to the last inquiry by Mrs.
7 Webb with regard to the planning of public meetings or the
8 preparation of public meetings specifically for Zimmer with
9 regard to Kentucky, did somebody else in your office handle
10 that matter?

11 A (Witness Heard) Yes.

12 Q Who was that, please?

13 A Mr. Jack Richardson.

14 Q Mr. Meyer, if we might go back to you for a
15 moment, I believe Mr. Dennison inquired with regard to your
16 experiences with the American Red Cross. Do you recall that?

17 A (Witness Meyer) Yes.

18 Q After your employment by the American Red Cross,
19 you were also employed by the Civil Defense Agency, is that
20 correct?

21 A That's correct.

22 Q In that capacity were you involved in working with
23 communities in preparing for civil defense planning?

24 A Yes.

25 Q And isn't it correct that in the course of

1 planning for the civil defense that those plans involved
2 planning for evacuation of people in the event of nuclear
3 war and other civil defense-related emergencies?

4 A Correct.

5 Q Would you elaborate on what your role was with
6 regard to community planning in that capacity?

7 A Well, actually the role in community planning is
8 to try and make the whole community, as a whole -- that
9 includes all the local agencies involved in the disaster
10 responsibilities as well as your voluntary agencies and
11 disaster responsibilities -- to try and coordinate the whole
12 community, as a whole, together so that there would be a
13 minimum amount of suffering when a disaster strikes.

14 Q So that we are clear, is it your testimony that
15 you were involved in coordinating working with state and
16 local governments and volunteer organizations in planning
17 for your civil defense?

18 A Correct.

19 Q And that would include evacuation of population
20 and preplanning efforts. Is that correct?

21 A Yes.

22 Q Okay. Now with regard to the experience with the
23 American Red Cross that you testified to, I believe you
24 testified on examination by Mr. Dennison that there was
25 plans -- I believe you called them "hurricane watch plans"?

1 A Correct.

2 Q That were prepared prior -- were these plans
3 prepared prior to a hurricane?

4 A These plans are ongoing that had been -- I had
5 completely -- the plans are constantly being reviewed,
6 updated, changed, as necessary.

7 Q And you would be involved in reviewing the plans,
8 I believe, specifically for the State of Texas?

9 A Correct. I wrote a hurricane watch plan for the
10 whole State of Texas.

11 Q And did that plan involve the movement of people
12 from coastal areas and such in the event of a hurricane?

13 A Yes.

14 Q Did you write any other state plans along this
15 nature?

16 (Pause.)

17 A I was working on a plan. It never really became
18 finalized, but I think it was during Hurricane Buelah.
19 President Johnson opened the border of the United States so
20 that the Mexican nationals could come across, and when this
21 happened there was a tremendous influx of Mexican nationals
22 that came to the United States and we had to make
23 arrangements to take care of them.

24 This was given to the Red Cross and I worked on
25 that plan.

1 Q And that was involved with relocation of people,
2 et cetera?

3 A Correct.

4 Q And is it also your testimony that you were
5 involved in other -- not directly yourself, writing plans,
6 but involved in working with communities, local governments
7 and volunteer organizations in preparing similar plans for
8 tornados and other natural disasters as well as Red Cross?

9 A Correct, yes.

10 Q And that you are also involved this year, in
11 regard to your work in civil defense, in dealing with plans
12 for evacuation in other such situations?

13 A Correct.

14 MR. CASSIDY: May I have one moment, Your Honor?

15 JUDGE FRYE: Certainly.

16 (Pause.)

17 MR. CASSIDY: Nothing further, Your Honor.

18 MR. DENNISON: I have nothing further, Your Honor.

19 MR. CASSIDY: Your Honor, at this time I would
20 move that the testimony that has previously been identified
21 by the witnesses as the testimony of Richard W. Meyer,
22 Palmer T. Frost and John C. Heard, Jr. of the Federal
23 Emergency Management Agency and Bernard E. Williams of the
24 Department of Transportation, Federal Highway
25 Administration, along with the two-page correction sheet

1 that was also identified, be entered into the record and be
2 bound into the record as if read.

3 JUDGE FRYE: Just as a point of clarification, you
4 earlier indicated that you wanted to make it an exhibit. It
5 doesn't really matter, I suppose.

6 MR. CASSIDY: As a matter of clarification, I
7 would request that it be bound into the record as if read,
8 if that is the correct term of art for this hearing, and
9 admitted as evidence in this proceeding.

10 JUDGE FRYE: Objections?

11 MR. DENNISON: No, Your Honor. No objection other
12 than just simply to note what has preceded heretofore, and
13 that with the conclusion of the evidence there may or may
14 not be an appropriate motion made.

15 JUDGE FRYE: Fine. With that understanding, the
16 testimony will be bound into the record as if read.

17 (The prepared testimony referred to above follows:)

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
CINCINNATI GAS AND ELECTRIC)	Docket No. 50-358
COMPANY, <u>et al.</u>)	
)	
(Wm. H. Zimmer Nuclear Power)	
Station, Unit No. 1))	

TESTIMONY OF RICHARD W. MEYER,
PALMER T. FROST, AND JOHN C. HEARD, JR.
OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY
AND BERNARD E. WILLIAMS, OF THE
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Q.-1 Mr. Meyer please state your name and title.

A. I am Richard W. Meyer, I am employed by the Federal Emergency Management Agency in Region V as an Emergency Management Specialist for the State of Ohio.

Q.-2 Do you have your statements of professional qualifications?

A. Yes, my professional qualifications are attached to this testimony.

Q.-3 When did you first become involved in the emergency planning for the Zimmer Nuclear Power Station?

A. I first became involved in offsite emergency planning for nuclear power facilities in the State of Ohio in February, 1980, as a result of the President's December, 1979, request that FEMA take the lead in offsite planning and review of all existing plans. I became involved with the Zimmer Nuclear Power Station sometime in April, 1981.

Q.-4 Please describe the nature of that involvement up to the present time, including the activities you have engaged in, persons you have communicated with, and responsibilities you have had.

A. In my capacity as Emergency Management Specialist for the State of Ohio, I have been responsible for review and evaluation of the State of Ohio and Clermont County Plans for fixed nuclear facilities. I am the field representative to the State of Ohio. In that capacity I work with Ohio Disaster Services Agency personnel in the review and modification of these plans. I have also worked with personnel from the State of Ohio and Cincinnati Gas and Electric (CG&E) on the training exercise. I also participated as exercise coordinator and as an observer in the Zimmer Nuclear Power Station exercise on November 18, 1981.

Q.-5 In the course of your review of the offsite emergency planning at the Zimmer Nuclear Power Station, what documents have you reviewed, particularly those that you view as primarily important to your evaluation of the plans.

A. I have reviewed the following documents:

1. State of Ohio Radiological Emergency Response Plan for the Zimmer Nuclear Power Station;
2. Clermont County Radiological Emergency Response Plan for the Zimmer Nuclear Power Station;
3. NUREG 0654/FEMA Rep-1, Revision 1
4. FEMA Guidance Memorandum on Radiological Emergency Planning;
5. FEMA Interim Regulations Radiological Emergency Response Plans;

6. The Regional Assistance Committee (RAC) comments on the plans and the Zimmer exercise; and

7. CG&E's prompt notification system proposal.

Q.-6 Has the review of these plans been completed?

A. No. Under the full 44 C.F.R. Part 350 process FEMA has provided assistance in the development of the plans, observed the Zimmer Nuclear Power Station exercise on November 18, 1981, and conducted a public meeting on November 16, 1981, in New Richmond, Ohio. The governor has submitted the State of Ohio plan for review and approval but the Clermont County Plan has not been so submitted. A draft of the Clermont County Plan transmitted on October 5, 1981, is presently being reviewed by the RAC.

Q.-7 What is the purpose of your testimony?

A: The purpose of this testimony is to address the contentions raised by the intervenor with regard to the adequacy of certain aspects of the State of Ohio and Clermont County Radiological Emergency Response Plans for the Zimmer Nuclear Power Station.

Q.-8 What is the basis for the evaluation of the offsite emergency planning at the Zimmer Nuclear Power Station?

A. The FEMA review is based upon the provision of the proposed rule, "Review and Approval of State and Local Radiological Emergency Plans and Preparedness," 44 C.F.R. Part 350 and the "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Nuclear Power Plants," NUREG-0654/FEMA Rep-1 Revision 1.

Q.-9 When do you anticipate that each of the plans referred to above will be completed, approved by the local authorities and submitted?

A. At this date there is no time schedule established for the completion of this process.

Q.-10 Mr. Frost, would you please state your name and title?

A. Palmer T. Frost, I am employed by the Federal Emergency Management Agency as a Communications Specialist for Region V.

Q.-11 Do you have your statement of professional qualifications?

A. Yes. My professional qualifications are attached to this testimony.

Q.-12 When did you first become involved in emergency planning for the Zimmer Nuclear Power Station?

A. I first became involved in offsite emergency planning for nuclear power facilities in Region V in March, 1980, as a result of the President's December 1979 request that FEMA take the lead in offsite planning and review of all existing plans. I became involved in the Zimmer Nuclear Power Station sometime in October, 1981.

Q.-13 Please describe the nature of your involvement up to the present time, including the activities you have engaged in, persons you have communicated with and responsibilities you have had.

A. I have reviewed the State of Ohio and Clermont County plan for determination of whether the communications aspects of the plan comply with the requirements of NUREG 0654/FEMA Rep-1, Revision 1. I served as an evaluator during the Zimmer Nuclear Power Station exercise on November 18, 1981. I have communicated with State of Ohio officials with regard to communication aspects of the plan. I have discussed the communication aspects of the plan and the exercise with other Federal officials who participated in the exercise and with FEMA personnel.

Q.-14 In the course of your review of offsite emergency planning at the Zimmer Nuclear Power Station, what documents have you reviewed particularly those which you view as particularly important.

A. I have reviewed the following documents:

1. State of Ohio Radiological Emergency Response Plan for the Zimmer Nuclear Power Station;
2. Clermont County Radiological Emergency Response Plan for the Zimmer Nuclear Power Station;
3. NUREG 0654/FEMA Rep-1, Revision 1;
4. FEMA Guidance Memorandum on Radiological Emergency Planning;
5. FEMA Interim Regulations on Radiological Emergency Response Plans;
6. RAC comments on the plans and the Zimmer Exercise; and
7. CG&E's prompt notification system proposal.

Q.-15 What is the purpose of your testimony?

A. The purpose of this testimony is to address the contentions raised by the intervenors with regard to the adequacy of certain communication aspects of the State of Ohio and Clermont County Radiological Emergency Response Plans for the Zimmer Nuclear Power Station.

Q.-16 What is the basis for the evaluation of offsite emergency planning at the Zimmer Nuclear Power Station?

A. The FEMA review is based upon the provisions of the proposed rule, "Review and Approval of State and Local Radiological Emergency Plans and Preparedness", 44 C.F.R. Part 350 and the "Criteria for preparation and Evaluation of Radiological Emergency Response Plans and Nuclear Power Plants, "NUREG 0654/FEMA Rep-1, Revision 1.

Q.-17 Mr. Heard Please state your name and title.

A. My name is John C. Heard, Jr., I am employed by the Federal Emergency Management Agency in Region IV. I am Manager for the Technological Hazards Branch in Region IV.

Q.-18 Do you have your statement of professional qualifications?

A. Yes. My professional qualifications are attached to this testimony.

Q.-19 When did you first become involved in the emergency planning for the Zimmer Nuclear Power Station?

A. I became involved in emergency planning for nuclear power stations in December 1971 as a representative to the ad hoc Regional Radiological Emergency Planning Committee. As Regional Director for the Federal Preparedness Agency, we were responsible for offsite planning from December 1975 onward. I became involved with the Zimmer Nuclear Power Station in 1980 as the result of the President's December 1979 request that FEMA take the lead in offsite planning and review of all existing plans.

Q.-20 Please describe the nature of your involvement up to the present time including the activities you have engaged in, persons you have communicated with and responsibilities you have had.

A. In my capacity as Manager of the Region IV Technological Hazards Branch, I have been responsible for review and evaluation of the Commonwealth of Kentucky, Pendleton, Bracken, and Campbell County Radiological Emergency Response Plans. My staff and I have worked with Kentucky and county personnel in the review and modification of those

plans. I participated in the Zimmer Nuclear Power Station Exercise on November 18, 1981.

Q.-21 In the course of your review of the offsite emergency planning at the Zimmer Nuclear Power Station, what documents have you reviewed, particularly those that you view as primarily important to your evaluation of the plan.

A. I have reviewed the following documents:

1. The Commonwealth of Kentucky Radiological Emergency Response Plans;
2. The Pendleton, Bracken and Campbell Counties Radiological Emergency Response Plans;
3. NUREG 0654/FEMA Rep-1, Revision 1;
4. FEMA Guidance Memoranda on Radiological Emergency Planning;
5. FEMA Interim Regulations on Radiological Emergency Response Plans;
6. Radiological Assistance Committee (RAC) comments on the plans and the Zimmer exercise; and
7. CG&E's prompt notification system proposal.

Q.-22 Has the review of these plans been completed?

A. No. Under the full 44 C.F.R. Part 350 process FEMA has provided assistance in the development of the plans, observed the Zimmer exercise on November 18, 1981 and conducted a public hearing. Comments on the plans and exercise have been sent by FEMA to the Commonwealth of Kentucky. Kentucky has advised me that they will not be responding to these comments until sometime in April, 1982.

Q.-23 What is the purpose of your testimony?

A. The purpose of my testimony is to address the contentions raised by the intervenors with regard to the adequacy of the Commonwealth of Kentucky and Pendleton, Bracken and Campbell County Radiological Emergency Response Plans for the Zimmer Nuclear Power Station.

Q.-24 What is the basis for the evaluation of offsite emergency planning at the Zimmer Nuclear Power Station?

A. The FEMA review is based upon the provision of the proposed rule, "Review and Approval of State and Local Radiological Emergency Plans and Preparedness," 44 C.F.R. Part 350 and the "Criteria for preparation and Evaluation of Radiological Emergency Response Plans and Nuclear Power Plants," NUREG 0654/FEMA Rep-1 Revision 1.

Q.-25 When do you anticipate that each of the plans referred to above will be completed, approved by the local authorities and submitted.

A. At this date there is no time schedule established for the completion of this process.

Q.-26 Mr. Williams would you state your name and title.

A. Bernard E. Williams, I am employed by the United States Department of Transportation, Federal Highway Administration, as a Highway Engineer.

Q.-27 Do you have your statement of professional qualifications?

A. Yes. My professional qualifications are attached to this testimony.

Q.-28 When did you first become involved in the emergency planning for the Zimmer Nuclear Power Station?

A. I first became involved in the emergency planning for the Zimmer Nuclear Power Station in 1981. As part of my duties I have

assisted the Special Assistant to the Regional Administrator, who is a member of the Regional Advisory Committee. As his assistant, I have reviewed the Ohio and Clermont County Radiological Emergency Response Plans for the Zimmer Nuclear Power Station.

Q.-29 Please describe the nature of that involvement up to the present time, including the activities you have engaged in, persons you have communicated with, and responsibilities you have had.

A. I have reviewed and evaluated the State of Ohio and Clermont County Radiological Emergency Response Plans with specific emphasis on highway issues. I have assisted in the preparation of the Federal Highway Administration comments for the RAC. I have discussed these plans with Federal Highway Administration and FEMA personnel.

Q.-30 In the course of your review of the offsite emergency planning of the Zimmer Nuclear Power Station, what documents have you reviewed, particularly those that you view as important to your evaluation.

A. I have reviewed the following documents:

1. The State of Ohio Radiological Emergency Response Plan;
2. The Clermont County Radiological Emergency Response Plan;
3. The Texas Transportation Institute evaluation of evacuation time estimates report.
4. NUREG 0654/FEMA Rep-1, Revision 1.

Q.-31 What is the purpose of your testimony?

A. The purpose of this testimony is to address those contentions raised by the intervenors with regard to the adequacy of the State of

Ohio and Clermont County Radiological Emergency Response Plans as they relate to highway issues.

Q.-32 What is the basis for the evaluation of offsite emergency planning at the Zimmer Nuclear Power Station?

A. The FEMA review is based upon the provisions of the proposed rule "Review and Approval of State and Local Radiological Emergency Plans and Preparedness", 44 C.F.R. Part 350 and the "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Nuclear Power Plants". NUREG 0654/FEMA Rep-1, Revision 1.

Q.-33 Mr. Meyer, are you familiar with the geographic location of Brown County, Ohio in relation to the Zimmer Nuclear Power Station?

A. Yes. Brown County is located to the East of ZPS. The arc of the 10 mile Emergency Planning Zone (EPZ) intersects Brown County roughly in the Southwestern corner of the County. Technically, a very small geographic area of Brown County is in the EPZ.

Q.-34 Mr. Meyer, are there criteria for determining whether an area is to be included in the EPZ?

A. Yes. NUREG-0654/FEMA Rep-1, Revision 1, establishes such criteria. Generally, a 10 mile radius was selected for the plume exposure pathway. Although this implies a circular area, NUREG-0654/FEMA Rep-1, Revision 1, provides that the actual shape of the EPZ would depend upon the characteristics of the particular site. NUREG-0654/FEMA Rep-1 at page 11. Consideration is given to local conditions such as demography, topography, land characteristics, access routes, and local jurisdictional boundaries.

Q.-35 Mr. Meyer, have you discussed these local conditions with Mr. McKenna of the NRC Staff?

A. Yes.

Q.-36 Mr. Frost, a number of contentions question the adequacy of communications between various agencies in Clermont County, Ohio. What is required for a county to have an adequate plan?

A. NUREG-0654/FEMA Rep-1, Revision 1 requires that each organization shall establish a reliable primary and back-up communications system for licensees, local and State organizations. NUREG-0654/FEMA Rep-1, Revision 1, at pages 47-48. It is required that within the plume exposure area the system shall provide an alerting signal and notification by commercial broadcast (e.g. EBS) plus a special system such as NOAA radio. NUREG-0654/FEMA Rep-1, Revision 1, Appendix 3, page 3-3 and 3-4. The minimum acceptable design objectives for coverage by the system are:

- a) Capability for providing both an alert signal and an informational or instructional message to the population on an area wide basis throughout the 10 mile EPZ, within 15 minutes.
- b) The initial notification system will assure direct coverage of essentially 100% of the population within 5 miles of the site.
- c) Special arrangements will be made to assure 100% coverage within 45 minutes of the population who may not have received the initial notification within the entire plume exposure EPZ.

Q.-37 Mr. Frost, Contention 20 b 4 states:

20 b 4]. Radio communications between base and mobile radios utilized by Clermont County emergency response support groups within an approximate area of four miles of the Zimmer Station in the near environs of U.S. 52 paralleling the Ohio River of incapable of radio transmission due to topographical and land characteristics of that area creating blank, or void, radio transmission whereby radio signals meet natural terrain barriers. [No plan provision].

Are you familiar with the problem raised by this contention?

A. Yes. The Clermont County Plan provides a system of communication amongst emergency response support groups (Section II-E). The primary means of communication is by radio. Radio communications along U.S. Route 52 are problematic due to topography and land characteristics of the area creating a blank or void. Clermont County is aware of this problem. The problem should be eliminated with the installation of a microwave system, a so-called repeater system, which will be installed by CG&E. During the recent exercise of the Zimmer Nuclear Power Station (ZPS), the communications system functioned well, both at the Sheriff's office and the EOC. With the installation of the repeaters, this system provides reasonable assurance for communications between the emergency response groups.

Q.-38 The intervenors contend that -

20 b. 5] The Clermont County Emergency Plan provides for communications among some of its emergency resource agencies by non-dedicated telephone line only, involving limited trunk service to certain agencies (one to four telephone lines), utilization of long distance telephone lines involving General Bell telephone systems, and as such this portion of the communications plan does not provide a reasonable assurance that communications necessary to a timely and prompt evacuation can be implemented, especially where limited trunk lines for telephone usage are subject to overload, e.g.,

Is non-dedicated telephone line the primary source of communication among emergency response groups in Clermont County?

A. No. The Clermont County Plan establish radio as the primary means of communication between emergency response groups with the exception of the schools. Thus, 36 of 40 emergency response groups have radio as their primary means of communication (Section II-E, Table E-1, page II-E-3, 4 and 5). The prompt notification system which is proposed will provide tone alert radios as the primary notification source in the schools. Telephones are used as a back-up communications system in most instances. During the early stages of an emergency, that is prior to notification of the general public, there would only be normal telephone traffic and use of the commercial telephone system would be adequate to notify various emergency response agencies. After notice to the general public, the commercial telephone system may be subject to overload. Under such circumstance, the Emergency Broadcast System (EBS) could be used to broadcast notification and instructions. NUREG-0654/FEMA Rep-1, Revision 1, Appendix 3, pages 3-13 to 3-15. During the exercise of the Zimmer Nuclear Power Station, where I participated as an evaluator, notification of the agencies involved was accomplished in a timely and efficient manner using both radio and telephones. This same system would be sufficient for a real incident. The plan meets the requirement of NUREG-0654/FEMA Rep-1, Revision 1.

Q.-39 Mr. Frost, there are several questions regarding the adequacy of various subparts of Clermont County's communication system. Specifically, it is contended that:

20 b 5 i] Communications between the Superintendent of the Clermont County Board of Education-County EOC and the Superintendent of the Felicity-Franklin School District requires

use of limited long distance trunk line, subject to overload, between Bell and General telephone systems: Felicity-Franklin Superintendent has three trunk lines for use in communications between the County Superintendent and to summon school bus drivers (approximately 13) to the school site for student evacuation;

20 b 5 ii] The Superintendent of Bethel-Tate School District has two telephone trunk lines, subject to overload, for use in communications between the County Superintendent and to summon school bus drivers (approximately 15) to the school site for student evacuation;

20 b 5 iii] The Superintendent of the New Richmond School District has four telephone trunk lines, subject to overload, for use in communications between the County Superintendent and to summon school bus drivers (approximately 17) to the school site for student evacuation and for telephone communications to the Monroe and Pierce Elementary Schools within the District, each school has two telephone trunk lines;

20 b 5 iv] The telephone trunk lines for each of the affected school districts will be overloaded during emergency situations due to parental telephoning into the schools;

20 b 5 v] All notifications to the County Superintendent, affected school districts, reception school districts, school district transportation supervisors, and school district bus drivers is by non-dedicated, existing telephone trunk lines. [Plan, §II-E, Table E-1, pp. II-E-3 and 5; §III-A, p. III-A-2; §III-C, pp. III-C-1 through 3].

Does the fact that telephone communications are used to notify the schools and bus drivers make the plan inadequate?

A. No. At the outset it should be noted that the range of times between the onset of accident conditions and the start of a major release is in the order of one-half hour to several hours (NUREG-0654/FEMA Rep-1, Rev., page 13). Clermont County has indicated that communication between the EOC and schools will be by telephone, messenger and NOAA weather radio (Clermont County response to ZAC-ZACK Interrogatory #121).

The Clermont County Plan provides that the Felicity-Franklin school district will be notified by the County Sheriff (III-A-2 and

Table III-A). This assuming either telephone notification or sending a deputy sheriff to the school. If the Sheriff drives to the school there will be a radio link to the EOC. Additionally, the Prompt Notification, as proposed, will provide for tone alert receivers to be placed in the schools. This will alert the school authorities to turn to an EBS station for further instructions.

The Clermont County Plan provides that bus drivers will be notified by telephone. As I stated earlier if the emergency response agencies, and I would include bus drivers in that category, are notified prior to notice to the general public there will only be normal commercial telephone traffic. In those circumstances, notice to the bus drivers can be reasonably assured.

Otherwise, the bus drivers will receive notice, as will the general public, via the prompt notification system, e.g., sirens and/or tone-alert radios, NOAA weather radio or EBS. There is a plan for notification of some bus drivers in other emergencies in effect in Clermont County.

As a practical matter, if an airborne release for Zimmer Nuclear Power Station is anticipated, it is only necessary to evacuate those persons downwind of Zimmer Nuclear Power Station. Not all schools would need to be evacuated. It may not be necessary to have all of the buses present to accomplish a timely evacuation. The Clermont County plan provides reasonable assurance that a sufficient number of bus drivers will be notified.

Communication between the superintendent and the Bethel-Tate School District and the New Richmond School District will be by telephone, messenger and NOAA weather radio. (See Clermont response to ZAC-ZACK Interrogatory #121.) The County Sheriff is required to notify the

Bethel-Tate School District. III-A-2 and Table III-A, III-A-18 Clermont County Plan. Notification may be by telephone or by sending a deputy sheriff to the school. If someone is sent to the school, there will be direct two-way radio communication between the school and the EOC where the Superintendent or his designee will be situated. Likewise, the New Richmond Police Department is directed to notify the New Richmond School District. Ibid. Again if an officer is sent to the school, this will establish a two-way radio communication link between the school district and EOC.

Q.-40 Mr. Heard, the intervenors have raised a number of contentions relative to communications in Campbell County, Kentucky similar to those just addressed by Mr. Frost. Do you agree with Mr. Frost's statement with regard to what is required in order for a plan to be adequate?

A. Yes. NUREG-0654/FEMA Rep-1, Revision 1 requires that each organization shall establish a reliable primary and back-up communications system for licensees, local and State organizations. NUREG-0654/FEMA Rep-1, Revision 1, at pages 47-48. It is required that within the plume exposure area the system shall provide an alerting signal and notification by commercial broadcast (e.g. EBS) plus a special system such as NOAA radio. NUREG-0654/FEMA Rep-1, Revision 1, Appendix 3, page 3-3 and 3-4. The minimum acceptable design objectives for coverage by the system are:

- a) Capability for providing both an alert signal and an informational or instructional message to the population on an area wide basis throughout the 10 mile EPZ, within 15 minutes.

- b) The initial notification system will assure direct coverage of essentially 100% of the population within 5 miles of the site.
- c) Special arrangements will be made to assure 100% coverage within 45 minutes of the population who may not have received the initial notification within the entire plume exposure EPZ.

Q.-41 Mr. Heard, Contention 20 b 6 states:

20 b 6]. The Campbell County Emergency Plan provides for communications among some of its emergency resource agencies by monitor radio and non-dedicated telephone lines, involving limited trunk service to certain agencies (one to four telephone lines), subject to overload, and as such this portion of the communications plan does not provide a reasonable assurance that communications necessary to a timely and prompt evacuation can be implemented, e.g.,

Is this an accurate representation of the Campbell County Plan?

A. No. The Campbell County Plan establishes that the primary notification is to be by radio with the commercial telephone system as the back-up (Appendix B-1, page B-1-1). This system was tested during the November 18, 1981 Zimmer Nuclear Power Station exercise and worked well. Thus, the Campbell County Plan does provide a reasonable assurance that a reliable communication system exists.

Q.-42 Mr. Heard, the intervenors contend:

20 b 6 i]. Communications to County School Superintendent by monitor radio and subsequent non-dedicated telephone use (four trunk lines to Superintendent);

20 b 6 ii]. County Superintendent's notification to five elementary and one middle school, including A.J. Jolly Elementary School within two miles of the Zimmer Station, is by a single non-dedicated telephone line into each of the six schools, each trunk line into each school is subject to overload;

20 b 6 iii]. The County Superintendent's notification to the Alexandria Elementary School and the bus garage is by two non-dedicated telephone lines into each facility, both of which are subject to overload;

20 b 6 iv]. The County Superintendent's four non-dedicated trunk lines are the means of communications to 54 regular and seven substitute bus drivers to summon school buses to nine school sites for student evacuation;

20 b 6 v]. The telephone trunk lines for each of the affected schools, the Superintendent and the bus garage will be overloaded during emergency situations due to parental telephoning into the schools;

20 b 6 vi]. All notification (except initial notification to Superintendent by monitor radio) and communications between schools, bus drivers and transportation supervisor is by non-dedicated, existing telephone trunk lines. [Plan, Basic Plan, pp. V-5,6; Annex B, Communications, p. B-3; Annex C, Notification & Warning, p. C-4].

Does not provide a reasonably assurance that communications for prompt evacuation can be implemented.

Does the Campbell County Plan address this issue?

A. Yes. The Campbell County Plan provides that notification of the schools will be by monitor radio and non-dedicated telephone. Appendix B-1, page B-1-1; Appendix C-8, page C-8-1. While a call-back verification system would provide assurance that the notification was received, the installation of the Prompt Notification System would alleviate this concern. The use of commercial, non-dedicated telephone circuits is subject to limitations, the principal one being the potential line overload. In the initial stages of notification this potential will be minimal, since information concerning the incident will not have been divulged to the public thus there will be only normal commercial use. Following issuance of public notice the potential could well be considerable.

Q.-43 Mr. Heard, several other contentions question the plan to the extent that telephone communications are the primary system.

Specifically:

20 b 6 ii]. County Superintendent's notification to five elementary and one middle school, including A.J. Jolly Elementary School within two miles of the Zimmer Station, is by a single non-dedicated telephone line into each of the six schools, each trunk line into each school is subject to overload;

20 b 6 iii]. The County Superintendent's notification to the Alexandria Elementary School and the bus garage is by two non-dedicated telephone lines into each facility, both of which are subject to overload;

20 b 6 iv]. The County Superintendent's four non-dedicated trunk lines are the means of communications to 54 regular and seven substitute bus drivers to summon school buses to nine school sites for student evacuation;

20 b 6 v]. The telephone trunk lines for each of the affected schools, the Superintendent and the bus garage will be overloaded during emergency situations due to parental telephoning into the schools;

20 b 6 vi]. All notification (except initial notification to Superintendent by monitor radio) and communications between schools, bus drivers and transportation supervisor is by non-dedicated, existing telephone trunk lines. [Plan, Basic Plan, pp. V-5,6; Annex B, Communications, p. B-3; Annex C, Notification & Warning, p. C-4].

Does the Campbell County Plan address these contentions?

A. The Campbell County Plan addresses the notification of the schools in Appendix C-8, page C-8-1.

The primary means of communications is by monitor radio with commercial telephone as the back-up notification system. Appendix C-8, page C-8-1. In addition to monitor radio and telephone some schools will be notified by sirens and NOAA weather radio. (Annex C, page C-4). The Campbell County Plan does provide reasonable assurances for notification of the affected schools.

The prompt notification system will alert the school to tune to any EBS station. Information can be transmitted via the EBS. NUREG-0654/FEMA Rep-1, Revision 1, Appendix 3, pages 3-13 to 3-15.

With regard to notification of the school bus drivers, primary notice is by telephone. Campbell County Plan, Annex C, page C-4.

Notification of both the schools and bus drivers will probably occur prior to notification of the general public, in which case there will be only normal use of the commercial telephone system. If calls to the bus drivers were not complete prior to notification of the general public, it is possible that the commercial telephone system may be subject to line overload. In these circumstances, bus drivers would be notified in the same manner as the general public, e.g., sirens, tone alert radios, NOAA weather radios. They can be given specific instructions over the EBS. NUREG-0654/FEMA Rep-1, Revision 1, Appendix 3, pages 3-13 to 3-15. This system does provide reasonable assurances for notification of the school bus drivers.

Q.-44 Mr. Heard, have you reviewed the Pendleton County Plan with regard to communications?

A. Yes. NUREG-0654/FEMA Rep-1, Revision 1, Criteria E.2. requires State and local governments to establish procedures for altering, notifying and mobilizing emergency response personnel. NUREG-0654/FEMA Rep-1, Revision 1, Appendix 3, Page 3-1 et seq. sets forth some of the means that may be used to accomplish notification. The basic requirement is that the systems be effective in mobilizing response authorities and operating element and in alerting the general public. NUREG-0654/FEMA Rep-1, Revision 1. Appendix 3, pages 3-4 and 3-5.

The Pendleton County Plan addresses notification and communication amongst emergency response workers in Annex C of the plan.

Q.-45 Mr. Heard, Contention 20 b 7 states:

20 b 7]. The Pendleton County Radiological Emergency Plan provides for notification and communications of and between emergency resource personnel by monitor radio and in most instances by pager or non-dedicated telephone absent reasonable assurance that contact can be made by pager (distance limitation in transmission) or by telephone, and as such this portion of the communications plan does not provide a reasonable assurance that communications necessary to a timely and prompt evacuation can be implemented, e.g.,

Is there a problem with the use of such a system?

A. We have no reason to believe that non-dedicated telephone lines will not be sufficient to effecting initial alerting and notification. The underlying assumption is that public notice has not been issued and that there will exist only normal demands on the commercial system. If the use of pagers provides a reliable means of contacting key officials on a day-to-day basis, there is no reason to believe they will be unreliable during the initial notification phase of an emergency. Once public notification is made, it is reasonable to assume that the pagers effectiveness would be substantially diminished. However, backup systems (monitor radios in homes, sirens and EBS) will provide additional notice and information to emergency response agencies who were not alerted by the primary system. With regard to the time frames encompassing the evacuation process, it must be remembered that a half hour to several hours may elapse between the onset of an emergency and the need to evacuate.

Q.-46 There are several contentions dealing with various segments of the communication system. The following two contentions question the use of telephones:

20 b 7 i]. Judge/Executive notified from DES Director by pager or telephone; DES Director notified from Communications Coordinator by pager or telephone; County EOC personnel to be notified by telephone, pager, or radio;

20 b 7 ii]. DES Director contact, communication and notification with Fire and Rescue Coordinator by means of telephoning an answering service and thereafter the answer service "contacting" (assumption is by telephone) that coordinator who will in turn communicate with the DES Director by telephone;

Is the Pendleton County Plan adequate in these two instances?

A. These contentions are addressed in Annex C of the Pendleton County Plan. We have no reason to believe that non-dedicated telephone lines will be insufficient to effecting initial alerting and notification. The underlying assumption is that public notice has not be issued and that there will exist only normal demands on the commercial system. If the use of pagers provides a reasonably reliable means of contacting key officials on a day-to-day basis, there is no reason to believe they will be unreliable during the initial notification phase of an emergency. (Appendix C-2, page C-2-1). The plan provides that communication, contact and notification of the Fire and Rescue Coordinator is accomplished by pager as the primary notification system and radio as the secondary system (Appendix C-2, page C-2-1). As indicated in response to Contention 20 b 7, the underlying assumption is that notification of emergency resource personnel is prior to public notice and there will only be normal demands on the commercial system.

Both the DES Director and the Fire and Rescue Coordinator are situated in the EOC. Therefore, all post notification communication between them will be direct, face to face, contact.

Q.-47 Contention 20 b 7 iii states:

20 b 7 iii]. Communications to fire departments will be by telephone, whether between fire company members or between fire chief and Fire and Rescue Coordinator (only to Falmouth Fire Department has radio contact with the EOC);

Are communications between the Fire and Rescue Coordinator and the fire departments by telephone?

A. The Fire and Rescue Coordinator will be in the E.O.C. and will communicate by radio with Falmouth Fire Department who will relay information to all other fire departments. (Appendix B-1, pg. B-1-1). Thus, radio, not telephone, is the primary communication system.

Q.-47 Contention 20 b 7 iv states:

20 b 7 iv]. Notification to the Law Enforcement Coordinator from the DES Director by pager or telephone;

Is this addressed in the Pendleton County plan?

A. Yes. The law enforcement coordinator is the County Sheriff. In addition to being contacted by pager and telephone he can be contacted by radio. Pendleton County Plan, Appendix B-1, page B-1-1.

Q.-48 Contention 20 b 7 v states:

20 b 7 v]. Notification to key emergency response personnel by pager, telephone, or answering service, and communications with certain emergency response personnel is inadequate to present reasonable assurance that notification and subsequent communications can be made and sustained where limited to non-dedicated commercial telephone line providing for single telephone trunk. [Plan, Annex A, Direction and Control, pp. A-5 through 7 and 9; Annex C, Notification & Warning].

Based upon your review of the Pendleton County Plan are there reasonable assurances that the communication system will work?

A. Notification by pager and telephone will be adequate in the initial stages of an emergency prior to notice to the general public.

After the general public has been notified the telephone system is subject to overload and this system becomes less effective. As I stated earlier, however, the emergency response personnel will receive notice in the same manner as the general public, sirens, tone alert radios, NOAA weather radios and the EBS.

After notification is received communication between the key emergency response personnel is not a problem. They are all located in the EOC and will communicate directly.

Q.-49 Contention 20 b 7 vi states:

20 b 7 vi]. Notification of special concerns by monitor radio (except Butler and Grant's Lick Nursing Homes and Black River Mining Company, which is silent as to notification) is Northern Elementary School, other communications by commercial radio. [Plan, Annex F, Protective Actions, pp. F-9-1 and 2.].

Does the Pendleton County Plan address notification of special concerns?

A. Yes. The Pendleton County Plan identifies three means of notification: tone-monitor radio, NOAA weather radio, and general commercial broadcast which met the requirements in NUREG-0654, E.2. Subsequent instructions will be via general commercial broadcast.

