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USNRC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION '86 MAY -2 P2:55
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of)
COMMONWEALTH EDISON COMPANY)
(Braidwood Station, Units 1 and 2))

Docket Nos. 50-456
50-457 *OL*

NRC STAFF/FEMA PROPOSED FINDINGS OF FACT
AND CONCLUSIONS OF LAW ON
EMERGENCY PLANNING CONTENTIONS 1(a) AND 1(b)

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May 1, 1986

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TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. PROCEDURAL BACKGROUND	2
III. REGULATORY REQUIREMENTS	3
IV. FINDINGS OF FACT	4
A. Contention 1(a)	12
B. Offer of Proof Issue 2	40
C. Offer of Proof Issue 3	49
D. Offer of Proof Issue 4	59
E. Offer of Proof Issue 6	63
F. Contention 1(b)	67
V. CONCLUSIONS OF LAW	89

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I. INTRODUCTION

1. Pursuant to 10 C.F.R. § 2.754 of the Commission's regulations, and the schedule adopted by the Atomic Safety and Licensing Board [hereafter "the Board"] (Tr. 1050-55), the NRC Staff/FEMA submit herewith proposed findings of fact and conclusions of law concerning emergency planning Contentions 1(a) and 1(b) and Offer of Proof Issues 2, 3, 4, and 6. The schedule adopted by the Board provided for the Applicant to file its proposed findings within thirty days after the record closed on these issues (Tr. 1053), for the Intervenor to file its proposed findings within forty days after the close of the record (Tr. 1053), and for the Staff/FEMA to file its proposed findings within fifty days after the record's close. (Id.) In preparing its findings, the Staff/FEMA has considered the findings submitted by the Applicant ^{1/} and Intervenor ^{2/} and has addressed any matters which warrant comment.

^{1/} "Applicant's Proposed Partial Initial Decision (Emergency Planning Issues)," April 4, 1986, [hereafter "Applicant's PID"]. That document consists not only of a PID but Proposed Findings of Fact. (PID, at pp. 37-113.)

^{2/} "Intervenor's Proposed Findings On Emergency Planning Issues," April 21, 1986 [hereafter "Intervenor's Findings"].

2. Intervenor's findings do not address Contention 1(a) Offer of Proof Issues 3, 4, and 6 and Contention 1(b). Applicant filed on April 25, 1986, "Applicant's Motion To Dismiss Intervenor's Contention 1(b)" [hereafter "Applicant's Motion"]. Applicant there argues that Intervenor's failure to file findings on those matters constitutes a default under 10 C.F.R. § 2.754(b) and that, accordingly, Contention 1(a) Offer of Proof Issues 3, 4, and 6 and Contention 1(b) should be dismissed. On April 29, 1986, the Staff filed a response supporting Applicant's Motion.

II. PROCEDURAL BACKGROUND

3. The procedural history of this proceeding to date is fully set forth in the introduction of the Applicant's proposed partial initial decision. (Applicant's PID, at 1-7.) The Staff/FEMA concurs with that discussion and incorporates it by reference. ^{3/}

4. The Staff/FEMA notes, by way of supplementation of the above portions of Applicant's PID and findings, that at the hearing on March 12, 1986, Intervenor took the position that the issue of restricted and unrestricted re-entry into the EPZ after an accident was outside the scope of Contention 1(a). (Tr. 928.) On Intervenor's request, and without the objection of the Staff/FEMA, the Board allowed FEMA's counsel to withdraw the Staff/FEMA portions of the pre-filed testimony, infra, discussing this issue. (Questions and Answer 24 of Mr. Wenger's

^{3/} The Staff/FEMA also adopts the following paragraphs of the proposed findings portion of the PID relating to the scope of specific contentions and offer of proof issues: ¶¶ 14, 53, 58, 63, 66, 70, 75, 88, 91, 96, 101, 102.

pre-filed testimony, infra.) Accordingly, that issue is not discussed in these proposed findings.

5. As amended, Contentions 1(a) and 1(b) state:

1. Intervenor contends that an adequate emergency plan for the Braidwood Station should include the following:

- (a) a program for informing the public within 10 miles of the Station of the means for obtaining instructions for evacuation or other protective measures in the event of a radiological emergency originating at the station; ^{4/} -
- (b) assurance that institutions within 10 miles of the Station, such as nursing homes, can be evacuated or adequately protected in the event of a radiological emergency.

III. REGULATORY REQUIREMENTS

6. The regulatory requirements for emergency planning are found in 10 C.F.R. § 50.47 and 10 C.F.R. Part 50 Appendix E. These regulations provide that no operating license for a nuclear power plant will be issued unless the NRC finds that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. 10 C.F.R. § 50.47(a)(1). Regarding the adequacy of offsite emergency measures, the NRC must base its findings on a review of the Federal Emergency Management Agency [hereafter FEMA] findings and determinations as to whether there is reasonable assurance that the emergency plans can be implemented. 10 C.F.R. § 50.47(a)(2).

^{4/} As noted infra, four "Offer of Proof Issues" were also litigated as part of Contention 1(a).

7. Guidance as to how these regulatory standards can be satisfied is provided in a regulatory guidance document NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (November 1980) [hereafter "NUREG-0654"]. The criteria set forth in NUREG-0654 are intended for use in drafting and reviewing emergency plans, and are the criteria against which FEMA determines the adequacy of offsite emergency plans. Duke Power Company, et al. (Catawba Nuclear Station, Units 1 and 2), LBP-84-37, 20 NRC 933, 939 (1984). NUREG-0654 is given "considerable weight" by NRC licensing boards in evaluating emergency plans. Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1), LBP-85-12, 21 NRC 644, 653 (1985); Duke Power Company, et al. supra; Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-83-32A, 17 NRC 1170, 1177 n.5 (1983).

IV. FINDINGS OF FACT

8. On October 29, 1985, the Board conducted an evidentiary hearing on Contention 1(a). By agreement of the parties, after a lengthy discussion on the record, the hearing was limited to testimony about the dissemination of information to the public prior to the time of any accident; testimony was reserved for a later hearing on the subject of alerting the public at the time of an accident and disseminating safety information at or after that event. (Tr. 409-27.)

9. At the October 29th hearing, the Staff/FEMA presented the testimony of Gordon Wenger. Mr. Wenger is an Emergency Planning Specialist, Technological Hazards Branch, FEMA Region V. He has held that position for the last six years. He is the Federal Team Leader for Radiological Emergency Preparedness Planning for Illinois and Indiana. (Testimony of Gordon Wenger Regarding Rorem Contention 1(a), ff. Tr. 518, at 1 [hereafter Wenger, ff. Tr. 518].)

10. The Applicant, Commonwealth Edison Company ["CECo"] presented the testimony of Lawrence D. Butterfield, Jr., concerning Contention 1(a). Mr. Butterfield is the manager of the Applicant's Nuclear Technical Services Department. He has been employed by Applicant for about nineteen years and has been involved in emergency planning for at least the last six years. He is presently responsible for the management of three groups within his department, including the Emergency Planning Group, which consists of twenty-one personnel. (Butterfield, Tr. 507; Testimony of Lawrence D. Butterfield, Jr. Concerning Contention 1(a), ff. Tr. 465-B, at 1-3 [hereafter Butterfield, ff. Tr. 465-B]; Supplemental Testimony of Lawrence D. Butterfield, Jr. On Rorem Contention 1(a), ff. Tr. 465-B [hereafter Butterfield Supp., ff. Tr. 465-B].)

11. The Staff/FEMA and Applicant presented additional testimony at hearing sessions on March 11-12, 1986, addressing Contention 1(a) and 1(b) as well as "Offer of Proof Issues." The NRC Staff/FEMA presented the testimony of Mr. Wenger (Testimony of Gordon Wenger Regarding Rorem Contentions 1(a) and 1(b), ff. Tr. 931 [hereafter Wenger, ff. Tr. 931].) The Applicant presented the testimony of Mr. Butterfield and

Ms. Jana Fairow. Ms. Fairow is the Radiological Emergency Planning Supervisor of the Illinois Emergency Services and Disaster Agency [hereafter "IESDA"]. As the Radiological Emergency Planning Supervisor, Ms. Fairow is responsible for developing, maintaining and supervising the Illinois Plan for Radiological Accidents ("IPRA") for all seven nuclear power stations in Illinois, including Braidwood. Prior to her present position with IESDA, Ms. Fairow was a consultant to the State of Illinois in the preparation of the State's offsite radiological emergency plans. (Testimony of Lawrence D. Butterfield, Jr., and Jana S. Fairow Regarding Contentions 1(a) and 1(b) (Emergency Planning) at 3-4 [hereafter Butterfield, et al., ff. Tr. 690].)

12. Prior to the issuance of an operating license, the U.S. Nuclear Regulatory Commission (NRC) requires development of an emergency plan to assure the safety of the public in the event of an accident. (Wenger, ff. Tr. 931, at 3.) 10 C.F.R. § 50.47. (Id.) The content of emergency plans is spelled out in Appendix E to 10 C.F.R. Part 50. (Id.) In addition, the NRC and FEMA have published a guide (NUREG-0654). (Id., at 3-4.) Each utility company seeking a license will develop a plan in close cooperation with state and local government officials. (Id., at 4.)

13. The emergency plan for Braidwood Station consists of an onsite plan (CECo's Generating Stations Operating Plan [hereafter "GESP"]) and an offsite plan -- the Illinois Plan for Radiological Accidents [hereafter "IPRA"]. (Butterfield, et al., ff. Tr 690, at 6.) The GSEP contains general information applicable to all of CECO's nuclear power plants. (Butterfield, et al., ff. Tr. 690, at 7.) Site specific information is

provided in the Braidwood Annex to the GSEP. (Id.) The current Braidwood Annex is revision 1, dated March, 1986 (Applicant's Ex. 8). (Id.) CECo developed the IPRA with the State of Illinois, Will, Kankakee and Grundy counties, and various communities within those counties. ^{5/} (Wenger, ff. Tr. 931, at 4.) The IPRA, which is a multi-volume set, is a comprehensive document which sets out in detail the plan for responding to any radiological emergency or accident which would happen in the state of Illinois. (Id., at 3.) The plan is both general, that is, state-wide, and specific, that is, tailored to deal with an emergency at each particular nuclear power station in Illinois. (Id.) The IPRA is a record of the responsibilities which have been assigned to various officials of state and local government and utility companies. (Id.) ^{6/} Volume One (Vol. I, June 1985) contains the State General Plan and refers to all of the 10-mile and 50-mile EPZs surrounding nuclear power plants in the State of Illinois. (Id.) Volume Seven (Vol. VII, Preliminary, August 1985) contains the plan specific to the Braidwood Station offsite planning. (Id.) In addition, there are procedures (Vol. I February 3, 1982 and Vol. VII August, 1985) for the State and the Braidwood Station. (Id.)

^{5/} CECo also has implementing procedures ("Emergency Plan Implementing Procedures" or "EPIPs") which further delineate the responsibilities of cognizant CECo employees in the event of an emergency. (Butterfield, et al., ff. Tr 690, at 7-8.)

^{6/} Due to the planning process that has taken place, the involvement of public officials having responsibilities under IPRA, as well as training of such officials and the exercise, there is reasonable assurance that these responsibilities will be carried out. (Wenger, Tr. 933.)

14. The IPRA sets out the procedures to be followed in educating the public before an accident, for notifying public officials at the time of an accident, for activating the "Prompt Alert and Notification System," ("PANS") and for delivering reliable information to the public on the protective actions they are expected to take. (Wenger, ff. Tr. 931, at 5.)

15. The IPRA calls for the licensee (the operator of the nuclear power plant) to develop a public information brochure in cooperation with state and local government officials. (Wenger, ff. Tr. 931, at 5.) The licensee then distributes the brochure at least annually. (Id.)

16. At the time of an accident, the licensee is responsible for classifying the accident and then for notifying the the IESDA and the Illinois Department of Nuclear Safety (IDNS). (Wenger, ff. Tr. 931, at 5.) The IDNS will evaluate from a technical perspective the licensee's information and recommendations. (Id.) It then reports its analysis to the Governor. (Id.) Taking into account the IDNS analysis, the Governor will direct the IESDA to implement appropriate actions. (Id.) For example, in the event of an accident which warrants a general emergency declaration, the Governor will direct IESDA to implement the appropriate action for that accident classification including determining which sectors of the EPZ are affected. (Id.) The IESDA will notify the Grundy, Kankakee, and Will County sheriff's dispatchers, who will, in turn, notify the county ESDA coordinators. (Id.) Upon the decision by county officials to activate the PANS, the coordinators will notify the county sheriffs' dispatchers to activate the system. (Id.) The county ESDA coordinators will activate the Emergency Broadcast System (EBS).

(Id.) The IESDA will set up and operate the Joint Public Information Center ("JPIC"). (Id.) See Vol. I, Chap. 2, Sections E and F, and Vol. I, Chap. 8, of the IPRA.

17. The JPIC is a central location where public officials will provide information to the news media about the progress of an accident. (Wenger, ff. Tr. 931, at 6.) Its function is to provide timely, accurate, and essential information and to dispel unfounded rumors. (Id.) The JPIC does not take the place of the EBS, but supplements it, especially during the times when the situation is essentially under control and information can be provided in a comprehensive and unhurried way. (Id.)

18. The PANS is the means by which government officials call the public's attention to an emergency condition. (Wenger, ff. Tr. 931, at 6.) Section IV.D.3 of 10 C.F.R. Part 50, Appendix E, states:

[T]he design objective of the prompt public notification system shall be to have the capability to essentially complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes. The use of this notification capability will range from the immediate notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available for the State and local governmental officials to make a judgment whether or not to activate the public notification system.

19. The design of the PANS is within the discretion of the Applicant, subject to evaluation under criteria set forth in NUREG-0654 and "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants," Appendix 3, FEMA-REP 10. (Wenger, ff. Tr. 931, at 6-7.) A PANS typically uses sirens as the primary vehicle

for alerting the public. (Id., at 7.) Some systems, however, rely on tone-alert radios, direct dialing telephone systems, or "route alerting," that is, messages broadcast from emergency vehicles fitted with public address equipment. (Id.) Many systems use some combination of these means. The PANS in the Braidwood EPZ uses sirens as the primary means of alerting the public and mobile public alerting as a backup means. (Id.)

20. The acronym EPZ refers to the "Emergency Planning Zone." (Wenger, ff. Tr. 931, at 7.) There are actually two EPZs surrounding each nuclear power plant. (Id.) The larger one is the ingestion pathway EPZ, which generally extends 50 miles out from the plant. (Id.) The other is the plume exposure pathway EPZ, and that extends 10 miles from the plant unless special circumstances justify the identification of a smaller zone. (Id.) Emergency planning is required only within the plume exposure pathway EPZ, which has a 10-mile radius in the case of the Braidwood Station. (Id.)

21. The public information effort which takes place before an accident, that is, distribution of brochures, educates the public to the need to tune its radios to the EBS. (Wenger, ff. Tr. 931, at 7-8.) ^{7/} Appropriate messages will be broadcast very shortly after the PANS is activated, and the messages will be repeated and updated as often as necessary. (Id., at 8.)

^{7/} This subject is discussed in more detail, infra, under "Pre-Emergency Notification."

22. Within fifteen minutes after the power plant operator determines that an emergency exists, it must notify State officials. (Wenger, ff. Tr. 931, at 8.) The State officials then evaluate the information provided by the utility and make a decision on activating the PANS. (Id.) They decide whether to activate the entire system. (Id.) This is a process of assessing the risk to each section of the EPZ, deciding if protective action is required and, if so, whether it should take the form of sheltering-in-place or evacuation. (Id.) The officials pay particular attention to the characteristics of the plume if there has been a release of radioactive material. (Id.) The nature of the risks depends on many factors, including weather; the duration of the release; the shape of the plume; the direction of the plume's movement; the materials released; and whether the release is in gaseous, liquid, or particulate form. (Id.) When those decisions have been made, messages are chosen from scripts in the IPRA. (Id.) These scripts are targeted for the particular sections of the EPZ affected by the emergency, and they contain specific information about the protective action recommended by the governmental officials. (Id.) If a release develops quickly, it is generally safer for people to be sheltered until the plume passes. (Id.) Evacuation is preferred when there is enough time to move people out of the EPZ without exposing them to the plume. (Id.)

