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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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USNRC

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In the Matter of)
)
PHILADELPHIA ELECTRIC COMPANY)
)
(Limerick Generating Station,)
Units 1 and 2))

Docket Nos. 50-352
50-353

OFFICE OF SECRETARY
DOCKETING & SERVICE
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NRC STAFF PROPOSED FINDINGS OF FACT AND CONCLUSIONS
OF LAW IN THE FORM OF A PARTIAL INITIAL DECISION
RELATING TO OFFSITE EMERGENCY PLANNING CONTENTIONS

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BEFORE ADMINISTRATIVE JUDGES:
Helen F. Hoyt, Chairperson
Dr. Richard F. Cole
Jerry Harbour

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In the Matter of
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(Limerick Generating Station,
Units 1 and 2)

Docket Nos. 50-352-OL
50-353-OL

March 7, 1985

APPEARANCES

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THIRD PARTIAL INITIAL DECISION
(On Offsite Emergency Planning Contentions)

I. INTRODUCTION ^{*/}

"This is the Third Partial Initial Decision ("PID") issued by this Atomic Safety and Licensing Board ("Licensing Board" or "Board")^{1/} in this proceeding.^{2/} Except for offsite emergency planning contentions,

^{*/} Since the Staff had no substantial disagreement with much of the "Introduction" portion of Applicant's Proposed Findings, that section, except as noted below, has been taken essentially verbatim from Applicant's Proposed Findings. Quotation marks set off these paragraphs. Additions to these paragraphs are identified by underscoring. Deletions to these paragraphs are signified by [brackets]. The Staff has carefully reviewed the Applicant's Proposed Findings Of Fact And Conclusions Of Law In The Form Of A Partial Initial Decision Relating To Offsite Emergency Planning Contentions. Wherever the Applicant's proposed findings of fact have been modified the insertion of new language is underlined and the deletion of language is identified by [brackets]. Additional findings proposed by the Staff are numbered with letter suffixes to designate the proper order according to the Applicant's proposed finding; .e.g., Staff's proposed finding 519a would appear between Applicant's proposed finding 519 and 520. Finally, the Staff adopted those proposed findings for which we had no changes.

^{1/} By notice issued September 25, 1984, the Board was reconstituted to comprise the present members, replacing Mr. Brenner and Dr. Morris with Mrs. Hoyt and Dr. Harbour.

^{2/} The first PID was issued on March 8, 1983 and resolved the litigated issues in favor of Applicant Philadelphia Electric Company, subject to certain conditions. Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), LBP-83-11, 17 NRC 413 (1983), aff'd in part, remanded in part, ALAB-785, 20 NRC 848 (1984). The remanded issues relating to the appeal from the first PID were resolved in favor of Applicant without the need for an evidentiary hearing. Limerick, supra, "Memorandum and Order on Del-Aware's Remanded and Revised Environmental Contentions V-14 and V-16" (November 8, 1984), appeal pending. The second PID was issued on August 29, 1984. Limerick, supra, LBP-84-31, 20 NRC 446 (1984), appeal pending. The second PID decided all issues in controversy which were prerequisite for authorization of the low-power operating licenses requested by Applicant pursuant to 10 C.F.R. § 50.57(c).

the first PID and second PID decided all issues admitted for litigation before this Licensing Board and resolved them in favor of Applicant. The third PID now disposes of those remaining issues in favor of Applicant."

"On March 17, 1981, Applicant applied for operating licenses for the Limerick Generating Station, Units 1 and 2, which is located in Limerick Township, Montgomery County, Pennsylvania. As stated in Applicant's Final Safety Analysis Report at 1.1-1, Applicant sought licenses to operate two boiling water nuclear reactors, each with a rated core power level of 3,293 megawatts thermal and a net electrical output of 1,055 megawatts."

"Pursuant to notice of receipt of the application published in the Federal Register, ^{3/} two intervenors, Limerick Ecology Action ("LEA") and Friends of the Earth in the Delaware Valley ("FOE") (admitted as a joint party with its representative Mr. Robert L. Anthony), proposed contentions relating to the offsite emergency plans for Limerick. ^{4/} Because the various jurisdictions within the plume exposure emergency planning zone ("EPZ") for Limerick had not yet issued draft emergency plans intended to conform to the emergency planning requirements under 10 C.F.R. § 50.47 and the regulatory guidance under NUREG-0654, the Licensing Board deferred consideration of the proposed offsite emergency planning

^{3/} 46 Fed. Reg. 42557 (August 21, 1981).