Q.-35 Contention 20 b 8 and its subparts, 20 b 8 i to 20 b 8 v, concern the communications system established in the Bracken County Emergency Plan for notification and communication of and between emergency resource personnel. Specifically they state:

20 b 8]. The Bracken County Emergency Plan provides for notification and communications of and between emergency resource personnel by monitor radio and in most instances by pager or non-dedicated telephone absent reasonable assurance that contact can be made by pager (distance limitation in transmission) or by telephone, and as such this portion of the communications plan does not provide a reasonable assurance that communications

necessary to a timely and prompt evacuation can be implemented, e.g.,

20 b 8 i]. Judge/Executive and DES Director notified from Communications and Warning Coordinator by pager or telephone; County, EOC personnel to be notified by telephone, pager or radio;

20 b 8 ii]. Fire and policy emergency response personnel to be notified by pager; field fire response personnel will communicate with the County EOC by telephone;

20 b 8 iii]. Law Enforcement Coordinator will be notified by pager or telephone;

20 b 8 iv]. Notification to key emergency response personnel by pager and communications by telephone;

20 b 8 v]. Notification to School Preparedness Coordinator and to Western Hills Elementary School by monitor radio, other communications by telephone, including summoning of school buses for evacuation of students. [Plan, Annex A, Direction & Control, pp. A-6, 13, Annex C, Notification & Warning, C-2-1; Annex F, Protective Actions, pp. F-9-1 and 2].

What is required to be contained in the plan?

A. NUREG-0654 specifies that local governments shall establish procedures for notifying, alerting and mobilizing emergency response personnel. NUREG-0654/FEMA Rep-1, Revision 1, Appendix 3, page 3-1 et seq. sets forth some of the means that may be used to accomplish notification. The basic requirement is that the system be effective in mobilizing response authorities and operating elements and in alerting the general public.

Q.-51 Does the Bracken County Plan provide the reasonable assurance required by NUREG-0654/FEMA Rep-1, Revision 1?

A. There is no reason to believe that the telephone/telephonic pager system will be insufficient for effecting initial notification and alerting. If pager systems provide a reasonably reliable means of contacting key officials on a day-to-day basis they should be dependable in the initial phases of notification. The assumption in that notice to the

general public will not have been given at the time emergency personnel are being notified. Hence, the telephone system would be bearing normal traffic. With regard to communication between emergency personnel, Appendix B-1 of the Bracken County Plan, depicts the use of radio with telephone back-up for communications between most response agencies and the County EOC. Exceptions are the ambulance service and the school districts. With regard to the timeframe encompassing the evacuation process, it must be understood that a half hour to several hours may elapse prior to evacuation being required. In this case, the Prompt Notification System, EBS and commercial broadcast would provide notice to those emergency personnel who may not have received notice by telephone, pager or radio.

Q.-52 Contention 20 b 8 ii set forth above indicates that fire and police are notified by pager and/or telephone. Does the Bracken County Plan provide for other means of communication between police and fire personnel?

A. While telephone and pager are used for notification, Appendix B-1 of Bracken County Plan depicts communications by radio between the EOC and the various fire and police departments.

Q.-53 How does the Bracken County Plan address communications among the various key response units?

A. Appendix B-1 of the Bracken Co. Plan depicts communications by radio, with telephone back-up, among key response units.

Q.-54 Contention 20 b 8 v, set forth above, questions the adequacy of notice to the Western Hills Elementary School and the bus drivers. Does the Bracken County Plan adequately address this notice issue?

A. The Western Hills school will be notified by both tone activated monitor radio and NOAA weather radio (pp. F-9-1&2). Although backup radio is provided there would be no assurance that the notice was received unless call-back verification were required of the school. It is agreed that use of telephone to summon buses would not provide assurance that drivers could be contacted. This would be particularly true, if notification of the public had been effected and the telephone system were overloaded. However, the prompt notification system, EBS and commercial broadcast could serve to notify drivers.

Q.-55 Mr. Williams, in your capacity as a highway engineer for Region V of the Federal Highway Administration, you were asked by FEMA to review certain contentions and prepare responses to those contentions - is that correct?

A. Yes. In my present position, I assist the Special Assistant to the Regional Director. The Special Assistant is a member of the RAC. In the course of my employment I had reviewed the Clermont County Plans generally but with particular interest in highway related matters. Since I was familiar with those issues, FEMA requested that I address contentions 20 c 1 to 20 c 6. These contentions all deal with highway capacity and similar issues involving the proposed evacuation routes.

Q.-56 Mr. Williams, Contention 20 c 1 states:

20 c 1]. The Clermont population in Designated Sectors (SSE(H) and SE(G), a permanent population of approximately 800, proceed in an easterly direction from the Zimmer Station on the major evacuation route of U.S. 52, through Washington and into Franklin Townships to S.R. 133, the junction of which is not an access control site and then proceed in a northerly direction on S.R. 133, a distance in excess of 10 miles to S.R. 125 at Bethel, Ohio at which point they are emerging from the plume exposure area (an approximate distance of 11-mile exposure of the plume on

U.S. 52 and an approximate distance of 13-mile exposure of plume on S.R. 133, for a total approximate distance of plume exposure of 24 miles); or alternatively the evacuees may proceed northerly on S.R. 133 to the Village of Felecity and then proceed on S.R. 222 to S.R. 232 to S.R. 125 at Bethel (an approximate distance of 11-mile exposure of plume on U.S. 52 and an approximate distance of 20-mile plume exposure on S.R.s 133, 222 and 232, for a total approximate distance of plume exposure of 31 miles); or alternatively after traveling on S.R. 222 to remain on that route to its intersection with S.R. 125 near Bethel (for a total approximate distance of plume exposure of 29 miles). From entry onto S.R.s 133, 222 and 232 there are no control access control point until the evacuees reach S.R. 125. At 0.25 miles east of the intersection of U.S. 52 and S.R. 133, on U.S. 52, there is a manned access control to direct traffic flow return to S.R. 133. The population east of the stated access control point (on U.S. 52 0.25 mile east of S.R. 133) involving the populations situated east of S.R. 133 and the Village of Utopia and approximately 40 roads servicing residents in the previously stated Designated Sectors and the additional Designated Sectors of E(E), ENE(D) and NE(C), are not within the evacuation route designated and must either proceed into the plume area by proceeding by roadways intersecting S.R. 133 or by following county and township roads to S.R. 125 west of Bethel, or proceeding directly into Brown County. The aforesated designated evacuation route fails in its implementation to timely and promptly evacuate this portion of the Clermont population from the plume exposure zone. [Clermont Plan, §II-I, Protective Response, pp. II-I-17, 18, 22 and 23].

The basic question is: Are these specific evacuation routes reasonable?

A. The evacuation plan seeks to provide the maximum number of routes possible for use in evacuation. In developing their evacuation estimate Stone and Webster, the consultants who prepared the evacuation time estimates, assigned evacuees to the route which most directly provided access to their assigned relocation center. Therefore, the routing which residents are most likely to use is accounted for in the evacuation estimates. The fact that evacuees may be traveling on a road which is not outside the 10 mile plume exposure path for a period of time is not necessarily significant. For example, the contention

states, in effect, that if the SE and SSE zones were being evacuated they would travel north on route 133 to the relocation center. Route 133 is within the 10 mile plume exposure pathway. However, if SE and SSE zones are evacuated, that would assume a wind from the NW or NNW. Thus, although route 133 is less than 10 miles from the plant, the evacuees would probably be out of the plume by the time they reached Felicity.

Access control points are positioned to prevent unauthorized persons from entering affected zones over which a protective action is being implemented. The plan has done this, however, at a number of points, roads exist which are not blocked off. Attached is a list of suggested additional access control points (Attachment 1). In addition, other access control points might have to be designated by the decision-making groups during an emergency if only part of a ring is to be controlled.

Q.-57 Mr. Williams, Contention 20 c 2 states:

20 c 2]. The Clermont population in Designated Sectors (portions) E(E), ENE(D), NE(C), NNE(B) and N(A), constituting the populations of Monroe and Washington Townships, approximately 1,639 permanent population, are to proceed by alternative routes: one, a southerly direction to U.S. 52 toward the Zimmer Station and thence west on U.S. 52; two, proceed in a northwesterly direction to S.R. 132, thence north on S.R. 132 to S.R. 125; or, three, a northeasterly direction to S.R. 222, thence northerly on S.R. 222 to S.R. 125; in which the roadways servicing that population for travel for travel to an evacuation route consists of two state roadways and approximately 38 county and township roadways. Manned access control points are located on S.R. 756, 0.25 miles south of Brown Road, on Laurel-Point Isabel Road 0.1 miles west of S.R. 222, and on S.R. 743, 0.5 miles west of S.R. 222 in Washington Township to direct traffic flow, and at the junction of S.R.s 232 and 756. S.R. 232 0.5 miles north of Ireton Trees Road and at the juncture of Franklin-Laurel and Carnes Roads in Monroe Township. The county, township and two state roadways for travel to an evacuation route situated in the aforesated sectors are narrow, winding, hilly and hazardous roadways unsupervised for traffic flow and control, except limitedly manned

as noted, for prompt, safe and timely evacuation of the permanent population within the area. The road configurations will not afford directions by radio to that population of the numerous roadways that the population must follow to correct evacuation routes and a safe evacuation in a prompt manner in the appropriate direction of travel cannot be implemented. [Clermont Plan, §II-I, Protective Responses, pp. II-I-17, 18, 22 and 23.]

Can the evacuation routes be adequately described to permit a prompt evacuation?

A. All of the major routes are roads that the residents are familiar with and, presumably, frequently traveled by the car driving residents. The evacuation route maps will be distributed to the residents ahead of time. With the maps and access control points to prevent them from traveling in the wrong direction, the populace should be able to evacuate within a reasonable time.

Q.-58 Mr. Williams, Contention 20 c 3 states:

20 c 3]. Clermont population in Designated Sectors N(A), NNW(R) and NNE(B), consisting of a portion of Monroe Township, Ohio Township and a portion of Pierce Township (a permanent population of 10,596), are to proceed either to U.S. 52, thence in a westerly direction and out of the plume area; or, to proceed to S.R. 132, thence in a northerly direction to S.R. 125, in which the roadways for travel to an evacuation route servicing that population consists of one state roadway and 27 county and township roadways. There are two access control points on the perimeter of the plume zone at the junction of S.R. 749 and Cole Road and on Jenny Lind Road, 0.25 miles south of Cole Road, but no access control points within the affected township areas. The roadways for travel to an evacuation route in the aforesaid sector are narrow, winding, hilly and hazardous roadways unsupervised for traffic flow and control, except limitedly manned as noted, for prompt, safe and timely evacuation of the permanent population within the area and a safe evacuation in a prompt manner in the appropriate direction of travel cannot be implemented. [Clermont Plan, §II-I, Protective Response, p. II-I-17, 18, 22 and 23.]

Are these roads inadequate to evacuate the population in the vicinity of Zimmer Nuclear Power Station.

A. According to a study by the Texas Transportation Institute, the roadways within the EPZ are sufficient to handle the projected traffic volume.

Route 52 between I-275 and New Richmond is a 4 lane divided highway and is neither narrow, winding or hilly as alleged in the contention. While some of the other roads may be narrow, windy, or hilly the car driving residents of the area use them and are familiar with them.

The contention is not correct as to the number of access control points. Figure 1-8 on page II-I-23 of the Clermont County Plan lists 4 manned and 2 unmanned access control points with Monroe Township, 1 manned control point in Ohio Township, and 5 manned control points in Pierce Township.

Considering all the factors, residents familiarity with the roads, maps provided in advance of any incident, and access control points to prevent travel in the wrong direction, the populace should be able to evacuate adequately.

A.-59 Mr. Williams, Contention 20 c 5 states:

20 c 5] The Clermont permanent population within the plume area is rural, generally serviced by narrow and winding township roads without center line and involving country lanes approximately eight feet in width and ranging from 200 to 700-foot depth from the township roadway. The use of CART buses, "as available", cannot reasonably assure prompt transportation for evacuees without vehicles assembled at pickup sites. School buses cannot be used for public transportation; §§3313.172 and 3327.14, Revised Code of Ohio, preclude use of school buses for public transportation, except transportation of senior citizens and adult education groups, rendering the use of school buses for public transportation unlawful. Vehicles used to afford transportation of handicapped and individuals without vehicles must be capable of driving country lanes, removing the ability of buses, CART or otherwise, from traveling such lanes or negotiating turnaround at residences. The timely and safe evacuation of the population without vehicles cannot be implemented. [Clermont Plan, §II-I,

Protective Response, p. II-I-5; §III-A, County Agencies (Gen), pp. III-A-1 and 2; §III-C, County School Districts, pp. III-C-1 and 2].

Are you familiar enough with the roads in this area to address this issue?

A. I can't provide comment on the legality of the use of school buses for public transportation due to a lack of expertise in the area. As to whether CART vehicles are capable of using all other of the rural roads, I can't comment since I am not that familiar with the entire road system, however, the transit company is set up currently to provide services to the entire county and has a variety of vehicle types. The system provides a modified version of demand responsive service. Routes and persons served are put together based upon daily demand for service.

Q.-60 Mr. Meyer, does the Clermont County Plan provide for evacuation of the handicapped and disabled?

A. Yes it does. The Clermont County Plan has several provisions for evacuating the handicapped and disabled. Clermont County Plan II-I-5. The Plan provides that the County Welfare Department (CWD) and the Clermont Association for the Physically Handicapped/Developmentally Disabled (CAPH/DD) will provide the list of persons needing assistance. Clermont Senior Services (CSS) will maintain a list for senior citizens. Both CART and CAPH/DD have drivers and vehicles capable of insuring the the evacuation of handicapped persons. Local life squads will also provide assistance in transporting the handicapped and seniors. Ambulance support is also available from the Ohio National Guard Units identified in Figure 1, Section I-I of the Ohio Plan.

Q.-61 Mr. Williams, Contention 20 c 6 states:

20 c 6] The evacuation time estimates for evacuation of the Clermont population, ranging from 1.0 to 3.9 hours, do not recognize the roadway circumstances of Clermont County and evacuation routing, the location of residences from public roadways, fails to take into account roadway blockage due to vehicular mishap, weather circumstances of the area as reflected by the Clermont DSA time study estimating evacuation times within a range of 2.5 and 77.5 hours, fails to consider the character of the population (unprepared as to provisions to be transported, inadequate fuel in evacuation vehicle, single vehicle families in which vehicle is at work site, attempts to make telephone contact with police agency to determine if emergency is a test or actual, detouring from evacuation routes to gather family members not at home, family returning to home from off-home site, panic reaction, vehicular mishap, impassable roadways due to flooding, ice or snow and inadequate roadways leading to evacuation routes), paragraphs 1] through 3] and 5], supra, and as such the time estimates are grossly underestimated and the population cannot be evacuated within the mandatory time limitations. [Clermont Plan, §II-I, Protective Response, p. II-I-15; Table 3-2, p. 3-7 of Attachment I-2, Stone & Webster Time Study].

Have you reviewed the time estimates provided in the Clermont County Plan?

A. Yes. I have reviewed the time estimates and the considerations and assumption upon which the Stone and Webster times are based. Section 5 of the Stone and Webster Study. Some of the assumptions utilized by the Clermont County DSA are also contained in that report but not all of them.

Q.-62 Are there any "mandatory" evacuation time requirements?

A. No. NUREG-0654/FEMA Rep-1, Revision 1 only requires that time estimates for various sections of the EPZ be included in the Plan. NUREG-0654/FEMA Rep-1, Revision 1, J. 1. at page 63. The elements to be included in the evacuation time study are set forth in Appendix 4 of

NUREG-0654/FEMA Rep-1, Revision 1. The plan considered all of the required elements.

The intent of including evacuation estimates in emergency response plans is to provide decision-makers with the information on which to base a decision about which protective response is needed under various conditions. These estimates aren't intended to be mandatory limits for evacuation but an idea of what can be expected under a given set of conditions for the movement of large numbers of people and their belongings. NUREG-0654/FEMA Rep-1, Revision 1, page 4-1.

Q.-63 Mr. Heard, Contention 20 c 7 which is consolidated with Contention 36 c states:

20 c 7]. The evacuation of the Campbell County population directed in a generally north direction of Persimmon Grove Road to proceed in a generally northwesterly direction on evacuation routes Ky 10 and Ky 8 are inadequate where the plume pathway of radiation release from the Zimmer Station is generally northwesterly proceeding in the same path as the evacuation routing, and is inadequate in the failure to evacuate that portion of the population away from the plume pathway; and the evacuation of the Campbell County population directed in a generally south direction of Persimmon Grove Road to proceed in a generally westerly direction on evacuation routes 1121, 1280 and U.S. 27 are inadequate where the plume pathway of radiation release from the Zimmer Station is generally westerly proceeding in the same path as the evacuation routing, and is inadequate in the failure to evacuate that portion of the population away from the plume pathway. Implementation of the evacuation under the stated circumstances provides no reasonable assurance that the health and safety of the affected population is protected. [Campbell Plan, Annex F, Protective Actions, p. F-14-1.]

The thrust of these two contentions is that the plan is inadequate because it fails to route evacuees away from the plume. Assuming this is true, does it make the Campbell County Plan inadequate?

A. This contention questions evacuation as a protective action under certain atmospheric conditions. The Campbell County Plan provides that

"protective actions are measures taken in anticipation of or after a release of radioactive material from ZPS-1". Annex F, page F-2. Evacuation is only one possible protective action that may be considered by the decision-makers. Annex F, page F-1.

Correlation of wind direction with the evacuation route is not required by NUREG-0654. However, Campbell County's evacuation routes are based upon the prevailing winds in the locality and the existing roadways (Annex F-14).

The fact that the evacuation route maps have fixed direction raises a legitimate concern. Planners could have had maps contain the evacuation routes without directions. Then, if evacuation was necessary, direction could be given over EBS. This approach provides flexibility. Having fixed direction given to the citizenry in advance of any accident allows them to become familiar with the routes and eliminates the need for them to wait for oral instructions at the time of an accident.

Each alternative has merit. It is a judgment call as to which may effect the most timely evacuation.

Q.-64 Mr. Heard, Contention 20 c 8 which is consolidated with Contention 36 D asks a similar question.

20 c 8]. Campbell evacuation routes 1121, California Cross Road, and Persimmon Grove Pike are narrow, winding, and hilly, with steep inclines; Lickert Road has four 90° turns and a narrow bridge impeding evacuation and, where it intersects U.S. 27, there is no access point control to direct traffic flow, resulting in traffic blockage or accident; Ky 8 is narrow without road berm, or shoulder, and approximately one-half mile southeast of Oneonta for an approximate distance of one-fourth of a mile the road has eroded and been without repair for a substantial period; Wesley Chapel Road and 1197 are narrow, hilly ridge roads; Ky 10 is a narrow winding ridge road and parallels 12-mile Creek and, during flooding, this portion of Ky 10 is impassable; and the approximate 50 rural service roads that the population must travel to evacua-

tion routes are approximately 12 feet wide without centerline; some gravel roadways leading to evacuation routes, due to topography and land characteristics, are not capable of affording prompt and timely evacuation of the population. [No plan provision].

Assuming the facts in the contention, is the Campbell County Plan adequate?

A. Yes. Criteria of NUREG-0654 do not stipulate that engineering specifications of roadways be assessed. Criteria of NUREG-0654 requires only "control of access to evacuated areas and organization responsibilities for such control" (J.10.j.) and that "impediments" be addressed. These are addressed in the Campbell County Plan in Annex F. pp. F-18-1-2; F-10-III and F-17. The November 18, 1981 Zimmer Nuclear Power Station exercise did not reveal deficiencies such as those contended.

In addition, evacuation routes are driven by local residents on a daily basis and should be familiar to them.

A.-65 Mr. Heard, Contention 20 c 9 which is consolidated with Contention 36 G states:

20 c 9]. There are an inadequate number of school buses timely and promptly to evacuate students of the nine schools within Campbell County subject to plume exposure, and during school session evacuation the use of school buses as vehicles for evacuation of the general public without transportation is incapable of affording timely and prompt evacuation of that segment of the population; there are no posted school bus stops or routes and there is no plan provision to educate the public where they are to assemble for school bus transportation to afford timely and prompt evacuation of that segment of the population; the roadways within approximately eight miles of the Zimmer Station are inadequate for TANK bus travel and maneuverability. The plan is not capable of being implemented in a timely and safe manner to evacuate that portion of the population without personal vehicles. [Campbell Plan, Basic Plan, pp. 5 and 6; Annex, Protective Actions, P. F-9-1.]

What facts does NUREG-0654/FEMA Rep-1, Revision 1 require the plan to include with regard to evacuation of schools?

A. Criteria of NUREG-0654 only require that the plan provide for the physical and administrative means for accomplishing evacuation. Specifics, such as an adequate number of school buses to evacuate students and the general public are tested during the REP Exercise.

Q.-66 Would it be necessary to evacuate all of the schools at the same time?

A. All schools are not located in same plume exposure pathway, therefore, all schools will not be evacuated at the same time. Staged evacuation will allow use of adjacent school district buses for evacuation of students and the general public.

If evacuation is the protective measure utilized, it is anticipated that it will be taken prior to release and lead time will be a half hour to several hours.

School buses are the primary transportation for evacuation to Campbell County High School. From there evacuees will be transported by TANK buses. These buses travel these roads daily and apparently can negotiate the roads.

The adequacy of roadways for TANK bus travel and maneuverability is not a specific requirement of NUREG-0654. The November 18, 1981 Zimmer Nuclear Power Station exercise noted no deficiencies in the evacuation process.

Q.-67 Were there any deficiencies in the number of school buses available noted during the November 18, 1981 ZPS exercise?

A. No deficiencies in the number of school buses were noted in the November 18, 1981 Zimmer Nuclear Power Station exercise. Posted school bus stops or routes for assembly of population without transportation is not a specific requirement of NUREG-0654; however, a public information program to be developed and distributed to the public by Zimmer Nuclear Power Station will contain this information. School bus stops and routes should be posted in order to facilitate evacuation of that segment of the population without transportation. (Ref. Annex F-9-1).

Q.-68 Mr. Heard, Contention 20 c 9 a states:

20 c 9 a]. Access control points are inadequate in number and placement to direct and control traffic during evacuation, and the plan does not provide any reasonable assurance that an adequate number of police and other support groups are available to discharge the responsibility, and police and support groups are insufficient in number to be timely deployed to control evacuation traffic. [Campbell Plan, Basic Plan, p. V-7; Annex F, Protective Actions, pp. F-10-1 and 2; Annex G, Law Enforcement, P. G-1-1: other than a statement of the identity of police units, no information is provided as to number of personnel, vehicles and equipment to provide reasonable assurance that the plan is capable of being implemented.]

Does the Campbell County Plan provide reasonable assurance for access control points?

A. Access control points are identified in Appendix F-17, pg. F-17-1 of the Campbell County Plan. This appendix also identifies traffic control points. The county and state plans do identify those organizations that will man the access control points in the Basic Plan Section on page V-7 and on page F-10-1. However, access control points as required by NUREG-0654 are identified for the primary purpose of controlling access to evacuated areas and are secondarily identified for the purpose of traffic control during evacuation (Campbell County

Plan, Annex F, page F-4). During the evacuation process, traffic control points serve as a mechanism to assure timely and effective evacuation. NUREG-0654 does not require specific numbers personnel and equipment be provided in the plan. During the November 18, 1981 exercise access and traffic control points were manned and functional.

Q.-69 Mr. Heard, Contentions 20 c 10 to 20 c 14 which were consolidated with Contention 36 B all concern the evacuation time estimates contained in the Stone & Webster report which appears in each of the plans.

Specifically, the contentions are:

20 c 10]. The evacuation time estimates for the evacuation of the Campbell population, ranging from 1.0 to 2.9 hours, as performed by Stone & Webster, and ranging from 1.25 to 11.25 hours, estimated by Kentucky DES, do not recognize the roadway characteristics of Campbell County, the location of residences from public roadways, and fail to consider the character of the population (unprepared as to provisions to be transported, inadequate fuel in evacuation vehicles, single vehicle families in which the vehicle is at the work site, attempts to make telephone contact with a police agency to determine if emergency is a test or actual, detouring from evacuation routes to gather family members not at home, family returning to home from off-home site, panic reaction, vehicular mishap, impassable roadways due to flooding, ice or snow, inadequate roadways leading to evacuation routes, and the character of evacuation roadways to topography and land characteristics), and as such the time estimates are grossly underestimated and the population cannot be evacuated with the mandatory time limitations. [Campbell Plan, Annex F, Protective Actions, Appendix F-18, pp. 3-6 and 3-7.]

20 c 11]. Pendleton County evacuation routes Corntown Road, Ky 10, Flour Creek Road, 169, Concord Caddo Road and Falmouth Lenexburg Road are ridge roads, steep, narrow, winding and in areas limited to maximum speeds of 25 mph; and the approximate 20 rural service roads that the population must travel to evacuation routes are approximately 12 feet wide without centerline, several gravel roads, winding and hilly; the evacuation routes and access roadways leading to evacuation routes, due to topography and land characteristics, are not capable of affording prompt and timely evacuation of the population. [No plan provision].

20 c 12]. Evacuation time estimates are inadequate for the reasons presented in paragraphs 6] and 10] supra and this plan again sets forth the Stone & Webster study.

20 c 13]. Bracken County evacuation routes Ky 10, 1109 and Ky 8 are ridge roads, steep, hilly, narrow and winding and the approximate 10 rural service roads that the population must travel to the evacuation routes are approximately 12-foot in width without center-line, winding and hilly and incapable of affording prompt and timely evacuation of the population. [No plan provision].

20 c 14]. Evacuation time estimates are inadequate for the reasons presented in paragraphs 6] and 10] supra and this plan again sets forth the Stone & Webster study.

Are there any "mandatory" evacuation time limits?

A. Contrary to this contention there are no mandatory time limits established by law or regulation. The purpose of including evacuation time estimates in emergency response plans is to provide the decision-makers with sufficient information with regard to the evacuation times to assist them in determining what protective actions from the available choices will minimize the public exposure to radiation.

The intervenors list a number of factors which they maintain were not considered in reaching the evacuation times. This is not correct. The considerations and assumptions underlying the time estimates are set forth in Appendix F-18 at pages 5-1 to 5-14. These assumptions include adverse weather, page 5-8, roadway characteristics, page 5-7, vehicles at work sites, page 5-6, and other considerations. Detouring from evacuation routes will be minimized by the manned access and traffic control points.

Of great significance is the fact that in arriving at the total population that must be evacuated the study number is a high estimate due to "double counting" as a result of counting some residents both

at their home and their place of work or school in planning zone. (Appendix F-18, page 5-6).

It should also be noted that the assessment was based upon emergency planning data available at the time and the findings are subject to revision after State and local emergency plans have been developed further. (Appendix F-18, page 1-1). Subject to revision based upon additional information these evacuation time estimates are reasonable.

There are broad discrepancies between the times developed by Stone and Webster and the counties. These discrepancies are obviously due to the fact that each group used a different set of assumptions. Coordinating and refining these figures would provide a better range of times for consideration by the decision-makers.

Q.-78 What about the allegations in contention 20 c 11 and 20 c 14 that the roads are too narrow, steep, hilly and winding?

A. NUREG-0654/FEMA Rep-1, Revision 1 does not require the specifications of the roadways to be assessed. Only the "control of access to evacuated areas and organizational responsibilities for such control" and "impediments", NUREG-0654/FEMA Rep-1, Revision 1, Criteria J.

The Pendleton County plan does consider these factors (Appendix F-18, Table 5-1, page 5-9 and 5-11 and Table 5-2, page 5-12). These roads serve to evacuate Sectors II, V and IX which have an estimated number of 889 vehicles (Appendix F-18, Table 5-2, page 5-12). The driving public in this area is familiar with the roads since they do in fact drive to and from their homes and/or work in these Sectors. There are no facts which I am aware of that would make these estimates unreasonable.

It must be remembered that the residents of this area travel those roads daily and are familiar with them.

Q.-79 Are these time estimates adequate?

A. The evacuation time estimates serve as a planning guide to the decision-makers. They assist them in determining what protective action might be taken in an emergency. NUREG-0654/FEMA Rep-1, Revision 1, Appendix 4, page 4-1.

The Stone & Webster study notes that these times were based upon the planning data available to them at the time and are subject to revision when new data becomes available.

Q.-80 Mr. Meyer, Contention 20 e 3 states:

20 e 3]. Clermont County has only volunteer fire squads. Fire personnel are assigned supporting access control action as available and no dependable count is furnished by the plan. Fire personnel within the plume area will provide door-to-door verification of population notification consisting of 113 volunteer personnel and 28 vehicles with an additional combined fire and life squad group of 134 (fire personnel numbers not stated in plan) to perform tasks in either the plume or relocation area and equipped with 18 vehicles. The plan fails to indicate the number of volunteer fire personnel that would or could be available at the time of emergency. The approximate number of fire personnel available on shift at notification for initial service would be 38. The miles of roadway within the plume area together with the miles of country lanes involved, remove any reasonable assurance that fire personnel of 38 to 267 (assuming all volunteers could and would immediately respond) to facilitate door-to-door verification of notification within the plume area and the miles of roadway present. The plan presents no reasonable assurance or upon implementation that any one, more or all of the volunteer fire personnel would or could be present to assume the responsibilities assigned, or that such personnel would or could leave their regular employment and family responsibilities during evacuation. [Clermont Plan, §II-I, Protective Response, p. II-I-6; §III-B, Emergency Services, pp. III-B-2, 5 and 7,]

What has been your experience with volunteer workers during emergencies?

A. In all my experience as American National Red Cross, Regional Director of Disaster Services and FEMA Regional Field Officer volunteer personnel have proven to be dependable, conscientious and dedicated, these personnel are the first to arrive at the scene and the last to depart. The plan therefore does present reasonable assurance volunteer fire personnel would be present to assume assigned responsibilities.

Q.-81 Is it required by NUREG-0654/FEMA Rep-1, Revision 1 that numbers of personnel be included in the plans?

A. No. NUREG-0654/FEMA Rep-1, Revision 1 does not require the plans to specify number of personnel.

Q.-82 Is it possible for any plan to provide reasonable assurance that volunteer workers will show up in an emergency?

A. No. No plan can predict the availability of fire personnel or other disaster workers with any accuracy. There are too many factors, vacations, illness, job vacancies, etc. However, these volunteer fire fighters do respond with regularity at all hours of the day and night to fires in the community. There is no reason to suspect they will act differently in this situation. Again, my experience with volunteer agencies in the past is that volunteers do keep their commitments to show up and do their jobs.

Q.-83 Mr. Meyer, Contention 20 e 4 states:

20 e 4]. Clermont County has only volunteer fire squads in which only Goshen and Miamiville have trained para-medics. The 119 life squad personnel within the plume area possess four mobile and no portable radios and no information is provided as to vehicles or equipment possessed by the plume area life squads. The plan fails to establish how many, if any, of the staffs. The plan fails to indicate, with any reasonable assurance, or upon implementation, that any one, more or all of the volunteer life squad personnel would or could be present to assume any responsibility

in the plume area during evacuation or that such personnel would or could leave their regular employment and family responsibilities during evacuation. [Clermont Plan, §III-B, Emergency Services, pp. III-B-4, 5 and 9].

Does NUREG-0654/FEMA Rep-1, Revision 1, require numbers of personnel be included in the plan?

A. No. NUREG-0654/FEMA Rep-1, Revision 1 does not require the plans to specify numbers of personnel.

Q.-84 Mr. Meyer, does the Clermont County Plan indicate the responsibilities of the life squads?

A. Yes. The Clermont County Plan states that the local life squads will provide medical support, as needed, including the transportation of radiologically contaminated or injured persons to appropriate medical facilities. Table A-1, page II-A-4.

Q.-85 Mr. Meyer, does the Clermont County Plan indicate whether the life squads are equipped with communication devices?

A. Yes. Table III-B-4 on page III-B-9 lists the communication equipment available to life squads.

Q.-86 Mr. Meyer, does the Clermont County Plan assure that volunteer life squad personnel will respond in an emergency involving Zimmer Nuclear Power Station.

A. As I stated previously, no plan can make such an assurance. My experience is that they will respond.

Q.-87 Mr. Meyer, Contention 20 e 5 states:

20 e 5]. The County Sheriff has 12 road patrol deputies, the local police have 14 full-time officers, with support from Pierce Township police in the plume area providing an additional nine full-time police officers. The Ohio State Patrol has approximately 25 patrolmen at the Batavia Post. In addition to the foregoing, there are 16 volunteer police officers associated with

the local police departments. At the time of notification of an emergency mandating evacuation there would be approximately four deputy sheriffs, seven local policemen and eight State Patrolmen on duty, for a total of 19 local police officers available to provide emergency response on duty, for a total of 19 local police officers available to provide emergency response resources to man access control points and direct traffic and maintain order within the plume evacuation area. The Clermont Plan as drawn and to be implemented provides no reasonable assurance that local police are capable of performing the response responsibility assigned, especially with the necessity to timely and safely direct and control evacuation traffic. Off-duty local police would be available on the ability to summon such officers to duty based upon the location of such officers and the presence of a point of notification contact. The plan presents no reasonable assurance (nor can it be reasonably implemented) that there is an ability to contact and summon off-duty local police officers to respond within the time restrictions present to promptly and safely direct the evacuation of the population. The time restrictions necessary to activate and deploy National Guardsmen or to summon police officers from contiguous counties provides no reasonable assurance in the plan or upon implementation, that such police and guard units can respond within time to support evacuation of the population. The number of police officers and the limitation of police vehicles fails to provide any reasonable assurance that local police are capable of discharging the assigned responsibility. The number of access control points for the direction of evacuation traffic is inadequate to properly, safely and timely direct the evacuating population, together with the absence of any access control points manned by police or other support emergency response personnel in the intersecting roads for travel by evacuees to evacuation routes. [Clermont Plan, §II-I, Protective Response, pp. II-I-6, 15, 18, 23 and 24; §III-B, Emergency Services, pp. III-B-1, 5 and 6].

Does NUREG-0654/FEMA Rep-1, Revision 1 require that the plan state the number of police personnel available to assist in an emergency?

A. As I stated previously, it does not.

Q.-88 Are the police departments capable of manning the access control and traffic control points?

A. The manning of access control points and traffic control points require the police officers to direct and control the flow of traffic. This is a part of their regular duties.

Q.-89 Are there any other emergency response agencies that are assigned to assist in manning access control and traffic control points?

A. Yes. Section II-I-6, paragraph I, of the Clermont County Plan lists those agencies who will support this function.

Q.-90 What provisions does the plan make for contacting off-duty police officers?

A. The means for contacting the police is identified on pages II-D-4 and II-E-3. In addition to this, off-duty police officers may be notified in the same manner as the general public, e.g., sirens, tone alert radios, NOAA weather radio and EBS. Messages to report for duty can be broadcast over the EBS stations.

Q.-91 Is there sufficient time for back-up such as National Guard and police from contiguous counties to respond?

A. In the usual case, there will be from a half to several hours before a release from Zimmer Nuclear Power Station. NUREG-0654/FEMA Rep-1, Revision 1, page 13. How much time cannot accurately be predicted.

Q.-92 Mr. Meyer, does the Clermont County Plan provide adequate numbers of access points?

A. The Clermont County Plan indicates the location of all of the access points at pages II-I-23 and II-I-24. The plan provides for 28 manned and unmanned access points strategically located along the evacuation routes.

The Clermont County Plan provides adequate personnel at appropriate locations. However, as indicated by Mr. William's testimony, additional access control points would improve the plan.

Q.-93 Mr. Meyer, Contention 20 e 6 states:

20 e 6]. The Clermont County Sheriff is assigned the primary command authority of all county activities in response to an emergency, including evacuation, and shall direct all primary and support agencies. The Sheriff shall direct all personnel involved in access control, including local police, local fire and State Patrol. A county sheriff is empowered, and thereby limited, by §311.07, Revised Code of Ohio, to call upon the sheriff of any adjoining county and municipal and township officials in his or adjoining counties, to furnish law enforcement and fire protection, together with appropriate equipment, as necessary, to preserve the public peace and protect persons and property only in the event of riot, insurrection, or invasion. The provisions of the plan providing command authority for emergency response to a Zimmer Station even or accident is not within the provisions of §311.07(B), Revised Code of Ohio, as the same does not consist of riot, insurrection, or invasion, and the plan as drafted and to be implemented provides a power to the Sheriff of Clermont County to control local police, fire and State Patrol contrary to the laws of the State of Ohio and the provisions of the plan are unlawful. Based upon the legal status of the plan, it cannot provide either reasonable assurance of implementation, or implementation, by its assignment of command responsibility contrary to state law. [Clermont Plan, §II-A, Command & Coordination, p. II-A-1, Protective Response, p. II-I-6; §III-A, County Agencies (Gen), p. III-A-12].

Have you reviewed this contention?