23. Applicant's witnesses Mr. Butterfield and Ms. Fairrow stated that CECO's actions in the event of an emergency, coupled with activities of offsite authorities, assure that the public within the EPZ will be timely and adequately notified of protective action information in the event of an

emergency at Braidwood Station. (Butterfield, et al., ff. Tr. 690, at 41.)

A. Contention 1(a)

24. Contention 1(a) states:

Intervenor contends that an adequate emergency plan for the Braidwood Station should include the following:

- a) a program to periodically inform the public within the EPZ on how they will be notified and what their initial actions should be in the event of a radiological emergency originating at the Station.

Pre-Emergency Public Notification

25. Mr. Wenger initially addressed two issues raised by Contention 1(a): (1) the adequacy of the information booklet, "Emergency Information Brochure, Braidwood Station," (Applicant's Emergency Planning Exhibit 1) [hereafter "Booklet"], which is the vehicle for disseminating the information called for in the contention and, (2) the adequacy of the plan for its dissemination (the public information program). (Wenger, ff. Tr. 518, at 1-2.)

26. In evaluating the booklet and the plan, Mr. Wenger referred to Evaluation Criteria II. G. 1 and II. G. 2 of NUREG-0654 (Wenger, ff. Tr. 518, at 2) which state as follows:

(Evaluation Criteria II. G. 1)

Each organization shall provide a coordinated periodic (at least annually) dissemination of information to the public regarding how they will be notified and what their actions should be in an emergency. This information shall include but not necessarily be limited to:

- a. educational information on radiation;
- b. contact for additional information;
- c. protective measures, e.g., evacuation routes and relocation centers, sheltering, respiratory protection, radioprotective drugs; and
- d. special needs of the handicapped.

Means for accomplishing this dissemination may include, but are not limited to: information in the telephone book, periodic information in utility bills, posting in public areas; and publications distributed on an annual basis.

(Evaluation Criteria II. G. 2)

The public information program shall provide the permanent and transient adult population within the plume exposure EPZ [Emergency Planning Zone] an adequate opportunity to become aware of the information annually. The programs should include provisions for written material that is likely to be available in a residence during an emergency. Updated information shall be disseminated at least annually. Signs or other measures (e.g., decals, posted notices or other means, placed in hotels, motels, gasoline stations and phone booths) shall also be used to disseminate to any transient population within the plume exposure pathway EPZ appropriate information that would be helpful if an emergency or accident occurs. Such notices should refer the transient to the telephone directory or other source of local emergency information and guide the visitor to appropriate radio and television frequencies.

(Wenger, ff. Tr. 518, at 2.)

27. In Mr. Wenger's testimony about CECO's public information booklet, he made note that the booklet contains a section entitled "Nuclear Power Plants" and another entitled "Radiation." (Wenger, ff. Tr. 518, at 3.) Both sections are one page in length. (Id.) The former explains the principles behind the operation of a nuclear power plant and points out that there is some risk of the escape of waste products which emit radiation. (Id.) The latter section explains the effects of different

levels of radiation on the human body. (Id.) It states that radiation doses of over 20,000 millirem in a day are necessary to produce identifiable effects in the body. (Id.) This is over 200 times the amount of radiation a person is normally subject to in an entire year. (Id.) The section on radiation points out that radiation levels at the nuclear power plant are monitored constantly, that even more detailed readings would be taken in the event of an emergency, and that plans for evacuation or sheltering the public would be put into effect if radiation exposures exceeded a predetermined level. (Id.)

28. Mr. Wenger concluded that there is sufficient information included in the booklet to meet the requirements of NUREG-0654, Criterion II. G. 1. a. (Wenger, ff. Tr. 518, at 3.)

29. In testifying about contacts for information (referring to Criterion II. G. 1. b. of NUREG-0654) Mr. Wenger pointed out that there is a preface inside the front cover of the booklet which states:

If you would like additional booklets or additional information, please write to Communications Services, Commonwealth Edison, P.O. Box 767, Chicago, Illinois 60690. Or you may write to one of the Emergency Services offices listed at the end of Section 6.

(Wenger, ff. Tr. 518, at 3.)

30. The booklet also contains a section entitled "Your Area's Emergency Plan" (Section 6). (Wenger, ff. Tr. 518, at 4.) The last half page of that section is a prominently displayed box with the names of county emergency agencies in bold type. (Id.) The text immediately before the box directs the reader to write or call one of the offices listed for more information. (Id.) The box lists the names, addresses and

telephone numbers of the IESDA and the comparable agencies for Will, Grundy, and Kankakee Counties. (Id.)

31. Mr. Wenger testified that the contacts for additional information are accurate, prominently displayed, and easy to find. (Wenger, ff. Tr. 518, at 4.) On that basis, he concluded that the booklet meets the Criterion II. G. 1. b. (Id.)

32. Section 1 of the booklet, "If You Hear a Siren Sounding," explains that, in an emergency, the responsible officials may direct people to stay indoors or to evacuate. (Wenger, ff. Tr. 518, at 4.) Section 2, "If Officials Say To Take Shelter Indoors," provides directions for the safety of the reader in an emergency which does not require evacuation. (Id.) Section 3, "If Officials Say to Evacuate," gives instructions for an evacuation. (Id.)

33. Mr. Wenger also pointed out that there is a map in the center of the booklet (Section 4) which shows evacuation routes. (Wenger, ff. Tr. 518, at 4.) The communities of Braceville, Braidwood, Carbon Hill, Coal City, Diamond, East Brooklyn, Essex, Gardner, Godley, Mazon, Reddick, South Wilmington, Union Hill, and Wilmington are shaded and outlined on the map. (Id.) Sector lines are superimposed on the map in contrasting ink which make it easy for the reader to identify the sector she or he is in. (cite) While the map does not show every road in the EPZ, it does show major roads and enough landmarks that anyone who understands how to read a road map could find the evacuation routes. (Id.) In addition, a panel to the right of the map lists the principal evacuation routes and preplanned destinations. (Id., at 4-5.) The same

panel lists the radio stations which will provide further information and instructions. (Id., at 5.)

34. Mr. Wenger noted that the booklet does not address the question of radioprotective drugs. (Wenger, ff. Tr. 518, at 5.) The decision whether or not to administer radioprotective drugs is reserved to officials in charge at the time of an emergency. (Id.) The State of Illinois does not anticipate administering such drugs to the entire population of the EPZ at the time of an emergency. (Id.) Therefore it is appropriate that the booklet does not suggest that such drugs will be made available. (Id.)

35. Mr. Wenger expressed his opinion that the booklet meets criterion II. G. 1. c. (Wenger, ff. Tr. 518, at 5.) The information which is provided is clear, concise, and easy to find. (Id.)

36. Criterion II. G. 1. d. of NUREG-0654 calls for treatment of special needs of the handicapped. (Wenger, ff. Tr. 518, at 5.) In his testimony, Mr. Wenger referred to Section 9 of the booklet entitled "People With Special Needs." (Id.) It is positioned on the back and inside-back covers of the booklet so that the tear-out Business Reply Card will automatically include the address label of the individual mailing it, assuming that the booklet was delivered to the responder by mail to begin with. (Id.) The Business Reply Card also has a space for the responder's telephone number. (Id.)

37. Mr. Wenger concluded that this Section contains clear instructions for the reader to let public officials know of his or her special medical or transportation needs or the need to be alerted in the event of an emergency. (Wenger, ff. Tr. 518, at 5.) The portion of the

Business Reply Card on the back cover of the booklet has simple graphic symbols illustrating these needs. (Id.) To the left of the card is a brief questionnaire which asks the reader if he or she has a special need in any of the areas listed. (Id., at 5-6.) He or she needs only to circle the appropriate "Yes" or "No" responses, write in a telephone number, tear out the card and mail it. (Id., at 6.)

38. In Mr. Wenger's opinion, the booklet effectively addresses the special emergency needs of the population of the EPZ and it meets Criterion II. G. 1. d. of NUREG-0654. (Wenger, ff. Tr. 518, at 6.)

39. Mr. Wenger summarized his overall assessment of the public information brochure by stating his conclusion that the strength of this public information booklet lies in its simplicity and logical organization. (Wenger, ff. Tr. 518, at 6.) Each section states no more than is necessary to convey the required information; and each section leads naturally to the one which follows. (Id.) The actions which residents may be asked to take are described and discussed in ways that make the information readily accessible in an emergency. (Id.) The graphics used throughout the booklet are simple, clear, and germane. (Id.) Repetition has been used to reinforce the concepts presented. (Id.) Emergency telephone numbers are prominently displayed in the booklet. (Id.) In Mr. Wenger's opinion, the public information booklet which the Applicant proposed to distribute effectively addresses Contention 1(a). (Id.)

40. Mr. Wenger's testimony also discussed "The Public Information Program." Mr. Wenger pointed out that the IPRA has been developed in close cooperation with the affected county governments and the Applicant. (Wenger, ff. Tr. 518, at 7.) The IPRA uses "public information

booklets" as the primary means of disseminating information, but it also calls for annual press briefings, the designation of public information spokespersons, and systematic rumor control. (Id.)

41. The distribution scheme for the public information booklets calls for them to be mailed each year directly to residents of the EPZ and to be made available in quantity in area hotels, motels, recreation areas, schools, industries, health care and nursing facilities, local Emergency Services and Disaster Agencies, and local utility offices. (Wenger, ff. Tr. 518, at 7.) In Mr. Wenger's opinion, the distribution plan would be enhanced by the posting of signs in places where transients are likely to go, advising them of the availability of booklets and of the frequencies of emergency broadcast radio stations. (Id.) However, as Mr. Wenger pointed out, NUREG-0654 does not literally require such actions. (Id.)

42. In preparation for annual press briefings, the news media will be given portfolios of handouts. (Wenger, ff. Tr. 518, at 7.) At the briefings, they will be able to ask questions directly of representatives of state and local governments and of the utility. Briefing topics will include an overview of IPRA-Braidwood, the concept of operations, the accident classification scheme, the communications network, protective and parallel actions, and public information. (Id.) In short, the news media will be given ample opportunity to become knowledgeable not only about the emergency plans but also about the nature of any emergency which may be anticipated. (Id., at 7-8.)

43. Mr. Wenger found that the public information program provides a systematic means of delivering information to all members of the public who need the information. (Wenger, ff. Tr. 518, at 8.) The plan

ensures that the information will be kept current and will be redistributed annually. (Id.) In the event of an emergency, a comprehensive network is activated to deliver information on a current basis effectively to the entire population of the EPZ. (Id.) The guidance of Criterion II. G. 2 is that information should be distributed at least annually, in a way that it is likely to be available in a residence in time of emergency and that signs, decals or other notices in public places direct transients to sources of current information. (Id.) Mr. Wenger found that these requirements are met by the public information plan. (Id.)

44. Mr. Wenger concluded generally that the emergency plan contains a program for informing the public of means for obtaining instructions in time of emergency. (Wenger, ff. Tr. 518, at 8.) The primary means the plan adopts is the annual mailing of a booklet to all residences in the EPZ. (Id.) The booklet will also be made available in other places to which the public has frequent access. (Id.) The booklet explains in very clear terms where to get information in the event of an emergency. (Id.) The plan also calls for annual briefings of the news media. Mr. Wenger is satisfied that the IPRA not only addresses the concerns of Contention 1(a) but that it also meets the more detailed guidance of NUREG-0654. (Id., at 9.)

45. Mr. Butterfield pointed out that the "Braidwood emergency plan" referred to in Contention 1(a) is in fact two plans. (Butterfield, ff. Tr. 465-B, at 5.) The GSEP, which is CECO's site emergency plan, contains general information applicable to all of CECO's nuclear power plants. (Id.) Site-specific information is provided in the Braidwood Annex to the GSEP. (Id.) The IPRA includes, among other things,

emergency plans for the counties in the plume exposure pathway EPZ. Volume I of the IPRA contains generic information. (Id.) The remaining volumes contain information specific to a particular nuclear power station. (Id.) The Braidwood site-specific information is found in Volume VII and the Standard Operating Procedures for Volume VII. (Id.)

46. According to Mr. Butterfield, both CECO's and the State's plan address the standard referred to in Contention 1(a), that is, that information be provided in advance of an emergency situation informing the public in the plume exposure pathway EPZ of the means of notification in the event of a nuclear emergency and what their initial actions should be. (Butterfield, ff. Tr. 465-B, at 5.)

47. The development of these two plans was guided by the regulations and implementing guidance issued by the NRC and FEMA, that is, 10 C.F.R. § 50.47(b)(7) and NUREG-0654, which require that information be provided to the public in the plume exposure pathway EPZ in advance of an emergency to inform them of how they will be notified of such an emergency and what their initial actions should be. (Butterfield, ff. Tr. 465-B, at 6.) Based on Mr. Butterfield's examination of the on-site and off-site emergency plans for Braidwood Station, he determined that the write-ups addressing the standard found in 10 C.F.R. § 50.47(b)(7) are adequate. (Id.)

48. According to Mr. Butterfield, the Braidwood Annex to the GESP will be revised to state that the Braidwood emergency information booklet will be hand-distributed to public facilities (rather than mailed) where it can be made available to transients in the plume exposure EPZ. (Butterfield, ff. Tr. 465-B, at 7.) Mr. Butterfield also noted that

information on respiratory protection will not be included in the booklet. (Id.)

49. Mr. Butterfield testified that the standard specified in the NRC's regulations is met by disseminating information to persons in the plume exposure pathway EPZ at Braidwood. (Butterfield, ff. Tr. 465-B, at 7.) The principal method for accomplishing this task is the publication and distribution of the booklet referred to previously. (Applicant's Ex. 1.) (Id.) It provides the appropriate information suggested by paragraph 1. on page 49 of NUREG-0654. (Id., at 7-8.)

50. The format for this booklet was developed and refined for each of CECO's nuclear stations to account for site-specific matters, such as, maps, Emergency Broadcast System ("EBS") radio stations, evacuation routes, shelter locations, and take-along items, such as valuables and medications. (Butterfield, ff. Tr. 465-B, at 7.) Section 1 of the booklet describes the siren that will be used as a mechanism to notify the public of an emergency. (Id.) It states that the public should respond to the siren signal by tuning to specified EBS radio stations. (Id., at 8-9.) In Section 2 of the booklet, there is a discussion of the steps to be followed to enhance personal safety if sheltering is recommended as a protective action. (Id., at 9.) The requirement to provide information on what to do, where to go, and how to get there if evacuation of the Braidwood Station plume exposure pathway EPZ is recommended, is discussed in Sections 3 and 4 of the booklet. (Id.) This information includes a checklist, a map of evacuation routes, shelter locations, and EBS radio station frequencies. (Id.)

51. Some sensible ideas on ways to prepare for any emergency are covered in section 5. (Butterfield, ff. Tr. 465-B, at 9.) A discussion of the coordinated approach to emergency planning by the state and local agencies as well as by Commonwealth Edison is presented in Section 6. (Id.) Telephone numbers and addresses where additional information may be obtained are also included. (Id.)

52. A general description of how a nuclear power plant functions and produces radiation is presented in Section 7. (Butterfield, ff. Tr. 465-B, at 9.) The information complements and facilitates understanding of Section 8, which contains an elementary discussion of radiation, and how it is measured. (Id.) The opportunity for persons who received the booklet to make the State and local officials aware of any special needs required to adequately respond to an emergency is provided in Section 9. (Id., at 9-10.)

53. Mr. Butterfield explained that the use of radioprotective drugs and respiratory protection has not been addressed in the booklet. (Butterfield, ff. Tr. 465-B, at 11.) The distribution and use of radioprotective drugs for emergency planning purposes is controlled by the State of Illinois. (Id.) The State has decided that such drugs will be distributed only to workers involved in responding to the emergency and to facilities within the plume exposure pathway EPZ which house individuals that may not be capable of timely evacuation, such as nursing homes. (Id.) Since the State does not plan to provide such drugs to the general public, information about radioprotective drugs is not needed in the booklet. (Id.) According to Mr. Butterfield, the use of respiratory protection is not considered to be useful during evacuation as

it might hinder a person's ability to respond effectively and, in any event, evacuation would be recommended before respiratory protection would be required. (Id.) For the case where sheltering is recommended, the State would perform an evaluation of the situation and make any recommendation for respiratory protection by messages over the local radio stations mentioned in the booklet. (Id.) For these reasons, information about respiratory protection is not needed in the booklet. (Id.)

