

1/19/82

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
CINCINNATI GAS AND ELECTRIC)
COMPANY, et al.)
(Wm. H. Zimmer Nuclear Power)
Station, Unit No. 1))

Docket No. 50-358



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.

DESIGNATED ORIGINAL

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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 18) 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 reasonable 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 aforesaid 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 aforesaid 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 with 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 fire 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 to provide any emergency services. [Pendleton Plan, Annex G, 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 change 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-I (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 NUREG-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 aforestated 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 1 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 police 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-2 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