A. Yes. I have been advised by counsel that this contention is a matter of law and have not responded to it.

Q.-94 Mr. Heard, Contention 20 e 7, which has been consolidated with Contention 36H, states:

20 e 7]. The fire personnel, in part volunteer, in Campbell County are assigned the task of fire response and, "if capable," to assist other emergency response functions without clarification. The plan provides no information as to either number of personnel and vehicles or support emergency functions. The plan fails to provide reasonable assurance that fire personnel are capable of discharging emergency response roles other than fire related activity. [Campbell Plan, Annex I, pp. I-1 and 2, I-1-2.]

What functions does the Campbell County Plan assign to the volunteer fire departments?

A. In Annex I, pg. I-1, the mission of fire personnel is "to provide fire protection for Campbell County during a radiological emergency; to assist other response functions, if capable." The functions of the fire departments are in order of priority on page I-Z:

1. Rescuing survivors of fires and other emergencies,
2. Extinguishing fires,
3. Assist in protective actions such as confirmation of evacuation, access control, or in-place protection/sheltering as needed,
4. Assist in other emergency response functions if capable."

Q.-95 What is the basis of the "other emergency response functions, if capable"?

A. The additional functions performed by fire personnel will be assigned based on available staff and resources. Firefighters will be provided training. (Annex S, pg. S-3).

Once trained, firemen will be assigned to tasks they have trained for. NUREG-0654 does not require specific numbers of personnel or equipment to be stipulated.

Q.-96 Does the Campbell County Plan provide reasonable assurance that the fire fighters are capable of discharging emergency response roles other than fire related activities?

A. Assuming that they are assigned only those other emergency response functions that they have received training for, yes.

Q.-97 Mr. Heard, Contention 20 e 8 states:

20 e 8]. Campbell County has no provision or information pertaining to rescue squads, except that rescue squads are present in the county fire departments and possess ambulances. No information is provided pertaining to training to treat radiological injury. The plan fails to provide reasonable assurance

that emergency medical technicians are prepared to provide services other than first aid and hospital transportation and are not trained for the identification and segregation of radiation injury. [Campbell Plan, Annex H, Medical & Public Health, p. H-2].

Does the Campbell County Plan set forth the duties and specify the training to be provided to rescue squads?

A. Annex H of the Campbell County Plan provides that contaminated patients be transported by fire department rescue squads and states that at least one EMT per vehicle is trained in proper transportation procedures. NUREG-0654 does not specify the inclusion of details relative to the make-up of rescue squads. Neither does the NUREG specify that rescue squad personnel be able to identify and segregate the radiologically injured. It does specify that response personnel be able to handle contaminated individuals. Annex H. addresses this requirement. However, the state and county plans do not specify the type of training to be received by rescue squad personnel (Annex S).

Q.-98 Mr. Heard, Contention 20 e 9 states:

20 e 9]. The number of State and local police present and available to provide access control point manning and other traffic control direction to provide a reasonable assurance of a safe and timely evacuation of the population are inadequate in number, as well as an inadequate number of police to reasonably assure the safe and timely evacuation of A.J. Jolly State Park and Camp Sunshine. The plan fails to present any information pertaining to the number of police to be punctually available at the time of an evacuation, support police to be summoned, and the times required to afford supported police assuming duty stations, or the number of police vehicles present and to be utilized in controlling evacuation. [Campbell Plan, Annex F, Protective Actions, p. F-9-2 and 3, F-1-1 and 2; Annex G, Law Enforcement, pp. G-12 and G-1-1, Annex K, Military Support, pp. K-1 and 2.]

Does NUREG-0654/FEMA Rep-1, Revision 1 require the plans to contain specific numbers of personnel?

A. No. NUREG-0654 does not require identification of the specific personnel resources for manning access control points and traffic control points.

A.-99 Does the Campbell County Plan provide for the evacuation of A.J. Jolly State Park and Camp Sunshine?

A. There is no apparent reason for police support for the Jolly State Park and Camp Sunshine staffs. Park and camp staffs are cited as responsible for evacuation of the park and camp respectively in Appendix F-9, Annex F, Campbell County Plan. It is also noted in Appendix F-9 and Annex I that Fire Service personnel can be used to man access and traffic control points to assist in evacuation of these facilities and elsewhere in the county. Annex F also mentions that state police and national guardsmen will assist in manning these points. If evacuation is the elected protective measure, ample lead time, a half hour to several hours, will be available to accomplish evacuation.

Q.-100 Mr. Heard, Contention 20 e 10 states:

20 e 10]. The Fire Departments in Pendleton County are volunteer and are assigned only the duty of fire emergency. All contact with county fire units is by telephone and fire companies will be activated for fire; other functions to be coordinated at the time. The plan and its implementation fails to provide any reasonable assurance that the fire companies will provide emergency response to protect the public in an evacuation. The plan presents no number of personnel or equipment available. [Pendleton Plan, Annex A, Direction & Control, p. A-9; Annex I, Fire Protection/Rescue, pp. I-1 and 2, I-1-1.]

Does the Pendleton County Plan assign functions other than fire fighting to the volunteer fire departments?

A. Yes. Section IV, Annex I, page I-2 of the Pendleton County Plan assigns functions other than firefighting to the various fire depart-

ments, such as; access control, confirmation of evacuation, and in-place protection/sheltering.

Q.-101 Mr. Heard, what is the means of communication between fire units in Pendleton County?

A. In Annex B, page B-1-1, it is established that while only the Falmouth Fire Department has radio communications with the county EOC, all departments can communicate by radio with one another. The Falmouth unit can provide the radio link to the EOC for the other units. NUREG-0654 does not require that numbers of personnel and equipment be stipulated in plans.

Q.-102 Mr. Heard, are you aware of any facts that would lead you to believe that the volunteer fire fighters would not respond to an emergency at Zimmer Nuclear Power Station.

A. No.

Q.-103 Mr. Heard, Contention 20 e 11 states:

20 e 11]. Pendleton has no provision or information pertaining to rescue squads that such squads are present in the three volunteer fire departments and that they are trained in rescuing fire survivors. The plan as drafted and to be implemented provides no reasonable assurance that rescue personnel can determine and segregate radiological injured persons or to provide any emergency services. [Pendleton Plan, Annex H. Health/Medical Services, pp. H-1 and 2; Annex I, Fire Protection/Rescue, pp. I-1 and 2, I-1-1.]

Does the Pendleton County Plan address the responsibilities and capabilities of the rescue squads?

A. Yes. The only rescue squad described as capable of transporting contaminated victims is that belonging to the Falmouth Fire Department. (Annex H, Pendleton County Plan). The plan states that at least one member of this squad is trained in the transportation of contaminated

persons. NUREG-0654 does not require that rescue personnel be trained to determine radiological injury and to segregate persons with those injuries. It requires only that such personnel be trained in transportation methods.

Military and state assistance are available to transport contaminated and non-contaminated patients to medical facilities. (Annex H, page H-3).

Q.-104 Mr. Heard, Contention 20 e 12 states:

20 e 12]. The number of State and local police and other resource support groups available to provide and man access control points and to provide traffic, together with providing traffic control and evacuation of Kincaid Lake State Park, is inadequate to present reasonable assurance by the plan or in its implementation that the population affected will be timely and safely evacuated from the exposed area. [Pendleton Plan, Annex F, Protective Actions, pp. F-9-2, F-10-1; Annex G, Law Enforcement, pp. G-1 and 2, G-1-1.]

Does the Pendleton County Plan provide adequate assurances for evacuation of Kincaid Lake State Park?

A. The Pendleton County Plan recognizes the problem of access control, traffic control and evacuation of Kincaid Lake State Park. Park transients are to be notified of evacuation by siren with a voice message and subsequent messages by mobile public address system. Evacuation routes will be posted at park entrance and at other facilities within the park. Annex F, page F-9-2. "Traffic control and access control points are to be manned by ---firemen, state and local police, or National Guardsmen." Annex F-9, page F-9-1. State park officials will assist in the evacuation of the Park. The "---Civil Air Patrol will provide aerial surveillance of access control points and routes." (Appendix F-10, page F-10-1). NUREG-0654 criteria do not require that numbers of personnel or equipment be specified.

The November 18, 1981 Exercise noted no deficiencies in this portion of the Plan.

Q.-105 Mr. Heard, Contention 20 e 13 states:

20 e 13]. Bracken County has four volunteer fire departments, trained in fire and rescue only. Departments have standby and call up procedures and other than fire related activity, the personnel are assigned access control functions during an evacuation. The plan and its implementation fails to provide any reasonable assurance that the personnel will provide emergency response for the protection of the public during emergency. The plan presents no number of personnel or equipment available. [Bracken Plan, Annex F, Protective Actions, p. F-10-1; Annex I, Fire/Rescue Services, pp. I-1 and 2, I-1-1.]

What functions does the Bracken County Plan assign to the volunteer fire departments?

A. In Annex I, pg. I-1 the mission of fire personnel is "to provide fire protection for Bracken County during a radiological emergency; to assist other response functions, if capable". The functions of the fire departments are in order of priority on page I-Z:

- "1. Rescuing survivors of fires and other emergencies,
2. Extinguishing fires,
3. Assist in protective actions such as confirmation of evacuation, access control, or in-place protection/sheltering as needed,
4. Assist in other emergency response functions if capable."

Q.-106 Mr. Heard, is the plan required to contain numbers of personnel or equipment available?

A. No. NUREG-0654 does not require specific numbers of personnel or equipment to be stipulated.

Q.-107 Does the plan provide assurances that the personnel will provide emergency response?

A. The additional functions performed by fire personnel will be assigned based on available staff and resources. Fire fighters will be provided training. (Annex S, pg. S-3).

Once provided training, firemen will be assigned to tasks they are trained for.

Q.-108 Mr. Heard, Contention 20 e 14 states:

20 e 14]. Bracken County has no provision or information pertaining to rescue squads. The squads will provide ambulance service only. The plan as drafted and to be implemented provides no reasonable assurance that rescue personnel can determine and segregate radiological injuries or to provide any emergency service. [Bracken Plan, Annex H, Medical & Public Health, p. H-2; Annex I, Fire/Rescue Service, pp. I-1 and 2, I-1-1.]

What are the requirements of NUREG-0654/FEMA Rep-1, Revision 1 with regard to rescue squads?

A. NUREG-0654/FEMA Rep-1, Revision 1, does not require that rescue personnel be able to determine and segregate the radiologically injured. It requires only that such personnel be trained in the methods of transporting contaminated victims. (NUREG L.4.). It is indicated on page H-2, Bracken County Plan, that at least one EMT per fire department rescue vehicle has been trained in these methods and will be able to carry out this responsibility.

Q.-109 Mr. Heard, Contention 20 e 15 states:

20 e 15]. The number of local police and other resource support groups present to provide and man access control points and to provide traffic control is inadequate to present reasonable assurance by the plan or in its implementation that the population affected will be timely and safely evacuated. [Bracken Plan, Annex F, Protective Actions, p. F-10-1; Annex G, Security and Law Enforcement, pp. G-1 and 2, G-1-1.]

Based upon the resources committed to access control in the Bracken County Plan are there sufficient resources to man access control points and provide access control?

A. Appendix F-10, page F-10-1, Bracken County Plan assigns access control point responsibilities to various police and fire departments. There is no reason to believe these organizations cannot perform the task. On page F-10-2, the plan states the Kentucky State Police and National Guard are available for traffic control and access control duty.

Q.-110 Mr. Meyer, Contention 20 f 1 states:

20 f 1]. At flood stage, Ohio River crest of 53 feet, U.S. 52, approximately $\frac{1}{4}$ th of a mile north of the Village of Neville is under water and impassable as to U.S. 52, Neville Spur and Maple Creek Road for an approximate distance of $\frac{1}{2}$ mile and including Maple Creek. Near the Village of Moscow, just south of S.R. 743 by several feet, U.S. 52 is under water and impassable for an approximate distance of $\frac{1}{2}$ mile and including Ray Run. On either side of U.S. 52 at the intersection of Laurel-Moscow Road for a distance of approximately $\frac{1}{2}$ mile, U.S. 52 is under water and impassable and at a 64-foot Ohio River crest the bridge over Little Indian Creek near Laurel-Moscow Road-U.S. 52 intersection, on U.S. 52 is under water and impassable. U.S. 52 at the Village of Point Pleasant, including the intersection of U.S. 52-Indian Road, intersection of U.S. 52 and S.R. 232, for an approximate distance of $\frac{1}{2}$ mile is under water and impassable. From and including, Clermontville road, and its intersection of U.S. 52, portions of Clermontville Road and approximately $\frac{1}{2}$ mile to the north, U.S. 52 is under water and impassable. From a distance of approximately $\frac{1}{2}$ mile south of the Village of New Richmond to approximately $\frac{1}{2}$ mile south of the intersection of Bethel-New Richmond Road and U.S. 52, U.S. 52 is under water and impassable. Within two hundred yards of U.S. 52 and to the west of U.S. 52, the streets of the Village of New Richmond are under water and impassable. The bridge located on Fagins Run Road within 50 feet of S.R. 132 is under water and impassable due to the flooding of Twelve Mile Creek and that evacuation route entry into S.R. 132 for the population northeast of the location is closed. Flooding of the Ohio River at a crest of 80 feet (1937 flood) U.S. 52 is under water and impassable from approximately 1 mile east of the Village of Neville to the west and north to within approximately 200 feet of the entrance to the Zimmer Station and within 200 feet to the north of the entrance of the Zimmer Station and continuing through the Villages of Point Pleasant and New Richmond and to the northwest of New Richmond,

U.S. 52 is under water and impassable. Maple Creek Road, S.R. 743, Laurel-Moscow Road, Indian Road, S.R. 232 Clermontville Altman Road, and Frank Willis Memorial Road are all under water and impassable at their respective intersections with U.S. 52, totally precluding vehicular travel to the Zimmer Station. During flood crests of the Ohio River from 53 feet to 80 feet a range from a substantial portion of an evacuation route is impassable and vehicular travel to the Zimmer Station is limited to S.R. 743 to U.S. 52 to Zimmer to the exclusion of U.S. 52 as an evacuation route from New Richmond to beyond Neville and the isolation of the Zimmer Station. Under those circumstances, including flooding of the Zimmer EOF site, evacuation and emergency plans cannot be implemented. [No plan provision].

What, if any information regarding flooding on the Ohio River, has been available to you?

A. One of the components of FEMA is the National Flood Insurance Program (NFIP). One of the responsibilities of the NFIP is to map flood hazard areas for the purpose of establishing flood insurance rate zones. I consulted with FEMA Staff in our Natural Hazards Branch for Region V on the issue of flood potential along the roads indicated in contention 20 f 1.

Q.-111 Mr. Meyer, are the routes set forth in the contention subject to flooding?

A. Yes. The area long the Ohio River is a flood hazard area. It should be noted, however, that 80 foot crest which occurred in 1937 was greater than the 500 year frequency flood. The 500 year flood is the design flood that has a .2 percent chance of occurring in any year.

Q.-112 Mr. Meyer, what kind of notice would people have of a flood along the Ohio River?

A. Normally, a flood on the Ohio River is a slow rising flood. There would be ample warning and opportunity for people to evacuate. It is probable that a flood occurring at the same time as an accident at Zimmer

Nuclear Power Station would result in residents leaving the area before the evacuation routes were flooded.

Q.-113 In the unlikely event that the evacuation routes referenced in the contention were flooded, would it be correct that evacuation and emergency plans could not be implemented?

A. No. Sheltering in place would become the alternative protective action. Alternative evacuation routes may be available and could be broadcast over the EBS.

Q.-114 Mr. Meyer, Contention 20 g 1 states:

20 g 1]. The Ohio roadways set forth in Contention 20 c) 1), 2) and 3) and the Kentucky roadways set forth in Contention 20 c), 7), 8), 11), and 13) are rendered impassable due to ice and snow accumulations during the period December 1 to March 31 annually. The roadway crews available in each of the respective counties are not equipped to rapidly remove snow and to sand and salt to render the roadways passable. The federal and state highways in the respectively counties remain impassable for periods of approximately three hours to 15 hours. County and township roadways cannot be made passable from periods ranging for two to 14 days. The topography and land characteristics, together with the roadways being hilly, narrow, steep and winding, precludes any vehicle travel, other than four wheel drive vehicles. Police vehicles were rendered useless during the winters of 1977 and 1978 and police activity was limited to one four-wheel vehicle in Clermont County and volunteer four-wheel drive operators to transport necessities to families that could not leave their residences. A majority of the population of the involved counties maintain their residences approximately 100 to 700 feet from the public roadway and vehicles at the home are inoperative and transportation by vehicle is capable only at the intersection of the residence lane with the public roadway. An evacuation during snow or ice accumulation, rendering a portion or all of the evacuation routes impassable and rendering the service roadways of township and county roadways for travel to evacuation routes impassable would result in the inability to evacuate the affected population due to impassable roadways and the absence of sufficient support vehicles present to evacuate. No county possesses sufficient snow moving, salting and sanding equipment and personnel to maintain roadways passable during snow and ice accumulation to present reasonable assurance that the population can evacuate during this seasonable condition. [No plan provision].

Does NUREG-0654/FEMA Rep-1, Revision 1 require the plan to address adverse weather conditions?

A. Yes. NUREG-0654/FEMA Rep-1, Revision 1 states, on page 59 J.3 that adverse weather conditions in arriving at evacuation time estimates.

Q.-115 Does the Clermont County Plan address snow and ice conditions?

A. There is no specific provision in the Clermont County Plan that addresses snow and ice emergency conditions.

Snow and ice conditions were considered in arriving at the evacuation time estimates. Stone and Webster Report at page 3-2.

Q.-116 In the event that an emergency occurred at Zimmer Nuclear Power Station at a time when the evacuation routes were impassable due to snow and ice what alternatives would be available.

A. As with the flooding situation, sheltering would become the alternative protective action until the roads could be cleared.

Q.-117 Mr. Meyer and Mr. Heard, Contention 21 b 2 states:

21 b 2]. Ohio has employed the police that it will administer potassium iodide to emergency workers only and not to the general public. Ohio has made no provision whatsoever to administer potassium iodide to the sensitive and vulnerable group, the child. Ohio will not monitor children or adult for a maximum period of 12 hours at reception site to determine whether such individuals have been contaminated, a period too long to protect the health and safety of the public, especially the child, and at that delayed period (12 hours) the administration of potassium iodide would be of little effect. Kentucky will administer potassium iodide to emergency workers and to the general public, including children. The Kentucky plan has no provision for the implementation of the administration of potassium iodide and, unless administered early, its effect is diminished. No plan provides for the timely administration of potassium iodide to school children. The plan as drafted and to be implemented provides no reasonable assurance for the timely administration of potassium iodide to school children by school personnel or other emergency resource workers and as such there is no reasonable assurance

that the safety and health of children will be protected in the event of contamination. [Ohio Plan, §III, Letters of Agreement, letter 14; Clermont Plan, §II-B, Emergency Response Support, p. II-B-1 (no plan provision); Campbell Plan, Basic Plan, V-8; Annex F, Protective Actions, p. 7, F-11-1; Pendleton and Bracken Plans comparable to Campbell Plan.]

Gentlemen, is there a Federal policy on the use of KI?

A. The Nuclear Regulatory Commission has stated the side effects of potassium iodide (KI) are not fully known and there is no Radiological Emergency Response Plan deficiency in not providing KI. There is no Federal Emergency Management Agency requirement for the use of KI.

The use of KI is a public health matter which, in the absence of any Federal policy, is best left to the discretion of the state public health officials.

Q.-118 Mr. Meyer, has the State of Ohio established a policy for the use of KI?

A. Yes. In the Ohio Plan Section III there is a letter 14 from John H. Ackerman, M.D. who is Director of Health for the State of Ohio, Department of Health. Dr. Ackerman states "After consultation with numerous experts, I have decided that the Ohio Department of Health will not provide potassium iodide for emergency workers or residents at this time." Additionally he states "Due to the lack of nationally recognized guidance and after consideration of the many adverse factors at risk, it is my professional opinion that it would not be in the overall best interests of the citizens of Ohio to provide potassium iodide at this time."

Q.-119 Mr. Heard, the Commonwealth of Kentucky has determined to distribute KI. Does the Kentucky plan provide for the distribution of KI?

A. The Kentucky plan provides that KI will be stored at medical facilities and distributed to the general public as necessary. Detailed plans for distribution are being developed. Annex F, pages F-14 and F-15.

Q.-120 Mr. Meyer, the intervenors contend that the respective school districts in Clermont County do not have a sufficient number of school buses to accomplish a timely evacuation of the schools. The specific contentions state:

21 c 1]. The New Richmond School District has 17 buses and a student population of 2,562 students. The schools located in this district are at three different sites. The current fleet of buses requires that the student population being bused to or from school by each bus traveling three routes for each transportation of students, requiring that the bus be in transit for one hour each morning and evening routes. Monroe and Pierce Elementary students would be evacuated to the receiving site first and then return of buses for evacuation of the student population at the New Richmond site. From boarding of buses to the receiving site at Glen Este and return would consume approximately one hour before commencement of the boarding of the New Richmond school population, total evacuation time for the last students to be evacuated and out of the 10-mile zone would be approximately four hours. The number of buses necessary to timely and promptly evacuate the New Richmond District school population would be 43 buses. New Richmond is 26 buses short of the required number to effectively evacuate the school children of this district. The plan as implemented has no assurance, reasonable or otherwise, that school children can be effectively evacuated in a safe and timely manner.

21 c 2]. Bethel-Tate School District has 12 buses and a student population of 1900. The schools within the district are located at one site. The current fleet of buses requires that each bus transport students on two trips, morning and afternoon. Approximately one-half of the student population would be evacuated to Goshen schools and bus return before the remaining population could be bused. The total time for evacuation would be approximately three hours. The number of buses necessary to evacuate the student population of this district would be 31 buses. Bethel-Tate is 19 buses short of the required number to effectively evacuate the school children of this district. The plan as implemented has no assurance, reasonable or otherwise, that school children can be effectively evacuated in a safe and timely manner.

21 c 3]. Buses sent from other districts can not timely evacuate the children at the two involved Ohio school districts because of the time requirements for transportation of those buses from original site to the plume school site and the circumstances of the necessity to utilize those buses for the evacuation of the students located at the receiving sites to afford reception of the evacuees, adult and school child. [No plan provision, Ohio or Clermont Plans; see limited discussion, Clermont Plan §II-I, Protective Response, p. II-I-5; §III-A, County Agencies (Gen), p. III-A-2, §III-C, County School Districts, pp. III-C-1 through 3 and 5].

With regard to evacuation times, what does NUREG-0654/FEMA Rep-1, Revision 1 require the plan to contain?

A. There is no requirement in NUPEG-0654 FEMA/Rep-1, Revision 1 to provide the times required to evacuate a specific location. The requirement does exist to provide time estimates by sectors. This requirement has been met, See Clermont County Plan, page II-I-15, Table 1-8, and provides reasonable assurance for prompt evacuation.

Q.-121 Mr. Meyer, does NUREG-0654/FEMA Rep-1, Revision 1, provide a time estimate for evacuation.

A. Yes. The time between the onset of an incident and the need to evacuate will be from a half hour to several hours and provide ample time for the reallocation of a sufficient number of buses from other districts outside of the plume to transport students out of the affected area. NUREG-0654/FEMA Rep-1, Revision 1, at page 13.

Q.-122 Mr. Meyer, are there other modes of transportation available to assist in evacuation of the schools?

A. Yes. An additional factor in meeting the transportation needs presented by such an incident would be privately owned cars owned by students, teachers and support personnel driven to school each day. Previously, no allowances have been made for privately owned automobiles.

Q.-123 Are there other factors that these contentions do not consider in estimating the number of buses available for evacuation of the schools?

A. Yes. In the event that a release from ZPS is anticipated it is unlikely that all of the schools would have to be evacuated since they are located in different sectors. Thus, school buses from New Richmond, Bethel-Tate or other school districts will be available to assist in the evacuation.

If a release has occurred and a timely evacuation could not be carried out with minimal exposure, the decision-makers would then exercise some other protective action such as sheltering.

Q.-124 Mr. Heard, the intervenors have raised the same contention with regard to evacuation of the Campbell County School District. Specifically, they contend:

21 c 4]. The Campbell County School District has nine schools at various sites, including A.J. Jolly Elementary approximately two miles from the Zimmer Station. It has 60 buses, 25 of which are eight years or older and subject to mechanical failure, and a student population of 6,111 students. Students are transported to and from school in morning and evening double and triple routing. More than half of the student population would be required to remain at school while the first evacuees would be transported to a reception site and the buses returned to the schools to continue evacuation. Sixty-two additional buses would be required to provide timely and safe evacuation of the students in the affected area. In addition to the aforesaid buses, the district is required to utilize two lift buses for handicapped children, each bus required to make two trips. No other buses would be available of any type to accommodate the evacuation of the handicapped children in a timely and safe manner. The time required to evacuate the student population would be approximately five hours. The plan as implemented has no assurance, reasonable or otherwise, that school children can be effectively evacuated in a safe and timely manner. [Campbell Plan, Basic Plan, pp. II-4, 7 and 8, V-5,6 and 11; Annex C, Notification and Warning, p. C-4; Annex F, Protective Actions, p. F-9-2.]

Does the Campbell County Plan provide for evacuation of all of the schools by school buses?

A. No. The schools in Alexandria, which are located at or beyond the 10 mile EPZ but are included in the plan, are to be evacuated by TANK buses.

Q.-125 Does the Campbell County Plan indicate the student population within the 10 mile EPZ, excluding Alexandria?

A. Yes. Appendix F-15, page 5-14, Campbell County Plan indicates there are three Campbell County schools (868 students and staff) within the 10 mile EPZ.

Q.-126 Are there sufficient resources to evacuate these schools?

A. Yes. The 56 buses available to the county should be more than sufficient to evacuate school populations within a reasonable time frame and to cope with other evacuation requirements, e.g., handicapped students. It is very unlikely that all zones would be simultaneously evacuated in any case.

Q.-127 Mr. Meyer, Mr. Frost and Mr. Heard, the intervenors state that the plans of Clermont and Campbell Counties fail to provide for communication with the school bus drivers when they are enroute to or from school. Specifically they contend:

21 d 1]. The schools involved in the New Richmond and Bethel-Tate School Districts of Ohio and the Campbell County School District of Kentucky have no means of communication to bus drivers while the driver is enroute. No present state or county plan presents a reasonable assurance or could be capable of implementation where students have been received at each school site following the first route trip and while the buses and drivers are in the course of picking up students preparatory to transporting them to school and evacuation is ordered and there is no present ability to contact the drivers and to direct them to transport the students currently on the buses to a

receiving or other site during which time the driver would continue on his normal route and there would be no provision for the summoning of those buses to transport the students required to be evacuated to a receiving site.

21 d 2]. No other school district contiguous to the involved school districts could dispatch buses to the three affected districts because of utilization of their respective fleet of buses and the inability to communicate with their drivers to advise discharge of their passengers.

21 d 3]. The converse of 1] and 2] would apply during the afternoon initial routings where a portion of the student population would be on buses and the remaining student population at school without bus facility.

21 d 4]. The evacuation times set forth in the specific paragraphs of Contention 21 c] would be substantially increased and for which there is no plan or its implementation capable of presenting an assurance reasonable or otherwise, that the affected school children could be timely and safely evacuated from the affected schools. [No plan provision].

Mr. Meyer and Mr. Heard, what does NUREG-0654/FEMA Rep-1, Revision 1, require with regard to communications?

A. NUREG-0654/FEMA Rep-1, Revision 1, Planning Standard F at page 47 requires a provision for alerting or activating emergency personnel.

Communication with the bus drivers in Clermont County has been addressed by Mr. Frost at pages 14-16 of this testimony. Communication with the bus drivers in Campbell County was addressed by Mr. Heard on pages 17-23 of this testimony.

Q.-128 Mr. Frost, does Clermont County have a means of notifying bus drivers enroute to change direction?

A. Yes. Although not reflected in the Clermont County Plan, county officials have advised me that they have a means of contacting bus drivers enroute which they use in other emergencies such as snowstorms.

Q.-129 Mr. Meyer, with regard to Clermont County, does its plan address the use of buses from contiguous school districts?

A. Yes. In the event of a nuclear power plant incident all schools would not have to be evacuated, therefore buses from non-affected schools could be used at the command of the County Sheriff by authority contained in Letter of Agreement IV-I and Clermont County Plan III-A-13.

Q.-130 Mr. Meyer and Mr. Heard, would there be sufficient time to reroute buses or bring in buses from contiguous school districts to evacuate the schools?

A. In most instances, there will be from a half hour to several hours before a release occurs. NUREG-0654/FEMA Rep-1, Revision 1, at page 13. This would allow sufficient time to reroute buses in transit.

Also, it should be noted that in the event of a release the plume will travel in the direction of the winds occurring at the time. Thus, it will not be necessary to evacuate all of the schools. This leaves sufficient transportation resources available to evacuate the affected schools.

Q.-131 Mr. Meyer and Mr. Heard with regard to Contention 21 d 4, could you respond to this contention?

A. Regarding contention 21 d 4, it is apparent that there are words missing, or misplaced, so that the sentence does not present an issue that can be addressed.

Q.-132 Mr. Meyer, Mr. Frost and Mr. Heard, Contentions 21 e 1, 21 e 2, and 21 e 3 state:

21 e 1]. The buses utilized for student transportation of pupils in the New Richmond and Bethel-Tate School Districts of Ohio and the Campbell County School District of Kentucky are maintained by

their drivers at the driver's residence or other parking area, in which the buses are parked during the school day offsite of the affected schools within the respective districts. Upon notification that it is necessary to conduct an evacuation of school children there are no means to assure the contact of all drivers to summon the buses to the school sites, except as such drivers could be reached by telephone at their homes or other normal place during the non-driving period of the school day. Where the driver could not be contacted and instructed to drive the bus to the school site, that bus would be removed from the transportation means of evacuation. School bus drivers during non-driving school hours are involved in other modes of employment, including farming, and in leisure pursuits, during which time they may not be accessible by telephone contact. The use of pagers to summon drivers are inadequate for transmission and notification over a distance of 12 miles and shopping areas and other areas for indulging in leisure pursuits, and areas in which one might be conducting business are beyond the 12-mile range for paging. There is no provision in any plan that provides for notification to drivers and as such there is no plan provision presenting reasonable assurance that buses can be summoned to the school site during an emergency.

21 e 2]. The location of school buses during the school day ranges from 5 to 15 miles from the school site and upon notification to the driver an approximate hour is consumed from the point of advising that evacuation is being ordered to the point that the notified driver arrives at the school site to commence transportation of evacuating children.

21 e 3]. None of the three school districts have the facility or the relationship with their respective drivers to park and maintain school buses at each respective school site. This circumstance removes any reasonable assurance that students can be timely and safely evacuated from school sites during a radiological emergency. [No plan provision.]

Mr. Meyer and Mr. Heard, accepting the facts stated in these contentions, are there reasonable assurances that there will be sufficient buses to evacuate the various schools if necessary?

A. In the event of an emergency at ZPS-1 it would not be necessary to evacuate all sectors. Thus, not all schools would be affected by evacuation. The plan provides for notification of bus drivers by telephone. The proposed prompt notification system, e.g., sirens and/or tone activated radios would also put the drivers on notice to tune to an EBS

station. The EBS broadcast system could be utilized to notify the bus drivers to report. NUREG-0654/FEMA Rep-1, Revision 1, Appendix 3, page 3-2.

Q.-133 Mr. Meyer and Mr. Heard, with regard to the fact that not all buses are kept at the schools, does this affect the ability of the plan to provide reasonable assurances that the schools can be evacuated in a prompt manner if necessary?

A. The time between notification and a release from ZPS will be from a half hour to several hours. This should provide ample time to evacuate those schools that will be affected by the release remembering that only those schools downwind of ZPS would require evacuation. In the event that there is not adequate time for evacuation the decision-makers will take some other protective actions such as sheltering.

Q.-134 Mr. Heard, are there any factors in Campbell County that require any additional comment?

A. Yes. The Campbell County plan does not employ pagers. The superintendent calls drivers via telephone presumably before general public notification is accomplished. This means is supplemented by tone-activated radio, sirens, and commercial broadcasts.

There are only three schools in Campbell County within the 10 mile EPZ pathway with a total population of 868, therefore, all bus drivers are not required. The remaining schools are located in Alexandria which is beyond the 10 mile radius but which has been included for planning purposes. The plan provides that the student's in Alexandria will be evacuated by TANK buses.

Q.-135 Mr. Meyer, Contention 23 I states:

23 1]. The affected population of the involved counties ranges in education from elementary education to University trained and within the five-mile radius of the Zimmer Station is rural, farming and factory employed populace. Flooding circumstances and being within the tornado belt, the population has been instructed by various means as to protective actions to be taken in the event of flood and in the event of tornado, as well as the use of sirens and other types of warning device including door-to-door notification. In each situation there has been a large segment of the population who telephone local police agencies to inquire if the siren is actual or for drill, notwithstanding the educational measures taken; and who upon being advised by door-to-door notification nonetheless neglect to take protective action until forced to do so by policy authority. Inquiry to police agencies have overloaded the trunk lines within the community services by an assigned number of telephone trunk line. [No plan provision].

The issue is that the public will not heed the warnings provided to them. What is required by NUREG-0654/FEMA Rep-1, Revision 1 as far as notice?

A. The Clermont County Radiological Emergency Response Plan provides for notification to the public of emergencies at nuclear power facilities and provides a means of instructing the public with regard to specific protective actions as required by NUREG-0654/FEMA Rep-1, Revision 1. The intervenors suggest that the general public will not respond to the notice and instructions regarding protective actions. The fact that some people may be disinclined to take the recommended protective action does not detract from the adequacy of the Ohio and Clermont County plans.

Q.-136 What has been your experience with respect to the public following directions to protect themselves.

A. Over the years, I have observed a large number of disasters, from hurricanes and tornadoes to chemical spills. My experience is that

the public will follow directions when instructed to take protective actions.

Q.-137 Mr. Meyer, with regard to Contention 23 2 are these plans required to provide time estimates?

A. NUREG-0654/FEMA Rep-1, Revision 1, planning guide J-10-1 requires time estimates for evacuation of various sectors under adverse conditions, Page II-I-15, Table 1-8 of the Clermont County plan provides this information. The time estimates that are provided are for the use of the local officials as a planning guide and to assist them in determining what, if any, protective action alternative to utilize in order to minimize the exposure of the general public to radiation.

Q.-138 Mr. Meyer, is evacuation the only "protective action"?

A. No. Protective actions include a range of alternatives from in-place shelter to evacuation. The time required for these actions may involve relatively short periods of time or a lengthy interval.

Q.-139 Mr. Meyer, Contention 23 3, which has been consolidated with Contention 4 C 12, states:

23 3]. The "Circle of Safety" as the mode of educating the affected population as to the nature of nuclear power, radiation, protective action, preparation is beyond the capabilities of the majority of the population within the affected area. Based on the average number of sentences per 100 words and the average number of syllables per 100 words the publication, in accord with Fry's Readability Graph, is within college level readability. The publication is too involved, too long and too sophisticated in its writing style to be either read or understood by a large segment of the involved population. The publication's style is comparable to text-book industry publications which do not interest the average reader and due to length frustrate the average reader and deters complete reading. Further, the publication in preliminary sentences attempting to minimize the potential hazards directs the average reader to stop reading those portions because the reader is initially informed that the matter will probably not occur and thus is extraneous information.

The publication has no reasonable assurance of being read, understood or educating the population within the EPZ and thus has no educational value of informing the affected public of the matters necessary to be known by that public to properly respond to an emergency at the Zimmer Station. [Clermont Plan, §II-F, Public Information, Attachment F-1, pp. II-F-3, et seq.; each of the Kentucky counties have the same publication present in their plans].

Is the "Circle of Safety" as presented in the plan, effective for informing the public?

A. We agree that the language used in the "Circle of Safety" could be simplified. Only pertinent data concerning the immediate welfare of the citizens should be distributed. However, we do find that it meets the requirements of NUREG-0654/FEMA Rep-1, Revision 1, Section G.

It is my understanding that the "Circle of Safety" is being revised.

Q.-140 Mr. Meyer, the intervenors also allege that the various plans do not provide for adequate distribution of the information. They specifically contend:

23 4]. The plans provide no reasonable assurance of the information to be disseminated to the public, permanent and transient, (to be mailed to all permanent population, placement in local telephone books, or the installation of signs) will be sufficient to inform or in its method of dissemination (style), will not minimize the hazards and deter the educational value of the material, or being written in such a manner that it is not readily understood by the public, e.g., "Circle of Safety." [Clermont Plan, II-F, Public Information, pp. J-% and 6; same information contained in Pendleton and Bracken Plans].

23 5]. There is no plan provision, or adequate assurance presented, as to the method, manner and text of the publications to be posted for the information of the transient population, particularly those visiting parks, historical sites and engaged in recreation pursuits on and near the Ohio River, all of which are within the affected area. [No plan provision].

Do the plans adequately provide for distribution of information to the general public?

A. Section II-F of the Clermont County Plan (and corresponding sections of the Pendleton and Bracken County Plans) meets the requirements of NUREG-0654/FEMA Rep-1, Revision 1, in dissemination of educational and public information material to the public.