54. Mr. Butterfield explained the Applicant's plan for the distribution of the booklet. (Butterfield, ff. Tr. 465-B, at 12.) The Braidwood Station public information booklet will be mailed to all residential and commercial customers of CECo within the Braidwood Station plume exposure pathway EPZ. (Id.) A complete mailing list of CECo's customers in the plume exposure pathway EPZ will be developed from its Customer Information System (CIS). (Id.) A booklet will be mailed to every address on the list developed from the CIS. (Id.) The list will be updated for each subsequent mail distribution of the booklet. (Id.) Booklets will also be mailed to persons residing on the site of the Joliet Army Ammunitions Plant who are not direct customers of Commonwealth Edison Company. (Id.) This mail distribution of the booklet will occur annually. (Id.)

55. Mr. Butterfield also explained the other measures for distributing the booklet to segments of the population of the EPZ. (Butterfield, ff. Tr. 465-B, at 13.) Concurrent with the annual mail distribution, multiple copies of the booklet will be delivered to major employers, schools, health care facilities and senior citizen centers.

(Id.) For transients, the program is based on providing multiple copies of the booklet to the persons in charge of the facilities catering to transients and discussing with the persons in charge the importance of having the booklet available. (Id.) The distribution of the booklet to these locations will occur concurrently with the annual mail distribution. (Id.) In addition, distribution will again be made each May or June to assure that the booklets are available for the summer months. (Id., at 13-14.)

56. The Braidwood booklet has been provided to all recreation areas within the Braidwood EPZ (Fairrow, Tr. 743) and there is an ample supply of booklets available at recreation areas. (Butterfield, Tr. 912-13.) Nevertheless, it is possible that a visitor might not know that they are available. (Id., Tr. 914-18.)

57. In order to provide additional awareness of the potential for an emergency and what a transient's initial response should be, CECO is undertaking discussions with the appropriate State authorities to develop a sign which could be placed in State recreation areas frequented by transients. (Butterfield, ff. Tr. 465-B, at 14.) The sign will contain the following information in substantially the following language:

If you hear a siren continuing for 3 minutes or more,
please tune to radio stations 1340 AM or 96.7 FM for
instructions.

(Id.)

58. If this concept is accepted by the State, Commonwealth Edison Company will discuss with private camp and recreational area operators the placement of these signs in their areas. (Butterfield, ff. Tr. 465-B, at 14.)

59. In addition, The Braidwood Station Prompt Public Notification System in and about most public recreational areas located in the plume exposure pathway EPZ at Braidwood has been equipped with a public address capability. (Butterfield, ff. Tr. 465-B, at 14.) Announcements over the public address system would follow the siren to alert transients in the recreational areas to tune in the EBS radio stations for additional information. (Id.)

60. Mr. Butterfield also addressed the advance arrangements established for the dissemination of information to representatives of the news media in the event of an emergency. (Butterfield Supp., ff. Tr. 465-B, at 1.)

61. The regulatory standard for this activity is part of 10 C.F.R. § 50.47(b)(7), namely the provisions which state:

... the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

(Butterfield Supp., ff. Tr. 465-B, at 1.) Implementing guidance for this standard is found in NUREG-0654, pages 49-51, paragraphs 3, 4, and 5. (Id.)

62. This aspect of 10 C.F.R. § 50.47(b)(7) provides that arrangements with the news media must be established in advance so that information about a nuclear emergency can and will be effectively communicated through the media to the public. (Butterfield Supp., ff. Tr. 465-B, at 2.) These advance arrangements do not involve, however, the official notice and instructions given to the public regarding an emergency via the prompt public notification system and the radio stations

of the Emergency Broadcast System. (Id.) That activity is the subject of a separate regulatory provision, namely 10 C.F.R. § 50.47(b)(5). (Id.) Although the news media will be informed of and may report the official notice and instructions, the media is not relied upon for that purpose. (Id.)

63. Mr. Butterfield has reviewed the emergency plans for Braidwood Station to determine whether they adequately address the standards mentioned previously. (Butterfield Supp., ff. Tr. 465-B, at 2.) In his judgment, the emergency plans for Braidwood Station adequately and completely address the standards regarding advance planning with the news media found in 10 C.F.R. § 50.47(b)(7) and NUREG-0654. (Id.)

64. The base volume of the IPRA (Vol. I) outlines how the public will be kept informed of an accident through the media; how rumors will be controlled; and how the media will be acquainted with the emergency plans. (Butterfield Supp., ff. Tr. 465-B, at 2.) IPRA Vol. I also provides that a Joint Public Information Center (JPIC) will be located at the Emergency Operations Facility near each nuclear generating station and that the State will provide a spokesperson to brief the press on the emergency. (Id., at 2-3.)

65. The Braidwood-specific volume of the State's plan (IPRA Vol. VII) contains parallel provisions for each of the three counties involved with emergency planning for the Braidwood Station plume EPZ. (Butterfield Supp., ff. Tr. 465-B, at 3.) These provisions also establish that each county and municipality in the EPZ will have a spokesperson responsible for public information. (Id.)

66. CECO's Generating Stations Emergency Plan (GSEP) establishes its offsite GSEP group which includes an Emergency News Center Director and Information Director and their staff. (Butterfield Supp., ff. Tr. 465-B, at 3.) Their responsibilities are outlined in the GSEP and in Emergency Plan Implementing Procedures. (Id.) The specific people responsible for these positions are identified in the GSEP Telephone Directory. (Id.)

67. Mr. Butterfield described the JPIC for Braidwood Station. (Butterfield Supp., ff. Tr. 465-B, at 3.) In accordance with the State's plan, the Emergency Operations Facility (EOF) for Braidwood Station has a large room dedicated for use as a JPIC. (Id.) The Braidwood Station EOF is located in Mazon, Illinois, about ten miles from Braidwood Station. (Id.) The JPIC in the EOF will have numerous telephones available for use by the media. (Id., at 3-4.) The JPIC will also have visual aids on hand. (Id., at 4.)

68. In addition to the JPIC's facilities, there will be media centers associated with the State's Emergency Operation Center (ESDA's State headquarters in Springfield, Illinois), and with the Emergency Operations Centers for Grundy, Will and Kankakee Counties. (Butterfield Supp., ff. Tr. 465-B, at 4.) All of these Emergency Operations Centers will be joined with each other and with the JPIC by a telecopier system which will be used to distribute information including press releases. (Id.)

69. Mr. Butterfield also described how information will be disseminated to representatives of the news media at the JPIC during an emergency. (Butterfield Supp., ff. Tr. 465-B, at 4.) During an emergency, representatives from the State of Illinois, the Federal

government and Commonwealth Edison will be present at the JPIC. (Id.) Other representatives from local governments and private agencies may also be present and participating. (Id.) These representatives will work together to provide coordinated dissemination of information to the news media representatives in news briefings, which will also permit the media to ask questions and request further information. (Id.)

70. The State's Public Information Officer (PIO) will be primarily responsible for providing information which concerns the health and safety of the public. (Butterfield Supp., ff. Tr. 465-B, at 4.) CECO's spokesperson will primarily explain the technical aspects of the accident. (Id., at 5.)

71. Mr. Butterfield discussed the provision for dealing with rumors during an emergency. (Butterfield Supp., ff. Tr. 465-B, at 5.) Rumor control activities are managed by the State of Illinois. (Id.) The State maintains telephone numbers dedicated to rumor control and which will be known to local governments, but not the general public. (Id.) When a local government cannot control locally generated rumors, they will contact the State EOC over the dedicated telephones and advise the State of the rumor. (Id.) If possible, the State will respond to the rumor directly. (Id.) Otherwise, the response to the rumor will be incorporated in the next news briefing provided to the media representatives. (Id.)

72. During the news briefings, questions and requests for rumor verification may arise from the news media representatives. (Butterfield Supp., ff. Tr. 465-B, at 5.) The spokesman or State public information officer will respond with available information. (Id.) If it is determined

that a rumor represents serious misinformation, the misinformation could be corrected immediately by the issuance of a news release from the JPIC. (Id.)

73. According to Mr. Butterfield, representatives of the news media are invited to attend press briefings which are held annually for each nuclear power plant in Illinois. (Butterfield Supp., ff. Tr. 465-B, at 5.) These briefings are presented jointly by the State and CECO. (Id., at 5-6.) The press briefings are usually scheduled in conjunction with the annual emergency exercise for each nuclear power plant. (Id.) In those instances, the media representatives are also invited to participate in the exercise itself at the JPIC. (Id.)

74. The first press briefing for Braidwood Station was held in conjunction with the emergency exercise scheduled for November 6, 1985. (Butterfield Supp., ff. Tr. 465-B, at 6.) The press briefing acquainted the media representatives with basic information such as nuclear reactor operation, radiation, and emergency planning. (Id.) The media representatives are also introduced to the JPIC as the central point through which information is disseminated to the news media by the State, the utility, and the Federal government. (Id.) As a part of the briefing, the media representatives received a "Press Kit" which will include a "Reporter's Guide to Braidwood Nuclear Power Station" and the Emergency Information Booklet. (Id.)

75. It should be noted that a majority of the news media representatives in the Braidwood area have been involved in past exercises and briefings for Dresden and/or LaSalle County Stations. (Butterfield Supp., ff. Tr. 465-B, at 6.) These activities have all taken place at the

Mazon EOF, which is the same facility that would be used in the event of an emergency at Braidwood Station. (Id.)

76. In cross-examining Mr. Wenger at the October 29th hearing, Intervenor questioned whether a farmer or pet owner would understand from the public information brochure how to care for his animals. Mr. Wenger pointed out that Section 6 of the brochure listed four locations which could supply further information. (Wenger, Tr. 540-41.)

77. Intervenor established on cross-examination that the brochure's treatment of respiratory protection did not include any information on that subject other than general information about sheltering and evacuation. (Wenger, Tr. 528-530.) Mr. Wenger's explanation for the omission of references to protective measures such as a handkerchief over the nose was that decisions on the use of such measures are best left to state officials at the time of an accident. (Wenger, Tr. 552-57.) Mr. Wenger concluded that nevertheless the booklet was acceptable. (Tr. 552.) When asked why the booklet did not discuss respiratory protection, Mr. Butterfield responded that he understood respiratory protection not to be useful or effective and, in some cases, to be a hindrance. (Butterfield, Tr. 473-474.) According to Mr. Butterfield, Applicant has discussed with the State of Illinois whether respiratory protection should be discussed in the booklet and the State agreed that it would not be

useful to include information on respiratory protection in the booklet. (Id., ff. Tr. 465-B, at 11; Tr. 473-74.) ^{8/}

78. During cross-examination, questions were raised regarding the statement in Section 3 of the booklet that EPZ residents being evacuated should plan for two days away from home. (Tr. 498, 522, 527-28.) Mr. Wenger explained the reason for this statement. (Wenger, Tr. 523-24.) He pointed out that planning for an evacuation of that duration would allow people to gather the items enumerated in the booklet as appropriate to take, and that the Red Cross would be able to provide for an evacuation lasting longer than the postulated two-day period. (Id., Tr. 523.) Mr. Wenger also noted that if residents were advised to take items for longer than that period, gathering such items prior to an

^{8/} At the October 29, 1985, hearing, the Board requested additional information from the Staff/FEMA and the Applicant regarding the lack of information on respiratory protection in the Braidwood brochure. (Tr. 545-46, 562.) The Staff/FEMA and the Applicant submitted filings responding to the Board. "NRC Staff And FEMA Response To Licensing Board's October 29, 1985 Order Requesting Interpretation of 'Respiratory Protection' As Used In NUREG-0654/FEMA-REP-1, Rev. 1 Section G.1.c.," December 19, 1985 [hereafter "Staff/FEMA Response"]; "Commonwealth Edison's Response To The Board's Questions Regarding Respiratory Protection," January 21, 1986. The Applicant's Findings (¶¶ 20-22) address the position presented by Applicant in its filing, and the Staff does not repeat that discussion here. The Staff notes that the position of FEMA (as expressed in the policy statement included as part of the Staff/FEMA filing) is essentially that 1) although NUREG-0654 does not specifically require language on respiratory protection in brochures, FEMA recommends that such language be incorporated therein; and 2) the absence of language on respiratory protection does not constitute a basis for a planning inadequacy. As the Staff noted in its Response, supra, the FEMA Policy Statement is consistent with NRC policy and guidance as expressed in NUREG-0654. Staff/FEMA Response, at 2.

evacuation could interfere with the ability of residents to evacuate in time. (Id., Tr. 523-24.)

79. On cross-examination, Intervenor also established that the booklet would be enhanced if it included information concerning a radioactive plume. (Butterfield, Tr. 497, 504; Wenger, Tr. 524-27.) However, according to Mr. Wenger, the lack of such information does not affect the acceptability of the booklet. (Id., Tr. 526-540.) At any rate, the Applicant has committed to modify the language in the booklet in its next scheduled issuance to include (at the end of the last full paragraph in Section 8) the following language regarding a radioactive plume or cloud:

The most probable form of radiation which would be found beyond the plant boundaries would be contained in a cloud or plume. This cloud would move in the prevailing wind direction and would dictate the areas for potential shelter or evacuation recommendations. ^{g/}

(Butterfield, Tr. 1026-27.)

9/ There is no support in the record for the position (Intervenor's Findings, ¶ 5) that the above addition is inadequate because it is to be added at the end of a paragraph (rather than in a separate paragraph) and is not keyed to earlier passages or sections (Id., ¶ 7).

Intervenor's objection here is to the format of the information, rather than to its substance. Inasmuch as the Board finds its substance to be adequate, the Board declines to adopt Intervenor's position regarding details of its placement or reference to earlier sections. Similarly, there is no support in the record, and Intervenor does not cite any, for the position espoused by Intervenor (Intervenor's Findings, ¶ 6) that the language to be added must include information about the physical or radioactive characteristics of a radioactive plume. Intervenor ignores the evidence in the record that such information might not be meaningful to members of the public and might serve to so confuse and frighten them that they wouldn't be able to carry out the directions given by EBS messages in the event of a radiological emergency. (Fairrow, Tr. 1034.)

80. In a similar category to Intervenor's objection in her proposed findings to the format of the information to be added to the booklet regarding a radioactive plume, is her objection to Section 1 of the booklet, "bullet" 4. (Intervenor's Findings, ¶ 8.) In this quibbling over possible refinements to the booklet, Intervenor ignores the basic purpose of this section of the booklet, which is to draw the public's attention to the siren's sounding and to get them to radios. (Wenger, Tr. 536.) There is ample support in the record that the booklet is acceptable as written (e.g., Wenger, ff. Tr. 518, at 6, 8.) Although refinements such as those Intervenor argues are necessary might possibly enhance the booklet, the record does not establish that without such refinements, the booklet is deficient.

81. On cross-examination and in Intervenor's Proposed Findings, Intervenor raised the issue of the effect of any illiteracy on the public's ability to be informed prior to an accident. (Tr. 466; Intervenor's Findings, ¶ 2). Although Ms. Rorem elicited admissions from Mr. Butterfield and from Mr. Wenger that no studies of illiteracy in the Braidwood EPZ had been conducted by either the Applicant or by FEMA (Butterfield, Tr. 466, 483; Wenger, Tr. 527.), there is no support in the record for Ms. Rorem's conclusion in her proposed findings (¶ 2) that "Applicant's public information program assumes that the adult population is able to read." (Id.). Mr. Butterfield explained that a special effort had been made to simplify the information in the booklet and make it readable. (Butterfield, Tr. 490.) More importantly, in response to a question on how Applicant ensures that all residents of a household would

read and understand the brochure, Mr. Butterfield also explained that the booklet states, on the first page, that the recipient of the booklet at a particular house should share the booklet with other members of the household. (Id., Tr. 482.) Thus, it is likely that any illiterate residents of the EPZ would be informed of the contents of the booklet by literate residents. Finally, there is no support in the record for Intervenor's conclusion that the illiterate would not make their "inabilities" known.

82. Intervenor also raised on cross-examination (Tr. 477) and in her proposed findings (§ 2) the issue of how visually impaired residents of the EPZ would be informed of relevant information in the booklet. Mr. Butterfield admitted on cross-examination that there were probably visually impaired people within the Braidwood EPZ. (Butterfield, Tr. 477.) However, he expected that such people would see to it that a sighted person read or explained the booklet to them. (Id., Tr. 477-78.) In this regard, the record is devoid of any support for Intervenor's speculation regarding the unwillingness of visually impaired people to seek the assistance of sighted people.

83. Mr. Butterfield was questioned about the Applicant's method of delivering a booklet to every resident of the EPZ. (Tr. 480-82, 498-500, 504-506, 512-13.) Mr. Butterfield explained that the Applicant maintains a list which includes every mailing address in the EPZ and also every ratepayer in those instances where the ratepayer's address is different from the service address. (Butterfield, Tr. 480.) According to Mr. Butterfield, Applicant's program to develop the mailing list includes comparison of the addresses billed for electricity and the hook-ups.

(Butterfield, Tr. 480.) If there is a difference, a brochure is mailed to both the party being billed for electricity at a particular residence and the resident of that house. (Id., Tr. 480, 498-99.) Thus, a booklet would be sent to every residence having a hooked-up meter, irrespective whether the billpayer lives at the residence. (Id., Tr. 505.) If there is a difference between the mailing address and the meter address, a booklet would be sent to both addresses. (Id., at 506.) However, in response to a hypothetical question posed by Ms. Rorem, Mr. Butterfield stated that there could be a situation in which the resident of a house would not receive a brochure. (Id., Tr. 513.) ^{10/}

84. During cross-examination, Mr. Butterfield explained (with respect to Answer 16 on page 14 of his pre-filed testimony) that the "prompt public notification system" mentioned there is the siren system. (Butterfield, Tr. 510.) Mr. Butterfield noted that there are twenty-three of these electronic sirens having public address as well as siren capability, which are located in areas such as parks, where transients might be. (Id., Tr. 510-11.) ^{11/}

85. The Board notes that Intervenor incorrectly states in her proposed findings on "pre-accident information" (Intervenor's Findings, ¶ 1, pp. 2-3) that the information booklet is the only method ". . . by which the public within the EPZ will be notified and what their initial

^{10/} This does not mean, as Intervenor suggests in her proposed findings (¶ 9), that the Applicant's entire means for distributing the booklet is inadequate. There is no support in the record for the position that Applicant should be required (or permitted) to determine who is living in every private home in the Braidwood EPZ.

^{11/} This subject is discussed in more detail infra.

actions should be in the event of a radiological emergency originating at the station. . . ." (Id.) As is evident from the preceding discussion (with respect to "Pre-emergency notification"), the IPRA uses "public information booklets" as the primary means of disseminating information prior to an accident, but it also calls for annual press briefings, the designation of public information spokespersons, and systematic rumor control. (Wenger, ff. Tr. 518, at 7.) To the extent Intervenor implies (Intervenor's Findings, p. 3) that additional pre-accident information is required, Intervenor is in error.

86. Intervenor also states that the "exact wording" of the signs offered to recreational areas was not provided. As previously stated, the testimony of Applicant's witness Mr. Butterfield specifically addressed the language the signs will essentially contain. (Butterfield, ff. Tr. 465-B, at 14.) To the extent Intervenor implies the language must now be cast in stone, Intervenor is in error. Moreover, Intervenor ignores the purpose of this language, which is to provide additional awareness of the potential for an emergency and what a transient's initial response should be. (Id.)

87. Similarly, there is no support in the record (and indeed Intervenor cites none) for Intervenor's conclusion that because the signs do not state that the area is within the Braidwood EPZ, members of the public are not aware of the possibility of a radiological emergency and therefore are not properly informed on how they will be notified in the event of such an emergency. (Intervenor's Findings, at p. 4.) Intervenor ignores the conclusion of Applicant's witness Mr. Butterfield that in his opinion, the signs would not carry additional meaning to

persons away from radios, if the signs stated that the area is within the Braidwood EPZ. (Butterfield, Tr. 738-39.) Moreover, as Mr. Butterfield pointed out, the sirens alluded to in the sign may signify emergencies completely unrelated to Braidwood, such as tornadoes or floods. (Id., Tr. 736.) The signs thus would be used for many purposes. (Id., Tr. 735.) As Mr. Butterfield noted, in most of the recreational areas in the Braidwood EPZ, sirens would be followed-up by verbal messages. (Id., Tr. 736.) Moreover, the Braidwood information booklet, which would supplement the signs by providing information specifically related to the Braidwood EPZ, has been provided to all recreation areas. (Fairrow, Tr. 743.)

88. On cross-examination and in her proposed findings, Intervenor suggested that the booklet should contain additional information on how radiation affects the body or what the possible consequences of nuclear accidents might be. (Intervenor's Findings, ¶ 3.) Although an admission was elicited during cross-examination that "educational information" is provided in various forms on other potential dangers to which the population within the Braidwood EPZ may be exposed (e.g., tornadoes) (Fairrow, Tr. 1046-47), there is no support in the record for the conclusion that the booklet is deficient because of the lack of the type of "educational information" which Intervenor believes should be available. It is not at all clear that it would be beneficial for members of the public to have this

type of information, particularly during an emergency. (Fairrow, Tr. 1034-35.) ^{12/}

Conclusion Regarding Pre-Emergency Public Notification

89. The overwhelming evidence in the record before the Board convinces the Board of the adequacy of both the Braidwood information booklet which is the vehicle for pre-emergency public notification and the plan for its dissemination (the public information program). There is sufficient information in the booklet to meet the relevant criteria of NUREG-0654 (Evaluation Criteria II.G.1 and II.G.2). Moreover, the IPRA provisions for advance arrangements with the news media and procedures for coordinated dissemination of information to the public by the media meet the requirements of 10 C.F.R. § 50.47(b)(7).

Dissemination of Information At The Time of An Accident

90. There are three basic ways that safety information would be accomplished at the time of an accident. (Wenger, ff. Tr. 931, at 9.) First there is the PANS. (Id.) Secondly, there is the EBS; and thirdly, there is the JPIC. (Id.)

91. The PANS in the Braidwood EPZ relies primarily on sirens to alert people to the existence of an emergency and the need to tune their radios to an EBS station. (Wenger, ff. Tr. 931, at 9.) As discussed below in connection with Offer of Proof Issue 3, some of the sirens and

^{12/} Mr. Butterfield noted that Applicant's public speaking bureau has programs for schools or other organizations about Applicant's nuclear activities. (Butterfield, Tr. 1048.)

all of the mobile alerting vehicles used in this PANS have the capability to deliver voice messages. (Id., at 9-10.) ^{13/}

92. The EBS is activated by State and local officials, as discussed previously. (Wenger, ff. Tr. 931, at 10.) The EBS is the primary means of delivering scenario-specific information to the public at the time of an accident. (Id.) The EBS system uses pre-planned scripts to the fullest extent possible, but it also has the flexibility to carry particularized information as needed. (Id.)

93. The JPIC, which is discussed above, is the principal means by which State and local officials communicate information to the general news media. (Wenger, ff. Tr. 931, at 10.)

94. Mr. Wenger concluded that these means of communicating safety information to the public at the time of an accident are adequate. (Wenger, ff. Tr. 931, at 10.) He based his conclusion on 1) the test of the emergency response plan for the Braidwood Station, which was on November 6, 1985; 2) the evaluation of the exercise, in which he took part; and 3) the evaluation of the plan by the Regional Assistance Committee (RAC) in which he also took part. (Id., at 10-11.) Mr. Wenger concurred in the RAC finding that the plan is adequate in this regard. (Id., at 11.) The Board concurs in Mr. Wenger's conclusion.

^{13/} Mr. Wenger explained the difference between route alerting and mobile public alerting. (Wenger, Tr. 923.) He stated that route alerting is part of the PANS (i.e., the outdoor siren system). (Id.) Mobile public alerting involves emergency vehicles equipped with speaker systems, which would drive through an area if it were necessary to supplement the primary outdoor warning siren system. (Id.)

B. Offer of Proof Issue 2

95. Offer of Proof Issue 2 states:

Applicant must develop and demonstrate its capability to provide, through scripts and/or other media information, substantive emergency information to adequately inform the public of emergency information in the event of an accident at the Braidwood Station through all radio, TV or EBS stations in the ingestion pathway zone, so as to enable the public to effectively evacuate in the event of an emergency and to effectively re-enter the affected zone in the event of an emergency.

96. Intervenor raised four specific issues under Offer of Proof Issue 2: 1) that none of the shelter or evacuation messages contain general instruction as to the actions to be taken, or what provisions will be made if an EPZ resident or member of his/her household is at a recreation site at the time these messages are broadcast; 2) that none of the shelter or evacuation recommendation messages in the State plan provide instruction as to what to do if a transient in the EPZ at the time of an emergency does not have a home, workplace, or home or business of a friend in which to shelter, or other fixed location; 3) that the information in the shelter and evacuation messages concerning school children, nursing home patients and hospital patients is not sufficient to deter individuals responsible for those persons from going to or calling the facilities in the event of a radiological emergency at Braidwood; 4) no provision is made in SOP-11, "Braidwood Station EPZ Re-entry" for the release of the re-entry messages by media stations throughout the Braidwood ingestion zone so as to insure that persons who are sheltered in private homes and rural areas as well as congregate care centers will receive notification of the re-entry recommendations.

97. Mr. Wenger addressed the dissemination of information at the time of an accident which will enable the public to evacuate the EPZ safely, as well as the dissemination of information after an accident which will enable the public to re-enter the EPZ safely. (Wenger, ff. Tr. 931, at 11.) The Governor makes the decision whether to shelter or evacuate. (Id., at 12.) The County Emergency Services and Disaster Agency (ESDA) Coordinators activate the Emergency Broadcast System both when evacuation is ordered and at the time the IDNS determines that unrestricted re-entry is safe. (Id.)

98. As previously stated, the Braidwood Station public information booklet has been published and distributed to households, organizations, businesses, institutions, industries, individuals, and bulk quantities have been made available at locations which the public (including transients) frequents. (Wenger, ff. Tr. 931, at 12.) The booklet provides significant general emergency planning information which directs the attention of readers to actions to be taken for their protection. (Id.) It also directs readers to the sources of more precise emergency information. (Id.)

99. The IPRA, Volume VII and SOPs contain prescribed messages which are to be read by officials over the EBS radio and prescribed messages which are to read to the media by information specialists at the JPIC. (Wenger, ff. Tr. 931, at 12.) The information to be read will recommend the protective actions to be taken based on the recommendations of the utility and the IDNS. (Id., at 13.) The recommended protective actions would be dependent upon the classification of the accident and plant conditions. (Id.) The same delivery system used to notify the population of the emergency and advise them of the

protective actions will be used to notify the population of the precautionary procedures in entering the affected evacuated area. (Id.) The post accident information gathered by the IDNS will determine if re-entry would be restricted or unrestricted. (Id.)

100. Vol. VII-7-SOP-11 is entirely devoted to, and deals at length with, the procedures to be followed by local officials in allowing the public safely to re-enter the 10-mile EPZ. (Wenger, ff. Tr. 931, at 13.) Once it has been determined that unrestricted re-entry is safe, the County ESDA Coordinators will initiate the broadcast EBS messages. (Id.) At the same time, they will coordinate with the JPIC so that the same information is available to all the news media in addition to the EBS stations. (Id.)

101. The scripts for the messages to be broadcast over the EBS and released to other new media through the JPIC are intentionally general. (Wenger, ff. Tr. 931, at 13.) It is expected that specific information will be added at the time of their dissemination so that they will be more complete and accurate. (Id.) The scripts for the EBS announcements of unrestricted and restricted re-entry appear as Attachment D to Vol. VII 7-SOP-11. (Id., at 13-14.)

102. Mr. Wenger concluded that the IPRA provides an efficient way of getting information to the public promptly and that the content of the messages has been carefully thought out to protect the safety of the public. (Wenger, ff. Tr. 931, at 15.) He based that conclusion on the November 6, 1985, joint radiological emergency exercise, during which the Applicant, and State and local governments effectively demonstrated the capability to efficiently implement the procedures and messages to inform

the population of the simulated emergency through the several delivery systems devised by the Applicant, and State and local governments. (Id.) FEMA had exercise evaluators at key locations to oversee the demonstration of disseminating emergency information to the affected population. (Id.)

103. The testimony of Mr. Butterfield and Ms. Fairrow (specifically regarding Offer of Proof Issue 2) indicates that over 100 pre-scripted EBS messages are provided in IPRA for the respective use of the State of Illinois and each of the three counties in the EPZ. (Butterfield, et al., ff. Tr. 690, at 13.) IPRA Vol. I, Ch.2; Vol. VII, SOP-8. There are messages for four different types of situations: 1) "for information only" messages are used when no protective actions have been recommended for the public but when the public should be made aware of the situation at the power plant so that they may prepare for a possible protective action recommendation; 2) "take shelter" messages are broadcast when the Governor has issued a take shelter recommendation; 3) "evacuate" messages are used when the Governor has recommended an evacuation; and 4) "re-entry" messages are used when it is safe for the public to return to an evacuated area. (Id., at 13-14.) IPRA Vol. I, Ch. 2, pp. 13-18; IPRA Vol. VII, SOP-8, SOP-11. Additional pre-scripted messages are provided for transmission over speaker-equipped siren systems in public areas and mobile public address systems. (Id.)

104. The Governor's "take shelter" message (which would be issued by the Governor or, in his absence, the IESDA Director), immediately indicates the importance of the message and provides a general description of the area affected by the take shelter recommendation.

(Butterfield, et al., ff. Tr. 690, at 16.) The message identifies the nuclear plant affected and requests that the public take "immediate shelter." (Id.) The nature of the incident is also briefly described. (Id.) The Governor's message instructs the public not to evacuate and explains that doing so may result in unnecessary radiation exposure. (Id.) The message informs those not inside to immediately proceed to their homes, work places or other familiar locations and provides specific instructions for securing shelter against radioactive emissions. (Id.) It also instructs individuals not to make unnecessary telephone calls, and to use the telephone only for emergency situations in order to leave the lines free for emergency personnel. (Id., at 16-17.) The message states that school children and nursing home residents are being well attended to by trained personnel, that there is no need to go to such locations and warns against entry into the area affected by the take shelter recommendation. (Id., at 17.) Traffic and access control posts will help assure compliance. (Id.) Finally, listeners are instructed to stay tuned to the EBS station for further information. (Id.) IPRA Vol. I, Ch. 2, pp. 15-16.

105. The counties' "take shelter" messages are similar to the Governor's message but specifically identify the area affected by the take shelter recommendation by geographic and political boundaries. (Butterfield, et al., ff. Tr. 690, at 17.) Such messages instruct the public to prepare for a possible evacuation recommendation by packing essential clothing, medical supplies and special dietary food for two days. (Id.) Additional situation specific information may be added by the county ESDA Coordinators. (Id.) E.g., IPRA Vol. VII, SOP-8.

106. The Governor's "evacuation" recommendation message would be issued by the Governor, or in his absence, the IESDA Director, to inform the public that an evacuation has been recommended for a portion of the EPZ. (Butterfield, et al., ff. Tr. 690, at 17.) The message immediately notifies the public of the importance and seriousness of the information to be provided, briefly describes the nature of the emergency, and instructs evacuees to pack necessary clothing, medical supplies and food for special diets, to be ready to leave within a designated period of time and to stay tuned to the EBS station for information from a county representative on the direction to evacuate and the routes to be used. (Id., at 17-18.) IPRA Vol. I, Ch. 2, pp. 17-18. Additionally, it states that those persons in areas not specifically identified should not evacuate, informs the public that all school children and nursing home residents are being provided for, and warns against entering the area being evacuated for any reason. (Id.)