Those same sections also address dissemination to the transient population as required.

Q.-141 Mr. Meyer and Mr. Heard, Contentions 24 1 and 24 5 contend that there are inadequate medical facilities, materials and transportation available to meet the public's needs during a radiological emergency at ZPS. Specifically, they contend:

24 1]. Clermont County and Cincinnati General Hospitals are the two Ohio hospitals which would provide inpatient treatment to radiologically injured individuals. The Central Ohio River Valley Association (CORVA) will provide guidance to those hospitals for development of disaster plans to include radiological emergency patient handling. Clermont County Hospital claims that it will treat radiological casualties and will institute procedures for radiation exposure treatment. Clermont County Hospital has 109 beds, but of that number would provide 45 beds by discharging ambulatory patients and transfer of others. Clermont County Hospital would transfer overage patients to Cincinnati General Hospital. Clermont County Hospital has not sought guidance from CORVA to the date of filing of these revised contentions. Clermont County Hospital has not revealed its hospital plan for radiological treatment. CORVA will be disbanded April 1, 1982. Clermont County Hospital has two full-time radiologists and one radiotherapist, as a consultant, and two radiation monitors and sufficient decontamination equipment for minor radiation accidents. There is nothing to indicate that Clermont County Hospital has separate, segregated emergency facilities so that other patients are not contaminated. The plan as drawn and as to be implemented does not provide reasonable assurances that Clermont County Hospital can provide adequate facilities and personnel to treat radiologically injured individuals. [Clermont Plan, §II-K, Med & Pub Health Sup, p. II-K-1: §IV, Letters of Agreement, Clermont County Hospital to Conover, January 21, 1981.]

24 2]. Other than noted in paragraph 1] above, no other information is presented by the Clermont Plan pertaining to Cincinnati General Hospital. [No plan provision].

24 3]. Campbell represents that three hospitals have the capabilities to treat radiological injuries: St. Luke Hospital; Cincinnati General and the University of Kentucky Medical Center (Lexington, Kentucky, approximately one hour travel time from Campbell County); in which each has submitted a letter agreement. Only the letter from St. Luke Hospital is presented in the plan. St. Luke Hospital does not indicate its bed capacity or how many beds would be available to hospitalize radiologically injured patients. This hospital has two radiology technicians and some monitoring equipment. Isolation of contaminated patients is not indicated, nor is the presence of separate, segregated emergency facility. The plan as drawn and as to be implemented does not provide reasonable assurances that St. Luke Hospital can provide adequate facilities and personnel to treat radiologically injured individuals. [Campbell Plan, Annex H, Medical & Public Health, p. H-2; Annex P, Inter-Government & Private Relations, letter, St. Luke Hospital to Flynn].

24 4]. Other than noted in paragraph 3]above, no other information is presented by the Campbell Plan pertaining to Cincinnati General Hospital or University of Kentucky Medical Center. [No plan provision].

24 5]. Ohio applies the policy that it will not administer potassium iodide to the general public, including children. This position taken by the State of Ohio and its political subdivision of Clermont County, removes any consideration of a reasonable assurance being presented by state and county plans and the failure to implement any procedure for the prompt administration of potassium iodide to block radioactive iodine intake to the thyroid gland, presents a substantial departure from required protective action to safeguard the health and safety of the exposed population. [Ohio Plan, §III, Letters of Agreement, letter 14; Clermont Plan, §II-B, Emergency Response Support, p. II-B-1 (no plan provision)].

Mr. Meyer, with regard to 24 1, can the Clermont County Hospital provide adequate treatment of radiological injuries, transportation, etc.?

A. Those people arriving at Clermont Co. Hospital will have been previously screened at an identified care center for possible contamination by the Clermont County life squad, II-A, Table A-1. No contaminated person will be directed to Clermont County Hospital. Clermont County Hospital will provide care for those personnel who have been exposed to ingestion

of radionuclides. These personnel provide no decontamination problems and therefore do not need to be segregated from the general population.

Clermont County Hospital will not decontaminate people, they will re-direct these people to one of the identified care centers.

Clermont County Hospital has not sought guidance to this date from CORVA concerning these contentions. CORVA will be disbanded as of April 1, 1982.

It is only an opinion that Clermont County Hospital cannot provide adequate facilities and personnel to treat radiologically injured individuals. As stated, Clermont County Hospital has several staff members specially trained to act in the event of such an incident and sufficient space has been allocated to take care of those individuals needing medical assistance.

Q.-142 Mr. Meyer, what is the status of Cincinnati General Hospital agreements to provide assistance?

A. Cincinnati General is only a backup to Clermont County Hospital. There is an agreement between the Zimmer Nuclear Power Station and Cincinnati General to provide the necessary assistance in the event of an incident. However, at this time there is no written agreement between Cincinnati General and Clermont County Hospital. Presently, negotiations are taking place to develop such a formal agreement.

Q.-143 Mr. Heard, what is the status of agreements with St. Luke's Hospital, Cincinnati General and the University of Kentucky Medical Center?

A. NUREG-0654, Section L.1. specifies that assurances be given that staff are capable of treating radiological injury and handling

contaminated victims. The St. Luke's letter provides reasonable assurance. There is no assurance provided by UK Medical Center or Cincinnati General, i.e., no letters of agreement are included in the plan. The St. Luke's agreement does not indicate the number of beds available for radiological injuries, however, this is not required by NUREG-0654.

Q.-144 Mr. Meyer contention 24 5 deals with the administration of KI in the State of Ohio. The contention states:

24 5]. Ohio applies the policy that it will not administer potassium iodide to the general public, including children. This position taken by the State of Ohio and its political subdivision of Clermont County, removes any consideration of a reasonable assurance being presented by state and county plans and the failure to implement any procedure for the prompt administration of potassium iodide to block radioactive iodine intake to the thyroid gland, presents a substantial departure from required protective action to safeguard the health and safety of the exposed population. [Ohio Plan, §III, Letters of Agreement, letter 14; Clermont Plan, §II-B, Emergency Response Support, p. II-B-1 (no plan provision)].

Is there a Federal requirement for the administration of KI?

A. This issue was previously addressed in response to contention 21 b 2. The Nuclear Regulatory Commission has stated the side effects of potassium iodide (KI) are not fully known and there is no Radiological Emergency Response Plan deficiency in not providing KI. There is no Federal Emergency Management Agency requirement for the administration of KI. In the Ohio Plan Section III there is a letter 14 from John H. Ackerman, M.D., Director of Health, for the State of Ohio Department of Health. Dr. Ackerman states "After consultation with numerous experts, I have decided that the Ohio Department of Health will not provide potassium iodide for emergency workers or residents at this time." Additionally, he states

"Due to the lack of nationally recognized guidance and after consideration of the many adverse factors at risk, it is my professional opinion that it would not be in the overall best interest of the citizens of Ohio to provide potassium iodide at this time." In the absence of any federal requirement this decision is left to the appropriate State officials.

Q.-145 Mr. Meyer, Contention 24 6 states:

24 6]. The life squads present in Clermont County, Ohio have no training for the examination and determination of persons contaminated and to take required safeguards to exclude such individuals from non-contaminated members of the public; and the members of the respective life squads in the plume area of Clermont have no training or qualifications in rendering aid to individuals contaminated and individuals sustaining radiological injury. The members of the plume area life squads in Clermont County may or may not respond as emergency resource personnel based upon priority commitments to one's vocation and the need to assist one's family during the evacuation process. The Clermont Plan in its implementation of providing volunteer life squads to assist and render aid to radiologically injured and contaminated individuals provides no reasonable assurance that such volunteer will in fact volunteer one's services during an emergency [No plan provision.]

Does the Clermont County Plan set forth the responsibilities of the life squads in radiological emergencies?

A. Yes. Contrary to the contention, life squad personnel do not examine and diagnose radiation injury. They are a support service for evacuation, and perform some monitoring functions for which they have been trained. See II-A, Table A-1.

Q.-146 What training has been given to members of the life squads?

A. Training has been provided by the State of Ohio for Clermont County Life Squads in the examination, determination and treatment of radiologically injured individuals. To this point in time all 384 Clermont County Life Squad members have been trained.

Q.-147 What assurances are there that life squad members will respond to radiological emergencies?

A. There can be no assurance that these personnel will in fact be available for service, however, as I have stated previously, in my experience volunteer workers have always proven to be dedicated and reliable individuals.

Q-148 Mr. Meyer contention 24 7 states:

24 7]. The monitoring of evacuees by local police and fire personnel at relocation centers within 12 hours of the evacuees arrival is inadequate to screen, and separate and isolate contaminated individuals, providing exposure by the contaminated person to the population at the relocation center. There are no provisions set forth and no implementation of training to police and fire personnel to properly monitor evacuees at relocation centers, to screen evacuees and isolate those contaminated or to decontaminate such individuals or the facilities for decontamination. There is no provision for monitoring of persons present at relocation centers before such persons exist the premise. [Clermont Plan, §II-I, Protective Response, p. II-I-4; otherwise no plan provision.]

Does the monitoring provision set forth in the Clermont County Plan comply with NUREG 0654/FEMA Rep-1, Revision 1?

A. The monitoring of evacuees within the 12 hours of their arrival at the relocation centers (Clermont County Plan - II-J-1) complies with NUREG 0654 FEMA REp, Rev 1, page 65.

Q.-149 Does the Clermont County Plan provide for training of personnel to conduct radiation monitoring?

A. Training has been provided for local fire departments, local life squads and other local officials (II-N-4 Clermont County Plan) Decontamination Station Worker Training in Basic Radiological Monitoring.

Q.-150 Does the Clermont County Plan provide for separation of contaminated individuals.

A. Within the Plan, provisions for separate facilities have been established for the isolation monitoring and decontamination of persons reporting to relocation centers. (Re: II-J-3, II-I-4)

Q.-151 Mr. Heard contention 24 8, which was consolidated with contention 34 F stated:

24 8]. Campbell County provides no plan or its implementation for the timely administration of potassium iodide as to the manner, place, administration and timely presentation of such blocking agent to the general public, and as such there is no reasonable assurance that the blocking agent can be systematically and timely administered to the public. [Campbell Plan, Basic Plan, p. V-2; otherwise no plan provision.]

Does the Campbell County Plan address the administration of KI?

A. This issue was addressed in response to contention 21 b 2. Use of KI is optional. KI for the general public will be stored at convenient medical facilities and distributed as necessary. Detailed KI distribution plans are being prepared. (Annex F, page F-14, 15).

Q.-152 Mr. Heard, contention 24 9 states:

24 9]. Campbell County does not provide for any monitoring of plume exposed persons, except that persons transported by school buses who do not wish to go to a reception center will be decontaminated at Northern Kentucky University. The absence of any reasonable assurance that contaminated persons will be monitored and decontaminated, as necessary, fails to provide reasonable assurance that monitoring of persons and decontamination procedures will be implemented. [Campbell Plan, Annex F, Protective Actions, p. F-9-1.]

Does this contention accurately reflect the provisions of the Campbell County Plan?

A. No. NUREG 0654, Section J.12. specifies that the means for registering and monitoring evacuees at relocation centers be described.

Annex E, Section IV establishes monitoring procedures and capabilities. Evacuees will temporarily relocate to most centers in Boone and Grant Counties (Appendix F-9, pg. F-9-1). Most County reception centers will screen evacuees for radioactive contamination (Appendix L-1, pg. L-1-2). Those persons not going to host reception centers will be decontaminated at Northern Kentucky University. Evacuees will be monitored and decontaminated by persons trained by KY-DES.

Circle of Safety, page 13, directs general public to reception centers for screening.

Q.-153 Contention 24 10 states:

24 10]. The procedures in Clermont and Campbell Counties to acquire lists of disabled, handicapped and senior citizens requiring special transportation fails to provide reasonable assurance by the plan or in its implementation that all such individuals are identified and that adequate vehicles and personnel are available and dependable to enter the plume exposed area to evacuate such individuals. [Clermont Plan, §II-B, Emergency Response Support, p. II-B-1; §II-I, Protective Response, p. II-I-5; Campbell Plan, Annex F, Protective Actions, p. F-9-1.]

Mr. Meyer does the Clermont County Plan address transportation of handicapped and senior citizens?

A. Yes. Clermont Senior Services will provide their most recent list of transportation dependent senior citizens.

Clermont Association for the Physically Handicapped/Developmentally Disabled will provide their most updated list of transportation dependent handicapped persons.

Residences may complete and return the special notification form found in the "Circle of Safety" public information pamphlet. It is the purpose of this form to identify the special transportation needs of the

public. Transportation of incapacitated persons will be provided by TANK (Annex M, pg. M-2).

Q.-154 Mr. Heard, does the Campbell County Plan address the evacuation of the handicapped and disabled?

A. Yes. The Campbell County Plan provides that: "Updated lists of elderly and handicapped persons residing in the plume exposure pathway EPZ will be maintained at the Judge/Executive Office and used to insure safe removal of all evacuees. The police and fire departments in Campbell County will inspect the area to confirm evacuation of all residents." (Annex F, page F-9-1). Again, in Annex M, page M-2, the "Circle of Safety" contains forms for handicapped and disabled to complete and return which will establish required roster.

Transportation of incapacitated persons will be provided by TANK. (Annex M, pg. M-2).

Q.-155 Mr. Meyer, the intervenors question the adequacy of the monitoring devices and the ability to relay such information to the public. Specifically,

25 3]. The Clermont County Board of Health and the Clermont County Cooperative Extension Service are jointly responsible for the monitoring and evaluation of the impact of radiation release upon county farm products and livestock and based upon such monitoring and assessment will institute protective actions pertaining to milk and livestock feed control. The plan provides no procedure and no procedure can be implemented with reasonable assurance for the protection of the public that livestock and dairy cattle within the monitoring range can be provided stored, closed feed, removed from pasturing, that facilities exist at the respective farm to remove livestock from field and house them and to store in sufficient quantity feed in closed containers, and to monitor that such protective agricultural practices are followed at the farm level. [Clermont Plan, §III-A, County Agencies (Gen), pp. III-A-3 and 10; otherwise no plan provision.]

25 4]. There is no provision for the monitoring of milk produced in the EPZs and transported in bulk to a processing and bottling facility for distribution to retail groceries and subsequent human consumption. [No plan provision.]

Is there a provision to address the issue of monitoring livestock and dairy cattle feed?

A. NUREG 0654, FEMA Rep-1, Rev 1, Item J-11 calls for the State to specify the protective measures to be used for the ingestion pathway, including the methods for protecting the public from consumption of contaminated foodstuffs. This shall include criteria for deciding whether dairy animals should be placed on stored feed. The Ohio State Plan pages IV-4 and 5 addresses this in an adequate manner. This plan item does require that a specified amount of stored feed be on site. The amount of stored feed available on dairy farms would depend upon the season of the year. Importation of animal feed into the ingestion zone is based upon both seasonal shortages and over contamination of existing supplies.

Q.-156 Is there a plan provision for monitoring milk?

A. The Ohio state plan on page IV-4, Paragraph B does provide for the monitoring of milk produced in the 50-mile EPZ ingestion pathway and transported in bulk to a processing facility for distribution to retail outlets for subsequent human consumption. The Clermont plan on page III-A-11, Table A-7 states the County will support the state in this function.

Q.-157 Mr. Heard, contention 34 [formerly Mentor 4] states:

34 The proposed Kentucky and Campbell County radiological response plans invalidate themselves as responses to the requirements for plans in 10 C.F.R. § 50.33(g); 10 C.F.R. § 50.47(a), (b); 10 C.F.R., Part 50, Appendix E, and

NUREG-0654 because they repudiate their own use during an emergency. The Campbell County plan (p. V, Plan Organization) contains the following statement: "During an emergency, Standard Operating Procedures (SOPs), developed from the plan, will be employed to respond to the emergency rather than this planning document". This statement is essentially repeated in the Campbell County Basic Plan, Appendix 8, p. VII-8-1, and twice in the Kentucky plan: Plan Organization, p. VI and Basic Plan, Appendix 5, p.5. SOPs are not included in the plans and have not been submitted separately.

Since the plans disavow themselves and establish SOPs as the sine qua non of emergency planning during an emergency, and since no SOPs are contained in the proposed plans or have been otherwise submitted, the people of Mento, of Campbell County, and of Kentucky have no plan to protect their health, safety, and interests during a radiological emergency at the Zimmer plant. As they stand, the so-called plans are, by self-description and by objective inspection, simply statements of intentions or, at best, plans for plans. To consider them in any other light would deny Mentor its right to make a timely evaluation of plans that would actually be used during an emergency, those that, if they exist, are hidden in the undisclosed SOPs.

What is required to be contained in the plans?

A. NUREG 0654/FEMA Rep 1, Revision 1, sets forth the form and contents of the plans on pages 28-30. It is important that the means by which all of the NUREG 0654/FEMA Rep-1, Revision 1 requirements are met.

"Applicable supporting and reference documents and tables may be incorporated by reference and appendices should be used whenever necessary. The plans should be kept as concise as possible. The average plan should consist of perhaps hundreds of pages, not thousands. The plan should make clear what is to be done in an emergency, how it is to be done and by whom. NUREG 0654/FEMA Rep-1, Revision 1, page 29.

Q.-158 Are any of these plans, Kentucky, Pendleton, Bracken and Campbell County final?

A. No. All of these plans are in draft form and subject to revision. Standard Operating Procedures (SOPs) will be developed and should be referenced to the plant to provide a more complete picture than the plans do at present.

Q.-159 Would the inclusion of all of the SOPs currently available and subsequently developed SOPs enhance the current plans?

A. It is agreed that inclusion of such would serve to clarify plan provisions. The result of such inclusion would be a tremendously voluminous document. Failure to include SOPs does not invalidate the basic plans which serve to establish a framework within which the procedures are employed to effect response operations. The individual SOPs would have little meaning when employed outside the basic plan context.

Q.-160 Mr. Heard, contention 35 [formerly Mentor 4] states:

35 Although the 50-mile ingestion pathway for the Zimmer Station EPZ includes about 700 square miles of southeast Indiana, there are no radiological emergency plans by or on behalf of the State of Indiana or the affected local Indiana governments. This omission endangers the health, safety, and interests, not only of the people of Indiana, but also of the people of Mentor, Campbell County, Kentucky, and Ohio, and is in violation of 10 CFR Part 50, Appendix E; 10 CFR § 50.33(g); 10 C.F.R. § 50.47; NUREG-0654/FEMA, REP-1, II-J-II, p. 79 (and all other criteria for state plans which are related to ingestion pathway planning).

The people of Mentor, of Campbell County, and of Kentucky (and of Indiana and Ohio) do not live in a vacuum; political boundaries are of no significance here. Parts of Kentucky (including Mentor), Indiana, and Ohio form a tri-state area within which there is production, distribution, and consumption of milk and other foodstuffs with little or no regard to point of origin. The people of Mento buy their food in this tri-state market and must not be exposed to the hazards of contaminated food from the unprotected Indiana part of the 50-mile EPZ. Simple humanitarianism extends this concern to all people who might be similarly exposed.

Is the problem of contaminated food from outside of Kentucky addressed in the plan?

A. Contaminated foodstuffs shipments should be embargoed. The Kentucky state plan contains arrangements for treating, quarantining or destroying contaminated stocks.

Q.-161 Mr. Heard contention 36 I states:

36 I]. The proposed system for prompt notification of the public (Campbell County plan: Annex C, I-A-1, p. C-1, IV-C, p. C-3, Appendix C-5) is inadequate and a burden to the people in that the siren system is designed to warn only 40% of the people within the 10-mile EPZ and has not been tested to ensure that it will achieve that design objective in any or all weather conditions for people outside or inside their homes during all their various activities; the radio system will not serve people who are outside their homes, farmers in the field, or people in their automobiles and the integrated siren and radio system is not adequate to protect those with hearing or sight impairments or those who operate or are near loud or noisy equipment and, being dependent upon electricity, will not function during periods of electric power outage.

Does the proposed Campbell County Plan provide for prompt notification of the population?

A. The proposed Campbell County Plan system for prompt notification of the public is designed to warn approximately 40% of the population within 5 miles of the station. Tone-activated radio receivers also are recommended to be made available to all households within 5 miles of the power station. This provides greater capability to achieve the design objective of 15 minutes notification for all the population within 5 miles. Areas between the 5 mile planning boundary and the 10 mile EPZ boundary are also designed to be covered by the system through the use of fixed sirens and tone-activated receivers. Mobile alerting according to the designed system, is to be utilized in areas with unique conditions where other methods are not feasible. (Appendix C-3, C-5, pp. 2,3).

Alerting deaf or hearing-impaired people would be accomplished using special tone-activated receivers equipped with bright flashing lights. (Appendix C-5, p.8).

Citizens outside their homes would receive notification largely through stationary or mobile sirens, or through personal notification (personal notification only implied not specifically mentioned in Plan). Since a large portion of the prompt notification system is dependent on electrical power, the system is admittedly vulnerable to power outage and should be supplemented by an alternative energy source to comply with NUREG 0654, Appendix E, page 3-6.

Q.-162 Mr. Heard contention 36 K states:

36 K]. Provisions for the monitoring, control and regulation of public water supplies, or for the availability of uncontaminated water to the public, before and during a radiological emergency (Campbell County plan: Annex D, Appendix D-3); Annex F, G, p. F-8, pp. F-11, F-12, and F-13, Appendix F-12, IV, p. F-12-1; Annex H, IV-B, p. H-2; Annex P, Appendix F) are not adequate to protect the health and safety of the people of Mentor or for a large population within the 10- and 50-mile EPZs in Kentucky because there is no radio communications systems between the Zimmer plant or state or local response agencies and the water treatment and supply facilities; the water treatment and supply facilities do not have the equipment or trained personnel for continuous monitoring of water before and during a radiological emergency; the present plans are too undeveloped and too clumsy and time-consuming to ensure that prompt and appropriate protective action can be taken; and, further, the people of the City of Mentor and a large population within the 10- and 50-mile EPZs, who receive their water from treatment and supply facilities that are situated near and are not unlike those of the City of Cincinnati, have not received consideration and potential protection similar or equal to that given the people of Cincinnati as evidenced by the recent settlement between the applicant and Cincinnati in a matter of radiological protection.

Does the plan provide adequate assurances for the protection of the water supply?

A. If necessary, radio communications between the Mentor water works and the Zimmer Plant (ZPs) could be affected by placing a radio-equipped monitoring team at the water works. This team would communicate with the

State Field Radiological Center (FRC) which has direct radio communications with ZPS (See App B-5 and pg. D-7, Kentucky REP plan). It is not absolutely necessary, however, that water monitoring be conducted at treatment facilities. Waterborne release of radioactive materials will be monitored at the ZPS and any warning or recommended protective action relative to drinking water would be communicated to the FRC and state/county EOCs (required by NUREG-0654, Sect. I.8). In state plan, in addition, sampling of air and water will be conducted at pre-designated sites by state and Federal teams (radio-equipped). Appendix D-4, State Plan, lists these sites. If water sources are found to be contaminated they can be isolated from the public water supply. (See page F-14 of the Kentucky Plan).

Attachment 1

Suggested list of roadblocks not accounted for in plan.

- Two-mile ring - Fruit Ridge Road north of SR 743
- Five-mile ring - CR 67 Laurel-Lindale Road south of Harvey Road
- CR 16 Bolender Road north of McKendree Chapel Road

- Ten-mile ring - CR 112 South Bantam Road south of SR 125
- Tr 56 Sugartree Road south of SR 125
- CR 12 Bethal-Hygiene Road west of SR 133 or SR 133 just south of Bethal
- Block at Bethal Maple Road just north of Pitzer Road should be moved to the intersection.
- CR 13 Bethal Maple Road should be moved to Hoover Road just west of Antioch Road
- SR 774 just west of Antioch Road
- SR 756 at Rickey Road intersection
- Tr 104 Rickey Road north of Felicity Higginsport Road
- CR 45 Felicity Cedron Rural Road east of Cove Road and east of Wagner Road.

RICHARD W. MEYER
PROFESSIONAL QUALIFICATIONS

I am presently employed as an Emergency Management Specialist with the Federal Emergency Management Agency in Region V. In this capacity I act as the field representative to the State and local governments in the State of Ohio.

I joined the Defense Civil Preparedness Agency in November 1972 as a Regional Field Officer and stayed in that position until July 1979 when I became an Emergency Management Specialist, for Federal Emergency Management Agency. My job was one of Federal-State liaison coordinating the States in implementing Federally sponsored disaster-related programs aimed at protecting life and property. From July 1969 to November 1972 I was employed by the American Red Cross as advisor to the Defense Civil Preparedness Agency. I assisted in promoting community participation in nuclear and non-nuclear civil defense programs and coordinated with State Civil Defense Directors and State staffs directly in improving their relationship with the American National Red Cross Chapter and other voluntary agencies with disaster responsibilities.

I was employed by the American Red Cross between 1961 and 1969 in several capacities. From April 1967 to July 1969 I was Regional Director for Readiness and Emergency Action (Disaster Services). Prior to that I served as a Disaster Representative.

In these positions I was responsible for:

- I. Administrative responsibility for preparing Red Cross Chapter groupings and communities to be ready and able to meet the emergency needs of victims suffering from natural disasters in the States of Kansas, Oklahoma and Texas.
- II. 24 hours a day on call responsibility - to be the Director of Disaster Operations any place in the Continental United States or its possessions. I supervised the activities of up to 200 professional disaster personnel through the use of my subordinate staff.

I actively participated on the scene in 33 disasters from 1961 to 1968.

I have completed 88-1/2 semester hours of college courses in business and public administration.

PALMER T. FROST
PROFESSIONAL QUALIFICATIONS

I joined the Federal Emergency Management (FEMA) Region V in February 1980 as a Communications Specialist. I manage and coordinate programs and projects related to communications and warning systems within FEMA Region V. I perform technical, operational and economic evaluations of communications and warning requests submitted by States and local governments.

From September 1976 to February 1980, I served as an Attack Warning Officer at the Alternate National Warning Center (ANWC), Olney, MD. In this position, I was responsible for warning the public of an attack or natural disaster. All actions were coordinated with any of the following: The White House, NORAD, Joint Chiefs of Staff, Federal Agencies, FEMA, State and local governments.

April 1974 to September 1976 - I served as a Communications Specialist for Defense Civil Preparedness Agency, DCPA Region IV, Battle Creek, MI. My duties were similar to my present duties.

From September 1971 to April 1974 - I served as an Attack Warning Officer at the National Warning Center, Colorado Springs, CO. My duties were the same as at the ANWC.

I served as the Communications Officer for DCPA R-IV, Battle Creek, MI from February 1968 until September 1971. I was responsible for the operation of the Communications Center.

From July 1956 to February 1968, I worked at the U.S. Army Strategic Communications Command, Davis, CA. I worked as a supervisor in the Automatic Tape Relay Station.

I served in the U.S. Navy as a radio operator from January 1951 to December 1954.

I have a high school diploma and attended Class A Radio School, USNTC, San Diego, CA as part of my naval training.

JOHN C. HEARD, JR.
PROFESSIONAL QUALIFICATIONS

I joined the Federal Emergency Management Agency in July, 1979. I am presently employed as the Manager of the Technical Hazards Branch in Region IV. In this position, I am responsible for the review of REP's, conducting exercises to test REP's and conducting public hearings. Members of my staff and I also assist State and local governments in preparing REP's and coordinating Federal assistance.

I have served on Regional Assistance Committee from December 1974 to present.

From July 1973 to July 1974, I was Regional Director, Federal Preparedness Agency. The Federal Preparedness Agency was responsible for fixed nuclear facility off-site planning from December 1975 (Federal Register Notice) until made a part of the Federal Emergency Management Agency in July 1979. In December 1979, the President assigned off-site responsibility to the Federal Emergency Management Agency.

Prior to 1973, I was employed by the Office of Preparedness, Executive Office of the President. I was the representative on ad hoc Regional Radiological Emergency Planning Committee December 1971 to August 1973. Committee was chaired by EPA and composed of representatives of Federal department/agencies, state radiological health officials, nuclear power industry representatives, and representatives of the academic community. Federal Register Notice January 1973, published by OEP assigned planning responsibilities to Regional Offices.

My formal education is as follows:

Attended the "Interagency Course in Radiological Emergency Response Planning in Support of Fixed Nuclear Facilities." Course conducted by RAC agencies at staff college in Battle Creek, Michigan in June 1975.

Attended "Work Shop - Seminar on State Emergency Planning in Relation to Licensed Nuclear Facilities." Seminar conducted by Atomic Energy Commission in September 1972 at Oak Ridge, Tennessee.

Completed nine months course at the University of South Carolina from September 1963 to May 1964. Course was entitled "Radiation Protection Institute". Course co-sponsored by Atomic Energy Commission and South Carolina State Board of Health.

Completed Radiological Defense Officers course, Staff College, Battle Creek, Michigan, June 1962.

Conducted and served as Principal Instructor for Radiological Monitor Instructors Course, University of South Carolina July 1961.

Completed United States Department of Agriculture Radiological Monitors Course February 1961.

Assigned as South Carolina Radiological Defense Officer from January 1961 to July 1964. Was issued AEC By-Products Material License from June 1961 until departed state employment to accept Federal employment in May 1970.

While on active military duty, attended Atomic Weapons orientation course, Fort Bliss, Texas December 1958.

While on active military duty completed U.S. Army Command and staff college (extension division). Technical Considerations in Employment of Atomic Weapons, March-August 1958.

BERNARD E. WILLIAMS
PROFESSIONAL QUALIFICATIONS

Since 1979 I have been employed as a Highway Engineer, Department of Transportation, Federal Highway Administration, Region V. In this position I review environmental studies, highway design plans and construction activities for compliance with Federal regulations. I provide technical assistance to State and local authorities on design and programming of construction projects. I have participated in the planning, design and construction of highways within the State. I provide technical assistance and guidance for State highway planning and research activities. I assist the Regional Advisory Committee member of Region 5 DOT by reviewing the REP Plans and exercises.

After receiving my Masters Degree in 1979 I was employed as a Transportation Engineer with consulting duties, with the firm of Alden E. Stilson and Associates. I worked on preliminary engineering and design studies for the I-670 freeway in Columbus, Ohio.

I received both my Bachelor and Masters degrees in Civil Engineering from Ohio State University, with a specialty in transportation engineering.

I hold an Ohio license as an Engineering-in-Training.

I am a member of Chi Epsilon civil engineer society and I am an associate member of both the American Society of Civil Engineers and the Institute of Transportation Engineers.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
CINNCINNITTI GAS AND ELECTRIC)
COMPANY, et al.) Docket No. 50-358
)
(Wm. H. Zimmer Nuclear Power)
Station, Unit No. 1))

TESTIMONY OF RICHARD W. MEYER,
PALMER T. FROST, AND JOHN C. HEARD, JR.
OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY AND
BERNARD E. WILLIAMS, OF THE
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

The following are corrections to the Testimony of the above-named witnesses previously submitted to this Honorable Board:

Page 15, line 1; Change "assuing" to "assumes".

Page 16, Q-40, line 5 of the Answer; Change "altering" to "alerting".

Page 18, first full paragraph; Change "reasonably" to "reasonable".

Page 20, line 2; Change "any" to "an"; Q-44, line 2 of the Answer, Change "altering" to "alerting".

Page 24, Q-49, line 3 of the Answer, insert "set forth" between "requirements" and "in".

Page 27, Q-55, line 2 of the Answer; Change "Director" to "Administrator".

Page 31, line 1, delete the word "study" and insert "letter dated December 14, 1981".

Page 41, line 1, insert "the emergency" between "in" and "planning".

Page 52, first paragraph, line 1; Change "are" to "is".

Page 64, Q-128, line 1 of the Answer; Change "county" to "state".

Page 66, Q-132, line 2 of the Answer, add "simultaneously" between "sectors" and ".".

Page 67, Q-134, line 1 of the Answer, add "for the bus drivers" between "pagers" and ".".

Page 77, line 3; Change "Re" to "See".

Page 78, line 2; Change "most" to "host" and on line 3 change "Most" to "Host".

Page 79, line 1; Change "TANK" to "CART" and "Annex M, pg. M-2" to "II-I-5".

Page 81, the penultimate line; Change "plant" to "plan".

Page 83, Q-161, line 1 of the Answer, insert "siren" between "Plan" and "system".

John C. Heard, Jr., Professional Qualifications, paragraph 3, line 1; Change "July, 1974" to July, 1979".

Bernard E. Williams, Professional Qualifications, last paragraph, line 1, add "honor" between engineering" and society".

1 MR. BARTH: Your Honor, are you admitting it as
2 evidence?

3 JUDGE FRYE: Subject to the understanding that it
4 may be subject to a motion to strike later, but if it's not
5 subject -- if it's not stricken, it will be evidence.

6 MR. BARTH: Thank you, Your Honor.

7 MR. CASSIDY: Your Honor, at this point I might
8 take up Mr. Wetterhahn's suggestion earlier that we break
9 for lunch.

10 JUDGE FRYE: I was just about to do that. Why
11 don't we break for lunch and be back at 2:00.

12 (Whereupon, at 12:35 o'clock p.m., the hearing was
13 recessed, to reconvene at 2:00 o'clock p.m., the same day.)

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AFTERNOON SESSION

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(2:00 p.m.)

JUDGE FRYE: Shall we go back on the record,
please?

Mr. Dennison, are you ready to resume the cross?

MR. DENNISON: Yes, I am.

Whereupon.

RICHARD W. MEYER

PALMER T. FROST

JOHN C. HEARD, JR.

and

BERNARD E. WILLIAMS

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

CROSS EXAMINATION

BY MR. DENNISON:

Q Now, Mr. Meyer, you have indicated that you are
familiar with the geographic location of Brown County, Ohio.

A (Witness Meyer) Yes.

Q By virtue of your direct written testimony,
originally in that testimony you had stated that the arc of
the ten-mile emergency planning zone intersects Brown County
roughly in the southwestern corner of the county.

A Yes.

1 Q You altered that after you had found out that
2 there are several feet beyond the ten-mile radius?

3 A Yes.

4 Q Had you done that pursuant to any of your own
5 calculations, Mr. Meyer?

6 A No.

7 Q Do you know, in arriving at that point, where the
8 measurement commenced, that is, whether it commenced at the
9 general location of the Zimmer plant as reflected by a map,
10 or whether it reflected the distance commencing from the
11 reactor building itself or the Ohio River or what have you?

12 A I don't know.

13 Q Then you have no independent knowledge of the
14 manner in which this distance would be computed from the use
15 of a topographical map and assuming the correctness of that
16 map relative to its guide for miles?

17 A I saw a topographical map.

18 Q Did you make a measurement on the scale --

19 A No, it explains something.

20 Q Now in the explanation of the topographical map,
21 was anything explained to you as to how the distance was
22 computed using the map scale and its commencement to
23 determine that there were several feet into Brown County
24 before you came to the end of the ten-mile distance?

25 A No.

1 Q Do you recognize, Mr. Meyer, that there could be
2 variations depending on where one commences the measurement
3 using a map in which there would be a measure of error of
4 several feet so that the Brown County line may be ten miles
5 or it may be ten miles plus some feet. Is that correct?

6 A Possibly.

7 Q Now in that circumstance, Mr. Meyer, would you
8 agree that perhaps because of such circumstances the about
9 or approximately ten miles is the one used, both by federal
10 regulation as well as NUREG-0654?

11 A What was the question?

12 Q The question is: Because of such circumstances as
13 attempting to plot by map the distance from a reactor or the
14 approximate location of a reactor to an outer belt of, for
15 our purposes, ten miles, that because of those circumstances
16 and others that may enter into the consideration, both the
17 federal regulation as well as the NUREG-0654 used the term
18 or the phrase "about or approximately ten miles". You
19 understand that the regulation and the NUREG both use "about
20 or approximately ten miles"?

21 A I have to check that. I'm not sure about the word
22 "about".

23 Q Okay. Now, calling your attention to 10 CFR
24 Section 50.33(g), it is stated there: "Generally the plume
25 exposure pathway EPZ for a nuclear power reactor shall

1 consist of an area about ten miles, 16 kilometers, in
2 radius."

3 A Okay.

4 Q And 50.47, under (c)(2), the phrase there is
5 "about ten miles".

6 A I'll take your word for it.

7 Q Then, Mr. Meyer, you would not impose a definite
8 terminating distance of exactly ten miles, would you?

9 A Depending on the demography, topography, the land
10 characteristics, the access routes, and the local
11 jurisdiction boundaries, is there was anything that would be
12 firm under those things that would make me feel that it
13 should go a little further, then I would. But if it didn't
14 have those considerations, without them I would say ten
15 miles is it.

16 Q Okay. Based upon your factual investigation of
17 that matter, using demography as being synonymous with
18 census or population number, did you find any substantial
19 distinction between the census or population numbers of the
20 Clermont County population two miles west of the Brown
21 County between U.S. 52 and State Route 125 and the
22 population or census of the Brown County population two
23 miles east of that same line?

24 A No.

25 Q Okay, they were substantially the same, is that

1 not correct?