107. Unlike the Governor's message, the counties' "evacuation" messages convey information specific for the evacuation of each area. (Butterfield, et al., ff. Tr. 690, at 18.) Each of the messages contains a description of the area affected by the evacuation by geographical and political boundaries. (Id.) The pre-scripted messages also provide, among other things, the following information as applicable: 1) the evacuation routes to be used; 2) the cities where shelters are being opened; 3) the specific facilities being used as shelters; 4) the schools being evacuated and the specific shelter to which each school within the affected area is being relocated; 5) instructions to pack clothing, medical supplies and food for special diets; 6) a telephone number for

mobility-impaired persons, who have not made prearrangements, to call for assistance; 7) instructions for persons who need public transportation; and 8) instructions for pet owners. (Id., at 18-19.) The county ESDA Coordinators may add any situation specific information necessary. (Id., at 19.) E.g., IPRA Vol. VII, SOP-8.

108. The sirens at recreational areas are equipped with a public address capability and will broadcast the evacuation message even if only a take shelter recommendation has been issued. (Butterfield, et al., ff. Tr. 690, at 19.) As necessary, additional situation specific information for persons in recreational areas may be included in the counties' EBS messages. (Id.)

109. Additionally, county ESDA Coordinators have a call list including recreational area contact persons, to be used to inform those facilities of the evacuation recommendation. (Butterfield, et al., ff. Tr. 690, at 19.) Signs will be offered to each of the recreational areas which will direct persons to tune their radios to the EBS station in the event of a public notification of an emergency. (Id.) The EBS take shelter and evacuation messages both warn against entering the area affected by the protective action recommendation. (Id., at 20.) Additionally, traffic and access control posts will help ensure compliance. (Id.)

110. Through the Prompt Alert and Notification System ("PANS") and EBS, transients will be alerted to the emergency and will be informed regarding shelter and evacuation recommendations. (Butterfield, et al., ff. Tr. 690, at 20.) Traffic and access control posts will require such individuals to leave the affected area, and will prevent their entrance into

the affected area. (Id.) Vehicles with public address systems can also provide appropriate information. (Id.) Additionally, IPRA Vol. VII, SOP-8, provides that "special facilities" are to be notified of the protective action recommendations. (Id.) Special facilities include locations where transients are likely to be found including recreational areas, hotels, motels, and industries (IPRA Vol. VII, SOP-8 pp. 5, 9 and 13), and are listed in Attachments F, G and H to SOP-8 by sector and distance from the Braidwood Station. (Id., at 20-21.) These attachments also identify the county or municipality which is responsible for notifying each facility of the protective action recommendation. (Id.) IPRA Vol. VII, SOP-8, Attachments F-H.

111. Intervenor raised on cross-examination and in her proposed findings the issue of deterring individuals responsible for school children or persons at recreation areas from picking up those children or other individuals in the event of a radiological emergency at Braidwood. (e.g., Tr. 906; Intervenor's Findings, ¶¶ 9-12.) Ms. Fairrow admitted on cross-examination that neither the prescribed EBS messages nor the Braidwood booklet say how quickly children will be evacuated from schools or recreation areas. (Fairrow, Tr. 846.) She also acknowledged that it would not be unreasonable for a parent to assume, in a particular situation, that the children could be evacuated more quickly by the parent than by a bus coming to evacuate the children. (Id., Tr. 851, 1016.) However, the messages do assure parents and other responsible persons that children are being cared for by trained people (Id., Tr. 844-45; 910-11) and, if evacuation is necessary, that they may be picked up at specified congregate care centers. (Id., Tr. 852-53;

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Tr. 1037-38.) In addition, both the booklet and the EBS messages discourage parents from going to such special facilities as schools and recreation areas to pick up their children. (Id., Tr. 824-25; 843.) Ms. Fairow explained why parents are discouraged from going to schools to pick up their children. (Id., Tr. 906-09.) While this does not prevent a parent from going to a school or recreational area when that might be more efficient, it does discourage unnecessary traffic. (Id., Tr. 854-55.) ^{14/} Moreover, traffic and access patrols during a radiological emergency would serve to deter people from going to a school or recreation area in the event of a radiological emergency at Braidwood. (Id., Tr. 852.)

112. The prescribed EBS messages do not contain information about the hazard of radiation at the time of re-entry into the EPZ after an accident. (Wenger, at Tr. 951-52.) However, situation-specific messages would be developed at the time with the advice of the Illinois Departments of Nuclear Safety, Agriculture, and Public Health. (Id.)

^{14/} Intervenor does not state what information in either the booklet or the EBS messages would be sufficient to prevent a parent or other responsible person, in a radiological emergency at Braidwood, from going to a school or recreation area to pick up children or others. Moreover, Intervenor provides no record citations (indeed there are none), for the statements in Intervenor's Findings (first paragraph, p. 14) regarding the distance of residences in the Braidwood EPZ from schools or recreation facilities or the initial distance of evacuation buses from the locations to be evacuated.

Furthermore, Intervenor, without any support in the record or precedent, suggests that there must be an absolute guarantee, that in no circumstances would a parent or other responsible person seek to pick-up a child or other individual, from a school or recreation area, in the event of a radiological emergency at Braidwood. The Board rejects the notion that such a guarantee is a prerequisite for adequate emergency planning.

Conclusion Regarding Offer of Proof Issue 2

113. There is ample evidence to convince the Board that in the event of a radiological emergency at Braidwood: 1) the provisions of IPRA for notifying persons in recreational areas ensures that adequate protective measures can and will be taken; 2) the provisions of IPRA for notification of transients within the EPZ are adequate and will be implemented to permit adequate protective actions for such persons (10 C.F.R. § 50.47(a)(2)); 3) the information in the booklet, along with the description of the nature of the emergency contained in the EBS messages and the presence of traffic and access control posts, provides reasonable assurance that persons will be deterred from attempting to go to or call schools or nursing homes in the EPZ; 4) the IPRA provides adequate means for dissemination of information concerning re-entry to persons at shelters, including private homes, outside the EPZ.

C. Offer of Proof Issue 3

114. Offer of Proof Issue 3 states:

Applicant must demonstrate its capability to adequately inform residential and transient populations within the EPZ in the event of an emergency so as to enable the populations to effectively evacuate or shelter including development of the specific means and content of such communications to specific populations.

115. Mr. Wenger's testimony on Offer of Proof Issue 3 described the ways in which officials will deliver information to the public at the time of an accident and addressed the means used to target particular segments of the population of the EPZ. (Wenger, ff. Tr. 931, at 15-20.)

116. The Governor of Illinois or his representative will first make a general announcement regarding the accident. (Wenger, ff. Tr. 931, at 16.) The County ESDAs initiate the activation of the PANS, as explained earlier. (Id.) The County ESDA's are also responsible for the selections and broadcast of scenario-specific messages. (Id.) When the licensee notifies the State of the existence of an emergency, the State evaluates the situation and, if necessary, notifies the county sheriffs' dispatchers to activate the system. (Id.) The system includes sirens and appropriate announcements through those sirens with voice capability, and the mobile alerting as required. (Id.) The prompt notification system will alert the public to tune to the EBS stations which are identified on page 15 of Vol. VII, Chapter 1, and in the public information booklet for Braidwood Station. (Id.) The scripts for the prompt notification announcements and the EBS broadcasts are included as Annex 1A to this Chapter, and Volume VII-7-SOP-8 Attachments C, D and E. (Id.) The prompt notification system will be targeted to specific populations. (Id., at 17.) The 10-mile EPZ is divided into sixteen sectors of 22.5 degrees and each sector is divided into three zones. (Id.) The first zone is from zero to two miles from the power plant; and the second is from two to five miles from the plant; and the third is from five to ten miles. (Id.)

117. The decision making process by which the State determines when to notify the public of an accident includes a system for determining which of these sectors and zones are affected. (Wenger, ff. Tr. 931, at 17.) The messages which are generated by this process are particularized in that only the affected areas given specific route evacuation

instructions in the event an evacuation is ordered. See Attachments C, D., and E to Vol. VII-7-SOP-8. Generally speaking, the affected population is that which is in the down-wind plume pathway EPZ. The population within the 2-mile radius of the station will be sheltered or evacuated prior to or simultaneously with any sector determined by field survey teams and/or the conditions of the nuclear power station during the accident. (Id.) Public notification of protective actions is based on distance and direction from the nuclear power station. (Id.) Prescribed messages contained in IPRA Volume VII SOPs Braidwood 7-SOP-8 are by mile/sector combinations.. (Id.) The IESDA has written the EBS prescribed messages to use familiar landmarks (roadways, waterways, political boundaries, or other geophysical features) for easy identification by the public. (Id.)

118. The transient population receives the emergency notification in much the same manner as the residential population. (Wenger, ff. Tr. 931, at 18.) In addition to the mailing of the public information booklet which contains emergency preparedness information and instructions, the State and applicant made bulk distribution to organizations, businesses, institutions, industries, and government agency and department offices and other places where the public and transients frequent. (Id.) The booklet directs attention to sources for immediate emergency information. (Id.) When the accident escalates to the point it becomes necessary to move a population, law enforcement personnel and other assigned personnel will be positioned at roadway junctions to direct traffic out of the area being evacuated and away from the plume to the reception and care centers. (Id.) The IESDA is studying the placement

of signs in facilities where transients frequent which directs them, upon hearing the outdoor sirens, to listen to the primary EBS radio station for specific instruction. (Id.)

119. The IPRA does not make any specific provisions for people who might not be near a radio or television. (Wenger, ff. Tr. 931, at 18.) However, the sirens in the recreational areas, where the situation is most likely to occur, have the capacity to carry voice messages. (Id., at 18-19.) This public address capability could direct individuals to the nearest official source of information. (Id., at 19.) In addition, the mobile public alerting component of the PANS has the same capability. (Id.)

120. Mr. Wenger concluded that the provisions of the IPRA for the prompt notification of the residential and transient populations of the EPZ to be adequate. (Wenger, ff. Tr. 931, at 19.) It was also his judgment that the plan can and will be implemented so as to give the public adequate information to allow safe evacuation or sheltering. (Id.) The emergency planning elements and procedures for notifying the resident and transient populations have been reviewed by the Regional Assistance Committee ("RAC") and found to be adequate. (Id.) The implementation of the procedures and messages was a part of the November 6, 1985, joint radiological emergency exercise. Mr. Wenger participated in the evaluation of this exercise. The implementation of the delivery system was found to be effective and adequate. (Id.)

121. The Applicant's testimony on Offer of Proof Issue 3 indicated that direct transmission of protective action recommendations to the public within the EPZ in the event of an emergency at Braidwood Station is the

responsibility of offsite authorities. (Butterfield, et al., ff. Tr. 690, at 26.) CECo, however, is responsible for the initial notification of offsite authorities (IPRA Vol. VII, Ch. 3, p. 2; IPRA Vol. I, Ch. 5, p. 11), and for continuing communication with those authorities in order to provide them with accurate and timely technical information regarding the events and conditions at the Braidwood Station site, including expected radiological releases to the environment. (Id.) IPRA Vol. I, Ch. 3, p. 2. It is important to note, however, that while CECo will transmit news information to the media, such information is not relied upon to ensure that the public within the EPZ is apprised of protective action recommendations. (Id.) Nevertheless, such information may supplement the protective action information provided through the EBS. (Id.)

122. The GSEP contains detailed provisions governing CECo's responsibility for the notification of offsite authorities. (Butterfield, et al., ff. Tr. 690, at 27.) The precise manner in which CECo carries out that responsibility depends, in part, upon the nature and severity of the emergency. (Id.) In particular, the GSEP delineates a number of emergency conditions covering the spectrum of emergency situations which may occur at Braidwood Station. (Id.) GSEP p. 5-1; GSEP BWA p. 5-1. Those emergency conditions are classified as: (1) Unusual Event; (2) Alert; (3) Site Emergency; and (4) General Emergency. (Id.) GSEP BWA p. 5-1. These conditions correspond to the emergency classification system provided in Appendix 1 to NUREG-0654. (Id.)

123. An "Unusual Event" is an event which indicates a potential degradation of the level of safety of the plant. (Butterfield, et al., ff. Tr. 690, at 27.) An "Alert" is declared when there is or has been an

actual or potential substantial degradation of the level of safety of the plant. (Id.) A "Site Emergency" is an event which involves actual or likely major failures of plant functions needed for the protection of the public. (Id.) A "General Emergency" involves actual or imminent substantial core degradation or melting with the potential for loss of containment integrity. (Id.) GSEP BWA p. 5-2. GSEP Table BWA 5-1 provides specific initiating conditions for each of these emergency classes at the Braidwood Station. (Id., at 28.)

124. The medium through which CECo informs offsite authorities is the Nuclear Accident Reporting System (NARS). (Butterfield, et al., ff. Tr. 690, at 30.) NARS links the Station Control Room, Technical Support Center ("TSC"), Emergency Operations Facility ("EOF"), and appropriate offsite authorities via a dedicated telephone communications system, thus limiting access to the designated organizations. (Id.) GSEP p. 7-7. The responsible CECo official, upon being informed of an event that may represent an emergency condition, will complete a NARS form and communicate the information contained therein to appropriate offsite authorities over the dedicated phone lines. (Id.) NARS is monitored twenty-four hours a day at the IESDA Dispatch Center, the IDNS REAC, and designated police or sheriff's dispatchers in each of the three counties in the EPZ. (Id.) In addition to NARS, there are other phone lines, microwave systems and radio systems linking onsite and offsite emergency facilities. (Id.) GSEP BWA pp. 7-3, 7-4; IPRA Vol. I, Ch. 3, pp. 25-26.

125. Completion of the NARS form enables prompt identification of predesignated sectors of the EPZ which are affected by the emergency

based upon the prevailing wind conditions. (Butterfield, et al., ff. Tr. 690, at 31.) Use of the NARS form insures that essential information is promptly and accurately transmitted to appropriate offsite authorities and permits prompt selection of the appropriate EBS messages. (Id.) If the initial emergency condition is classified as an Unusual Event, Alert or Site Emergency, the responsible CECo official will simultaneously notify IESDA and the IDNS. (Id.) GSEP Figures 6.1-1(B), 6.1-1(C). If the initial condition is classified as a General Emergency, designated county authorities will also be notified simultaneously. (Id.) GSEP Figure 6.1-1(D). (Id.) In the case of Braidwood, the county authorities are the designated representatives of Grundy, Will, and Kankakee Counties, the three counties within the EPZ. (Id.) NARS permits simultaneous transmission of the emergency information to all of these authorities. (Id.)

126. CECo must contact those officials within fifteen (15) minutes of classifying the emergency condition. (Butterfield, et al., ff. Tr. 690, at 31.) GSEP p. 3-4. In addition, plant data, which enables IDNS to perform its own evaluation of the condition of the plant, will be continuously communicated via a separate, dedicated datalink directly to IDNS. (Id., at 32.) Additionally, gaseous and liquid effluent monitoring datalinks will, in the future, be established in order to provide such information to IDNS. (Id.) Furthermore, additional information can and will be communicated, as necessary, over the other communication links described above. (Id.) CECo will update the NARS information and communicate it to the appropriate offsite authorities within fifteen (15) minutes of reclassifying an emergency condition (upgrading or down-

grading). (Id.) GSEP p. 3-4. Additionally, CECo will provide hourly updates of emergency information. (Id.) EPIP EOF-10 p. 1. (Id.)

127. Upon receiving notice from CECo, IESDA will verify the NARS message via commercial telephone lines, consult with IDNS regarding the general nature of the incident, and then notify the county dispatchers of the situation at Braidwood Station via NARS. (Butterfield, et al., ff. Tr. 690, at 32-33.) The county dispatchers will also verify the NARS message and will then call their respective county ESDA Coordinators who will activate their EOCs and their emergency response personnel as necessary, even if the NARS message indicates that no protective actions have been recommended but that the counties should prepare for a possible recommendation. (Id., at 33.) IPRA Vol. VII, SOP-1; e.g., IPRA Vol. VII, Ch. 2A, pp. 5, 9. Provisions exist in IPRA to notify and mobilize county officials on a twenty-four hour basis and to maintain EOC operations around the clock. (Id.) The county call list contains each official's home and business telephone numbers and the home and business telephone numbers of each official's alternate. (Id.) Alternates have been designated to facilitate twenty-four hour operations of the EOCs. (Id.) In addition, the counties in the Braidwood EPZ have twenty-four hour dispatching capabilities. IPRA Vol. VII, SOP-2,3,4 and 5, Attachments B-L; e.g., IPRA Vol. VII, Ch. 2, pp. 1, 5, 7 and 45.