2 A I don't know.

3 Q You simply don't know.

4 A I don't know.

5 Q Okay, would the population numbers be significant
6 in the sense of demography for you to appropriately
7 evaluate, assess and review the considerations as to that
8 item only, of whether or not Brown County should be included
9 or excluded from the planning base?

10 MR. CASSIDY: Your Honor, I would object. I am
11 not quite sure what the question is. You know, I don't mean
12 to be -- I just don't understand the question.

13 JUDGE FRYE: You don't understand it?

14 MR. CASSIDY: No.

15 JUDGE FRYE: Could you state it again?

16 BY MR. DENNISON: (resuming)

17 Q Not having this factual basis which you have just
18 explained to me, Mr. Meyer, of the population of the Brown,
19 Clermont populations that adjoin one another, from the
20 factor only of demography consideration, you could not
21 evaluate or assess whether Brown County should be placed
22 within the planning zone or not placed in the planning zone
23 based upon a consideration of demography. Would I be
24 correct?

25 A (Witness Meyer) Well, I think the determination

1 of whether the Brown County should be -- have a plan or not
2 have a plan would be determined by the State of Ohio and
3 Brown County.

4 Q Okay. Now are you aware of any input that has
5 been present for Brown County other than the witness who
6 appeared in this proceeding?

7 A The Sheriff?

8 Q That's correct.

9 A No, I'm not.

10 Q Now did you give any weight, Mr. Meyer, to the
11 presence of the Sheriff and his testimony relating to the
12 circumstance of relocation centers, access control points
13 and, as I gleaned, his position that Brown County ought to
14 be part of this planning?

15 MR. CASSIDY: I would object to the form of the
16 question on its because "did he give any weight", and
17 there's nothing in evidence or in any testimony that he
18 could have considered prior to that. If Mr. Dennison wants
19 to amend it to --

20 BY MR. DENNISON: (resuming)

21 Q I'll so amend it.

22 Let me preface that by saying that's the first
23 Brown County input you had and onl that?

24 A (Witness Meyer) Correct.

25 Q After having received that, did you give some

1 weight to Brown County's concern?

2 A When the county commissioners of a county are
3 offered help by a state to help them with a plan, even just
4 a regular disaster preparedness plan for a civil defense,
5 when they are offered this kind of help and they are offered
6 help -- "how can we get a viable civil defense organization
7 in the county" -- and apparently they don't want help, if
8 they don't want it then you can't give -- you assume that
9 Brown County doesn't want to have a plan.

10 Q I trust, Mr. Meyer, that you base those
11 assumptions upon the testimony of Mr. Williams?

12 A Correct.

13 Q As I recall the testimony of Mr. Williams, Mr.
14 Meyer, he indicated that there had been some visits to Brown
15 County, some involvement with the Sheriff. As I recall, he
16 was not personally involved but with members of his staff,
17 and these were for purposes of the State beginning to open
18 inroads toward getting civil defense plans there, not that
19 they were being ignored. Wasn't that the sense of Mr.
20 Williams' statements on that subject?

21 MR. CASSIDY: Objection. The question calls for
22 the witness to give an opinion on Mr. Williams' intent in
23 the statement.

24 JUDGE FRYE: I think he's just refreshing his
25 recollection as to the testimony. It's overruled.

1 WITNESS MEYER: Would you just repeat that?

2 BY MR. DENNISON: (resuming)

3 Q Yes, Mr. Meyer. Was not the sense of Mr.
4 Williams' testimony that members of his staff had gone two
5 or three times to Brown County. They met with the Sheriff's
6 staff. They may have met one time with the Sheriff, may
7 have met one time with the County Commissioners of Brown
8 County, all of which was dealing with the state advising and
9 opening inroads -- call it negotiations, if you will -- for
10 the purposes of having a civil defense plan or service in
11 Brown County, and that this was not being barred. It was
12 merely the initiating steps?

13 A (Witness Meyer) Trying to get a viable civil
14 defense program in Brown County, yes.

15 Q And also, as I recall Mr. Williams' testimony, he
16 did not discuss the circumstance of radiological
17 preparations but rather just general civil defense
18 planning. Was that your understanding of his testimony?

19 A I don't know.

20 Q In any event, where this is leading us, Mr. Meyer,
21 is simply this, that the assumptions that you make of Mr.
22 Williams' testimony may not be correct from the standpoint
23 that Brown County does not want involvement here.

24 MR. CASSIDY: Objection. I think that
25 mischaracterizes the testimony. The assumptions were based

1 on more than just Mr. Williams' testimony, as I understood
2 it. The previous question --

3 MR. DENNISON: Let me withdraw the question. You
4 may be perfectly right.

5 BY MR. DENNISON: (resuming)

6 Q Were there any other factors that led to your
7 assumption?

8 A (Witness Meyer) About the ten-mile zone?

9 Q No, no.

10 A Of what?

11 Q Of Brown County's desire or no desire to have
12 civil defense planning. Does that go anyplace other than in
13 what you heard Mr. Williams say?

14 A What the Sheriff said.

15 Q And the Sheriff said they did.

16 A They had a civil defense program.

17 Q No, no, not whether they did or whether they
18 didn't, whether they are considering it or discussing it and
19 presumably implementing it in the future.

20 A In the future?

21 Q Beyond today.

22 A Who knows, right.

23 Q Now, Mr. Meyer, you heard the Sheriff relate that
24 there were several roadways which followed the Clermont
25 County-Brown line between U.S. 52 and 125, which lead

1 directly from Clermont into Brown County and would be
2 interpreted, I think reasonably, as access roads.

3 A Just one second. I want to get the plan.

4 (Pause.)

5 Okay, I have the map before me now, sir.

6 Q Okay. You have the map, located at II-I-19?

7 A I am looking at II-I-18.

8 Q Okay. That map, other than State Route 125,
9 doesn't indicate that there is any other way to get to Brown
10 County, does it?

11 A I think -- I don't know if 756 goes into it or
12 not, or 774 I'm sure does.

13 MR. CASSIDY: May I object here, Your Honor? I
14 think this is where we ran into the map problem. I am not
15 sure that we are looking at the same II-I-18s at this
16 juncture.

17 WITNESS MEYER: Incidentally, I am looking at the
18 one where 52 does go into Brown County, and that is an
19 evacuation route.

20 BY MR. DENNISON: (resuming)

21 Q Good point, Mr. Meyer. That is apparently the
22 original map.

23 A (Witness Meyer) That's the one I am looking at.

24 Q Since that you have come to understand -- and I
25 think just this morning -- that there was a revised map

1 which no longer routes traffic into Brown County. Am I
2 correct?

3 A Yes. I didn't get a good look at the second one,
4 but from the testimony, yes.

5 Q Now has anyone offered you an explanation as to
6 why that routing was revised so that it no longer went into
7 Brown County?

8 A I didn't know about it until this morning, no.

9 Q What is the date reflected on your map?

10 A I hate to tell you I don't have a date.

11 Q Now are you aware from your investigation on this
12 contention 20(X), Mr. Meyer, that County Route 43 leaves
13 Clermont and enters Brown County to the north of 52?

14 A County Route 43?

15 MR. DENNISON: May I approach the witness, Your
16 Honor? I think I can speed this up.

17 JUDGE FRYE: Yes.

18 (Counsel and witness examining document.)

19 BY MR. DENNISON: (resuming)

20 Q Mr. Meyer, this might be a bit simpler to use. I
21 will advise you and you can inspect it to be certain
22 yourself I would advise you that it is a map of Brown
23 County and to your immediate left is the Clermont County
24 border.

25 Now you note at the southern extreme of the map by

1 the Ohio River is U.S. 52.

2 A (Witness Meyer) Correct.

3 Q And you note as you move to the top of the map you
4 would have State Route 125.

5 A Yes.

6 Q All right. Now starting from U.S. 52 and
7 terminating at 125, would you indicate the roadways that are
8 leading from Brown -- pardon me, from Clermont County into
9 Brown County on that strip of Clermont-Brown jurisdictional
10 division?

11 A Yeah, there are some roadways.

12 Q Could you speak up a bit, Mr. Meyer?

13 A Yes, there are some roadways here.

14 Q Would you indicate what those roadways are, that
15 is, by name and state route number?

16 A 43, and then, at Dunbar Road -- is this Dunbar
17 Road? Is that a road there too, or does it end there?

18 Q No, it terminates there.

19 A It terminates there, so that would be --
20 Skiffsville, what road is that there, and that's 42. This
21 is a dead end, I assume, and this is a dead end, I assume.

22 Q Right, which is Robertson Road.

23 A Yeah, which is a dead end, and Griffith Road is a
24 dead end.

25 Q Does Griffith Road lead into 756?

1 A Yes, I beg your pardon. That does. You are right.

2 Q And 756, which is the state roadway, does it go
3 from Clermont into Brown County?

4 A It appears that it does, you know, looking from
5 Brown County, yes.

6 Q And does it also indicate an arrow at that road,
7 intersection with the County line, indicating to Felicity?

8 A Oh, yes, yes, it does, yeah -- to Felicity.

9 Q All right. And the next roadway would be this 30
10 -- at least indicated 302, which would also connect with
11 756, this roadway here?

12 A Yes. Wait, is this -- yes. Yeah.

13 Q And at the other extreme of that roadway likewise
14 comes from Clermont County and connects to 756, is that
15 correct?

16 A This -- yeah. I assume it does because here I
17 don't have it. I don't have it on here.

18 Q I recognize the limitation of that plan map. Is
19 there also a Feesburg-Potown Road leading from Clermont into
20 Brown County?

21 A Yes, 774.

22 Q There are two roads, one indicated --

23 A Right.

24 Q The other red one is --

25 A 774.

1 Q 774, State highway?

2 A Right.

3 Q Then you would have Vanderman Road, which would
4 come from Clermont into Brown County, is that correct?

5 A Yes.

6 Q And then you would also have Sodom Road coming
7 from Clermont into Brown County?

8 A Yes.

9 Q And you would also have, again, State Route 125
10 coming from Clermont into Brown County, is that correct?

11 A Yes.

12 Q Those roadways that we have just gone over, Mr.
13 Meyer, are approximately equal distance one to the other as
14 you would proceed in a northerly direction from U.S. 52 to
15 State Route 125, would I not be correct?

16 A You mean the distances between the roads?

17 Q That's correct.

18 A Yes.

19 Q This, like fingers on a hand, would permit a
20 network of access roads leading directly from Clermont into
21 Brown County, is that not correct?

22 A Yes.

23 Q Between the 125 to 52 belt.

24 A Yes.

25 Q All right. Those roadways, as far as you know,

1 Mr. Meyer, could also be used as access roadways,
2 dispatching people on the most direct routes from their
3 respective residences. One proceeded from 52 to 125 as
4 access routes away from the Zimmer station. Would that not
5 be correct?

6 MR. CASSIDY: I would object to the question as to
7 form. It's already been stated that Mr. Meyer is just
8 looking at that map and whether or not he knows whether
9 those specific roads could be used as access routes or not
10 is no foundation. We don't know what the quality of those
11 roads are.

12 JUDGE FRYE: I think we earlier had a definition
13 of access roads and evacuation routes.

14 MR. CASSIDY: That was from Mr. McKenna, yes.

15 JUDGE FRYE: Can we stipulate to that definition?

16 MR. CASSIDY: That's not my problem. My problem
17 is -- the question was, to the witness, whether or not these
18 roads could serve as access roads or not. Mr. Dennison has
19 been very diligent in his presentation to state that these
20 roads are terrible, many of them. Now he is asking the
21 witness, based on roads that he is not familiar with,
22 whether or not they would be serviceable as access roads.

23 If he wants to lay a foundation and find out
24 whether the witness has driven those roads or has any
25 knowledge of the condition of those roads, that's fine, but

1 all we have before us is a map with lines on it. We don't
2 know what the condition of the roads are and whether they
3 would be serviceable for access.

4 JUDGE FRYE: I think we've got it established that
5 the roads go from Clermont to Brown County and I suspect
6 that covers it, really.

7 BY MR. DENNISON: (resuming)

8 Q As a matter of fact, Mr. Meyer, do you have any
9 knowledge other than by map of the condition of any roadway
10 in Clermont County?

11 A (Witness Meyer) Yes, I do.

12 Q Did you travel these roadways?

13 A Yes, I did.

14 Q And when you traveled those roadways, when did you
15 do it?

16 A I did it on Monday, January 25, in the morning.
17 You will remember it was a bit snowy that day.

18 Q And on that bit-snowy day, Mr. Meyer, did you have
19 any difficulty in getting up any of the hills?

20 A It was a lovely drive.

21 (Laughter.)

22 Q And you would then be familiar with these roadways
23 that I have discussed. You would have certainly, on that
24 drive, taken all the roadways in Clermont as they would
25 obviously go on into Brown to satisfy yourself?

1 A No, no. I'll tell you where I went so you will
2 know.

3 Q Okay.

4 A I started on 52, came down 52 past New Richmond,
5 past 232, past the plant, past Moscow, stayed right on 52
6 till we got down to 133. 133 we turned north and went to
7 Felicity. Then we turned west of 756, went 756 up to the
8 crossroads at 743 and turned -- which way did we go --
9 turned south on 743 and came down to the intersection of 52,
10 then went north again on 52 to 232. Then, on 232 we went --
11 I think that's east and went up 232.

12 Then 232, we went up to 222. 222 we took to 125
13 and 125 we came to the outer belt and then down.

14 Q And was that the extent of your observation of the
15 county roadways?

16 A That was my extent.

17 Q Okay. After you passed the plant -- and I am
18 certain you recognized that --

19 A I was just going to say try not to hold me to --
20 the roads were a little snow-covered.

21 Q How long did it take you to drive all around there?

22 MR. CASSIDY: I'm going to object on the grounds
23 of relevancy, assuming that Mr. Dennison is going to put
24 this in for the purpose -- it's taken many hours. Mr. Meyer
25 has testified he had driven over the roadway system but

1 obviously not trying to get out of the roadway systems, so
2 we object on the grounds of relevancy.

3 JUDGE FRYE: I think we'll allow it.

4 WITNESS MEYER: We went approximately 25 miles an
5 hour, Judge, 25, 30 -- something like that -- and we were
6 really observing, you know, the roads, and they are
7 winding. I'm not going to say they're not.

8 (Laughter.)

9 BY MR. DENNISON: (resuming)

10 Q Thank you, Mr. Meyer.

11 A (Witness Meyer) Don't mention it. There was a --
12 okay.

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1 Q But my question was not how fast you drove.
2 Rather, after you passed the plant until you finally emerged
3 on 125, how long did it take you to drive over these roads?

4 A (Witness Meyer) Several hours. I don't remember
5 exactly.

6 Q And in the course of your travels did you note
7 particularly at 133 topographic circumstance as you left 52
8 and started up or proceeded along 133 --

9 A Let me put it to you this way. I'll tell you
10 where I found a couple of problems.

11 MR. CASSIDY: Objection. That's not responsive to
12 the question.

13 BY MR. DENNISON: (resuming)

14 Q I put a new one in. Tell us about the problems,
15 Mr. Meyer.

16 (Laughter.)

17 A (Witness Meyer) I don't think that was a good way
18 to go either.

19 (Laughter.)

20 MR. CASSIDY: For the record, I would object to
21 the question.

22 JUDGE FRYE: We really want to know about the
23 problems.

24 (Laughter.)

25 WITNESS MEYER: There was a hill on 743 between

1 Fruitridge Road and 743. Now this was a rather steep hill
2 and this could be a problem. However, we didn't have a
3 problem going over it, but I can see where it's possible.

4 Then, at the crossroads of 756 and 232 there was a
5 little bit of a difficulty getting up the hill to Laurel.
6 Those were the two spots that we -- you know, we saw.

7 BY MR. DENNISON: (resuming)

8 Q Without getting into a semantical debate, did you
9 consider those to be potential bottlenecks?

10 (Laughter.)

11 A (Witness Meyer) Do we have to use that word? It
12 scares me.

13 Q That's what I thought, but would you call them
14 bottlenecks?

15 MR. WETTERHAHN: For the record, are we talking
16 about under the same conditions as he traversed them?

17 BY MR. DENNISON: (resuming)

18 Q Under any conditions from his standpoints and
19 observations.

20 A (Witness Meyer) I think the best answer I can
21 give you is I really don't know. I don't know how much
22 shoulder is there.

23 Q Okay. Did you observe these roadways as to the
24 presence and absence of shoulders?

25 A No, no.

1 Q Did you observe them at all as to the presence or
2 absence of vertical obstructions?

3 A Would you clarify "vertical obstruction"?

4 Q Yes. That would be something like a guard rail
5 within six feet of the roadway, signs within six feet of the
6 roadway edge.

7 A I haven't observed too many of them.

8 Q Terrain in that same position and so forth.

9 MR. CASSIDY: Your Honor, I would raise an
10 objection here, only that we are getting down the scope, I
11 think, of 20(X), assuming that we're going to follow through
12 sequentially.

13 MR. DENNISON: I didn't --

14 MR. CASSIDY: I have no problem with Brown County
15 roads.

16 MR. DENNISON: I'm coming back to that.

17 JUDGE FRYE: We'll come back to it. As I said
18 this morning we're not going to follow the same format we
19 followed with the Applicant's testimony.

20 BY MR. DENNISON: (resuming)

21 Q Now, Mr. Meyer, did you take any account of the
22 width of the roadways that you traveled, particularly the
23 state roads?

24 A (Witness Meyer) Somewhat.

25 Q And did you take any measurements?

1 A It didn't seem that we had any problems passing
2 cars coming the other way. There was no real problem, even
3 trucks. We were able to get by each other with no problem.

4 Q But these were not spacious roadways in any sense
5 of the term? I'm not suggesting they are one lane, either,
6 but --

7 A No.

8 MR. CASSIDY: Objection. I don't know what we're
9 talking about.

10 BY MR. DENNISON: (resuming)

11 Q They were not wide roadways?

12 A (Witness Meyer) They were not superhighways.

13 Q In fact, they ranged about ten feet on the lane?

14 A I don't know. I can't give you measurements
15 because I didn't measure.

16 Q Okay, fine, Mr. Meyer. Did you observe during
17 that drive the presence of curves and particularly severe
18 curves, what we would usually refer to as right angle turns
19 or S curves?

20 A Not too much so because we were going very slowly.

21 Q But you did notice that these were not straight
22 and level roads?

23 A Yes.

24 Q And from the standpoint of curves and hills, this
25 would reduce somewhat one's visibility for purposes of

1 passing, that sort of thing?

2 A Yes, it's a two-lane road, right.

3 Q Now going back to the roadways that we have
4 identified as access roadways, whatever their condition may
5 be, there are several of them which are in the belt between
6 125 and 52 leading from Clermont to Brown County. Is that
7 not true?

8 A Now we are talking about Brown County?

9 Q The map we went over, the roads that you
10 identified.

11 A Okay, okay. I know there are some roads there,
12 yes. I don't know how wide they were or anything about
13 them. Right.

14 Q Now I think you had touched on 756 during your
15 travels, did you not?

16 A Yes.

17 Q And you also noticed that 756 goes into Brown
18 County by virtue of the map that was displayed to you -- and
19 if you want to take a look at it again --

20 A No, it's all right.

21 Q Okay. Now these would provide -- rather, let me
22 put it this way. You have no knowledge of whether these
23 roads are somehow different in kind than the other roads in
24 Clermont County, do you?

25 A I have no knowledge.

1 Q You have no knowledge as to whether the roads in
2 Brown County are somehow different than they are in Clermont?

3 A No.

4 Q Without that knowledge, would you accept that in
5 all probability you could make the assumption that the roads
6 remain the same from county to county?

7 MR. CASSIDY: Objection.

8 MR. WETTERHAHN: Objection.

9 MR. CASSIDY: He said he had no knowledge.

10 JUDGE FRYE: Yes. I think I'll have to sustain
11 that.

12 BY MR. DENNISON: (resuming)

13 Q Now you had mentioned earlier this morning that
14 when you were involved in working in and near Texas that
15 there was a situation during Hurricane Buelah, as you recall
16 it, when President Johnson had apparently permitted Mexican
17 nationals to come from across the Mexican border into
18 Texas. Is that correct?

19 A (Witness Meyer) Correct.

20 Q Now when these Mexican nationals came from Mexico
21 because of the hurricane circumstances -- I would assume
22 that was the reason. Am I right?

23 A Correct.

24 Q Okay. When they came across the border into
25 Texas, did this require that you do anything at all relative

1 to the influx of those Mexican evacuees?

2 A Yes. We had to set up -- as a matter of fact, he
3 designated the Red Cross as the official agency to take care
4 of them.

5 Q And I assume that the reason they were going from
6 Mexico to the United States was because of some sort of
7 disaster related to this hurricane in Mexican territory. Is
8 that correct?

9 A The hurricane came. Then we had torrential rains
10 and torrential rains could end in flooding.

11 Q Now from that experience, Mr. Meyer, do you see
12 anything that would be different in the situation of
13 Clermont population coming into Brown County as evacuees?

14 MR. CASSIDY: Objection, Your Honor.

15 WITNESS MEYER: It's considerable.

16 MR. CASSIDY: Could we have a ruling on the
17 objection, please?

18 JUDGE FRYE: You've already got an answer. Do you
19 need a ruling on the answer?

20 MR. CASSIDY: I would move to strike the answer.
21 I don't see any relevancy. We haven't established any basis
22 of numbers or anything.

23 JUDGE FRYE: I think that's basically what the
24 witness was going to lead to.

25 MR. CASSIDY: I would say this is irrelevant.

1 JUDGE FRYE: Let's let him tell us it is different.

2 MR. CASSIDY: There's no question before him right
3 now.

4 BY MR. DENNISON: (resuming)

5 Q Mr. Meyer, would this distinction be a distinction
6 by numbers?

7 MR. CASSIDY: Objection. Again, we don't have
8 anything in the record as far as what numbers of people we
9 are talking about in the event that people go from Brown to
10 Clermont as opposed to what Mr. Meyer experienced in Texas
11 several years ago.

12 JUDGE FRYE: I do think we have several points in
13 the record on that point. I would like to hear what the
14 differences are as Mr. Meyer sees them.

15 MR. CASSIDY: Is there a ruling on the objection?

16 JUDGE FRYE: Overruled.

17 MR. CASSIDY: Thank you.

18 WITNESS MEYER: Number one, it is always nice if
19 you communicate with people and when some speak Spanish and
20 some speak English it's a little bit of a problem, and we're
21 talking about thousands coming across the border into a
22 flooded area where we are already housing United States
23 citizens.

24 We were very fortunate to find an old discarded
25 military camp or something of that nature and were able to

1 house a tremendous number of Mexican nationals there. We
2 had the leaders of their communities supervise them and we
3 took care of -- they ordered the food they needed and
4 everything else.

5 You are talking about a tremendous influx of
6 people. I am talking about, say, 15-20,000 that don't speak
7 English, that are getting three meals a day and really don't
8 have to do anything except sit there. And they were not in
9 a very big hurry to get back across the border.

10 (Laughter.)

11 And that's another minor problem. Finally, we got
12 these tremendously large army helicopters, physically put
13 them in the helicopters, and took them back home. I don't
14 think that would be allowed in the United States. They
15 didn't seem to want to rehabilitate their own cities too
16 rapidly where it was flooded. They were just very, very
17 contented to stay with us.

18 They're not, I don't think, like the people of the
19 midwestern United States.

20 MR. CASSIDY: Your Honor, based on Mr. Meyer's
21 answer I would move to terminate the line of questioning on
22 the basis of relevancy.

23 MR. DENNISON: That's all I have anyway.

24 JUDGE FRYE: I was going to say --

25 BY MR. DENNISON: (resuming)

1 Q Now, Mr. Meyer, during your trip along Route 52
2 and proceeding on 133, as you have described that, you did
3 note that there was a circumstance -- a land characteristic
4 difference, did you not, that being the rise in elevation as
5 you went up a hill?

6 A (Witness Meyer) Yes.

7 Q And continuation, by way of illustration, to 52
8 into Brown County would remove circumstances of necessity of
9 going up that 133 hill, would they not?

10 A Well, Mr. Dennison, as I said, I have the map
11 where actually it goes into Brown. That's one of the
12 evacuation routes.

13 Q Assuming that your map has been revised --

14 A Yes.

15 Q -- and rather than going into Brown County on 52,
16 one turns left and goes up 133 --

17 A Okay, okay.

18 Q Under that circumstance, from the aspect of land
19 characteristics, if you continue, as your map indicates, you
20 would not have to go on that hill, would you?

21 A No.

22 Q That would be a factor of land characteristics to
23 be taken into account, would it not?

24 A Yes, that would be one factor.

25 Q Now given the circumstances, Mr. Meyer, that as

1 you viewed this Brown County map that we discussed several
2 minutes back, assuming that individuals did utilized those
3 roadways and went from Clermont into Brown County, would you
4 have a situation in which there would be some responsive
5 needs in Brown County to those Clermont Countians who would
6 be going into Brown County?

7 A No, I don't think so.

8 Q Okay. Now would there be the necessity to
9 establish any access routes -- pardon me, any access control
10 points along that area?

11 (Pause.)

12 A I don't know.

13 Q Now would access control points be established
14 from the standpoint of restricting entry into the plume EPZ
15 of Zimmer as we would be considering only the Brown County
16 sector?

17 (Pause.)

18 A Would you repeat the question?

19 Q Would it be necessary, considering this belt
20 between 125 and 52 and the respective roadways which you
21 identified from Clermont to Brown County, would it be
22 necessary to establish any access control points along those
23 roadways for purposes of restricting entry from Brown County
24 into Clermont during a Zimmer emergency?

25 MR. WETTERHAHN: Objection. That's completely

1 beyond 20(X) now. We are getting into access control
2 points. It has nothing to do with whether there should be
3 an emergency plan for Brown County.

4 (Board conferring.)

5 JUDGE FRYE: I'm inclined to agree with Mr.
6 Wetterhahn on that one.

7 MR. DENNISON: If I can have an answer to that and
8 one other question I could tie it up. Otherwise we could
9 strike it.

10 JUDGE FRYE: You can tie it up? We will give you
11 a chance to tie it up.

12 MR. CASSIDY: Your Honor, could we have a ruling
13 on the objection? This is a new rule of evidence Mr.
14 Dennison is proposing here.

15 JUDGE FRYE: Objection overruled.

16 BY MR. DENNISON: (resuming)

17 Q Do you recall the question?

18 A (Witness Meyer) No.

19 Q This belt that's been referred to, from 125 to 52,
20 given the roadways that we discussed on the map in that
21 belt, in order to restrict entry from Brown County into
22 Clermont County during a Zimmer-related emergency, would it
23 be necessary to put access control points in that belted
24 area that we discussed in Clermont County to keep people
25 from entering into the plume EPZ?

1 A Not right at the border, no. I don't think right
2 at the border you would need them.

3 Q Absent those at the border, there could be
4 wrong-direction entry, could there not?

5 A Yes, that's true.

6 (Pause.)

7 Q Now, Mr. Meyer, from the standpoint of your
8 involvement in the 20(X) circumstance, I take it that you
9 have not directly discussed the matter with any state or
10 Clermont planner. Am I correct?

11 A No. No, I have not.

12 Q Now, Mr. Frost, if I may, you have indicated in
13 your testimony that you recognize that there is an area
14 along U.S. 52 in Clermont County in which there is what
15 would be termed blanks or voids due to the land
16 characteristics of that area in which there cannot be radio
17 communication with emergency vehicles from a base to mobile
18 radio, is that correct?

19 MR. CASSIDY: Your Honor, could I just ask a point
20 of clarification on this? Perhaps a bench conference may be
21 in order.

22 This morning when we did discuss the sequential
23 taking of these contentions, my recollection was it wasn't
24 clear how we were going to do it. We are now getting into
25 questions of Mr. Frost as far as telecommunications go. My

1 understanding of how we are proceeding either way is that we
2 would at some juncture determine that we were done with a
3 particular contention so that other parties may cross.

4 JUDGE FRYE: No, no. I had not intended to
5 proceed that way.

6 MR. CASSIDY: So the way I understand the
7 procedure, Mr. Dennison is going to direct on all 85 pages
8 of testimony, all contentions, and then all the parties are
9 going to go back and --

10 JUDGE FRYE: Yes.

11 MR. CASSIDY: May we approach the bench, Your
12 Honor?

13 (Bench conference.)

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1 JUDGE FRYE: We have apparently completed Mr.
2 Dennison's examination on Contention 20(X) and at the bench
3 conference we decided that that might be a good point to
4 break and let the other parties question on that contention
5 before we move on to the other contentions.

6 MR. WETTERHAHN: The Applicants have no questions.

7 MR. WOLIVER: I have one question, Your Honor.

8 JUDGE FRYE: Okay.

9 MR. WOLIVER: Do we need a proffer for this one
10 question?

11 (Laughter.)

12 JUDGE FRYE: No, I don't think you need a proffer
13 for the one question.

14 MR. BARTH: No objection.

15 JUDGE FRYE: Mr. Woliver, your one question.

16 CROSS EXAMINATION

17 BY MR. WOLIVER:

18 Q Mr. Meyer, initially, in response to some cross
19 examination by Mr. Dennison, you were talking about the fact
20 that Brown County officials are raising the possibility that
21 Brown County officials may not have been interested in
22 developing a disaster plan. As you have been interpreting
23 your responsibilities, and as I read your testimony on page
24 10, would the size or configuration of an EPZ in any way
25 necessarily be predicated upon the willingness of local

1 officials in a certain area to participate in disaster
2 planning?

3 A (Witness Meyer) No.

4 MR. WOLIVER: Nothing further.

5 JUDGE FRYE: Any other cross?

6 Any redirect?

7 MR. CASSIDY: I just have a few questions, Your
8 Honor.

9 REDIRECT EXAMINATION

10 BY MR. CASSIDY:

11 Q Mr. Meyer, Mr. Dennison had inquired on his cross
12 examination with regard to the involvement of Brown County
13 or certain parties in Brown County to prepare plans or
14 becoming involved in the planning process.

15 Is it your testimony that your knowledge of Brown
16 County's communications in that regard is based on your
17 hearing the testimony here during the past two weeks?

18 A (Witness Meyer) Yes.

19 Q Is there any requirement in NUREG-0654 or any of
20 the other regulations that would require Brown County to
21 prepare a radiological emergency plan in this situation?

22 A No.

23 MR. CASSIDY: No further questions.

24 JUDGE FRYE: The Board has no questions. What's
25 the next subject matter?

1 MR. DENNISON: The next subject matter, Your
2 Honor, would be communications, commencing with Contention
3 20(B)(4).

4 JUDGE FRYE: Fine.

5 CROSS EXAMINATION

6 BY MR. DENNISON:

7 Q Mr. Frost, you indicate in your testimony that you
8 recognize a blank or a void in the near environs of the Ohio
9 River, U.S. 52 and the Zimmer Station for radio
10 communication between base and mobile radios and which would
11 involve mobile radios of emergency vehicles in that general
12 area.

13 You do recognize that in your testimony, do you
14 not?

15 A (Witness Frost) That's correct.

16 Q And that condition exists today, does it not, as
17 far as you know?

18 A As far as I know that is correct.

19 Q Now do you have any information, factually, that
20 that circumstance can be eliminated in the future?

21 A Yes. It's my understanding they are going to
22 install I think it's a repeater system, relay the
23 communications.

24 Q Do you know as a matter of fact if that will occur?

25 MR. CASSIDY: Objection. It calls for a

1 conclusion on the part of the witness. That's totally
2 speculative in terms of whether or not it will occur at some
3 undefined future date.

4 MR. DENNISON: I'll withdraw the question.

5 BY MR. DENNISON: (resuming)

6 Q As the situation is now constituted, Mr. Frost, a
7 void close to the area of the nuclear reactor prohibiting
8 radio communications from emergency response base radios to
9 emergency response vehicles in the near area of that nuclear
10 reactor would constitute a deficiency in communications
11 during a site emergency involving the environs near that
12 site, would it not?

13 A (Witness Frost) That is possible.

14 Q So that under that set of circumstances, as you
15 have testified, there is no reasonable assurance that
16 communication standards can be met as we have now discussed
17 it based upon your present knowledge today. Is that not
18 correct?

19 MR. CASSIDY: Objection. Again, he's calling for
20 a conclusion and mischaracterizing the testimony. The
21 testimony was that Mr. Frost is aware that there is a plan
22 to take care of the deficiency that's been recognized, and
23 Mr. Dennison's question mischaracterizes that.

24 MR. DENNISON: Your Honor, as I recall the
25 circumstances, when I sought to inquire into his

1 understanding of whether that commitment would ever be
2 fulfilled it was objected to and I withdrew the question,
3 and that's the state of the record.

4 JUDGE FRYE: Yes, it's overruled. Let me note for
5 the record that Dr. Livingston has had to leave in order to
6 catch a plane and that we are now proceeding under the
7 quorum rule.

8 BY MR. DENNISON: (resuming)

9 Q Do you recall the question, Mr. Frost?

10 A (Witness Frost) No, sir. Would you please repeat
11 the question?

12 (The reporter read the record as requested.)

13 WITNESS FROST: I don't believe that is correct,
14 sir. During the exercises the communication systems that
15 were observed functioned very well.

16 BY MR. DENNISON: (resuming)

17 Q And then you would be totally incorrect in your
18 written testimony that radio communications along U.S. 52
19 are problematic due to topography and land characteristics
20 of the area creating a blank or void? That is incorrect?

21 A (Witness Frost) No, sir, that is not incorrect.
22 But to say that communications will not perform, there is a
23 small area, as I understand it, there where there could be a
24 problem. It's not a continual problem, as I understand.

25 Q Okay. What is the location of that area of

1 problem?

2 A Sir, I do not know.

3 Q Now, Mr. Frost, you recognize that the -- as you
4 put it, 36 of the 40 emergency response groups have radio as
5 their primary means of communications in which four of the
6 emergency response groups have as their means of
7 communication telephones. That emergency response group of
8 four involves schools, does it not?

9 A That is correct.

10 Q You also acknowledge that during a Zimmer-related
11 accident in which there would be protective actions notified
12 and advised to the public that thereafter the telephone
13 systems to these schools would be subject to overload. Is
14 that not correct?

15 A That is correct.

16 Q Now you note in your testimony that during the
17 exercise at the Zimmer Nuclear Power Station you
18 participated as an evaluator and that notification of the
19 agencies was accomplished in a timely and effective manner
20 using both radio and telephones. Did you observe the use of
21 telephones to any of the schools during that drill?

22 A I was in the Sheriff's office at the time, but I
23 cannot say who he called. He made numerous phone calls of
24 the radio transmission, but specifically to the schools, no,
25 sir, I cannot.

1 Q Now you have made an assumption that if the
2 schools are notified before the public is notified of an
3 accident that there would not be a circumstance involving
4 overload of the school phones. Is that not correct?

5 A That is correct.

6 Q This would require that the schools be notified
7 and conclude all of their notifications to bus drivers
8 within their school system and otherwise within a space,
9 maximally, of fifteen minutes. Would that not be correct?

10 A I believe the time frame is more like a half hour,
11 sir.

12 Q Are you aware of the regulation which requires
13 that the public, for prompt notification, be notified within
14 fifteen minutes of the onset of accident?

15 A Once a decision has been made to notify them, yes,
16 sir.

17 Q Now you are aware that the Felicity-Franklin
18 School District is on a different telephone system than is
19 the EOC, the EOF, and the County Superintendent's office?

20 A Yes, sir.

21 Q This requires that for use of telephone
22 communication between the Felicity-Franklin School
23 Superintendent and his county superintendent, the EOC, or to
24 the utility itself all requires the use of long distance
25 trunk lines. Is that not correct?

1 A That would be correct.

2 Q And are you aware of the number of bus drivers in
3 the Bethel, Tate, Franklin, Felicity and New Richmond School
4 Districts who would be contacted by the use of a commercial
5 telephone during a Zimmer accident in order to summons those
6 drivers to schools?

7 A I could not give you a specific number. As I
8 recall, Mr. Fite said there was 18 in New Richmond and a
9 similar one in the other ones. The exact numbers I couldn't
10 provide you.

11 Q And would the circumstances of your testimony, Mr.
12 Frost, be that you do not know?

13 A I cannot give you an exact number for the
14 Felicity-Franklin District.

15 Q Have you made any investigations of the time
16 necessary, given the phone lines that are present within
17 each school district, that it would take to summons --
18 advise and summons and give directions to bus drivers?

19 A No, sir.

20 Q That time would be a circumstance which would be
21 important in the consideration of the adequacy of any
22 communication system, would it not?

23 A Yes, sir.

24 Q Now do you have any factual information, Mr.
25 Frost, that after the onset of accident the necessity over

1 different periods of time for these respective schools that
2 are affected to be using the telephone for purposes of
3 inter-school communications, and by inter-school
4 communications I mean to their drivers, to their principals,
5 to the Batavia location of the emergency operating center
6 for the County, and the position of the County
7 Superintendent at that location?