128. Upon receipt of CECo's NARS information, including its protective action recommendation, IDNS analyzes all available technical information and assesses the implications and consequences of the radiological incident. (Butterfield, et al., ff. Tr. 690, at 33-34.) IPRA Vol. I, Ch. 6, p. 1. Based upon this assessment, IDNS determines and

provides their protective action recommendations to the Governor and IESDA simultaneously. (Id.) Concurrent with the IDNS determination, IESDA determines the feasibility of implementing protective actions. (Id.) IESDA simultaneously advises the Governor and IDNS of their determination. (Id.) The Governor makes the final decision concerning protective actions and commitment of State resources. (Id.) Upon receipt of the Governor's recommendations, IESDA will inform the counties in the EPZ of the recommendation via NARS. (Id.) Within fifteen (15) minutes after this notification, the counties will activate the local EBS station and the PNS. (Id.) IPRA Vol. VII Ch. 1, pp. 15-16; IPRA Vol. VII, SOP-6.

129. The EBS stations designated for the Braidwood EPZ broadcast over two frequencies: 1340 AM (WJOL) and 96.7 FM (WLLI). (Butterfield, et al., ff. Tr. 690, at 34.) The method by which the EBS station is activated is described in IPRA Vol. VII Ch. 1, pp. 15-16. (Id.) The State and the three county ESDA Coordinators will provide messages to the EBS stations by telephone after sheltering or evacuation has been recommended. (Id., at 34-35.) The State, through the Illinois Information Service, will contact the designated EBS station News Director, General Manager or their alternate and notify them that the Governor or IESDA Director is about to recommend protective action for the public. (Id., at 35.) After receipt of a code word, the station will begin recording the State's message. (Id.) The counties' messages will be received in a similar manner. (Id.) Once received, the designated EBS station promptly broadcasts the EBS messages. (Id.) The EBS messages from the designated EBS stations will be automatically relayed to

nearby EBS affiliates for rebroadcast. (Id.) The counties within the EPZ may also notify other local radio stations of the emergency information. (Id.)

130. Receipt of the NARS information, particularly the identification of the predesignated geographic sectors affected and the protective action recommendation, enables the ESDA Coordinators to turn directly to a page of their SOPs which corresponds to the sectors affected and protective action recommendation, to select the appropriate pre-scripted EBS message. (Butterfield, et al., ff. Tr. 690, at 36.) Once the general protective action information is identified, the county, ESDA Coordinators may add specific additional information. (Id.) Such information will be provided to the ESDA Coordinators by other State and county officials at the county EOCs. (Id.)

131. Warning messages for the counties to broadcast over the electronic siren public address systems and over mobile public address systems are provided in IPRA Vol. VII, SOP-6 for take shelter and evacuation conditions. (Butterfield, et al., ff. Tr. 690, at 36.) The electronic siren warning messages inform listeners that the Governor has recommended that the facility where they are located is being evacuated and that they should proceed to their vehicles and prepare to evacuate even if the Governor's recommendation is to take shelter. (Id., at 36-37.) Listeners are instructed to tune their radios to the EBS station. (Id., at 37.) IPRA Vol. VII, SOP-6, Attachment C. The mobile public address warning scripts advise listeners of the protective action recommendation and to tune to the EBS station. (Id.) IPRA Vol. VII, SOP-6, Attachment D.

Conclusion Regarding Offer of Proof Issue 3

132. There is ample evidence that 1) the provisions of IPRA for the prompt notification of the residential and transient populations of the EPZ are adequate, and 2) the plan can and will be implemented so as to give the public adequate information to allow safe evacuation and sheltering.

D. Offer of Proof Issue 4

133. Offer of Proof Issue 4 states:

The Program for notification of the public at the time of an accident is deficient in that it provides no means of informing employers in the EPZ as to what actions they should take with respect to facility shutdown, sheltering, or the release of employee personnel in the event that evacuation is required.

134. Mr. Wenger's testimony of Offer of Proof Issue 4 addressed the special attention that is given to major employers, that is, those with more than twenty-five employees. (Wenger, ff. Tr. 931, at 20-23.) These employers are encouraged, but not required, to have plans in place for the sheltering or evacuation of their employees. (Id., at 20.) This is not to suggest that no attention is given to smaller employers, but only that the logistics of evacuating or sheltering larger concentrations of employees are more complex than is the case with smaller groups. (Id.) All groups of employees receive the same benefit from the prompt notification system as the general public. (Id.)

135. Attachments F, G, and H to IPRA Vol. VII-7-SOP-8, contain a comprehensive list of special facilities, including major employers, within the 10-mile EPZ. (Wenger, ff. Tr. 931, at 20.) The list identifies the sector, zone, and community that each facility is in, as well as the name and phone number of an individual to contact in the event of an

emergency. (Id.) At various places throughout 7-SOP-8, there are references to the notification of major employers. (Id., at 20-21.) 7-SOP-8, Sections 4.1(E), 4.2(E), 5.1(E), 5.2(D), 6.1(E), 6.2(e).

136. The notification of employers is carried out by local officials. (Wenger, ff. Tr. 931, at 21.) The sheriff and other local law enforcement officials are responsible for notification of major employers and the recommendation of protective actions. (Id.) Volumes I and VII and Volume VII SOPs of the IPRA contain the planning and instructions to notify employers in the Braidwood Nuclear Power Station EPZ. (Id.) IPRA Volume VII 7-SOP-8 outlines the responsibilities and actions to be taken by designated officials of the three counties in the 10-mile EPZ. (Id.) The attachments F, G, and H to 7-SOP-8 contain comprehensive lists of the special concerns and facilities. (Id.) Mr. Wenger has personally contacted some of the special concerns and facilities. (Id.) The local officials have the responsibility of notifying the public and structured groups and organizations. (Id.) It is their responsibility to notify them of the need to take protective action to protect the health and safety of those individuals under their care and direction. (Id.) The local officials cannot direct the employers on facility shutdown. (Id.) Many industries and businesses have a set procedure which may require time and some manpower to accomplish an orderly ceasing of operation. (Id., at 21-22.)

137. The IESDA and the IDNS conducted training for specific groups and organizations in the EPZ of the Braidwood Nuclear Power Station as they have done in all the other nuclear power stations in Illinois. (Wenger, ff. Tr. 931, at 22.) The training consists of

organization of planning and the structure for implementing planning. (Id.) It provides good in-depth participation and demonstration with respect to radiological exposure and protective actions. (Id.) The training is open to any organized group of citizens and officials on request. (Id.) The State conducts the first and subsequent annual training as a required by the IPRA. (Id.) However, training can be requested at any time. (Id.)

138. The structured groups and organizations such as industries and businesses have, in most cases, emergency plans which cover a multitude of emergency situations. (Wenger, ff. Tr. 931, at 22.) Among those emergencies is the need to evacuate the premises. (Id.) Particularly in the case of employers, employees have their own means of transportation to get to work, therefore there would be sufficient transportation to transport the work force from the area in the event of a recommendation to evacuate. (Id.)

139. The sheriff and other local law enforcement officials are charged with traffic control responsibilities. (Wenger, ff. Tr. 931, at 22.) Roadblocks are planned to move traffic out of the affected sectors away from the plume. (Id.) The evacuated employees would be directed to shelters if their domicile is in the affected sectors. (Id., at 22-23.) If the recommendation to shelter is made, most of the buildings can be closed sufficiently to afford protection to those who would be housed inside. (Id., at 23.) In some cases shelter areas exist within the buildings such as basements and tornado shelters. (Id.)

140. Mr. Wenger expressed his professional opinion that the IPRA makes adequate provision for notifying employers for the purpose of

advising employees of protective actions to be taken in the event of an emergency. (Wenger, ff. Tr. 931, at 23.) The recommendations for protective actions to employers are much the same as they are for the general public with respect to sheltering-in-place or evacuation. (Id.) The RAC reviewed the special concerns and facilities portion of the IPRA Braidwood Plans and found them to be adequate. (Id.)

141. The Applicant's testimony on Offer of Proof Issue 4 states that evacuation and take shelter recommendations for employers are generally the same as for the general public. (Butterfield, et al., ff. Tr. 690, at 38.) Employers would receive notification of protective action recommendations through the PNS and the EBS. (Id.) In addition, as mentioned above, IPRA Vol. VII, SOP-8 also provides that county and municipal officials are responsible for notifying employers of take shelter or evacuation recommendations for affected "special facilities" which include industries in the EPZ with over twenty-five (25) employees. (Id.) IPRA Vol. VII, SOP-8 pp. 5, 9 and 13. Attachments F, G, and H to SOP-8 identify seventeen industries in the Braidwood EPZ, exclusive of the Braidwood Station. (Id.)

142. With respect to provisions for shutdown of such facilities, employers are in the best position to determine the most appropriate actions to minimize damage to equipment or machinery. (Butterfield, et al., ff. Tr. 690, at 38.) IESDA surveyed the shutdown times of these facilities. (Id.) Based on that survey, sixteen of seventeen facilities can be shutdown without damage to the facilities within sixty minutes, and one, which operates only during the day, can be shutdown within ninety minutes. (Id.)

143. On cross-examination, Ms. Rorem questioned whether the annual distribution of public information brochures to employers provided one brochure for every employee. (Tr. 953.) This is not the case, although employers do receive as many as 500 brochures and employees typically receive brochures through other means, especially if they live in the EPZ. (Wenger, at Tr. 953-55.)

144. Employers are not required to develop emergency plans of their own, but they are encouraged to do so. (Wenger, at Tr. 958-960.) The means by which they are encouraged is the training offered on an on-going basis by CECO and IESDA, which is quite visible in the community. (Id.) It is in the interest of employers to have such plans to deal with other emergencies, such as tornadoes. (Id.)

Conclusion Regarding Offer of Proof Issue 4

145. Based on the record before it, the Board is convinced that the IPRA makes adequate provision for notifying employers for the purpose of advising them of the protective actions to be taken in the event of an emergency.

E. Offer of Proof Issue 6

146. Offer of Proof Issue 6 states:

Applicant's public information program is deficient in that it fails to set out the means by which the public will be informed during an emergency of re-entry protective measures to be followed by the public in an emergency and the content of such means with respect to information concerning decontamination and interdiction of the foodstuffs, water supplies, dairy and livestock, and field and garden crops.

147. In his testimony on Offer of Proof Issue 6, Mr. Wenger discussed the way in which the contamination of food, water, and livestock is assessed and information on that subject is communicated to the public. (Wenger, ff. Tr. 931, at 24-26.) ^{15/}

148. The issue of the treatment of contaminated food, water, and livestock is discussed in IPRA, Chapters 2 and 5 of Volume 1 and in Volume VII, 7-SOP-11, Sections 4 through 6, Attachments A through D, and several sections of the State SOP's, Vol. I. (Wenger, ff. Tr. 931, at 24.) The IDNS is responsible for all aspects of radiation exposure, including the determination of when and under what restrictions it is safe to reenter the EPZ. (Id.) The Illinois Department of Agriculture (IDA) is responsible for the treatment of foodstuffs. (Id.) The IESDA will furnish information to the news media through the JPIC. County ESDAs will activate appropriate EBS messages. (Id.)

149. Section 5 of Chapter 2 of the IPRA (Vol. I), entitled "Concept of Operations," deals with parallel actions, which include public information, radiation control, and re-entry. (Wenger, ff. Tr. 931, at 25.) The IDNS is responsible for all aspects of radiation exposure. (Id.) Chapter 5 (Technical Functions), Section G.1 (Radiation Aspects of Technical Functions) gives a more detailed account of the role of IDNS in this regard. (Id.) Section 5, Part (1), outlines the authority of the

^{15/} As previously stated, at the hearing on March 12, 1986, the Board determined, on Intervenor's request, that the discussion of restricted and unrestricted re-entry into the EPZ after an accident (Wenger, ff. Tr. 931, at 14), which Mr. Wenger originally incorporated by reference here (Id., at 24) was outside the scope of Contention 1(a). Accordingly, that issue is not covered here.

IDA to inspect, condemn, embargo, and confiscate unwholesome foodstuffs. (Id.) The IDA will make such inspections and determinations as called upon by the IDNS. (Id.) Prior to re-entry, the IDA will monitor agricultural and horticultural products to assure that they are safe for commercial distribution. (Id.) The IDA will report its findings to the IDNS. (Id.) As stated in Section 5(g), Chapter 2, Volume I, the IDNS will determine when and under what restrictions it is safe for the public to re-enter the affected area and public notification procedures will be implemented. (Id.)

150. The EBS scripts for the re-entry announcements are general. In the case of unrestricted re-entry, no enhancements on the subject of foodstuffs are necessary. (Wenger, ff. Tr. 931, at 25.) In a partially restricted re-entry, appropriate information will be added. (Id.) It is accepted that much of the protective action instruction for re-entry will have to be developed as data is gathered from field surveys. (Id.) Many variables will enter into the determination for safe re-entry and the protective actions to be implemented. (Id., at 25-26.)

151. Mr. Wenger concluded that the IPRA makes adequate provisions for informing the public concerning protective measures to be taken regarding foodstuffs at the time of re-entry. (Id., at 26.)

152. The Applicant's testimony addressed the Intervenor's concern that no specific instructions on the subject of decontamination and interdiction of foodstuffs, water supplies, dairy products, livestock and field and garden crops are provided in EBS re-entry messages and that a statement should be included in the messages stating that information regarding such matters will be provided via EBS or by appropriate

authorities. (Butterfield, et al., ff. Tr. 690, at 39.) The Applicant's witnesses Butterfield and Fairrow testified that the general contents and use of the re-entry messages are found in IPRA Vol. VII, SOP-11. (Id.) Additional special instructions or precautionary information for returnees may be added by the county ESDA Coordinators. (Id.) If any protective measures are necessary at the time of re-entry, IDNS will provide the information to the county ESDA Coordinators so that the information may be included in the re-entry message provided to the EBS station for broadcast. (Id., at 39-40.) IPRA Vol. I, Ch. 5, pp. 42-43.

153. Because the choice of the appropriate re-entry protective measures is dependent on a number of incident specific variables, such as the type of radiological release and weather conditions, it is not feasible to pre-script such information in re-entry messages. (Butterfield, et al., ff. Tr. 690, at 40.) Such information, however, will be provided both prior to and during re-entry. (Id.) The special instructions or precautionary information may consist of instructions to deal with decontamination and interdiction of foodstuffs, water supplies, dairy and livestock, and field and garden crops. (Id.) This type of information would be provided by IDNS, after consultation with the appropriate State agencies. (Id.) IPRA Vol. I, Ch. 5, pp. 42-43. As explained in IPRA Vol. I, Ch. 5, IDNS obtains information concerning the type and extent of radioactive contamination and acts as the coordinating agency for a number of State agencies which would perform technical functions in the event of an emergency. (Id.) IPRA Vol. I, Ch. 5, p. 49. The Illinois Department of Agriculture is responsible for monitoring agricultural and horticultural products as well as meat, poultry and livestock. (Id.) The

Illinois Environmental Protection Agency is responsible for monitoring water supplies for contamination. (Id., at 40-41.) The Illinois Department of Public Health responsibilities include identifying and disposing of contaminated food and dairy products. (Id., at 41.) Those activities of the three agencies are at the request and under the direction of IDNS. (Id.)

Conclusion Regarding Offer of Proof Issue 6

154. The record establishes that the provisions of IPRA adequately address the issue of informing the public with respect to protective measures to be taken regarding foodstuffs at the time of re-entry.

F. Contention 1(b)

155. Contention 1(b) states:

1. Intervenor contends that an adequate emergency plan for the Braidwood Station should include the following:
 - (b) assurance that institutions within 10 miles of the Station, such as nursing homes, can be evacuated or adequately protected in the event of a radiological emergency.

156. Mr. Wenger's testimony on Contention 1(b) dealt with the provisions in the IPRA for the sheltering or evacuation of the people in schools, institutions such as nursing homes, and recreational areas. (Wenger, ff. Tr. 931, at 26-30.) Arrangements for sheltering or evacuating these people are found in Volumes I and VII of the IPRA and in the SOPs (Standard Operating Procedures of Volume VII). (Id., at 27.)