8 Do you have any factual information, knowledge, as
9 to the number of calls, the periods of time over which it
10 would be necessary that communications be ongoing by the use
11 of commercial telephones?

12 A No, sir.

13 Q Okay. Not having that knowledge you would be in
14 no position to inform us that even if the schools were
15 notified in advance of the emergency that they could
16 continue after public notification to continue their
17 telephonic communications. Would that not be correct?

18 MR. CASSIDY: Your Honor, I would object because
19 that mischaracterizes the written testimony this witness
20 prepared and also mischaracterizes the record as it stands.

21 If the Board will recall, Mr. Fite, I believe,
22 testified the other day that he always has one line in the
23 Superintendent's office he can make calls on, which is
24 certainly a mischaracterization of the record as it stands
25 and a mischaracterization of the written testimony prepared

1 by this witness as far as the entire notification process
2 that is set forth in the plan.

3 JUDGE FRYE: I think we'll allow it. It's
4 overruled.

5 BY MR. DENNISON: (resuming)

6 Q Do you recall the question?

7 A (Witness Frost) No, sir. Would you repeat it?

8 (The reporter read the record as requested.)

9 WITNESS FROST: There very well may be a
10 restriction to the telephonic communications, but at that
11 point they could rely on the Emergency Broadcast System and
12 the prompt notification system and so forth.

13 BY MR. DENNISON: (resuming)

14 Q And those are all one-way receiving modes of
15 communication, are they not?

16 A (Witness Frost) That is correct.

17 Q So that there is no ability for the response
18 organization of the school itself to be in communication
19 with their emergency personnel, the bus drivers. Is that
20 not correct?

21 A I believe the plan calls for the Sheriff to notify
22 Bethel, Tate and, I believe, the Felicity School District
23 and the New Richmond police is to notify the New Richmond
24 schools by either telephone, messenger, and if they send a
25 police officer out there they would in fact have radio

1 communications from that point.

2 Q And in that radio communication would there be,
3 then, some police officer with a two-way radio at the site
4 of each bus driver's home or the location of each bus driver?

5 A No, sir.

6 Q So that from the standpoint of the school's
7 ability to communicate to bus drivers off school site, the
8 presence or absence of a two-way radio by the Sheriff or
9 another police agency would be of no assistance to
10 communications and the giving of directions to drivers of
11 buses. Is that not correct?

12 A That is correct.

13 Q Okay. Now as we have been discussing this, Mr.
14 Frost, from the standpoint of the plan's involvement with
15 school communications by telephone, and these would be
16 commercial, non-dedicated lines, can you tell me where there
17 is a finding or determination on your part that that plan
18 for the use of telephones, school bus drivers and other
19 school personnel is adequate and capable of being
20 implemented during Zimmer-related emergencies?

21 A The plan does meet the requirements of NUREG-0654
22 and that was the guidance that I based it upon.

23 Q And all that the plan does is state that they are
24 going to use telephones and the NUREG parallels that as
25 recognizing it as a form of communication, does it not?

1 A It recognizes it as a form of communications, yes.

2 Q Now the circumstances of the overloading of the
3 telephones, rendering them no longer a communication device,
4 results in a finding or determination of an incapability or
5 inadequacy in implementing that portion of the plan. Is
6 that not true?

7 A I think they provided for it with the Sheriff and
8 the messenger service and the public alert system.

9 Q All right. Now I think you mentioned that your
10 understanding of Mr. Fite's testimony was he had 18 bus
11 drivers to contact.

12 A Yes, sir.

13 Q And the plan calls for 12 deputy sheriffs, is that
14 correct?

15 MR. CASSIDY: Objection. That mischaracterizes
16 Mr. Fite's testimony the other day, which was that he had
17 nine bus drivers to contact of the 18 and Mrs. Seiger would
18 contact nine bus drivers.

19 MR. DENNISON: I understood your witness to say 18
20 would be contacted.

21 MR. CASSIDY: The question was whether or not Mr.
22 Fite was going to contact 18 bus drivers over one telephone
23 line.

24 BY MR. DENNISON: (resuming)

25 Q Mrs. Seiger, Mr. Fite, some of the school teachers

1 and so on, all of whom have an overloaded line -- it's
2 immaterial whether there's one or more line trying to use
3 overloaded phones. Is that not correct, Mr. Frost, from
4 your expertise in communications?

5 MR. CASSIDY: Objection there because that
6 mischaracterizes Mr. Frost's testimony as to what lines are
7 overloaded.

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1 JUDGE FRYE: Which testimony?

2 MR. CASSIDY: Mr. Frost testified here that in
3 response to Mr. Dennison's questions that he agreed with Mr.
4 Dennison's statement that yes, the school lines may be
5 overloaded. That was the testimony, as I recall.

6 Mr. Dennison is now trying to take that testimony
7 and transform it into that the entire phone system in the
8 county is going to be overloaded and that was not the
9 testimony that was given here.

10 MR. DENNISON: If that's the interpretation, it
11 certainly was not intended. I am talking about the phones
12 that are situated at the schools as they are used as a
13 communicative device.

14 MR. CASSIDY: It's all right that way.

15 JUDGE FRYE: That's what I thought, and -- well,
16 I'll leave it at that.

17 MR. CASSIDY: Could I have a ruling on the
18 objection?

19 JUDGE FRYE: It's overruled.

20 WITNESS FROST: Sir, would you please repeat that?

21 BY MR. DENNISON: (resuming)

22 Q The question was, Mr. Frost, that recognizing the
23 overloaded of the, let's use New Richmond, of that system's
24 telephones, that means that they cannot received calls in or
25 send calls out. Is that not correct?

1 A (Witness Frost) It would restrict it.

2 Q Now the utilization of a Sheriff's deputy with a
3 two-way radio permits communications to the EOC and other
4 receivers on that radio frequency, is that not correct?

5 A That is correct.

6 Q But that does not permit communications with
7 school bus drivers who do not have a two-way radio on that
8 same frequency, is that not correct?

9 A That is correct.

10 Q You have no evidence that any of these bus drivers
11 will have two-way radios on the same frequency as the
12 Sheriff, do you?

13 A No, sir.

14 Q Or on the same frequency as any other police
15 officer, am I correct?

16 A That is correct.

17 Q Thus, the communications with the school bus
18 drivers is entirely dependent upon the ability to use a
19 commercial telephone from the school site to that bus
20 driver's location at the time of an emergency for the school
21 personnel to communicate on a two-way basis with that bus
22 driver. Is that not correct?

23 A That is correct.

24 Q Right. That being the circumstance, you cannot
25 make either a finding or a determination that the state and

1 local plan is adequate and capable of being implemented as
2 it relates to school personnel communications with school
3 bus drivers as we have just now discussed it. Is that not
4 right, Mr. Frost?

5 (Pause.)

6 A We do not have two-way radio communications. That
7 is correct.

8 Q Okay. Now did we or did we not come to an
9 understanding that the school site itself, with its
10 administrative personnel, would be considered as the
11 principal response organization for schoolchildren taking
12 protective actions? Do you agree with me that that would be
13 the principal organization responsible for protective
14 actions to schoolchildren?

15 MR. CASSIDY: Your Honor, I would object at this
16 point, and this is where we are getting into the question of
17 who answered what. The contentions that Mr. Frost answered
18 strictly dealt with communications, not with protective
19 action. If Mr. Dennison wants to go on to protective
20 actions, we're in a different ballpark and I would ask for
21 the opportunity to redirect on communications.

22 JUDGE FRYE: I don't -- Mr. Dennison, you are not
23 moving to a new subject -- you?

24 MR. DENNISON: No, I'm not.

25 MR. CASSIDY: I was just pointing out that this

1 was not a contention Mr. Frost addressed.

2 JUDGE FRYE: Oh. In other words, you don't think
3 he should answer the question?

4 MR. CASSIDY: No, because he didn't address those
5 contentions and he is only being offered for his expertise
6 in telecommunications.

7 MR. DENNISON: This would deal with --

8 JUDGE FRYE: This is going to come back into
9 telecommunications.

10 MR. CASSIDY: Maybe if we could repeat the
11 question, perhaps I didn't understand.

12 JUDGE FRYE: It was just basically --

13 BY MR. DENNISON: (resuming)

14 Q Can we come to an agreement, Mr. Frost, that from
15 the standpoint of the responsibility for protective actions
16 for schoolchildren the principal organization will be the
17 school itself, that is, the Superintendent of the school and
18 his administrative staff? Is that correct?

19 MR. CASSIDY: I object. I don't see how that gets
20 us into telecommunications.

21 JUDGE FRYE: I think you have to wait for the next
22 question. Can he answer the question?

23 MR. DENNISON: It's a series of three. If I can
24 get the first two, maybe --

25 MR. CASSIDY: Why don't we just go to the third?

1 Maybe we don't need a foundation for it.

2 JUDGE FRYE: Can he answer the question?

3 MR. CASSIDY: If he will respond yes or no as to
4 whether he can answer the question.

5 JUDGE FRYE: Can you answer the question, Mr.
6 Frost?

7 WITNESS FROST: I believe I could agree that that
8 is the --

9 JUDGE FRYE: I thought so.

10 BY MR. DENNISON: (resuming)

11 Q Would you also agree that the bus drivers would
12 constitute emergency personnel within that principal
13 organization of the school?

14 A (Witness Frost) Yes, sir.

15 Q Okay. Now in your testimony you have indicated
16 your familiarity with 44 Code of Regulations, Part 350, and
17 directing your attention to Section 350.5(a)(6), is not the
18 requirement for your consideration of these plans and
19 communications that provisions exist for prompt
20 communications among principal response organizations to
21 emergency response personnel?

22 MR. CASSIDY: Objection, Your Honor. This is
23 getting into the issue we discussed earlier. 44, 350 is not
24 relevant to this hearing. That deals with the final
25 evaluation of the final plans.

1 MR. BARTH: Your Honor --

2 JUDGE FRYE: I don't understand your reasoning at
3 all on that one, and I would appreciate it if you could
4 explain it a little more.

5 MR. BARTH: Your Honor, if I may, we discussed
6 this many times. These people were offered for their
7 expertise on these contentions. As a matter of fact --

8 JUDGE FRYE: These contentions don't have anything
9 to do with compliance with the regulations? Is that what
10 you are saying?

11 MR. BARTH: We've been through that so many times,
12 Your Honor. What these people have done is respond to
13 specific contentions given by Mr. Dennison. That's what
14 they are offered for. They are not offered for their
15 relationship ultimately between FEMA and our agency.

16 JUDGE FRYE: So under your position or your view
17 of the thing, then Mr. Dennison would not be able to ask any
18 questions relating to the compliance of the plans with the
19 applicable regulations?

20 MR. BARTH: No, Your Honor, that is, again, a
21 hyperbolization of what I have just said. He is certainly
22 able to ask are these plans acceptable. There's no question
23 about that.

24 JUDGE FRYE: Okay.

25 MR. BARTH: Depending on the particular expertise.

1 JUDGE FRYE: All right.

2 Now how do you decide -- how does the witness
3 decide whether the plan is acceptable?

4 MR. BARTH: Fine. He bases this on his past
5 experience as an emergency planner as to whether this
6 provides an effective remedy. In this particular
7 circumstance he decides does the plan provide adequately for
8 communications with the school bus driver in the area we are
9 discussing. That is the matter at issue.

10 How does he do that? If he standing face-to-face
11 with a school bus driver and talks to him, of course that's
12 adequate. It is based on his expertise.

13 JUDGE FRYE: All right. Let's say -- I probably
14 shouldn't get into analogies, but if we had a situation in
15 which the ten-mile emergency planning zone were suddenly
16 changed to 15 miles in the midst of this proceeding, would
17 Mr. Dennison's contention with regard to Brown County still
18 be limited to consideration of a ten-mile EPZ?

19 MR. BARTH: Your Honor, I'm just not able to
20 address that kind of an analogy.

21 JUDGE FRYE: I don't understand. We've been
22 talking about the regulations extensively with regard to
23 that particular contention. Now we get to another
24 contention, the regulation comes up -- a different
25 regulation comes up -- and somehow that's not relevant, and

1 I don't understand the distinction at all.

2 MR. BARTH: Your Honor, there are allegations by
3 ZAC that there are factual defects in the Clermont County
4 radiological emergency response plan. Mr. Dennison presents
5 evidence that there are defects. These people present
6 evidence there are not defects. The Board decides.

7 JUDGE FRYE: Okay, he says they are inadequate,
8 they say they are adequate, now.

9 MR. BARTH: That puts the ball right in your lap,
10 Your Honor.

11 JUDGE FRYE: And I can't look at the regulations
12 to decide if it's adequate?

13 MR. BARTH: The regulations have nothing to do
14 with it if there's reliable, probative, substantive evidence
15 that it's a problem or not a problem. The regulations don't
16 bind you.

17 JUDGE FRYE: Well, I think to solve this
18 particular point at this time, I am going to let Mr.
19 Dennison pursue this matter as to compliance with the
20 regulations and I will, of course, entertain, after we have
21 finished here, if anyone wants to file a motion setting all
22 this matter forth and explaining to us why we should not
23 consider that, we will rule on it then and we can exclude
24 the testimony after the hearing is over.

25 But for the time being we are going to allow it to

1 go on.

2 BY MR. DENNISON: (resuming)

3 Q I know that you certainly probably don't remember
4 the question, Mr. Frost.

5 A (Witness Frost) You are correct.

6 Q Now under 44 Code of Regulations, Section
7 350.5(a)(6) it states that provisions exist for prompt
8 communications among the principal response organizations to
9 emergency personnel. That does not exist here as to the
10 school and its bus driving staff. Is that not correct?

11 A As we mentioned earlier, if you are talking about
12 two-way radio communications, no it does not. But assuming
13 there is enough time that these people would be notified
14 prior to the general public, the telephone would be
15 utilized.

16 If they did not have the time, then they would be
17 included as members of the general public and notified via
18 the prompt notification system that we feel this meets this
19 requirement.

20 Q Okay. And taking them from the circumstances of a
21 response organization dealing with certain responsibilities
22 and converting them to the public, based upon their ability
23 to communicate or not communicate, that assumption could be
24 applied equally as to fire, police and other response groups
25 who did not have an adequate communication system and could

1 be removed over, by your assumption, to members of the
2 general public, relying upon NOAA and the Emergency
3 Broadcasting System. Is that not correct?

4 A I don't think so.

5 Q Why do you make the distinction with the school?

6 A Fire and policemen are emergency-type operations.
7 They work every day. They have had communications. Radio
8 communications have been in existence for years and years.

9 Q Okay. And do not the schools administer
10 day-to-day, at least during the scholastic months, to the
11 student population, house that student population for
12 several hours each day, Monday through Friday, as well as
13 provide for the transportation to and from the school site?

14 A That is correct, and it's my understanding they
15 have a means of contacting these bus drivers via telephone.

16 Q That is only under certain conditions. Is the
17 plan adequate under all conditions, even overloading?

18 MR. CASSIDY: Your Honor, I would object at this
19 point because he's mischaracterizing the standard of
20 NUREG-0654. It provides whether there are reasonable
21 assurances, and that's what we're talking about. It may be
22 splitting hairs, but we are talking about reasonable
23 assurances.

24 JUDGE FRYE: Let me rephrase the question.
25 Instead of adequate, shall we say: does the plan provide

1 reasonable assurance?

2 WITNESS FROST: I think so.

3 BY MR. DENNISON: (resuming)

4 Q Now, Mr. Frost, since you have presented as part
5 of your testimony familiarity with 44 Code of Federal
6 Regulations, Part 350, does it not provide that your
7 findings and determinations will relate to the adequacy and
8 capability of the plan being implemented?

9 MR. WETTERHAHN: Objection.

10 MR. BARTH: Objection, Your Honor. At this time I
11 really would like to point out that 44 CFR Part 350 does not
12 exist. I'll wait for that to sink in. This is a proposed
13 rule by the Federal Emergency Management Agency. There is
14 no rule. It's a proposed rule at this time, subject to
15 extensive revision by these people or subject not even to be
16 put out at all. It has no bearing here in this argument.

17 Having lost that with my usual ill grace, I now
18 take up the argument that there is no such animal because
19 it's merely a proposed rule. These people have looked at
20 that plan in regard to NUREG-0654, which does exist, Your
21 Honor. Any relation of a standard set forth in an alleged
22 rule -- an alleged 44 CFR Part 350 -- is improper, Your
23 Honor, and we object to it.

24 MR. WETTERHAHN: I would just add that whether by
25 rule, by agreement, the person making the finding of

1 reasonable assurance is the head of FEMA. That is a formal
2 finding and that is integrated into the NRC findings.
3 That's different from the opinion of these two witnesses or
4 these four witnesses.

5 (Board conferring.)

6 JUDGE FRYE: Mr. Cassidy, you're from FEMA. Is
7 proposed 44 CFR Part 350 in FEMA a proposal?

8 MR. CASSIDY: It is a FEMA-proposed regulation,
9 Your Honor, and Mr. Barth stated correctly that it is a
10 proposed rule. It is undergoing the rulemaking process at
11 the present time, but it is not a final rule and I would
12 agree with his characterization that as a proposed rule it
13 is not binding.

14 These witnesses did review these plans in
15 accordance with what the existing requirements are.

16 JUDGE FRYE: What are they?

17 MR. CASSIDY: Those requirements are set forth in
18 NUREG-0654.

19 JUDGE FRYE: So that's all they used? They didn't
20 use anything else?

21 MR. CASSIDY: That's correct.

22 JUDGE FRYE: Perhaps looking at the NRC rules, I
23 suppose.

24 MR. CASSIDY: That's correct.

25 JUDGE FRYE: That was it. Okay.

1 MR. DENNISON: Let me simply withdraw the
2 question, Your Honor, and ask a couple of more.

3 JUDGE FRYE: I was about to ask, before you did
4 that, if this would speed this along, I think -- well, I'm
5 not sure it would help. I was wondering whether a
6 stipulation to the effect that there is no FEMA finding
7 would simplify the matter at all, but I think we've already
8 got that pretty well established because Mr. Cassidy has
9 indicated that there is no FEMA findings.

10 MR. CASSIDY: As far as what we have a FEMA
11 finding on, if you are referring to a FEMA finding, that
12 basis has been discussed previously on a final plan that has
13 been submitted and reviewed to FEMA, and FEMA recommends to
14 NRC, that is correct.

15 JUDGE FRYE: Okay. So your testimony is not
16 entitled -- well, you have on findings, so there's no
17 presumptive validity involved in this.

18 MR. CASSIDY: That is correct.

19 JUDGE FRYE: I don't know whether that helps to
20 simplify what you are trying to do or not.

21 MR. DENNISON: Your Honor, I would like to ask two
22 questions of Mr. Frost and as applicable to the other three
23 members of the panel, if that's necessary, and then I would
24 like to be heard on the matter.

25 JUDGE FRYE: All right.

1 BY MR. DENNISON: (resuming)

2 Q Mr. Frost, do you have your testimony in front of
3 you?

4 A (Witness Frost) Yes, sir.

5 Q I call your attention to question 15 on page 5.
6 (Pause.)

7 A Yes.

8 Q Is the question there: "What is the purpose of
9 your testimony?". And your answer: "The purpose of this
10 testimony is to address the contentions raised by the
11 intervenor with regard to the adequacy of certain
12 communication aspects of the State of Ohio and Clermont
13 County Radiological Emergency Response Plan for the Zimmer
14 Nuclear Power Station."

15 A Yes.

16 Q And is the next question, 16, "What is the basis
17 for the evaluation of offsite emergency planning at Zimmer
18 Nuclear Power Station?" And is your response, "The FEMA
19 review is based upon the provisions of the proposed rule,
20 review and approval of state and local radiological
21 emergency plans and preparations and preparedness, 44 CFR
22 Part 350, and the criterion for preparation and evaluation
23 of the radiological emergency response plans in nuclear
24 power plants, NUREG-0654/FEMA Rep. 1, Revision 1."?

25 A Yes. I have.

1 MR. DENNISON: Your Honor, at this time I am going
2 to draw to the Board's attention that we have come to a
3 hearing which apparently has no standing. I have never
4 before in a rather long professional career been in
5 litigation for which one had no standard. I have been
6 advised by counsel for FEMA and by the NRC that this is a
7 proposed rule, one which is not subject to being applied as
8 a standard to judge anything, that the standard has evolved
9 in this particular matter of being whatever somebody's
10 hunch, assumption or best guess might be on any subject,
11 that we have come a bit further and that is that each of
12 these witnesses have been addressed as to their testimony by
13 way of purpose, to discuss the emergency preparedness plans
14 of the offsite planning for the Zimmer Power Station,
15 whether it be Ohio, Kentucky or political subdivisions, from
16 the standpoint of the contentions which have been raised.

17 The contentions universally point to the question
18 of the adequacy of these plans, not that they are in
19 existence, not that they are an interim form, not that they
20 are written on the printed page, but rather whether they are
21 capable of being implemented.

22 That is followed with the question dealing with
23 the basis for evaluation. And we come to the proposed Rule
24 44 CFR Part 350. If that is not to be used as a standard to
25 guide this Board, to guide counsel, to guide witnesses, to

1 guide those doing assessments, review and evaluations at
2 whatever level, then I don't know where one reaches to a
3 standard and I know no other form of litigation in the
4 absence of a standard.

5 Now we have come to this point and I am told and I
6 have listened well that this is all a thing down in the
7 future. Then I say that will be my standard. That will be
8 fine. I will confront the witnesses at that point in time
9 and let us now adjourn this hearing and come back after the
10 thing has been finalized, after a proposed rule has become
11 the rule, after there has been a review, after there has
12 been a standard made applicable to these proceedings.

13 I don't know if we are here to play a Chinese fire
14 drill of going from what is written in the plan to what is
15 written in a NUREG and saying that's fine, it ends the
16 matter, let's all go home, or whether we are here from a
17 citizens' concern as to whether or not these plans are
18 capable of being implemented.

19 I have sat here through a dialogue for the last 45
20 minutes with Mr. Frost -- and I do not mean to demean Mr.
21 Frost -- but we go back and forth, absent that standard, no,
22 you can't use the phones; yes, you can; no, you can't. But
23 this is still fine.

24 Where is the standard for which judgment will be
25 exercised as to the sufficiency of these plans in any given

1 stage? I am given to believe that this is the stage that I
2 am given the right to make inquiry. If we cannot have a
3 standard, I can make no inquiry, and this has been a
4 fruitless, frustrating and lost two weeks for everyone
5 involved.

6 MR. BARTH: Your Honor, I have considered the
7 remarks of Mr. Dennison. I have reviewed the question 16
8 and response on page 65, and I withdraw all of my objections
9 to the use by Mr. Dennison to apply the standard set forth
10 in the proposed rule 44 CFR Part 350. I apologize for my
11 mistake in not having more carefully read the testimony
12 prefiled here, Your Honor.

13 MR. CASSIDY: Your Honor, I will also withdraw my
14 objection and I again stand dressed down by Mr. Dennison,
15 duly, in that I was paying more attention to the substance
16 of the testimony and did overlook the statement in the
17 testimony as prefiled. I withdraw my objection.

18 JUDGE FRYE: Let's take a fifteen-minute recess at
19 this point.

20 (A brief recess was taken.)

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1 JUDGE FRYE: Shall we go back on the record,
2 please? I am not quite sure where we stand at this point.
3 Mr. Dennison, do you want to continue or do you want to make
4 a motion?

5 MR. DENNISON: Yes, Your Honor. From the state
6 and developments of these proceedings over the past two
7 weeks, I have come to the conclusion that we cannot be
8 productive from the standpoint of coming to grips with the
9 adequacy of the plans that are: one, in an interim basis;
10 two, apparently have had little, if any, review in which in
11 the third category this is my understanding it's the only
12 opportunity this Intervenor has to inquire into the adequacy
13 of the plans.

14 Based upon the state of the record I would ask
15 that this matter be adjourned and resumed at a point in the
16 future in which there are answers to the multi-questions
17 that have heretofore been raised.

18 MS. WEBB: Your Honor, the City of Mentor would
19 also join in that motion.

20 JUDGE FRYE: Mr. Barth, Mr. Wetterhahn, whomever
21 wishes to go first.

22 MR. WETTERHAHN: I don't share Mr. Dennison's view
23 of the record developed thus far. I believe that these past
24 two weeks have been productive and in accordance with the
25 contemplation of the Commission as far as review of

1 emergency plans is concerned.

2 This proceeding is no different than a number of
3 others that have transpired regarding the status vis-a-vis
4 completion of the plans by state and local authorities and a
5 review by FEMA. In fact, I believe initial decisions have
6 been written and I believe that licensing decisions have
7 been made by the Commission even prior to the formal FEMA
8 approval of emergency plans.

9 JUDGE FRYE: Do you have any references you can
10 give me on that?

11 MR. WETTERHAHN: Yes. I believe the Salem facility
12 -- Salem Unit 2 -- was issued both a low power operating
13 license and a full power operating license without even the
14 formal FEMA approval of the state plans being in place.
15 That's one.

16 JUDGE FRYE: I was trying to recall whether that
17 was a contested case or not.

18 MR. WETTERHAHN: It was not, not as to the
19 issuance of the operating license, but the principle is the
20 same with regard to the need for formal FEMA approval at
21 this stage. As I'm sure this Board will recognize, there
22 are other facilities -- contested cases I'm talking about --
23 that have considered emergency planning prior to the formal
24 FEMA review.

25 I believe Three Mile Island is one of those, and --

1 JUDGE FRYE: To my recollection, Three Mile Island
2 is the only one -- correct me if I'm wrong -- in which an
3 initial decision has been issued.

4 MR. WETTERHAHN: I believe Diablo --

5 JUDGE FRYE: Diablo is low power.

6 MR. WETTERHAHN: Well, at least there is precedent
7 for it. I believe that these witnesses and the witnesses
8 of the Applicants gave testimony with regard to the
9 contested issues. I believe that was competent testimony.
10 I believe it addressed all the factual questions and I
11 believe that there is a proper standard of review, and that
12 is NUREG-0654 and the Commission's regulations, which
13 incorporate NUREG-0654, and gives a sufficient and complete
14 guidance to this Licensing Board with regard to the
15 standards that it must follow in determining whether it
16 should recommend -- whether it should find that an operating
17 license should be issued with regard to the contested issues.

18 Certainly, as we have emphasized both prior to
19 this hearing and, I believe, last week and perhaps even this
20 week, that if there are significant new developments, first
21 the Applicants or the Staff or FEMA, as appropriate, would
22 have to bring that to the attention of the Licensing Board
23 and the parties, and that Mr. Dennison and his clients and
24 Mrs. Webb and her client would be given the opportunity to
25 make appropriate motions with regard to the resumption of

1 these hearings as these significant changes might affect
2 their contentions in this proceeding.

3 Again, I won't repeat the arguments we made
4 yesterday, but it is not a workable solution to wait until
5 the final T is crossed and the final I is dotted with regard
6 to FEMA findings, because if that is the case we are going
7 to find ourselves about a week before the plant was
8 otherwise ready to operate in facing months and months of
9 hearing while this Board considered these contested matters.

10 I believe the Commission's regulations not only
11 suggest that we proceed in the manner in which we have been
12 proceeding, but I think they require it. This, in
13 conjunction with the Commission's policy statement that the
14 Board avoid delay in pursuing the licensing proceeding,
15 requires that we continue and that we not stop at this point
16 in time.

17 JUDGE FRYE: Let me ask you, Mr. Wetterhahn, I
18 take it from what you said that you are perfectly willing
19 for us to write an initial decision on this record and
20 whatever additional evidence comes in.

21 MR. WETTERHAHN: I think it must be pointed out
22 that as opposed to the statutory responsibility for making a
23 finding with regard to the emergency plan generally, the
24 presentation of FEMA before this Licensing Board and that of
25 the Staff is as of any other party, and all parties'

1 evidence must be considered, not only that of FEMA or the
2 NRC Staff. And based upon that, I would not hesitate to ask
3 the Licensing Board to write an initial decision based upon
4 the record as we have it to date.

5 JUDGE FRYE: Mr. Barth?

6 MR. BARTH: Your Honor, contested hearings have
7 been held in Diablo Canyon, Susquehanna, Summer and TMI-1
8 prior to a final FEMA determination. Hearings have been
9 held, completed, and the record closed prior to a final FEMA
10 determination.

11 Nothing has occurred here different than in most
12 cases. There were alleged defects in the emergency plans,
13 testimony by FEMA and by the power companies in those cases
14 were given, and the Board ultimately will make a decision
15 based upon that evidence as to whether or not these alleged
16 defects are substantial in nature.

17 Insofar as this matter of 44 CFR 350, I would like
18 to read Your Honor the FEMA review and findings and
19 determinations will be based upon guidance jointly issued by
20 FEMA and NRC, entitled "Criteria for Preparation and
21 Evaluation of Radiological Emergency Response Plans and
22 Preparedness in Support of Nuclear Power Plants,
23 NUREG-0654." That is the standard to which these people
24 have applied. There's nothing different than the proposed
25 rule by FEMA.

1 I would like to point out the memorandum of
2 understanding which exists between our agency and the
3 Federal Emergency Management Agency. The memorandum of
4 understanding provides: "Notwithstanding the procedures
5 which may be set forth in 44 CFR 350 for requesting
6 enriching a FEMA administrative approval of state and local
7 plans, findings and determinations on the current status of
8 emergency preparedness around particular sites may be
9 requested by the NRC through the NRC-FEMA Steering Committee
10 and provided by FEMA for use as needed in the NRC licensing
11 process. Those findings and determinations may be based
12 upon plans currently available to FEMA or furnished to FEMA
13 by the NRC." The citation for that is 45 Federal Register
14 82714, Section 11.4.

15 JUDGE FRYE: Correct me if I'm wrong, but I
16 thought I asked earlier and was told we did not have FEMA
17 findings within the intent of NRC regulations.

18 MR. BARTH: That is what I have just read, Your
19 Honor.

20 JUDGE FRYE: You just read me the memorandum of
21 understanding. As I understood what you said, or read, that
22 NRC might request FEMA findings for purposes of a proceeding
23 like this, and then these findings would, I assume, be
24 entitled to the validity accorded them by Part 50 of our
25 regulations. Maybe I misinterpreted you or maybe I

1 misunderstood.

2 MR. BARTH: Your Honor, we already have an interim
3 FEMA findings in this regard which I referred to prior in
4 this proceeding. That was the interim finding of October
5 22, 1981, from Mr. Jaske at FEMA to Mr. Grimes of the NRC.
6 We have not brought that matter up because it's not at issue.

7 What we are litigating here are particular
8 objections. I would like to point out --

9 JUDGE FRYE: Has the interim finding been passed
10 out to us?

11 MR. BARTH: I do not recall.

12 JUDGE FRYE: Well, I think we should have the
13 interim finding. What I have here is a memorandum of
14 January 22, '82, to Grimes from -- I think it may be Crimm,
15 but I can't quite make it out from the --

16 MR. BARTH: That is different, Your Honor.

17 JUDGE FRYE: Okay.

18 MR. BARTH: I would like to emphasize that this
19 ultimate or interim FEMA finding really has no place in the
20 proceeding here. We are no different than Diablo,
21 Susquehanna and TMI-1 in which there have been alleged
22 defects in emergency plans as they presently exist and under
23 which FEMA, Staff and the power companies have addressed
24 those with evidence, as the Intervenors have too, in those
25 cases.

1 The Licensing Board in those cases has completed
2 its hearing and will make a determination through the form
3 of an initial decision, and I would like to point out that
4 the final record, of course, is not closed, but insofar as
5 the emergency planning is concerned, the evidence has been
6 adduced in that proceeding, sir.

7 I see no reason why we should not continue and
8 ultimately, of course, the matter is in the jurisdiction of
9 the Board to determine what the evidence does state in
10 regard to these contentions which have been admitted from
11 ZAC and from the City of Mentor.

12 Thank you, Your Honor.

13 (Board conferring.)

14 JUDGE FRYE: Mr. Dennison, I think we want to take
15 your motion under advisement and decide it sometime in the
16 future, probably within the next couple of weeks. We have
17 the witnesses here. I don't know whether you want to
18 continue with your examination.

19 MR. DENNISON: No, I'll be happy to continue, Your
20 Honor, and hopefully we can speed along because I recognize
21 that while it does not prejudice me, it's prejudicing a lot
22 of people here as to how long this hearing is going today.

23 JUDGE FRYE: Fine.

24 MR. DENNISON: Thank you.

25 BY MR. DENNISON: (resuming)

1 Q Now, Mr. Frost, you indicate on page 15 of your
2 testimony that the Clermont County plan -- I'll let you find
3 it, first.

4 Now on page 15, the first full paragraph, Mr.
5 Frost, you state that the Clermont County plan provides that
6 bus drivers will be notified by telephone. Then you
7 continue, and I quote: "As I stated earlier, if the
8 emergency response agencies, and I would include bus drivers
9 in that category, are notified prior to notice to the
10 general public, there will only be normal commercial
11 telephone traffic. In those circumstances, notice to the
12 bus drivers can be reasonably ensured."

13 You made that statement, did you not?

14 A (Witness Frost) Yes, sir.

15 Q Now if we alter that statement, Mr. Frost, as to
16 the circumstances, those circumstances being that the bus
17 drivers are notified after the public is advised that there
18 is an emergency at Zimmer, you have acknowledged that the
19 communication system of the telephone in the respective
20 schools would be subject to overload and overload, and under
21 that set of circumstances you would then give the converse
22 of your opinion here, to wit, that notice to bus drivers
23 cannot be reasonably assured. Is that not correct?

24 A No, I don't think so. I think they still could
25 meet a reasonable assurance by using the prompt notification

1 system.

2 Q Mr. Frost, I really don't want to belabor the
3 point, but I thought we had come to agreement that it was
4 necessary and, in your own terminology, you consider the bus
5 drivers to be part of the emergency response agency, that it
6 is required that there be a mode of two-way communications
7 between the school and its bus drivers. I thought we had
8 agreed to that.

9 Did we or did we not?

10 A I'm not sure now whether we did or not. I know we
11 -- I'm not sure whether we did or did not agree.

12 Q Well, do you agree, Mr. Frost, that it is
13 necessary for the implementation of school evacuation that
14 there be a mode of open communication between the school
15 officials and the respective bus drivers to give those bus
16 drivers direction, commands, things of that nature, and that
17 it is also necessary that the school officials communicate
18 within their different schools where those schools are
19 situated some miles apart for purposes of giving
20 instructions, directions, things of that nature. Would you
21 agree with me to that extent?

22 A You mean other than by telephone?

23 Q No, no, by telephone.

24 A Yes, I would agree.

25 Q Given only the telephone -- and I understand

1 that's the only thing the plan addresses, is the use of
2 commercial telephones, am I wrong?

3 A I believe that's correct.

4 Q All right. If those telephones, being commercial
5 and given the limitations of the lines, one-to-four, those
6 lines being overloaded, there can be no reasonable assurance
7 under such a set of circumstances that there be
8 communication between school officials, their bus drivers,
9 school officials and their other school personnel at other
10 sites. Would that not be correct?

11 MR. CASSIDY: Your Honor, I object to the form of
12 the question. We have gone from three different groupings
13 together. If Mr. Dennison would ask them one at a time, I
14 think we could get a more succinct answer.

15 MR. DENNISON: I have got no problem with that.

16 BY MR. DENNISON: (resuming)

17 Q Mr. Frost, limited to the telephone communications
18 in your statement of them being overloaded, the telephone
19 communications between the school official and the bus
20 driver, no other form of communication, two-way, being
21 present by plan, this gives no reasonable assurance of
22 communication on a two-way basis for directions and
23 otherwise between the school official and its bus driver, is
24 that not correct?

25 A (Witness Frost) It does not give two-way

1 communications. That's correct.

2 Q It gives no communication for purposes of
3 direction, things to implement any type of emergency
4 response plan for the school. Is that not correct?

5 A That is correct.

6 Q Now were I to ask you the same question, Mr.
7 Frost, as to the school official communicating with school
8 principals and other school officials at other sites for
9 which that school official attempting to use an overloaded
10 telephone is given the responsibility of making those calls
11 to give direction to that school principal or other person
12 at the alternate school site, and the phones being
13 overloaded, we cannot say that there is present reasonable
14 assurance of that communication device being adequate to
15 permit communications to give directions otherwise from one
16 school to another. Is that not correct?

17 A It's my understanding that at least from the New
18 Richmond District they could have an open line at all times.

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1 Q Is your understanding based upon, what, Mr. Frost?

2 A Mr. Fite's statement.

3 Q Mr. Fite's statement was that during snow
4 emergencies that there has been at the Superintendent's
5 office usually one line open. Is that not correct?

6 A That is correct.

7 Q You also heard the testimony of Mr. Fite and
8 others that during a Zimmer-related accident there would be
9 total overload of the telephone system at New Richmond. Is
10 that not correct?

11 MR. CASSIDY: Objection, Your Honor. I believe
12 that does mischaracterize Mr. Fite's testimony.

13 MR. DENNISON: I'm not limiting it to Mr. Fite.

14 MR. CASSIDY: He said Mr. Fite and others. If he
15 wants to identify the others, fine.

16 BY MR. DENNISON: (resuming)

17 Q Chief Kennedy, Harold Kennedy, Chief of Police,
18 New Richmond Police Department, the Assistant Chief of the
19 Fire Division, Richard Feldkamp. Do you remember those
20 gentlemen's testimony?

21 A (Witness Frost) Yes.

22 Q Isn't that what they said, Mr. Frost?

23 A Basically that's what they said.

24 Q Given that overload, there is no way, during a
25 Zimmer-related emergency that this school can communicate

1 with its drivers and with its offsite schools, is that not
2 correct?

3 A Other than providing a prompt notification system.

4 Q And the prompt notification system, we have come
5 to agreement, does not permit command direction to be given
6 from the school to its other emergency research personnel,
7 is that not correct?

8 A I would agree with that.

9 Q Now, Mr. Heard, you have responded to the same set
10 of circumstances present in the Campbell County School
11 District, is that not correct?

12 MR. CASSIDY: May I inquire at this point. I
13 believe Mr. Dennison is now finished with Mr. Frost as far
14 as Clermont. If we're moving on to Mr. Heard, I think this
15 might be an appropriate time for any other questions on
16 redirect of Mr. Frost on Mr. Dennison's cross examination.

17 MR. DENNISON: I have no problem with doing it
18 that way.

19 JUDGE FRYE: Any other cross of this witness?

20 (No response.)

21 JUDGE FRYE: Redirect?

22 REDIRECT EXAMINATION

23 BY MR. CASSIDY:

24 Q Mr. Frost, with regard to the requirements of
25 NUREG-0654, is it not correct that the NUREG-0654 requires

1 that a primary and backup system be available for
2 notification to bus drivers and others?

3 MR. DENNISON: Your Honor, I am going to object.
4 The issue has never been notification. The issue has been
5 communications.

6 MR. CASSIDY: I would say, then, that's a
7 foundational question, Your Honor, and I'm going to move on
8 from there.

9 MR. DENNISON: With that understanding I withdraw
10 my objection.

11 BY MR. CASSIDY: (resuming)

12 Q Is it your understanding of NUREG-0654 that the
13 requirement is that there be a primary and backup system for
14 communication or notification with various personnel, in
15 this specific instance bus drivers?

16 A (Witness Frost) Principally, yes.

17 Q With regard to bus drivers specifically, is there
18 any requirement that there be two-way notification to them
19 to get them to respond to the schools?

20 A Not to my knowledge.

21 Q Now earlier on direct examination Mr. Dennison
22 asked you, with regard to your testimony on page 15, whether
23 or not you knew the number of bus drivers that needed to be
24 called in New Richmond, Bethel-Tate and --

25 MR. DENNISON: Franklin-Felicity.

1 BY MR. CASSIDY: (resuming)

2 Q Franklin-Felicity School District. Do you recall
3 him asking you that?

4 A (Witness Frost) Yes.

5 Q Do you recall your testimony at that point, that
6 you did not know what the numbers were as far as all three
7 of those school districts?

8 A That is correct.

9 Q At the time you prepared your testimony on
10 communication with those people, were you aware or did you
11 look at the documents indicating the numbers of bus drivers
12 involved?

13 A The Clermont County plan.

14 Q Okay. So your testimony is that you do not recall
15 the number at this point in time. Is that correct?

16 A That is correct.

17 Q But you were aware of the numbers from looking at
18 the plan and preparing your testimony?

19 A Yes.

20 Q Were you present during the testimony of Mr.
21 Badger?

22 A Yes.

23 Q Do you recall Mr. Badger is a communications
24 person that was presented by the Applicant? Is that correct?

25 A That is correct.

1 Q Do you recall his testimony with regard to a,
2 quote, unquote, secret telephone system for the school
3 department?

4 A Yes.

5 Q Was it your understanding that that system would
6 provide one or more lines to be available from incoming
7 calls so that outgoing calls from the various schools could
8 be made?

9 A Yes.

10 Q And would that not relieve the problem of
11 overloading on the school department's lines so they could
12 get out?

13 A It should.

14 Q And in your opinion, would that facilitate the
15 school officials making the calls to the bus drivers even
16 after notification was given to the general public?

17 A I don't know, sir. I do not know.

18 Q Would it be your opinion that if there were lines
19 available in the school to make outgoing calls that it would
20 certainly increase the probability of the school being able
21 to make calls to the bus drivers?

22 A That is correct.

23 Q Mr. Frost, is it your understanding that in an
24 emergency at Zimmer Nuclear Power Station that it is
25 unlikely that all of the various sectors, as identified on

1 the map in the plan, would need to be evacuated all at once?

2 MR. DENNISON: Objection. That's not responsive
3 to any questions addressed on --

4 MR. CASSIDY: It's foundational, Your Honor, with
5 regard to communication to bus drivers. I'm just asking if
6 he is familiar with that condition.

7 JUDGE FRYE: All right. It's foundational.

8 WITNESS FROST: Yes, I am.

9 BY MR. CASSIDY: (resuming)

10 Q And given that premise that it would not be
11 necessary to evacuate all of the schools, it would not be
12 necessary to notify every single bus driver in the district
13 to facilitate an evacuation. Is that correct?

14 A (Witness Frost) That's correct.

15 Q And is it your testimony presented here that as to
16 your review of the plan with regard to the primary and
17 backup system that you testified to that the plan provides
18 reasonable assurances that a sufficient number of bus
19 drivers would be able to be contacted in the event an
20 evacuation was necessary?

21 A That is correct.

22 MR. CASSIDY: No further questions.

23 MR. DENNISON: Did the Staff have any?

24 MR. BARTH: No.

25 RECROSS EXAMINATION

1 BY MR. DENNISON:

2 Q What is your understanding of Mr. Badger's
3 telephone system?

4 A (Witness Frost) I'm not quite sure. I wasn't
5 privy to the --

6 MR. DENNISON: Your Honor, at this time I would
7 move to strike all of the testimony of Mr. Frost relative to
8 Mr. Badger's telephone system and as to the entire line of
9 redirect by Mr. Cassidy, as it relates to what we might call
10 the so-called Badger Telephone System.

11 MR. CASSIDY: May I respond?

12 JUDGE FRYE: Yes.

13 MR. CASSIDY: I premised my question with the
14 statement of what the system was, that it would in effect
15 free up several lines without going into the detail of it,
16 that it would enable one or more lines to be freed up. And
17 in his response to the question, that was his understanding
18 and I believe that's the understanding that the bench has
19 and the record would reflect from Mr. Badger's limited
20 testimony on that subject.

21 So his understanding in response to the question
22 was his understanding was that one or more lines could be
23 freed up for outgoing calls.

24 (Board conferring.)

25 MR. WETTERHAHN: I don't understand the basis for

1 the motion to strike Mr. Badger's testimony.

2 JUDGE FRYE: I didn't think it was to strike Mr.
3 Badger's testimony. It was to strike this witness'
4 testimony with regard to Mr. Badger's telephone system --
5 the secret system.

6 MR. WETTERHAHN: The secret system.

7 (Laughter.)

8 (Board conferring.)

9 JUDGE FRYE: I hate to use this term, Mr. Dennison
10 -- and I think this is the first time I've done it, but it's
11 been a long two weeks -- but we will leave it in for what
12 it's worth.

13 MR. DENNISON: I have nothing further. I will
14 proceed, then, with you, Mr. Heard.

15 I'm sorry. Did the Board have any questions?

16 JUDGE FRYE: No, I was about to say we didn't. Go
17 right ahead.

18 MR. DENNISON: Thank you.

19 CROSS EXAMINATION

20 BY MR. DENNISON:

21 Q Mr. Heard, you have made the responses concerning
22 the Campbell County School District telephone system.

23 A (Witness Heard) Yes, sir.

24 Q Do you have any background in telephone system
25 communication, radio communication -- that sort of thing?

1 A No more than I would have as an emergency
2 planner. I'm not a communication specialist.

3 Q Now do you recognize that the use by the Campbell
4 County School District of commercial non-dedicated telephone
5 circuits is subject to limitations, the principal one being
6 the potential for overload? Am I not correct?

7 A Yes, sir.

8 Q You were present -- well, let me strike that.

9 I believe you have also stated that following an
10 issuance of a public notice that the potential for the
11 overload of the Campbell County School District telephone
12 system could well be considerable, could well be
13 considerable -- your own choice of words, not mine. Am I
14 correct?

15 A Yes, sir.

16 Q All right. You recognize that in the planning
17 concept we cannot remove from consideration that sort of
18 accident which would commence with atmospheric release
19 within thirty minutes of the onset of the accident. Is that
20 not correct?

21 A Yes, sir, that's a possibility.

22 Q All right. Given that sort of possibility or
23 circumstance, if you will, then there is no reasonable
24 assurance that the telephone system of Campbell County
25 School District would not be overloaded. Am I not correct?

1 A That's correct.

2 Q In that sort of situation the school district
3 would be notified as time would permit under the time
4 limitations of the major release within thirty minutes of
5 the onset of accident. Would I not be correct?

6 A The Superintendent, yes, sir. And he would notify
7 the principals.

8 Q I am talking about that Superintendent being
9 notified at the onset of accident.

10 A Yes, sir.

11 Q Under that set of circumstances, Mr. Heard, we
12 would rule out that the Superintendent would be notified
13 before the public, would we not?

14 A No, sir. I wouldn't rule it out.

15 Q All right. Are you telling us that within that
16 thirty-minute time limitation that the school superintendent
17 can be notified in Campbell County, Kentucky, before the
18 public?

19 A I would think he would -- if you're talking about,
20 sir, during while the school is in session, during the
21 normal duty work day while school is in session, he might be
22 notified. It's a judgment as to the activation of the
23 public prompt notification system, as opposed to calling
24 selected personnel. I don't know in what order Campbell
25 County would notify its emergency response personnel and/or

1 sound the public prompt notification system.

2 Q All right. Now given the limitations of a major
3 release within thirty minutes of the onset of accident, we
4 would be given, by regulation, a fifteen-minute period in
5 which to make a decision, would you not?

6 A Yes, sir.

7 Q You would be given fifteen minutes in which to
8 make prompt notification?

9 A Yes, sir.

10 Q And assuming that one involves himself in the
11 decisionmaking process for this full fifteen minutes, then
12 you would be left with fifteen for purposes of notification
13 to the public generally, is that not correct?

14 A Yes, sir.

15 Q And prior to that, as many of these communication
16 responses that you had directed or addressed, particularly
17 as to officials and so forth, in Bracken and Pendleton
18 Counties, where telephone notification is also utilized, we
19 have the Campbell County School District and we have the
20 Bracken, Pendleton County officials all being notified
21 within this fifteen-minute period, do we not, by telephone
22 before we are advising the public?

23 A Yes, sir. The situation you depict, I assume, is
24 a general emergency at Zimmer which the utility has
25 recommended evacuation. Is this the situation you depict,

1 so that there would be a general prompt notification system
2 sounded throughout the three counties?

3 Q Yes, we would make those assumptions, Mr. Heard.

4 A All right. Then that being the case, my best
5 judgment would be that they would sound the prompt
6 notification system, NOAA radio, EBS, sirens, and that would
7 notify everyone at one time, all the emergency response
8 officials, school bus drivers, general public at one time
9 that there had been an emergency. They should have been,
10 obviously, of course, oriented, familiarized that that
11 signal would indicate that.

12 Q Now at that point in time, and given these
13 assumptions that we have made in our dialogue to date --

14 A Yes, sir.

15 Q -- you would then have the Campbell County School
16 Superintendent relying upon and restricted to the use of a
17 telephone to the A. J. Jolly principal, William Voelker, and
18 that would be his only means of communications on a two-way
19 basis with Mr. Voelker, would that not be correct?

20 A Well, my understanding, in discussing with the
21 Campbell County officials, are that they will place two-way
22 radios at the A. J. Jolly School and the St. Peter and Paul
23 School.

24 Q All right. Now why didn't you refer to that in
25 your testimony?

1 A I did not know about it at the time. The plan did
2 not reflect that, so obviously I did not know it.

3 Q Now it is my understanding we are dealing with the
4 plan and we are viewing that plan under NUREG-0654 and other
5 federal regulations. Is that not correct?

6 A That's correct.

7 Q And in the viewing of the plan you would not want
8 to get yourself into the circumstances of the "might bes",
9 would you?

10 A No, sir.

11 Q So that when we review the plan, and at this point
12 I'm going to commence asking that we come to grips with what
13 we came here to discuss, that is, this plan. Does that plan
14 in any manner mention the use of a two-way communication
15 device with the Campbell School District other than
16 commercial telephone?

17 A No, sir.

18 MR. WETTERHAHN: Objection, this Board must make a
19 finding based upon the record. The record before it is more
20 than just the plan. It's not going to be very productive to
21 indicate what the plan alone indicates -- states -- when we
22 all know what the testimony before this Board has been.

23 JUDGE FRYE: Overruled.

24 MR. BARTH: Sir, may I point out that 5 USC 556(d)
25 requires that this Board order be based upon the entire

1 record?

2 JUDGE FRYE: This Board's order will be based upon
3 the entire record, but this witness can testify as to what
4 is in the plan right now.

5 BY MR. DENNISON: (resuming)

6 Q Now, Mr. Heard, you are aware, are you not, that
7 the A. J. Jolly School has a single telephone line?

8 A (Witness Heard) I was not aware of that.

9 Q Now in your consideration of the plan and the
10 method and mode of communication, here we would be
11 discussing the Campbell County plan, did you make any
12 finding as to the number of telephone lines which were
13 available from the school superintendent to other locations
14 within his school district, such as bus garages, different
15 school buildings -- things of that nature -- inclusive of
16 the parochial schools for which he is obligated to provide
17 bus service?

18 A I believe, if my memory serves me correctly, that
19 there are four.

20 Q Four lines where?

21 A From the Superintendent's office.

22 Q All right. How many lines into A. J. Jolly?

23 A I do not know, sir.

24 Q Do you know how many lines into St. Peter and Paul?

25 A No, sir.

1 Q Would your answer remain the same if we were to
2 tick off other schools in that district?

3 A Yes, sir.

4 Q Now, absent a finding of the number of telephone
5 lines that serve as this mode of communications within the
6 school district, you are in no position to make a
7 determination under the plan as to whether or not this mode
8 of communication is adequate and capable of being
9 implemented, are you?

10 A Well, we have not lost sight -- I have not lost
11 sight of the fact that this is not a complete plan. It's an
12 interim plan. We have no SOPs. Hopefully they will be
13 prepared.

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1 Q I understand that as well, Mr. Heard, but we're
2 talking about this plan as it's not constituted, whether or
3 not that plan is adequate and capable of being implemented.
4 That does not say that three months from now we may create a
5 semiphore system that is most adequate.

6 What I am talking about is we have all been
7 looking at a plan. We have been having testimony relative
8 to that plan and we've also had some suggestions of the
9 "might bes" of the future. From your understanding of the
10 plan as it now is constituted, my question is directed for
11 telephone communications within the Campbell County School
12 District. Is it adequate and capable of being implemented
13 in the event of a Zimmer-related emergency?

14 A From what I read of the plan now, yes.

15 Q All right. And that would be subject to the
16 overloading of these telephone lines, is that correct? I
17 believe your testimony has indicated you acknowledge that..

18 A Yes, sir.

19 Q To me, an overloaded telephone means no
20 communications by telephone. Is that your understanding?

21 A Yes, sir.

22 Q And no communications to me, Mr. Heard, would mean
23 that it is not capable of being implemented. Would you
24 agree?

25 A If you had no communications and your plan

1 depended on communications, then the plan would not be
2 implemented, no, sir.

3 Q Now you heard Mr. Sell, the Superintendent,
4 address that particular issue and the necessity that he have
5 communications with his bus drivers, that he have
6 communications with his school principals, did you not?

7 A I was present at Mr. Sell's testimony. I don't
8 recall every word of what he said, but I vaguely recall that
9 he said he had -- you said he did have communications?
10 Would you repeat your statement?

11 Q Okay, certainly, Mr. Heard.

12 My question to you was: Do you recall Mr. Sell,
13 the Superintendent of Campbell County School District, state
14 that it was necessary that he be in communication to direct
15 his school bus drivers and that he be in communication with
16 the principals of his school system to direct their conduct
17 and that the only mode of communication he had with them was
18 by telephone, whether it be to summons school bus drivers or
19 to confer, for instance, with Mr. Voekler about what he
20 should do and what was occurring? Do you recall the tenor
21 of that testimony?

22 MR. CASSIDY: Objection, Your Honor.
23 Unfortunately, Mr. Dennison can't have it both ways. He is
24 asking with regard to Mr. Sell's testimony of the other day,
25 with regard to telephone communications. We all agreed Mr.

1 Sell said he couldn't communicate without phones.

2 There was also testimony there was going to be a
3 two-way radio installed there. Either he asks questions
4 based on all the testimony in the record, or he just asks
5 questions on the plan. He can't have it both ways, Your
6 Honor.

7 MR. DENNISON: The question of radios was
8 specifically addressed to Mr. Sell and he said there were
9 none.

10 JUDGE FRYE: That was my recollection.

11 MR. CASSIDY: He said there were no radios but
12 there is testimony there are going to be radios provided.

13 JUDGE FRYE: We can take that into account when we
14 get to our decision. We understand there is testimony in
15 the record regarding the radios. Right now we are focusing
16 on a very specific point. I think the witness should answer
17 the question.

18 WITNESS HEARD: I do recall Mr. Sell's testimony.

19 BY MR. DENNISON: (resuming)

20 Q From the circumstance of Mr. Sell, his telephones
21 being overloaded, there is no adequate and capable method
22 for the portion of the plan dealing with school
23 communications being implemented. Is that not correct, Mr.
24 Heard?

25 A (Witness Heard) That is correct.

1 Q Thank you.

2 Now, Mr. Heard, I believe that I am still in your
3 testimony.

4 A Yes, sir.

5 Q On page 27, and at the top of that page is an
6 answer which deals with northern Kentucky circumstances. Is
7 that still your testimony?

8 A Yes, sir.

9 Q Okay, I didn't want to run into another witness
10 simply because I didn't have an indication of the person
11 answering.

12 Then you state, do you not, that it is agreed that
13 use of telephones to summons buses would not provide
14 assurance that drivers could be contacted, and you continue
15 that this would be particularly true if notification of the
16 public had been effected and the telephone systems were
17 overloaded. Is that correct?

18 A Yes, sir.

19 MR. DENNISON: I have nothing further, Your Honor,
20 and that would deal, I believe, with all of the telephone
21 contentions.

22 MR. WETTERHAHN: I have one question.

23 CROSS EXAMINATION

24 BY MR. WETTERHAHN:

25 Q Regarding that same question, is it still your

1 conclusion that the prompt notification system, EBS and
2 commercial broadcast would serve to notify drivers and
3 fulfill the communication requirements of 0654?

4 A (Witness Heard) Yes, sir.

5 MR. WETTERHAHN: No further questions.

6 JUDGE FRYE: No other cross?

7 Redirect?

8 MR. CASSIDY: May I just have a moment?

9 JUDGE FRYE: Yes, surely.

10 (Pause.)

11 REDIRECT EXAMINATION

12 BY MR. CASSIDY:

13 Q Mr. Heard, you were asked on cross by Mr. Dennison
14 about the scenario where, to use Mr. Dennison's words, you
15 had fifteen minutes, basically, to notify the general public
16 of an evacuation. Do you recall him asking about that?

17 A (Witness Heard) Yes.

18 Q And I believe he asked you whether or not, in your
19 judgment, it would be necessary to sound the prompt
20 notification system either simultaneously or before calling
21 the schools. Do you recall that?

22 A I recall it.

23 Q I would presume you are not going to be present
24 and it isn't your judgment that's at issue in that
25 situation, is that correct? In other words, it's not your

1 decision whether or not to alert -- to use the prompt
2 notification system. Is that correct?

3 A It's not my decision, no, sir.

4 Q And whose decision, according to the plan, or who
5 makes that decision, according to the plan?

6 A As I recall, the County Judge-Executive. That
7 responsibility rests with him.

8 Q And he would take into consideration all the
9 circumstances at that time, is that correct?

10 A I would hope so.

11 Q I think we all hope so.

12 Mr. Heard, you were here during the testimony for
13 the last two weeks, is that correct?

14 A All but one day and part of another one.

15 Q You were present during the testimony regarding
16 the installation of two-way radios at Jolly and St. Peter
17 and Paul School?

18 A Yes.

19 Q And in your opinion, would the installation of
20 two-way radios facilitate communications amongst the EOC and
21 those schools?

22 A Yes.

23 MR. CASSIDY: Nothing further.

24 (Board conferring.)

25 JUDGE FRYE: No Board questions.

1 Mr. Dennison?

2 MR. DENNISON: I do have another recross, Your
3 Honor.

4 JUDGE FRYE: Oh, you have recross. Go ahead.

5 RE CROSS EXAMINATION

6 BY MR. DENNISON:

7 Q Mr. Heard, is it your understanding that there are
8 only two Campbell County schools which are located within
9 the ten-mile plume exposure emergency planning zone in
10 Campbell County?

11 A (Witness Heard) No, sir.

12 Q I'm not wrong, am I, that there is only an
13 evacuation for a point up to five miles and no further?

14 MR. CASSIDY: Objection, Your Honor. This is
15 beyond the redirect.

16 (Board conferring.)

17 JUDGE FRYE: I'm sorry. I really couldn't hear
18 what you were --

19 MR. DENNISON: Let me just withdraw the question
20 and I'll put it to Mr. Heard this way.

21 BY MR. DENNISON: (resuming)

22 Q The other schools that are present in the Campbell
23 County School District besides A. J. Jolly and St. Peter and
24 Paul, those schools are subject to evacuation, are they not?

25 A (Witness Heard) Yes, sir.

1 MR. CASSIDY: I would object. It's beyond the
2 redirect.

3 JUDGE FRYE: It's overruled.

4 BY MR. DENNISON: (resuming)

5 Q Is there any future "might bes" that those other
6 schools will be equipped with two-way radio systems?

7 MR. CASSIDY: Objection, calls for speculation on
8 the part of the witness. We don't have any evidence to back
9 that up at all.

10 JUDGE FRYE: Well, I think, you know, he can say
11 so. If he has no knowledge of any such plans, he should say
12 so.

13 WITNESS HEARD: I do not have any knowledge. I do
14 not know.

15 BY MR. DENNISON: (resuming)

16 Q And, Mr. Heard, do you have any knowledge that
17 there will be a two-way radio located with each bus driver?

18 A (Witness Heard) My understanding is, sir, that
19 there would be a two-way radio placed at the A. J. Jolly
20 School and the St. Peter and Paul School and that upon the
21 word to evacuate, if that were the situation, that that lead
22 bus, the one bus at St. Peter and Paul, and the lead bus in
23 the case of the four going to the Jolly School, the lead bus
24 would have that two-way radio placed on it, and could
25 receive instructions in or out to comply with the plans or

1 deviate with the plans or whatever.

2 In my conversation with Mr. Bob Alexander I asked
3 him had that system been tested, and he said yes, they
4 placed radios in cars and they went out there and up and
5 down the roads in the vicinity of the schools and tested the
6 radios.

7 Q Now if I understand you correctly, those radios do
8 not -- the two of them -- come into the possession of a bus
9 driver until that bus driver arrives, in the one instance at
10 A. J. Jolly and in the other instance at St. Peter and
11 Paul. Is that correct?

12 A That is my understanding. Yes, sir.

13 Q So that prior to that time, wherever that school
14 bus driver might be located, notification and summoning
15 that school bus driver from the standpoint of presenting him
16 with directions on a two-way communication basis would be
17 limited solely to the telephone system that we have been
18 discussing. Is that not correct?

19 A That's my understanding, yes, sir. He would have
20 no other two-way means of communication.

21 MR. DENNISON: I have nothing further.

22 JUDGE FRYE: Are we ready to move to the next
23 topic?

24 MR. CASSIDY: I have no further questions, Your
25 Honor.

1 A My statement was based on the understanding that a
2 person may be still traveling within the designated plume
3 EPZ and yet not be in an affected evacuation zone.

4 Q I'm sorry, Mr. Williams. I'm not sure that I
5 understood your explanation.

6 A A person could be traveling within the designated
7 -- the area designated as the plume EPZ and yet would not be
8 in a specific sector being evacuated.

9 Q Okay. Now this contention, if you will, assumes
10 that we would have a directional path of wind into that
11 sector where these roadways are located and that the
12 individual following the direction route -- and let us say
13 it is an inhabitant of Moscow, Ohio, and they would pull
14 from Moscow and make a righthand turn on U.S. 52, and they
15 would proceed to 133 and make a left and continue on 133
16 until they emerge outside of the area on 125. Would that
17 directional route, as you perceive it from the map and my
18 description at the moment in which the plume exposure is
19 proceeding in that direction as well -- would that have any
20 influence on your statement here that it might not be -- is
21 not necessarily significant?

22 A I am not sure I follow what you are trying to get
23 at, sir.

24 Q Okay. Given a major release commencing a half an
25 hour, let us say, after the onset of accident and that the

1 direction of the wind is proceeding at that respective
2 compass point, where you would be midway on 133 between 125
3 and 52 and an occupant of Moscow would be alerted to
4 evacuate, being less than a mile from the plant, and that
5 individual travels 52 and on up 133, does the period of time
6 that it takes to drive that particular route have any effect
7 on the conditions as I have asked you to assume?

8 MR. CASSIDY: Point of clarification. What
9 compass point are we talking about when you say midway up
10 133 -- 133 travels a long distance and there are about five
11 compass points, according to the diagram.

12 JUDGE FRYE: I assumed it was pretty much due
13 east. The wind would be blowing pretty much in an easterly
14 direction. Is that correct?

15 BY MR. DENNISON: (resuming)

16 Q Do you have one of the plans in front of you, Mr.
17 Williams?

18 A (Witness Williams) Yes.

19 Q Let's use II-I-17.

20 A I've got it.

21 Q Now you see where Moscow is located?

22 A Yes, sir.

23

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1 Q And you are aware that U.S. 52 parallels the Ohio
2 River and goes through Neville and Shiloh and turns and goes
3 through Felicity and continues on to Bethel?

4 A 52 does not go through Felicity.

5 Q Pardon me, 133 continues through Felicity and on
6 to Bethel?

7 A Yes, sir.

8 Q All right, fine. Now given this illustration for
9 purposes of assumption of the Moscow resident who is
10 following to the letter this path of travel and we've got a
11 major release occurring thirty minutes after the onset of an
12 accident, that individual travels the route and the path of
13 the wind at that point is east. Does this have any
14 significance on that routing?

15 A Upon the routing?

16 Q Well, upon the individual following the routing,
17 put it that way.

18 A It could.

19 Q What if the wind was in a directional pattern of
20 east-northeast?

21 A Same answer. It could have an effect.

22 Q As to east-southeast?

23 A Same answer.

24 Q All right. Now given that wind directional
25 pattern and our Moscow resident, and given further that he

1 has studied arduously the Circle of Safety and the map in
2 his telephone book and he has got the corrected map, rather
3 than the one you have, and the same set of circumstances
4 occur and as he passes Shiloh he decides not to take the
5 route and to deviate from all of his learning and continue
6 on 52 and cross over into Brown County.

7 Is he in a better position than had he followed
8 the directions of the map?

9 MR. CASSIDY: Your Honor, I'm going to object at
10 this point because we have a hypothetical without any
11 basis. We don't know the wind speed. We don't know how far
12 we're being carried. The question asks for an opinion as to
13 what the significance would be and it depends on all of
14 these factors.

15 There has not been a proper foundation laid for
16 the question.

17 JUDGE FRYE: We're going to overrule it. We're
18 simply exploring the statement here.

19 WITNESS WILLIAMS: Could you repeat the question,
20 please?

21 MR. DENNISON: Read the question back.

22 (The Reporter read the record as requested.)

23 WITNESS WILLIAMS: If he went out 52 he wouldn't
24 be entering a potential plume.

25 BY MR. DENNISON: (Resuming)

1 Q Now on page 30, Mr. Williams, you have indicated
2 that all of the major routes or roads that the residents are
3 familiar with and presumably frequently travel by the
4 car-driving resident, now when you are referring to major
5 routes are you referring to the evacuation routes or are you
6 referring to roadways that are present in the specified
7 sector for Contention 20(C)(2)?

8 A (Witness Williams) I was addressing both.

9 Q Okay. Now have you had the opportunity to travel
10 and inspect the roadways in the sector of Clermont County?
11 That would be the e, d, c, b, and a sector of Monroe and
12 Washington Townships.

13 A I have driven some of them.

14 Q Okay. Did you have the opportunity to drive on
15 132, that is, the State Route?

16 (Pause.)

17 A I don't believe I have, no, sir.

18 Q Now I would take it that your basic manner of
19 relating to the roadways in Clermont County would be by map?

20 A Yes, sir.

21 Q Now as a traffic engineer, as you look at a
22 Clermont County map -- and I am presuming you have one in
23 front of you --

24 A That's true.

25 Q -- You note that these roads, for purposes of the

1 map, change their direction frequently in relatively short
2 distances, do they not?

3 A Yes.

4 Q All right. They have multiple intersections, do
5 they not -- that is, roads intersect one another?

6 A Yes.

7 Q All right. As a traffic engineer you recognize
8 that for what we might call normal volume of traffic these
9 roads would probably be adequate, would they not, as far as
10 you know?

11 A They are adequate, yes.

12 Q That would be because you would recognize, as a
13 traffic engineer, that all of the population is not using
14 the roadways at one time. Is that not correct?

15 A That's true.

16 Q And by population we mean simply the area that we
17 were discussing, whether that be a pie slice, you know, a
18 block wide, that is apex and three miles and its top, which
19 is five or eight miles long, where, if we're talking about
20 the whole county or otherwise, coming to grips with the
21 circumstance of population, there are certain hours in which
22 some number of the population, but not all, will be
23 utilizing the roadway, and there are other hours in which
24 very, very few will be using the roadway, do you understand
25 those concepts as a traffic engineer?

1 A That's normal to all roads.

2 Q I believe that you were involved with some of the
3 design for one of the interstate systems in Columbus,
4 something comparable to the 471 here in this community, is
5 that not correct?

6 A Yes, sir.

7 Q Now you recognize when you were involved in the
8 design of that you were servicing those individuals in
9 Franklin County which were going through Columbus, as it
10 were, is that not correct, whether they be permanent or
11 transient?

12 A Yes.

13 Q You did this based upon different traffic volume
14 studies, did you not?

15 A Upon projected demand for the roadway segments,
16 yes.

17 Q And that roadway, as you designed it, would not be
18 capable of taking, without a bottleneck of that interstate
19 system, all of the residents in Columbus if they were all
20 asked to use it at one time, is that correct?

21 MR. WETTERHAHN: Objection, irrelevant.

22 JUDGE FRYE: I think it's getting fairly far
23 afield from where you are going.

24 MR. DENNISON: If I could get a response to that --

25 MR. WETTERHAHN: Objection. I objected. I'm

1 entitled to a ruling. There is no showing that there is any
2 similarity between the road system here and the road system
3 in Columbus. There is no interstate within the ten-mile EPZ.

4 MR. BARTH: Nor, Your Honor, is there a population
5 of approximately half a million people which is in Columbus.

6 JUDGE FRYE: All right. I'll sustain that.

7 BY MR. DENNISON: (resuming)

8 Q Mr. Williams, as we have been generally discussing
9 these concepts, have you had the opportunity to be aware of
10 the road widths -- not lanes, but total road widths -- of
11 the roadways which are located in Monroe and Washington
12 Townships other than by map?

13 A (Witness Williams) Besides driving a few of them
14 I haven't measured them, no.

15 Q All right. Are you aware of any information as to
16 the total width of these roadways?

17 A I believe some of the interrogatories have
18 answered the width of the various roads in Clermont County.

19 Q All right. Did you find any of them which, other
20 than U.S. 52 or State Route 125, other than those two
21 roadways, did you find any that were 24 feet wide?

22 MR. WETTERHAHN: Objection. I think we need a
23 foundation that he has examined the interrogatories.

24 MR. DENNISON: I thought he just said that.

25 JUDGE FRYE: He just said that he had some

1 information based on the interrogatories.

2 MR. CASSIDY: Your Honor --

3 MR. WETTERHAHN: He may have heard it here.

4 JUDGE FRYE: Maybe we better get a foundation for
5 it just to be clear.

6 BY MR. DENNISON: (resuming)

7 Q Did you examine interrogatories pertaining to
8 width of roadway?

9 A (Witness Williams) I have read them, yes.

10 Q All right. And did you take note, while you were
11 reading them, of the respective widths of the different
12 roadways other than U.S. 52 and 125?

13 A Yes.

14 Q Did you take note of the distances from the
15 standpoint of whether there was present or absent roadways
16 24 feet wide or whether they were less?

17 A I don't recall whether there were any that were 12
18 feet wide.

19 Q Beg your pardon?

20 A I don't recall that there were any that had
21 12-foot lanes, no.

22 Q From your experience of driving those roadways,
23 did you find any that had lanes 12 feet wide?

24 A As I recall from driving through the area, there
25 are some that could be 12-foot. The lane width could be 12

1 feet wide. They all vary.

2 Q Now from the roadways generally and not being
3 dependent upon this particular area of Monroe and Washington
4 that we have been discussing, do you have a copy of the
5 interrogatories that you had reviewed, that you have with
6 you now?

7 A No, sir.

8 MR. DENNISON: May I approach the witness, Your
9 Honor?

10 JUDGE FRYE: Yes.

11 MR. CASSIDY: May we see what you are going to
12 show him?

13 MR. WETTERHAHN: What number, please?

14 MR. DENNISON: 97 and sequel -- Clermont County.

15 BY MR. DENNISON: (resuming)

16 Q Now, Mr. Williams, commencing with interrogatory
17 97 and going to 98 and 99, would you review those and tell
18 me if those refresh your recollection as the interrogatories
19 that you had previously reviewed dealing with roadways in
20 Clermont County?

21 (Pause.)

22 A (Witness Williams) Yes, sir, it is.

23 Q All right. Now keep those with you momentarily,
24 Mr. Williams, so that you can use those for your review.

25 In that series of interrogatories do you find any

1 roadways that are 24 feet wide and therefore would have
2 12-foot lanes?

3 A Yes, sir.

4 Q What roadway?

5 A Ralph Road in Moscow, which is a township road.

6 Q What is its width?

7 A 24 feet.

8 (Pause.)

9 State Route 125, and U.S. Route 52.

10 Q So that other than U.S. 52, State Route 125 and
11 one road in Moscow, Ohio, all the rest of them are less than
12 12?

13 A Yes, sir.

14 Q And in those roadways are there some that are as
15 narrow as 13, 15, 17 feet?

16 A Yes, sir.

17 Q Now, Mr. Williams, as a traffic engineer, does
18 this situation indicate to you that those roads utilized as
19 access roads by the population as feeder roads, if you will,
20 into evacuation routes are sufficient to service the entire
21 population which are serviced by those roads where they are
22 using them at a single time?

23 MR. CASSIDY: Objection, Your Honor. The question
24 just asks him whether or not based on the road widths. I
25 think we've all been educated at this point by the various

1 witnesses that both ZAC and the Commonwealth put on that
2 there are a number of other factors in determining whether
3 or not the road can carry a certain capacity.

4 The question also lacks a foundation in that we
5 are talking about roads without regard to what numbers of
6 people we are talking about traveling on them, and also we
7 have not identified whether each one of these roads would
8 lead into an evacuation route.

9 (Board conferring.)

10 JUDGE FRYE: I guess I am going to sustain it.

11 MR. CASSIDY: Thank you, Your Honor.

12 BY MR. DENNISON: (resuming)

13 Q Mr. Williams, do you have any information upon
14 which you can make findings as to the population that would
15 be involved in the plume exposure planning zone in Ohio,
16 Clermont County, as it would relate to the Zimmer station?

17 A (Witness Williams) The population there is listed
18 on a map in the Clermont County plan.

19 Q Do you have any information as to the number of
20 vehicles that would be involved by permanent population?

21 A No, sir, I don't.

22 Q Are you in a position of making any finding as to
23 the transient population that would be involved at any given
24 time in this planning zone area of Clermont County?

25 A Are you asking me if I know the number of the

1 transients that would be in the area?

2 Q That's correct.

3 A No, I don't.

4 Q Now from the standpoint of you being in a position
5 to make any findings relative to the adequacy and the
6 capabilities of these roadways to support evacuation of the
7 residents, you would have to have some knowledge, would you
8 not, of the number of vehicles which would be traveling
9 those roadways during an evacuation? Would I be correct?

10 A I would have to have knowledge of the projected
11 traffic volumes on each segment of the roadways, yes.

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1 Q Do you have that kind of knowledge or that kind of
2 information for that knowledge, is what I meant to say.

3 A No, I don't.

4 Q Now on the map that you have there, Mr. Williams,
5 and based upon your experience as a traffic engineer, would
6 each intersection of the roadways that you view on that map
7 be the type that requires some sort of traffic control?