157. Once the State recommends either sheltering or evacuation, the chief elected official of each unit of local government is charged with the responsibility of notifying key staff and local or area organizations of the need to take protective action. (Wenger, ff. Tr. 931, at 27.) In the documents referred to above, particularly the Volume VII SOPs, the arrangements and responsibilities for implementing protective actions and the protective actions are highlighted. (Id.) For example, if the utility and State recommend shelter in place, institutions such as schools and nursing homes have trained personnel and plans to care for individuals at those locations. (Id.) The Standard Operating Procedures (7-SOP-10 of Volume VII) provide specific guidance for sheltering in such institutions. (Id.) If the sheltering-in-place option is selected, educational institutions, licensed day care centers, and senior centers would be advised to close doors and windows, and shut down air exchange systems which circulate or mix inside and outside air and implement specific instructions in the SOPs. (Id., at 27.)

158. The Standard Operating Procedures of 7-SOP-10 of Volume VII provide specific guidance for the evacuation of institutions such as nursing homes, schools, licensed day care centers, and recreational areas. (Wenger, ff. Tr. 931, at 28.) If the order was given to implement evacuation procedures, responsible officials identified in the IPRA Volumes would implement the SOPs, evacuating that portion of the population in the plume exposure pathway of the EPZ. (Id.) The Braidwood plan has detailed procedures designating by title the individuals responsible for giving the order to evacuate, the points of contact at institutions, the actions these points of contact are to take,

and the coordination of the necessary materials, supplies and transportation. See Vol. VII Chapters 7-SOP-8, 7-SOP-9 and 7-SOP-10. (Id.)

159. If nursing homes are to be evacuated, the residents might require special arrangements for transportation. (Wenger, ff. Tr. 931, at 28.) Another group of people in the Braidwood EPZ who have special needs are those who live alone or who may be alone during some portion of the day and have a physical or medical impairment or no transportation. (Id.) Provisions are made for these groups of people in the IPRA. (Id.) As part of the Braidwood plan, the Braidwood public information brochure has a section (6) which solicits submission of information from the public on people with special needs. (Id.) The county and public social service agencies also gather this information. (Id., at 28-29.) A list of the people with special needs has been compiled and is retained in confidentiality at the county ESDA office in each of the three counties. (Id., at 29.) For each such person, special arrangements have been planned. (Id.)

160. In the case of schools, school buses and drivers will be mobilized to transport students and school personnel from the school to designated congregate care shelter locations in accordance with 7-SOP-9 of the IPRA. (Wenger, ff. Tr. 931, at 29.) Licensed day care facilities or nursery schools will evacuate in staff vehicles and additional school buses as needed. (Id.) Specific instructions for nursery schools are included in IPRA's 7-SOP-9 Attachment J. (Id.)

161. Recreational areas require special treatment. (Wenger, ff. Tr. 931, at 29.) Those living in mobile facilities in camp grounds and

parks would be ordered to move from the area of potential risk. (Id.) Patrons of recreational areas where no large permanent housing exists such as swimming areas, picnic grounds, hunting and fishing sites and golf courses, would be directed to leave the area of potential risk. (Id.)

162. During his visits in the 10 mile EPZ of the Braidwood, Mr. Wenger contacted a random sample of representative institutions and individuals to discuss their implementation of emergency planning and response to an emergency at the Braidwood Station. (Wenger, ff. Tr. 931, at 29.) He met with individuals representing schools, senior centers, nursing homes, businesses and industry, as well as residents and visitors to recreational areas and he found people to be cognizant of emergency planning matters. (Id., at 29-30.) He also attended training sessions sponsored by IESDA and IDNS for emergency workers, municipal executives and police departments. (Id., at 30.)

163. Mr. Wenger concluded that the IPRA provides reasonable assurance that special facilities such as nursing homes, schools, and recreational areas are provided for in planning and can be protected or evacuated in the event of a radiological emergency. (Wenger, ff. Tr. 931, at 30; Tr. 990.) In particular, he based his opinion on the comprehensive planning in the IPRA Volumes I and VII and the implementing SOPs to both volumes. (Id.) Schools and special concerns are addressed in those volumes and instructions are given in Volume VII SOPs 9 (schools) and 10 (special concerns). (Id.) Recreational areas are provided for by the sheriff in coordination with the county ESDA coordinator and the superintendent of schools, Volume VII, SOP 8. (Id.) During his visits to the Braidwood area, Mr. Wenger contacted community

leaders, businesspersons, and citizens and he has gained assurance of their knowledge of the emergency response to an accident at the Braidwood Station. (Id.) He also contacted several persons by telephone using the information in the plans. (Id.)

164. Applicant's witnesses Mr. Butterfield and Ms. Fairrow concluded, with respect to testimony on Contention 1(b), that the IPRA adequately provides for the evacuation and sheltering of persons in facilities located within the EPZ such as nursing homes, schools (including parochial schools and pre-schools), and recreational areas. (Butterfield, et al., ff. Tr. 690, at 42-43.) The IPRA was developed in accordance with the guidance provided in NUREG-0654 and not only makes specific provisions for such facilities, but also provides sufficient flexibility to respond to unforeseen conditions at the time of a radiological emergency at the Braidwood Station. (Id., at 43.)

165. IPRA's provisions for ensuring that schools, recreational areas, and nursing homes within the EPZ can be adequately protected in the event of a recommendation to either evacuate or take shelter can be divided into three categories: (1) planning activities; (2) notification and communication procedures; and (3) responses to recommended actions. (Id.)

166. Prior to undertaking any specific planning activities, IESDA conducted a detailed assessment of the schools within the Braidwood EPZ. (Butterfield, et al., ff. Tr. 690, at 44.) IESDA first identified all of the public, parochial schools and pre-schools in the EPZ. (Id.) IESDA identified twenty public schools, two parochial schools and five pre-schools located within the EPZ. (Id.) IESDA then surveyed all of

the identified schools, which involved visits and/or telephone calls to each of these schools, to obtain data regarding the student and staff population, the grade levels of the schools, the number of students bused to the schools, the number of buses available to each school, the number of bus drivers, the average number of student and staff cars, and information regarding the time required to mobilize available transportation. (Id.) As a result of its surveys, IESDA prepared facility specific emergency instructions for each school including facility specific checklists to be used in the event of either an evacuation or a take shelter recommendation. (Id.) These facility specific instructions have been provided to the regional and district school superintendents. (Id.) The responsibilities of school officials and staff are discussed during the training sessions provided by IESDA for schools within the Braidwood EPZ. (Id., at 44-45.) In addition, the data obtained from the schools were used to assess the transportation resources of the schools to determine the appropriate congregate care center for each school and to determine any additional special needs of the schools. (Id., at 45.)

167. One of the activities conducted by IESDA and IDNS is emergency response training of school personnel and bus drivers. (Butterfield, et al., ff. Tr. #90, at 45.) All of the regional and district superintendents and their alternates within the EPZ and the managers of the private bus companies were invited by IESDA to attend Executive Training. (Id.) IESDA has conducted six Executive Training sessions for the regional and district school superintendents. (Id., at 46.) During 1985, IESDA and IDNS conducted fourteen Radiological and Operational Emergency Worker Training sessions for communities within

the Braidwood Station EPZ. (Id., at 47.) Bus drivers and other school personnel were invited to attend these sessions. (Id.) In addition to these training sessions, IESDA also conducted three IPRA orientation programs to familiarize school officials with the purpose of IPRA and the role of school officials in the event of an emergency. (Id.)

168. The State of Illinois has assessed the transportation resources needed to evacuate the schools in the EPZ. (Butterfield, et al., ff. Tr. 690, at 48.) Based on surveys conducted by IESDA, the transportation requirements of each of the schools within the EPZ were analyzed against the available bus resources. (Id.) The nine school districts within the EPZ have a total population of approximately 6,850 including the students, faculty and staff of the two parochial schools and five pre-schools. (Id.) The transportation resources available under the IPRA are sufficient to ensure that evacuation of the school population can be effectively carried out. (Id.)

169. Based on surveys of the schools, from the time the schools begin notifying the bus drivers, the buses could be brought to the schools in approximately ten to forty minutes. (Butterfield, et al., ff. Tr. 690, at 50.) IESDA conducted a survey of the number of bus drivers available throughout the three counties which comprise the EPZ as well as the bus drivers normally available to the school districts in the EPZ. (Id.) Of the three counties, the Regional Superintendent of Schools of Kankakee County has 217 bus drivers available, the Grundy County Regional Superintendent of Schools has 115 bus drivers available and the Will County Superintendent has 553 bus drivers available. (Id., at 50-51.) Even if the entire EPZ were to be evacuated, the schools

would require only 111 drivers. (Id., at 51.) Based on the number of drivers available to the schools, as well as those available to the regional school superintendents, there are sufficient bus drivers available to evacuate the schools within the EPZ. (Id.)

170. Applicant's witnesses also described the procedures which will be used to notify schools in the event of an emergency at the Braidwood Station. (Butterfield, et al., ff. Tr. 690, at 52-54.) Any abnormal event or condition at the Braidwood Station will be analyzed by personnel at the Station under criteria prescribed by the Braidwood onsite emergency plan to determine into which, if any, emergency response category it falls, that is, Unusual Event, Alert, Site Area Emergency, and General Emergency. (Id., at 52.) If a condition or event occurs at the Station that falls into any of these emergency response categories, the Station will give timely notification to the State. (Id.) To minimize delay and communication problems, this notification and subsequent updates will be provided using NARS, which links the utility, State and county governments. (Id.) The State will notify Will, Grundy, and Kankakee Counties via the NARS. (Id.) If the situation warrants, the counties will notify the municipalities within the EPZ, activate the county EOCs, and mobilize appropriate personnel. (Id.) NARS will also be used to provide continuous updates on the status of the emergency and any recommended protective actions. (Id.)

171. In the event of an emergency at Braidwood Station requiring notification of schools, the county regional superintendents of schools, who will be stationed at each of the county EOCs, will first coordinate with the county ESDA Coordinator and then contact the affected district

superintendent of schools regarding the recommended take shelter or evacuation protective actions. (Butterfield, et al., ff. Tr. 690, at 53.) The regional superintendent will also brief the district superintendents on the situation. (Id.) The district superintendents will contact the principals of the affected schools, including the parochial schools and pre-schools. (Id.) The school principals will be told to implement the appropriate protective actions as provided in the emergency instructions prepared for each school. (Id.) The district superintendent will also determine the availability of buses and bus drivers and provide that information to the regional superintendent. (Id.) If for any reason an affected school could not be contacted by telephone, the municipal ESDA Coordinator will dispatch a police officer or other municipal personnel to the affected school in order to notify the school principal of the required action. (Id.) Any changes in the recommended action will be communicated to the affected schools in a similar manner. (Id.)

172. If protective actions are required as a result of an emergency at the Braidwood Station, the IPRA provides for response actions to be taken at the regional, district and individual school level. (Butterfield, et al., ff. Tr. 690, at 54.) If sheltering is recommended, the regional superintendent will immediately contact the affected district superintendent and brief the district superintendent on the situation. (Id.) The regional superintendent will direct the district superintendent to place all school bus drivers on call or standby and verify that all affected schools have been notified of the take shelter recommendation. (Id.) The district school superintendent, after notifying the principals of the affected schools of the recommended action, will coordinate with the

principals to determine the number of buses required for evacuation, and will place bus drivers on call or standby. (Id., at 54-55.) The district superintendent will report the availability of buses and drivers to the regional school superintendent. (Id., at 55.) Upon receipt of the information from the district school superintendents, the regional superintendent will assess the availability of school buses and bus drivers and make any necessary arrangements for additional buses or drivers, drawing on buses and drivers available throughout the school districts in the county (including those of the private bus companies). (Id.) The regional superintendent will coordinate with the district superintendents to determine that all protective actions for take shelter are complete. (Id.)

173. Upon notification of a take shelter recommendation, the affected school principals will implement the emergency sheltering instructions developed for each school within the EPZ. (Id.)

174. The IPRA provides for continual monitoring of the actions taken by the affected schools to ensure that any requests for assistance are promptly answered. (Butterfield, et al., ff. Tr. 690, at 57.) In addition, information regarding transportation requirements at the affected schools is required to be provided to the regional superintendent once a take shelter recommendation is made. (Id., at 58.) Any requests for other assistance, such as medical assistance, is communicated to the district superintendents in the municipal EOC by the particular school principal. (Id.) If the request cannot be acted upon by the municipal EOC, the district superintendent will forward the request to the regional superintendent in the county EOC. (Id.) The ESDA Coordinator at the

county EOC is responsible for ensuring responses to any such requests. (Id.)

175. The provisions of the IPRA relating to protective actions for persons in recreational areas in the event of an emergency at the Braidwood Station, can be broken down into three components: (1) planning, (2) notification and communications; and (3) response to recommended action. (Butterfield, et al., ff. Tr. 690, at 59.)

176. The planning effort for the recreational areas began with the identification of all recreational areas within the EPZ and an assessment of their main characteristics. (Butterfield, et al., ff. Tr. 690, at 59.) A listing of all recreational areas, including the name of a contact person for the area and his phone number, is included in IPRA Vol. VII, SOP-8, Attachments F, G, H. (Id.) Each of the recreational areas was contacted by a representative of IESDA and data obtained regarding the season of operation, the average number of visitors by season, the number of peak day visitors, the number of overnight visitors, and the average number of buses and private vehicles present at the area on a daily basis. (Id.)

177. Sirens have been placed around the recreational areas so that the alert tone is capable of being heard throughout the particular area. (Butterfield, et al., ff. Tr. 690, at 59.) With the exception of three recreational areas, sirens with public address systems are being installed. ^{16/} (Id., at 59-60, Tr. 739-40, 760-63.) The public address

^{16/} It was determined that no public address capability was needed at these areas because of their location and/or daily usage. (Id., at 60.)

capability of the sirens will generally provide coverage in parking lots and at other areas where people are expected to congregate and will be used to provide specific instructions in the event of an emergency. (Id., at 60.) Mr. Butterfield also pointed out that almost all of the sirens in the EPZ having public address ("PA") capability use batteries continually charged by alternating current as their source of power. (Butterfield, Tr. 760-63.) These sirens would continue to function in the event of an off-site loss of power. (Id., Tr. 761.) In contrast, Mr. Butterfield also testified that sirens covering the non-recreation areas (which do not have batteries) would not function if off-site power were lost. (Id., Tr. 696-97; 760-61.)

178. Signs will be offered to each of the recreational areas informing visitors (should they hear the sirens) of the purpose of the sirens and instructing them to listen to either of the two EBS Stations which will broadcast emergency information. (Butterfield, et al., ff. Tr. 690, at 60; Id., at Tr. 734.) The signs will generally be installed in parking lots, and other areas where people are expected to congregate. (Id., ff. Tr. 690, at 60.) However, these signs do not specifically warn that the sirens may signal a radiological emergency. (Butterfield, Tr. 734.) (The reason is that the sirens are also used to alert people of other, generally weather-related emergencies.) (Id., Tr. 734-36.) Mr. Butterfield could not state whether certain emergencies might cause a person to respond with a greater sense of urgency than others. (Id., Tr. 735.) Similarly, he could not state whether a person entering a recreational area in the EPZ (who is not aware that he is in the EPZ) would assume the sirens are for weather-related warnings only. (Id.,

Tr. 736.) However, according to Mr. Butterfield, sirens sounding within the EPZ would, in all probability, be followed-up by a verbal message. (Id.) Additionally, Braidwood Public Information Booklets have been distributed to each of the recreational areas. (Id., ff. Tr. 690, at 60.) These Booklets are also provided to facilities catering to transients such as motels. (Id.)

179. In the event of a protective action recommendation or a General Emergency, the sirens located in the recreational areas will be activated. (Butterfield, et al., ff. Tr. 690, at 60.) After the sirens have been sounded, the county ESDA Coordinator will direct the activation of the public address systems located at the recreational areas and provide the appropriate script. (Id., at 60-61.) The public address systems will advise the visitors in the recreational area to evacuate the area and to listen to either WJOL 1340 AM or WLLI 96.7 FM for further information. (Id., at 61.)

180. In addition to the Prompt Notification System warning, each recreational area will be contacted by telephone from a county or municipal EOC and instructed to evacuate the area. (Butterfield, et al., ff. Tr. 690, at 61.) If telephone communication with the recreational area is not possible, the county or municipal EOC will dispatch a law enforcement or other responsible official to the area to ensure that the evacuation is being carried out. (Id.) Any changes or additional instructions will be communicated to the recreational area through the public address system and by telephone. (Id.) Because most of the recreational areas do not have sheltering capability, the recommended action will, in all cases, be to evacuate the area. (Id.; Fairrow,

Tr. 804-05.) The pre-scripted message for the public address system calls for evacuation as the protective action if either take shelter or evacuation is recommended. (Id.)

181. Once the recreational areas are notified to evacuate, visitors in the areas will be instructed by the public address system to tune in one of the EBS radio stations for further instructions. (Butterfield, et al., ff. Tr. 690, at 62.) In addition, the traffic and access control posts, listed in the IPRA and manned by local and State law enforcement officials, will ensure that all persons leaving the recreational area will proceed out of the EPZ in the proper direction. (Id.) Traffic and access control posts will be located around the perimeter of the affected sectors to be evacuated. (Id.) In addition, the municipal police will dispatch roving squad cars to provide security within their municipalities, and assist persons evacuating the EPZ. (Id.) Any requests for transportation assistance will be made through the municipal and county EOCs. (Id.) The county ESDA Coordinators are specifically required by the IPRA to monitor the status of the transportation needs of the recreational areas and to coordinate with the regional school superintendents to provide transportation assistance. (Id.) Requests for other types of assistance will be made to the municipal and county EOCs and will be handled in a manner similar to requests from schools. (Id.)

182. The Royal Willow Nursing Care Center ("Royal Willow"), is the only nursing home in the Braidwood EPZ. (Butterfield, et al., ff. Tr. 690, at 63.) In regard to Royal Willow, the State has undertaken substantial planning activities to ensure that adequate measures are in

place under the IPRA to shelter or evacuate the patients and staff in the event of an emergency at the Braidwood Station. (Id.)

183. Once emergency instructions were developed and discussed with the Royal Willow Director, IESDA conducted an orientation program and later a training session at the Royal Willow facility which were attended by the Director and staff. (Butterfield, et al., ff. Tr. 690, at 64.)

184. The transportation needs of Royal Willow were assessed in light of the physical condition and number of patients at Royal Willow. (Butterfield, et al., ff. Tr. 690, at 65.) The current resident population is 140 persons. (Id.) It was determined that the entire staff and patient population of Royal Willow could be evacuated using three buses and two ambulances, assuming no private vehicles are used. (Id.) In the event of an evacuation, any needed transportation assistance would be provided through the Wilmington EOC or the Will County Regional School Superintendent, if necessary. (Id., at 65-66.) If ambulances are needed, there are fifteen ambulances located in the Braidwood EPZ, including three located in Wilmington, with an additional thirty-seven ambulances available through mutual aid agreements. (Id., at 66.) In light of these transportation resources, there will be an ample number of vehicles available to transport and evacuate all the residents and staff of Royal Willow in the event of an emergency at the Braidwood Station. (Id.)

185. Regarding notification of Royal Willow in the event of an emergency at Braidwood, personnel at the municipal EOC ^{17/} will notify personnel at the special facilities, including the Royal Willow Director, and inform them of the recommended protective action and brief them on the situation. (Butterfield, et al., ff. Tr. 690, at 66.) The Royal Willow Director will be instructed to implement the appropriate provisions of the emergency instructions developed for Royal Willow. (Id.) The Director will be instructed to place all requests for assistance through the Wilmington ESDA Coordinator. (Id.)

186. If the recommended protective action is evacuation, the Royal Willow Director will be told the location of the congregate care shelter. (Butterfield, et al., ff. Tr. 690, at 67.) The Director will also be asked whether any of the patients require Special Care Shelters. (Id.) If so, the Director will be advised of the location of the Special Care Shelters able to provide the necessary medical attention. (Id.) Whether the recommendation is made for sheltering or evacuation, the Royal Willow Director will follow the detailed Royal Willow emergency instructions. (Id., at 67-69.)

187. If the Royal Willow Director requires assistance to evacuate, he would contact the Wilmington ESDA Coordinator at the Wilmington EOC. (Butterfield, et al., ff. Tr. 690, at 69.) Representatives of the fire and police departments, the Wilmington Superintendent of Schools, the Public Works Department and the Water Department will be located at the

^{17/} Prior to this, the counties will notify the municipalities affected and the municipal EOCs will be activated. (Butterfield, et al., ff. Tr. 690, at 66.)

Wilmington EOC. (Id.) If the immediate resources available to the Wilmington ESDA Coordinator are not sufficient, the ESDA Coordinator will contact the Will County ESDA Coordinator for assistance. (Id., at 69-70.)

188. The Applicant's witnesses Mr. Butterfield and Ms. Fairrow expressed the opinion that the provisions of IPRA governing sheltering and evacuation of individuals in nursing homes, recreational areas and schools within the EPZ permit the timely and effective sheltering and evacuation of such individuals. (Butterfield, et al., ff. Tr. 690, at 70.)

189. Ms. Rorem questioned at some length how people out of doors in recreational areas and not near radios would receive the information they needed to be evacuated safely. (e.g., Tr. 963-964.) Mr. Wenger testified that there is reasonable, although not absolute, assurance that warning messages will reach such people through sirens, public address messages using the voice capability of sirens, and safety vehicles sent into recreational areas. (Wenger, at Tr. 963-64.) The likelihood that someone in a recreational area would not receive any warning message is very minute. (Id., Tr. 975.) The individuals in charge of recreational areas are expected to see to it that transportation is provided, through the county or municipal emergency operations center, for anyone who requires it. (Id.; Tr. 978-79.)

190. The IPRA does not assume that everyone in a recreational area has a radio. (Butterfield, Tr. 739.) In most cases, the sirens in these areas have a public address capability to broadcast safety messages. (Id., at 739-40.) In addition, there are contact persons at recreational areas who will assist with the evacuation of these facilities. (Id.,

Tr. 744.) If needed, assistance could also be provided by county or municipal officials. (Id.)

191. Mr. Butterfield admitted that there could be people in inaccessible areas of recreation areas out of contact with responsible persons at the recreation areas and without radios, whom no one knows are there. (Fairow, Tr. 746.) It would be expected that in the event of the sirens sounding, such an individual would seek a source of information. (Id., Tr. 744-45.) In Mr. Butterfield's opinion, if signs in recreation areas stated that the areas is within the Braidwood EPZ, any sirens sounding would not necessarily carry an additional meaning to persons without radios. (Butterfield, Tr. 738.) The electronic sirens PA pre-scriptive messages advise people in recreational areas to evacuate. (Fairow, Tr. 805.) Moreover, the contact persons at recreation areas would assist in an evacuation. (Id., Tr. 744.) If there were a loss of offsite power and thus no sirens sounding, individuals without radios would not be notified. (Id., Tr. 747.) ^{18/}

192. Mr. Wenger also testified that transients in other areas of the EPZ would receive safety messages through sirens, the EBS broadcasts, and, in some cases, roadblocks. (Wenger, Tr. 964-65.) Transients on their way through the EPZ would ensure their safety by continuing on their way. (Id., Tr. 971-74.) The EBS messages would instruct those transients in buildings when sheltering was ordered (who would be the largest category of transients) to remain where they were. (Id.,

^{18/} However, as previously stated, only three recreation areas lack battery-powered sirens with PA capability which would not function in the event of a loss-of-power.

Tr. 965, 967, 971.) Transients not in buildings who needed to find shelter could do so by going to places such as restaurants or hotels. (Id., Tr. 965-66, 973-74.)

193. The primary factor in determining whether buildings could provide adequate shelter is whether door and windows can be closed and air transfer points sealed so as to create an envelope of contained air. (Wenger, Tr. 974.)

194. Ms. Rorem established on cross-examination of Ms. Fairow that buildings differ in their ability to shelter the occupants from radioactivity. (Fairow, Tr. 902-03.) However, if sheltering is ordered, it is generally safer to remain indoors than to evacuate to a better shelter. (Id., Tr. 902-06, 1038-39.) ^{19/} IESDA has surveyed special facilities such as schools and nursing homes in the Braidwood EPZ and found that they are adequate for sheltering-in-place (where sheltering-in-place is the recommended protective action). (Fairow, Tr. 1017-18.)

195. When it is necessary for the County ESDA offices to reach local officials, the first line of communication is the telephone; the second is pocket pagers; the third is radio. (Fairow, Tr. 709-14.) If an official is not reachable by any of those means, a fire phone is used which rings at several locations at one time. (Id., at Tr. 714.)

196. Ms. Fairow admitted on cross-examination that in an extreme case, it might be possible that public officials or designates may not be

^{19/} Ms. Fairow conceded that there could be very limited circumstances in which it might be better to move school children from one sheltering location to another better sheltering location. (Fairow, Tr. 1042.)

reachable by telephone, pager or radio. (Fairow, Tr. 722.) In the event of a loss of offsite power preceding or causing an accident, there might not be any way to notify such officials of their duties and responsibilities under IPRA. (Id.) However, the telephone system does not depend on offsite power to function. (Butterfield, Tr. 722.)

197. In her cross-examination, Ms. Rorem established that there are some local officials in the EPZ who have dual roles (i.e., responsibilities as both public officials and persons responsible for recreational areas under IPRA.) (Fairow, Tr. 723.) However, only three such persons have been identified (Id., Tr. 1045) and each community has alternates assigned so that it is always ready to respond to an emergency such as a fire, tornado, flood, or chemical incident. (Tr. 724-25; 1019-20).

198. In cross-examining the Applicant's witnesses, Ms. Rorem raised the issue of whether a loss of off-site power might prevent special facilities such as schools from being alerted in an emergency. (Tr. 696-97.) Ms. Fairow testified that special facilities will be contacted by phone or directly by emergency response persons whether the sirens operate or not. (Fairow, Tr. 705.)

199. On cross-examination of Mr. Wenger, Ms. Rorem established that the exercise of the IPRA did not include full-scale evacuation or sheltering of schools in the EPZ. (Wenger, Tr. 936-40.) However, Mr. Wenger pointed out that the skills involved in sheltering or evacuating school populations are similar to those used in everyday activities and are regularly tested in such situations as severe snowstorms and tornado warnings. (Id., Tr. 989-91, 996-98.)

200. Ms. Rorem raised the question of whether buses might become contaminated during an evacuation and whether this might slow the evacuation or endanger the people being evacuated. (e.g., Tr. 830-31; 833-34.) To answer these questions, the Applicant produced a witness, Eugene C. Fields, [hereafter Fields], a registered nuclear medicine and radiologic technologist with IDNS. (Fields, Tr. 858.) ^{20/} The monitoring of buses and any decontamination of buses would take place after the passengers were dropped off at the congregate care shelter. (Id.; Tr. 864.) The monitoring of buses for contamination takes only a minute or so (Id., Tr. 865) and there are measures for getting passengers out of contaminated buses without exposing them to contamination. (Butterfield, Tr. 839.) Mr. Fields testified that no school buses going through a checkpoint to a congregate care center would be stopped because of any contamination problem. (Fields, Tr. 858.) Passengers of such buses would also be monitored for contamination upon entering the congregate care shelter and would be segregated from other people at the center until it is determined whether or not they are in fact contaminated. (Id., Tr. 865.) In the event that the passengers were already contaminated, they would be decontaminated at the congregate care facilities. (Id., Tr. 866.)

201. Ms. Rorem inquired how a bus evacuating a special facility might be informed if the radiological plume changed direction and thus endangered the bus. (Tr. 890.) Mr. Butterfield testified that the plume

^{20/} Applicant's witness Mr. Butterfield also responded to some of Ms. Rorem's questions on this subject.

is monitored continuously and systematically. (Tr. 890-91.) Moreover, a number of school buses have either two-way or CB radios. (Fairrow, Tr. 828-29.) If an evacuation route needed to be changed due to a change in wind direction, such information would presumably reach those buses with radios. (Id., Tr. 829-30.) Mr. Butterfield conceded there could be a situation in which information on a change in evacuation would not reach a single bus without a radio, and traveling alone. (Id., Tr. 830.) This would be very unlikely. In addition, if needed, law enforcement personnel could escort buses out of the EPZ. (Id., Tr. 1021.)

Conclusion Regarding Contention 1(b)

202. Based on the record before it, the Board finds that 1) based on the planning activities, notification and communication procedures, and responses to recommended protective actions, the IPRA provides reasonable assurance that schools within the EPZ, including parochial schools, nursery schools, and day care centers, can be adequately protected and evacuated in the event of an emergency at Braidwood Station; and 2) the IPRA provides reasonable assurance that recreational areas and nursing homes within the Braidwood EPZ can be adequately protected and evacuated in the event of a radiological emergency at the Braidwood Station.

Consideration of Evidence Adduced By Intervenor on Contentions 1(a) and 1(b) Through Cross-Examination

203. At the evidentiary hearing session held March 11 and 12, 1986, the Intervenor raised some matters on cross-examination which appear to

relate to Contentions 1(a) and 1(b) generally as opposed to the findings discussed above. As to such matters, the Staff/FEMA adopts Applicant's findings ¶ 157 and incorporate it by reference.

204. On cross-examination, Mr. Wenger testified that he doesn't believe there were any criticisms, on either his part or the part of the RAC, ^{21/} of the exercise, as regards public information dissemination, sheltering or the evacuation of any special facilities. (Wenger, Tr. 946-49.)

V. CONCLUSIONS OF LAW

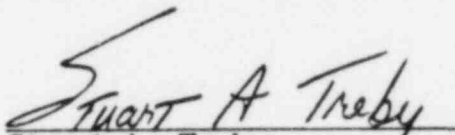
1. The Board has considered the entire record in this portion of the proceeding relating to off-site emergency planning. The Board concludes, in accordance with 10 C.F.R. § 2.760a and Section VIII of Appendix A to Part 2, that the off-site emergency response plan for the Braidwood Station with respect to all matters placed in controversy and considered in this partial initial decision, complies with the applicable provisions of 10 C.F.R. § 50.47 and 10 C.F.R. Part 50, Appendix E, and provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

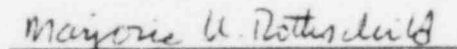
^{21/} The Regional Advisory Committee consists of eight agencies having responsibilities in an emergency situation. (Wenger, Tr. 992.) The Chair position is held by FEMA. (Id., Tr. 993.) These agencies would be in a legitimate position to criticize matters such as information dissemination during the exercise. (Id., Tr. 991.) During an exercise, the RAC members are very much involved in making assessments and evaluations for FEMA. (Id., Tr. 992-93.) Mr. Wenger is personally provided with the criticisms by these agencies. (Id., Tr. 992.) If there were any major criticisms of information dissemination, either as contained in the written emergency plan or as performed during the exercise, Mr. Wenger would be aware of such criticism. (Id., Tr. 993.)

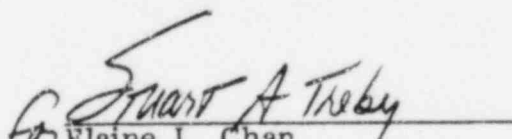
Effectiveness and Review of Initial Decision. This Partial Initial Decision is effective immediately and will constitute the final decision of the Commission 45 days after the date hereof, unless a party appeals or seeks a stay. Pursuant to 10 C.F.R. § 2.762, an appeal from this Partial Initial Decision may be taken by filing a notice of appeal with the Atomic Safety and Licensing Board within 10 days after service of this decision. A brief in support of an appeal must be filed within 30 days after the filing of the notice of appeal (40 days if the appellant is the NRC Staff/FEMA). Within 30 days after the period for filing and service of the briefs of all appellants has expired, any party not an appellant may file a brief in support of or in opposition to the appeal.

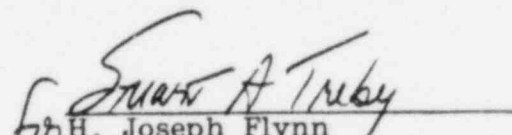
The NRC Staff/FEMA may file a responsive brief within 40 days after the period for filing and service of the briefs of all appellants has expired.

Respectfully submitted,


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Dated at Bethesda, Maryland
this 1st day of May, 1986