8 MR. CASSIDY: May we see which map he is referring
9 to now?

10 MR. DENNISON: The Clermont County map that he has
11 in his possession.

12 MR. CASSIDY: Mr. Williams' map?

13 MR. DENNISON: Yes, yes. I merely got my
14 interrogatories. I didn't give him anything.

15 MR. CASSIDY: Thank you.

16 WITNESS WILLIAMS: I've forgotten your question.

17 BY MR. DENNISON: (resuming)

18 Q The question was, based upon your experience and
19 training as a traffic engineer, is that the sort of thing in
20 which each intersection requires a traffic control device,
21 and if there's not sufficient information just simply tell
22 me you don't know.

23 A (Witness Williams) Under normal circumstances the
24 only traffic control that would be required at intersections
25 would be a stop sign.

1 Q Or perhaps a traffic light, depending upon
2 somebody else's decision or the volume of traffic, is that
3 correct?

4 A Depending on the volume at each location.

5 Q Do you have any knowledge as to whether or not any
6 of these intersections are traffic-controlled by a stop sign
7 or a traffic light?

8 A I'm sure there are a few. I can't list all of
9 them specifically.

10 Q Okay. Now during the circumstances of an
11 evacuation situation and the use of those roadways as one
12 comes to intersections and assuming, first, that there is no
13 control device present at that intersection by way of a stop
14 sign or a traffic light, would it be necessary to control
15 the discharge of merging traffic that there be a traffic
16 control device there, a police officer or someone else
17 directing traffic?

18 A It would make the merging more orderly, depending
19 on the volume. They may be able to do it without specific
20 traffic control.

21 MR. CASSIDY: I wanted to ask the witness to keep
22 his voice up. We're having a hard time hearing him.

23 WITNESS WILLIAMS: I'm sorry.

24 BY MR. DENNISON: (resuming)

25 Q Mr. Willams, would it also, under that assumption,

1 increase the probability of vehicular accidents at such
2 intersections?

3 A (Witness Williams) Not necessarily, but it could.

4 Q Now given the same assumption but with a traffic
5 control device such as a stop sign or traffic control light
6 and no police officer, and given the circumstances of an
7 emergency in the population that is present in this area,
8 from your experience as a traffic engineer, would this
9 merging traffic be directed simply by the traffic control
10 device which has always been installed and present at each
11 intersection where such is located?

12 A It could be.

13 Q And when you say it could be, there is some
14 probability in your mind that it could not be?

15 A Well, in some instances like a traffic signal,
16 people might tend to avoid a long red light if there's no
17 traffic coming the other way, if they feel an imminent need
18 to travel.

19 Q All right. And would you also agree, Mr.
20 Williams, that if there was an imminent need to travel that
21 they might likewise disobey the stop signs?

22 MR. CASSIDY: Objection. We're getting into an
23 area beyond the scope of this witness' expertise. We're
24 talking about the psycho -- excuse me, we're getting beyond
25 an area of the scope of this witness' expertise. He asked

1 whether or not the likelihood is people are going to run
2 stoplights.

3 Certainly he can testify as to the effect of
4 stoplights but not the psychology of whether people are
5 going to run stop signs. He's not been offered for that
6 purpose.

7 JUDGE FRYE: He is clearly following his earlier
8 answer on that. I'm going to overrule it.

9 BY MR. DENNISON: (resuming)

10 Q Do you recall the question, Mr. Williams?

11 A (Witness Williams) Yes, if they might run a stop
12 sign.

13 Q That's correct.

14 A It's possible, but I couldn't say for sure.

15 Q Now you have reviewed the plan as it relates to
16 access control points, have you not?

17 A Yes, sir.

18 Q Were you the individual that suggested the
19 additional access control points that are not present in the
20 plan but were submitted as an attachment with the testimony?

21 A Yes, I am.

22 Q And what was the purpose, Mr. Williams, in those
23 additional access control points that are not present in the
24 plan?

25 A To supplement the ones that were indicated in the

1 plan.

2 Q The basis of my question is why did you feel the
3 need for supplementation?

4 A The plan designated traffic control points -- I
5 should say access, excuse me, access control points along
6 each of the rings at 2, 5, and 10 miles away from the
7 plant. There were some roads that were left off of that
8 list that are along those rings.

9 Q Now, Mr. Williams, would it be your position that
10 access control points or the presence of police officers or
11 other emergency personnel at access control points would
12 have a function in the direction of traffic and particularly
13 in directing the traffic in its proper direction?

14 A Yes, sir.

15 Q All right. Would you subscribe to the
16 circumstance that the citizens be permitted to follow
17 whatever routes they wished in whatever direction they
18 wished to go during an evacuation process in Clermont
19 County, whatever the area or sector might be?

20 MR. CASSIDY: Objection, Your Honor, beyond the
21 scope of any contention that Mr. Williams has responded to.
22 We're talking now about planning with regard to how people
23 are going to go, and that's an area beyond Mr. Williams'
24 expertise and certainly beyond what he's been offered for
25 here.

1 MR. DENNISON: Mr. Williams has responded, I
2 believe, in his direct testimony -- or at least one of the
3 witnesses, I am trying to find it now -- that the population
4 being familiar with the roadways, the routes and so forth,
5 would be capable of -- here it is, on page 30. He has
6 indicated that the major routes or roads the residents are
7 familiar with and frequently travel, and with maps and
8 access control points to prevent them from traveling in the
9 wrong direction that they should be able to evacuate within
10 a reasonable time.

11 JUDGE FRYE: Overruled.

12 BY MR. DENNISON: (resuming)

13 Q Do you recall the question, Mr. Williams?

14 A (Witness Williams) Not any more. I'm sorry.

15 MR. DENNISON: Would you read it back?

16 (The Reporter read the record as requested.)

17 WITNESS WILLIAMS: Subject to the affected area
18 being blocked off by access control points, that was my
19 opinion. Of course, at the time I was looking at the
20 revision of the plan that I had, which indicated that most
21 of the major routes were evacuation routes.

22 BY MR. DENNISON: (resuming)

23 Q Now do you have any information from which you
24 could make a finding or determination of the adequacy and
25 capability of implementing transportation to

1 transportation-dependent individuals, whether they be
2 without a vehicle or they be handicapped, as to the
3 circumstances of the distance of farm lanes, roadways --
4 things of that nature?

5 MR. CASSIDY: Point of clarification. Are we now
6 on 25(C), Mr. Dennison?

7 MR. DENNISON: That's correct.

8 MR. CASSIDY: Thank you.

9 WITNESS WILLIAMS: I don't know that I can say
10 that they have enough adequate buses, if that's what you're
11 referring to.

12 PY MR. DENNISON: (resuming)

13 Q That would be one of the things I am referring
14 to. You cannot say whether the buses were adequate or
15 inadequate. Is that right?

16 A (Witness Williams) I can't say whether they have
17 enough of them, no.

18 Q You can't say whether they have enough drivers or
19 trained drivers from the standpoint of transportation of
20 disabled or handicapped individuals. Would I be correct?

21 A No, I can't say that.

22 Q That is, you cannot say whether they have enough
23 or not?

24 A Yes.

25 Q And likewise you cannot present us with any

1 testimony pertaining to the nature of the roadways and the
2 sizes and capabilities of buses to move over some of these
3 roadways in Clermont County. From that standpoint, do you
4 have any finding or information from which you could
5 determine whether it was adequate or capable of being
6 implemented?

7 A Other than the buses normally operate on those
8 roadways, no.

9 Q All right. Now as a traffic engineer you would be
10 aware that bus routing is generally along routes that are
11 sort of centrally located as a route so that persons come to
12 that spot, rather than the bus operating like a taxi and
13 going residence to residence.

14 A Not necessarily, no.

15 Q What is your understanding, then, of the routing
16 of the CART buses in Clermont County?

17 A CART has charter service which they run on a
18 routine basis between the two points. Other than that,
19 theirs is a demand-responsive service. That is, they
20 collect requests from residents to be transported from point
21 A to point B, accumulate these and set up routes for the
22 next day.

23 Q All right. And from the standpoint of the number
24 of those buses and the routes that you are aware of, are you
25 in a position to make a finding based upon your knowledge as

1 to whether or not the CART system is adequate and capable of
2 being implemented as one of the modes for the transportation
3 of evacuees who are mobility -- without cars?

4 MR. CASSIDY: Objection, Your Honor, lack of
5 foundation in terms of how many people we are talking
6 about. We have already covered that in the record in terms
7 of how many people we have in the area who are handicapped
8 and disabled. There is a lack of foundation with regard to
9 facts that makes this question incapable of being answered.

10 MR. DENNISON: I asked him as to his findings and
11 that was simply it.

12 JUDGE FRYE: Yes, that's overruled.

13 MR. CASSIDY: Excuse me, I'm sorry. I would note
14 that Mr. Williams has not made any findings per se. He is
15 only being offered to respond to those specific contentions
16 that were raised by ZAC dealing with transportation and
17 highway issues. Mr. Williams has not made any findings and
18 not in a position to make any findings.

19 JUDGE FRYE: Well, I think we can ask him with
20 regard -- we can question him on this contention and this
21 contention clearly goes, as I recall, to the subject matter
22 of the question, so it's overruled. If he doesn't have any
23 information or doesn't know, I hope he will say so.

24 WITNESS WILLIAMS: I don't know if they have
25 enough buses to be able to respond to all the residents in

1 the county. I don't have the information to be able to
2 predict that, no.

3 BY MR. DENNISON: (resuming)

4 Q Okay. Would that likewise be the same answer as
5 to the facilities of the physically-handicapped or the
6 Clermont Association for the Physically Handicapped and
7 Developmentally Disabled?

8 A (Witness Williams) Yes, sir.

9 Q Would that same answer stand for the local life
10 squads?

11 MR. CASSIDY: Objection, Your Honor. Again, the
12 answer is going to be he has no knowledge because he cannot
13 respond to those specific contentions.

14 JUDGE FRYE: You're saying the question is
15 directed at the wrong witness?

16 MR. CASSIDY: That's correct.

17 JUDGE FRYE: Okay.

18 MR. DENNISON: I recall a point of order on page
19 31 which states, Mr. Williams' -- Contention 20(C)(5)
20 states, and it is 20(C)(5) that has in there this business
21 of vehicles for the removal of handicapped and individuals
22 without vehicles, CART buses and otherwise.

23 Mr. Williams is making the responses. Somebody
24 else also has them. I'll come on them sooner or later here,
25 but right now I am asking Mr. Williams.

1 MR. CASSIDY: I would suggest that Mr. Dennison
2 and the Board read Mr. Williams' response, which says he
3 can't comment since he is not familiar with the road
4 system. He testified, as he already did, to what vehicles
5 the transportation company has and that it's demand-response
6 service, which he has already testified to, and that is the
7 extent of his knowledge and testimony.

8 With regard to the number of buses for the
9 physically handicapped, I would refer to question 60 on the
10 page, which is directed to Mr. Meyer, and suggest that these
11 questions be directed to Mr. Meyer.

12 JUDGE FRYE: It seems they switched in midstream
13 there.

14 MR. DENNISON: I'm not sure I follow counsel there.

15 MR. CASSIDY: Question 60.

16 JUDGE FRYE: Question 60, directed to Mr. Meyer.

17 MR. DENNISON: Fair enough. I'll withdraw the
18 question as to this witness.

19 BY MR. DENNISON: (resuming)

20 Q Mr. Meyer --

21 MR. WETTERHAHN: Are we at a convenient point with
22 regard to Mr. Williams?

23 MR. DENNISON: Well --

24 JUDGE FRYE: I think we're going to be back to Mr.
25 Williams in a minute when we get finished with this.

1 MR. WETTERHAHN: Okay. I'm sorry, Your Honor.

2 BY MR. DENNISON: (resuming)

3 Q Mr. Meyer, you have been an observer for too long.

4 A (Witness Meyer) I thought you'd think so.

5 Q Now, Mr. Meyer, did you make any findings based
6 upon your own knowledge of the number of buses, capability o
7 the CART buses, and things of that nature?

8 A Just one second.

9 (Pause.)

10 JUDGE FRYE: While we have a break here, I think
11 we ought to say that we're probably not going to be able to
12 stay past about 6:30.

13 MR. WETTERHAHN: Mr. Chairman, if I may be heard,
14 I think it's important that we finish with these witnesses
15 in one session or go till tomorrow.

16 WITNESS MEYER: There is some knowledge here in
17 the Clermont County plan on 3-A-1, and it's Table A,
18 Clermont Authority for Rural Transportation, CART. And in
19 the resources for transportation they have 20 radio-equipped
20 vehicles as follows: 3 vans with wheelchair lifts and 11
21 seats; 5 vans with 14 seats; 3 vans with 22 seats; 4 vans
22 with wheelchair lifts and 17 seats; one bus with wheelchair
23 lifts and 32 seats; 2 buses with 36 seats; one station wagon
24 with 9 seats; one jeep; four-wheel drive pickup; personnel
25 that have 20 full-time employees with chauffeur's licenses

1 and first aid and handicapped training.

2 They have 19 mobile radios, one mobile base and
3 one base station.

4 BY MR. DENNISON: (resuming)

5 Q Did you verify any of that, Mr. Meyer?

6 A (Witness Meyer) No, I did not.

7 Q Now did you come upon any information of the
8 number of people during an evacuation that would be required
9 to be served by these CART facilities?

10 A No.

11 Q Now absent some information as to the number of
12 people to be served, you could not come a finding or a
13 determination as to whether or not the plan was adequate and
14 capable of being implemented within this concept. Is that
15 not correct?

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1 MR. BARTH: Your Honor, we object. This constant
2 repetition of findings and determination has nothing to do
3 with this matter. We object to this question. It's beyond
4 the purview --

5 JUDGE FRYE: Why don't you simply, after we're
6 finished, file a motion and identify those objectionable
7 periods or passages and we'll pass on it then. In the
8 interim, we're going to let him answer the question.

9 MR. BARTH: Because, Your Honor, I feel that I'm
10 entitled to object when the question is asked.

11 JUDGE FRYE: Okay, okay.

12 WITNESS MEYER: Would you repeat the question,
13 please?

14 BY MR. DENNISON: (resuming)

15 Q Yes, Mr. Meyer. The question was this: If you
16 have no knowledge, absent any finding or determination of
17 the number of individuals who would be required to be served
18 by the CART buses during an emergency requiring evacuation,
19 you are in no position to determine whether or not the plan
20 is capable of being implemented and, therefore, adequate.
21 Is that correct?

22 A (Witness Meyer) That's true.

23 Q Would that be the same circumstance as it would
24 relate to the Clermont Association for the Physically
25 Handicapped and Developmentally Disabled?

1 A I heard the latest testimony testified for
2 that agency and I am sure that their vehicles would also be
3 available to do this. Also the County Welfare Department
4 would be certainly involved and the Clermont Senior Citizens
5 Services could be involved.

6 Q They are involved for the purposes of acquiring
7 lists but not for the purposes of evacuation.

8 A (Nods in the affirmative.)

9 Q You heard Mrs. Goode indicate they have one driver?

10 A Right.

11 Q They have a large vehicle, a small vehicle and I
12 suppose it's a flip of the coin which one she drives.

13 A I said right. I should have said yes.

14 Q Now again, without any knowledge, Mr. Meyer, of
15 the number of people that would be serviced by the CAPH/DD
16 you don't know whether or not that organization is adequate
17 for the transportation, no matter what this might be, and
18 whether the plan is capable of being implemented in that
19 circumstance. Would I not be right?

20 A I do not know.

21 Q Again, not having any idea of the number of people
22 to be serviced, your response would remain the same, that
23 you don't know as to local life squads. Is that correct, as
24 to whether or not those local life squads could adequately
25 implement and be capable of implementing -- whether they

1 would be adequate and capable of implementing the plan?

2 A Right.

3 Q Now, Mr. Williams, you were asked the question
4 under Contention 20(C)(6) on page 33 relative to the
5 evacuation time estimates of Stone and Webster, and your
6 only response to the question, as I perceive it, is that the
7 times are -- there is no mandatory time for evacuation.

8 A (Witness Williams) Yes.

9 Q Did you have any chance to do an independent
10 review of the Stone and Webster time study as a traffic
11 engineer?

12 A I have reviewed what's in the plan.

13 Q Okay. That would be the Stone and Webster time
14 study. You looked at their assessment?

15 A Well, yes.

16 Q Technology, things of that nature?

17 A Yes, sir.

18 Q Do you recall the discussion yesterday between
19 myself and Mr. Weiss?

20 A I don't think I was here for all of it.

21 Q Okay. Were you here when we were discussing the
22 traffic -- the highway traffic capacity manual?

23 A I believe you are mentioning the Highway Capacity
24 Manual?

25 Q Yes.

1 A Yes.

2 Q All right. Do you recall my discussion with Mr.
3 Weiss as to the ideal of 2,000 vehicles both ways on a
4 12-foot lane roadway without impediments, with shoulders, so
5 forth and so on?

6 A Yes, sir.

7 Q All right. Are you familiar with that particular
8 manual?

9 A Yes, I am.

10 Q It is a manual generally recognized and used by
11 traffic engineers?

12 A It is.

13 Q All right. Your understanding of the manual,
14 Chapters 4 and 5, is there any situation in which you start
15 with Table 4.1, with the 12-foot -- I think it's on page 75
16 or 76 -- do you want to go ahead and find that and I'll ask
17 the question?

18 (Pause.)

19 A There is no table on page 75.

20 Q Try 76.

21 A Or 76.

22 MR. CASSIDY: May I ask a question of counsel, to
23 please find what we're referring to?

24 (Pause.)

25 MR. DENNISON: May I review your manual for a

1 moment?

2 (Laughter.)

3 (Pause.)

4 MR. DENNISON: I don't know. Maybe it's a little
5 late.

6 BY MR. DENNISON: (resuming)

7 Q Mr. Williams, I thought I indicated to you page 75
8 or 76 for Table 4.1.

9 A (Witness Williams) Oh, I'm sorry. There is a
10 table at page 76.

11 Q That indicates for a 12-wide lane highway, under
12 ideal -- as the ideal, 2,000 vehicles both ways as the
13 roadway capacity. Is that correct?

14 A Yes, sir.

15 Q Would you understand that as a traffic engineer to
16 mean 1,000 in one direction, 1,000 in the other direction?

17 A Yes, I would.

18 Q All right. Now from that do you understand in the
19 application of that manual, Mr. Williams, that you would
20 then begin to subtract from that ideal as you narrowed the
21 roadway, as you had vertical obstruction and as you had no
22 shoulders?

23 A There would be reductions in capacity due to
24 roadway width and shoulder width.

25 Q All right. Now, then, in this circumstance, Mr.

1 Williams, you would eventually get to, as I recall in the
2 use of the manual in Chapters 4 and 5, to a level E service
3 for the roads we are considering in Clermont County. Would
4 you agree with that?

5 A Level of E service?

6 Q Yes, sir.

7 A Is defined as highway capacity.

8 Q But these roadways that are in Clermont County
9 would fall in the category of level E service. Is that not
10 correct?

11 MR. CASSIDY: Objection, Your Honor. Mr. Williams
12 has testified that he has not driven all the roadways in
13 Clermont County and he is not familiar with all the roadways
14 in Clermont County.

15 I appreciate Mr. Dennison is a little frustrated
16 here, but if you're going to ask for an expert opinion you
17 have to have a foundation, and if he's just relying on Mr.
18 Williams' observation --

19 JUDGE FRYE: That's what Mr. Williams testified
20 to. I'm beginning to wonder.

21 MR. DENNISON: I am not picking on Mr. Williams,
22 but I don't know why they are offering him if every response
23 is that he doesn't know about it. I thought he was here to
24 tell us about the roadways in Clermont County, and if he
25 doesn't I ask counsel to withdraw him and we'll go from

1 there.

2 MR. CASSIDY: Your Honor, I would not want to get
3 into personalities here, but if we ask a proper -- when
4 you're dealing with an expert witness, if you want to ask
5 him a hypothetical question, then he can answer it. But all
6 I'm saying is that the question, as it is posed to Mr.
7 Williams, is going to solicit an I don't know answer because
8 he doesn't have all the facts to render an expert opinion.

9 JUDGE FRYE: I take it, Mr. Williams, that you
10 don't have enough facts to answer that question?

11 WITNESS WILLIAMS: With due respect to Mr.
12 Cassidy, level of service E is a measure of quality of the
13 traffic flow, and as such is independent of a particular
14 type of roadway.

15 JUDGE FRYE: It's a measure of the quality? Did I
16 understand you correctly?

17 WITNESS WILLIAMS: Yes. Now the number of
18 vehicles that is defined as capacity or as level of service
19 E would be dependent on roadways.

20 JUDGE FRYE: Would be dependent on the width of
21 the road, whether there are obstructions, shoulders, this
22 and that?

23 WITNESS WILLIAMS: Yes.

24 JUDGE FRYE: I see. Now as to capacity, do you
25 have knowledge of the roads so that you could address that

1 issue so far as Clermont County roads are concerned?

2 WITNESS WILLIAMS: Partially, depending on what
3 I'm asked.

4 JUDGE FRYE: Partly you have some knowledge of
5 them.

6 WITNESS WILLIAMS: Yes.

7 JUDGE FRYE: I see.

8 BY MR. DENNISON: (resuming)

9 Q Now from your knowledge of the roadways, could we
10 agree that they are in the level E service?

11 A (Witness Williams) Roadways are not defined for a
12 level E service. Roadways would never be defined as level E
13 service.

14 Q All right. Now you are familiar -- or rather, I
15 believe it's on page 303, as Table 8. -- pardon me, 10.8 --

16 (Pause.)

17 A Yes, sir.

18 Q All right. Now in that it indicates levels of B
19 and E, does it not?

20 A Yes, it does.

21 Q These roadways would not be in the level B, would
22 they?

23 MR. CASSIDY: Point of clarification. Which
24 roadways are we talking about?

25 MR. DENNISON: Clermont County.

1 MR. CASSIDY: Each and every road?

2 MR. DENNISON: Highway network, excluding U.S. 52,
3 125, and the road in Moscow.

4 MR. CASSIDY: Could we have an "if he knows"? I'm
5 not sure he can answer. I would appreciate the question
6 that Mr. Williams made of my --

7 MR. DENNISON: I will withdraw the question.

8 BY MR. DENNISON: (resuming)

9 Q Using this table it is indicative that going from
10 the ideal of 1,000 vehicles per hour as the roadway capacity
11 that you are given circumstances of obstruction on one side
12 and obstruction on both sides. You are also given distance
13 from the traffic lane edge to the obstruction in feet. Is
14 that not correct?

15 A (Witness Williams) Yes, sir.

16 Q That would involve the lanes of travel at 12, 11,
17 10, and 9?

18 A Yes.

19 Q And it would also involve, from the standpoint of
20 an obstruction on one side, different factors as to whether
21 it was 6 feet, 4 feet, 2 feet or 0 feet from the edge of the
22 pavement. Is that correct?

23 A That's true.

24 Q All right. This would also involve situations in
25 which any lateral obstruction within 6 feet would apply as

1 to its distance from the edge of the highway within that
2 6-foot range, to be diminished in the percentage from the
3 1,000 vehicles per hour. Is that not correct?

4 A I'm not sure I follow the statement. These are
5 adjustment factors to the ideal capacity based on a level of
6 service and the particular positioning of an obstruction.

7 Q So that given illustratively a 10-foot lane with
8 obstruction on one side, and that obstruction being to the
9 edge of the traveled portion of the lane, under level E it
10 would reduce the capacity to 71 percent of the ideal. Is
11 that not correct?

12 A Did you say 2 feet?

13 Q No, zero feet.

14 A It will be 71 percent of the ideal capacity, yes.

15 Q And at a 9-foot lane it would be 66 percent of the
16 ideal capacity, is that not correct?

17 A Yes.

18 Q Using this particular table in the manual, and
19 considering a 10-foot lane with an obstruction at the edge
20 of the roadway, you would reduce your capacity from 1,000
21 vehicle capacity per hour to 710, would you not?

22 A That's correct.

23 Q Mr. Williams, yesterday I had addressed some
24 questions concerning the FEMA transmittal of January 22,
25 1982, which was received by the different parties here. Are

1 you also familiar with that dissemination?

2 A I've seen it, yes.

3 Q All right. There is stated on page 7 of the typed
4 copy, in hand there is a notation at the bottom, 8 of 9. In
5 the third paragraph on that page, under elements of special
6 concern -- do you have a copy of it, Mr. Williams?

7 A Yes, I do. Which page are you referring to?

8 Q The typed page 7, the in-hand 8 of 9 page. I'm not
9 sure how to refer to it. It's got a typed numeral 7 at the
10 top --

11 MR. CASSIDY: I'll show him the page to facilitate
12 this.

13 (Counsel handing document to witness.)

14 WITNESS WILLIAMS: I see it, sir.

15 BY MR. DENNISON: (resuming)

16 Q Do you see it, Mr. Williams?

17 A (Witness Williams) Yes.

18 Q Did you have any input into that paragraph?

19 A That was most likely based on the comment by the
20 regional assistance committee.

21 Q Does that indicate that management of evacuation
22 routes appear uncertain and that the consultant's estimates
23 of route capacity used in the plan are unrealistically high,
24 which implies that evacuation time estimates are
25 unrealistically low?

1 A We stated that we thought the evacuation estimates
2 were high. That may or may not affect the time estimates.

3 Q When you say "we", are you indicating that you and
4 others find some discrepancy in the Stone and Webster time
5 evacuation study?

6 A We questioned the number for highway capacity that
7 is listed in the plan, yes.

8 Q And in this questioning, is it significant to the
9 decisionmaking process of a decisionmaker as to whether or
10 not these time estimates were valid to discharge traffic as
11 evacuating traffic in the respective zone areas?

12 A They could be.

13 Q As far as you were concerned, is that an
14 inadequacy in the planning, an inadequacy in the plan as it
15 is now constituted, in which each state and its political
16 subdivision relies upon that Stone and Webster time estimate?

17 A It is a question about it.

18 (Pause.)

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1 MR. DENNISON: Your Honor, other counsel may
2 inquire. That brings me up to 20(C)(7), the combined
3 responses to the contention by Mr. Meyer and Mr. Williams.

4 MR. WETTERHAHN: I have a little cross.

5 JUDGE FRYE: Do you want to proceed?

6 CROSS EXAMINATION

7 BY MR. WETTERHAHN:

8 Q Some time ago now, Mr. Williams, you answered
9 questions about -- I believe it was you or the panel
10 answered questions regarding hypothetical wind directions
11 and possible roads from Moscow, Ohio. Do you remember that?

12 A (Witness Williams) Yes, I do.

13 Q Do you know which sector Moscow, Ohio, is in?

14 A It's in parts of a number of them.

15 Q If I informed you it was in the southerly sector,
16 the south sector, would that correspond with your
17 information?

18 A As indicated on Figure 1.2 of the Clermont County
19 plans, it is.

20 Q Therefore, it might not be necessary to evacuate
21 that area if the wind was directly east and depending on the
22 various meteorological conditions. Isn't that true?

23 A It might not.

24 Q You recognize that one of the -- well, is it your
25 understanding of the plan with regard to evacuation routes

1 that the planners could advise individuals as to alternate
2 evacuation routes, depending on the various circumstances at
3 the particular time of an accident?

4 A Yes, I believe so.

5 Q Okay. With regard to the 2,000 cars per hour,
6 have you found anything in the highway manual which states
7 that it must be divided strictly 1,000 -- 1,000 in each
8 direction, for a two-lane road?

9 A Well, when you have two lanes of traffic the table
10 considers the capacity of that route. It's considering both
11 lanes. Obviously the capacity of one-half of it cannot be
12 more than one-half of that total figure.

13 Q Is that based upon anything in the manual?

14 A It's my understanding of the manual. I don't know
15 where it says any differently.

16 Q On page 76 of the manual, at the end of the
17 paragraph in italics, doesn't it indicate the capacity of a
18 two-lane -- are you there?

19 A Not yet. Where are you quoting on page 76?

20 Q Okay. I'm pointing to the end of the first -- I'm
21 sorry, the second full paragraph, beginning "Studies have
22 shown". Would you read the italicized sentence at the end of
23 that paragraph, please?

24 A "The capacity of a two-lane, two-way roadway under
25 ideal conditions is, therefore, 2,000 passenger vehicles per

1 hour total, regardless of distribution by direction."

2 Q So the expert reference that you rely upon does
3 not come to the same conclusion that it must be divided
4 equally. Is that not correct?

5 A No. It says the capacity cannot be above that.
6 It's independent of the direction of volumes on any
7 particular road.

8 Q Then you say that it couldn't be 1,100 in one
9 direction and 900 in the other, equaling 2,000? Is that
10 your testimony?

11 A Yes, sir.

12 Q Have you made any surveys of other literature with
13 regard to empiric data regarding capacity per lane in
14 evacuation situations?

15 A Nothing --

16 Q Excuse me.

17 A If you are referring to, specifically, evacuation.

18 Q Evacuation.

19 A I have seen the reference of Mr. Hanson Sells.

20 Q Doesn't that support evacuation capacities per
21 lane of above 1,000 cars per hour for specific actual
22 conditions?

23 A I don't remember it referring to the type of
24 roadway it was on.

25 Q But it does give capacity factors above 1,000 cars

1 per hour for evacuation?

2 A It stated 2,600.

3 Q If there was no traffic coming in one direction,
4 is it still your testimony that all the other lane could
5 handle would be 1,000 cars per hour, no traffic coming
6 whatsoever?

7 A Assuming they don't use the vacant lane, that's
8 correct.

9 MR. WETTERHAHN: One second, please.

10 (Pause.)

11 BY MR. WETTERHAHN: (resuming)

12 Q Have you ever made any estimates of road
13 capacities for rural roads such as in Clermont County?

14 A (Witness Williams) Have I myself made any
15 specific surveys?

16 Q Yes.

17 A No.

18 Q So you are really not familiar with the manner in
19 which to do these road capacity estimates for rural roads
20 such as found in Clermont County. Is that not correct?

21 A Just by education.

22 Q By education. Are there factors to be applied in
23 doing these capacity factors, let's say, at intersections in
24 determining what a road capacity segment would be?

25 A I'm not sure I understand the question.

1 Q Let's start -- we have a road and an intersection
2 and one is going to make a right turn into another road.
3 First one would take the capacity of the first segment,
4 would he not, in determining what the capacity of the entire
5 route is?

6 A The capacity of intersections may be different
7 than the roadway.

8 Q So one would have to consider all three when
9 determining the total road capacity of that particular
10 segment consisting of one roadway, an intersection, and then
11 another roadway. Is that not correct?

12 A Yes, sir.

13 Q Can that properly be taken into account assuming
14 that there is no traffic officer there? Are there ways of
15 calculating such traffic capacity?

16 A Yes, sir.

17 Q So, therefore, one could make estimates for road
18 capacity and evacuation times, even if there was not a
19 traffic control officer at each intersection. Isn't that
20 correct?

21 A Yes.

22 MR. WETTERHAHN: No further questions.

23 JUDGE FRYE: Any redirect?

24 MR. CASSIDY: No, Your Honor.

25 MR. DENNISON: I have nothing further on this

1 contention.

2 JUDGE FRYE: All right. We seem to have reached a
3 good breaking point, it seems to me, before we get started
4 on the next one. I take it the next contention is
5 20(C)(7). Is that correct, Mr. Dennison?

6 MR. DENNISON: No, Your Honor. I believe it would
7 be 20(C)(8).

8 JUDGE FRYE: 20(C)(8)?

9 MR. DENNISON: No, I'm sorry. Yes, that would be
10 the next contention.

11 JUDGE FRYE: 20(C)(7) on page 34. We've covered
12 everything up to that point?

13 MR. DENNISON: That is correct.

14 JUDGE FRYE: Gentlemen, I'm sorry that we didn't
15 finish and that we're going to have to come back to finish
16 this, probably the first week of March.

17 MR. WETTERHAHN: Mr. Chairman, I would move that
18 we sit tomorrow as the Board indicated it would.

19 JUDGE FRYE: The Board indicated that it was
20 prepared to do that. We discussed the whole matter with the
21 parties. We agreed that we thought we could probably finish
22 this afternoon. Unfortunately, that has not proven to be
23 the case.

24 We've only got two members here. We are operating
25 under a quorum. We've got our bags packed. We've checked

1 out of our hotel. I think it's unfortunate, but I think
2 there's also a substantial likelihood that we're going to
3 have to come back the first week in March anyway for
4 rebuttal, as we said yesterday

5 MR. WETTERHAHN: Mr. Chairman, whether we had to
6 come back in March or not, there is a lot to be said for
7 getting the entire case in as far as the case in chief of
8 each party and cross examination. That's much different
9 from leaving this what I consider in the middle, hanging,
10 with these witnesses having to come back for the sake of the
11 completeness of the record and for the sake of many of these
12 motions and things which we must take up with regard to
13 where we are in this proceeding.

14 I believe it's quite important that we proceed to
15 finish the examination of ZAC-ZACK, the cross examination of
16 the other parties, and complete the case at this point in
17 time. The Applicants are willing. They are here to stay
18 tonight, tomorrow, and however long it take -- Sunday or
19 Monday or next week.

20 MR. BARTH: Your Honor, on behalf of the Staff, we
21 have also checked out of the motel and have flight
22 reservations. We will cancel all of that and stay. I will
23 stay; the Staff will stay, and we will be here as late as
24 necessary tonight and tomorrow to complete this as we
25 previously discussed, Your Honor, in spite of the fact it

1 will cause an inconvenience. We'll find a motel somewhere
2 and we'll find tickets to get back.

3 MR. CASSIDY: On behalf of FEMA, although my
4 witnesses may regret it, I will speak on their behalf.

5 (Laughter.)

6 MR. CASSIDY: It would be our position we are
7 willing to stay and finish this matter.

8 (Board conferring.)

9 JUDGE FRYE: How much longer do you have? I keep
10 asking this and I know it's awfully difficult to estimate it.

11 MR. DENNISON: Your Honor, we still have Campbell
12 County roadways to discuss, and we would move from that into
13 response personnel, emergency response personnel, and again
14 that's Ohio and Kentucky. We've got this passable roadway,
15 flood conditions, snow, ice and so forth, again on both --
16 those may not take a lot of time. I don't know. I'm just
17 sort of indicating what we've got.

18 JUDGE FRYE: There's another consideration here,
19 too, that just escaped me earlier, and that is that in light
20 of the agreement we had made was that yesterday we did not
21 make arrangements for this courtroom and I do not believe we
22 have access to the hearing space.

23 MR. DENNISON: Whatever the Board would desire I'm
24 willing to do.

25 JUDGE FRYE: Sure. I realize that. I appreciate

1 your cooperation very much. You would guess what? Hours?

2 MR. DENNISON: To be candid, I've got to give up
3 on guessing. I've guessed three times today and I'm not
4 sure I'm in control of these time estimates.

5 JUDGE FRYE: Yes.

6 MR. DENNISON: I thought we would be much further
7 than what we are.

8 JUDGE FRYE: Let us confer for a moment.

9 (Board conferring.)

10 JUDGE FRYE: Miss Webb and gentlemen, we don't see
11 any way that it's possible to go tomorrow. We've got no
12 hearing room. We've got commitment that could have been
13 avoided had we known this earlier. But under the
14 circumstances -- and we regret that very much because, as
15 you know, we wanted to finish this up rather than to come
16 back -- but under the circumstances I'm afraid it's just
17 impossible.

18 MR. WETTERHAHN: Mr. Chairman, in the interest of
19 finishing, I will state that the Applicants will get a
20 conference room in one of the local downtown hotels. We
21 will accommodate you.

22 JUDGE FRYE: That doesn't take care of the
23 commitment, unfortunately.

24 What is a convenience time for a conference call?
25 Do you people have any idea as to what your schedule are

1 like next week?

2 MR. BARTH: Your Honor, is it possible to continue
3 tonight, finish this and take an early plane back?

4 JUDGE FRYE: The problem is, as I understand it,
5 there is no early plane. Well, it's not my commitment.
6 It's not getting back to Washington. It's getting to Ann
7 Arbor. That's the problem.

8 Let's go off the record.

9 (A discussion was held off the record.)

10 JUDGE FRYE: We will adjourn the hearing, to
11 reconvene at a place to be designated at 9:00 a.m. on March
12 1.

13 (Whereupon, at 6:25 o'clock p.m., the hearing was
14 adjourned, to reconvene at 9:00 o'clock a.m., Monday, March
15 1, 1982.)

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the
ATOMIC SAFETY AND LICENSING BOARD

in the matter of: Cincinnati Gas & Electric CO., et al., (William H. Zimmer
Nuclear Power Station, Unit 1)

Date of Proceeding: February 5, 1982


Docket Number: 50-358-OL

Place of Proceeding: Cincinnati, Ohio

were held as herein appears, and that this is the original transcript
thereof for the file of the Commission.

Ann Riley

Official Reporter (Typed)



Official Reporter (Signature)

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