^{4/} Limerick, supra, LBP-82-43A, 15 NRC 1423, 1438-39 (1982).

contentions. ^{5/} Once draft offsite plans suitable for framing issues were available for review, intervenors proposing offsite emergency planning contentions were required to file and respecify their proposed contentions. ^{6/}

"At a prehearing conference held the week of March 5, 1984, the Licensing Board ruled on the admissibility of the proposed contentions. A number of contentions were admitted on behalf of LEA. One contention was admitted on behalf of FOE and combined with a related LEA contention, for which LEA was designated the lead intervenor. ^{7/} The contentions proposed by other intervenors were either rejected or subsequently settled. ^{8/} Following a period of discovery and the Board's final respecification of the admitted contentions, ^{9/} thirty-seven days of evidentiary

^{5/} Id. at 1519.

^{6/} Limerick, supra, "Memorandum and Order Confirming Schedules Established During Prehearing Conference" (May 16, 1983) (slip op. at 4-5).

^{7/} Limerick, supra, 19 NRC 1020, 1069 (1984).

^{8/} A contention admitted on behalf of the Commonwealth of Pennsylvania ("Commonwealth"), relating to the adequacy of dosimetry for emergency workers, was subsequently withdrawn upon agreement by Applicant to purchase the necessary dosimetry. See Appl. Exh. E-104. On January 24, 1984, the City of Philadelphia withdrew its two admitted contentions related to the protection of the City's public water supplies on the basis of an agreement reached with Applicant (Tr. 20350-52).

^{9/} Limerick, supra, "Memorandum and Order Ruling on Reworded and Respecified Offsite Emergency Planning Contentions" (September 24, 1984) and "Memorandum and Order on LEA's Deferred and Respecified Offsite Emergency Planning Contentions" (October 26, 1984).

hearings on the contentions were held between November 19, 1984 and January 29, 1985 in Philadelphia, Pennsylvania."

II. BASIC PRINCIPLES OF EMERGENCY PLANNING

At the outset the Board believes it would be helpful to state certain principles of emergency planning that arise out of the NRC regulations and case law.

"The regulations and adjudicatory decisions of the Nuclear Regulatory Commission ("Commission" or "NRC") provide that offsite emergency planning contentions are to be decided somewhat differently than other contentions admitted for hearing. Further, as discussed below, the Board's adjudicatory findings on any admitted contentions are only part of the overall findings which the NRC must make with regard to emergency preparedness prior to the issuance of a full-power operating license. The rules governing emergency planning for the NRC are contained in 10 C.F.R. § 50.47 and 10 C.F.R. Part 50, Appendix E. Under the NRC's regulations, issuance of an operating license for a nuclear power reactor requires that the NRC find that there is reasonable assurance that adequate protective measures both on and off the facility site can and will be taken in the event of a radiological emergency. ^{10/} With regard to the adequacy of offsite emergency planning, the NRC must base its findings on a review of the Federal Emergency Management Agency ("FEMA") findings and determinations as to whether State and local emergency

^{10/} 10 C.F.R. § 50.47(a)(1).

plans are adequate and whether there is reasonable assurance that they can be implemented.' ^{11/}"

"Pursuant to the Presidential Order of December 7, 1979, FEMA is to assume lead responsibility for all offsite nuclear emergency planning for fixed nuclear facilities. ^{12/} Generally, the guidance and criteria [standards] for judging the adequacy of onsite and offsite emergency response plans are contained in NUREG-0654, ^{13/} which is cited in 10 C.F.R. § 50.47(b) as appropriate guidance. NUREG-0654 does not constitute the only method of meeting applicable regulatory requirements for emergency planning. In the absence of other evidence, however, adherence to NUREG-0654 may be sufficient to demonstrate[s] compliance with the Commission's emergency planning regulations. ^{14/} The role of FEMA in NRC licensing is set forth in the 'Memorandum of Understanding Between NRC and FEMA Relating to Radiological Emergency Planning and Preparedness (executed on November 3-4, 1980) ("MOU"). ^{15/} Under the MOU, FEMA is required, in addition to any responsibilities under 44 C.F.R. Part 350

^{11/} 10 C.F.R. § 50.47(a)(2).

^{12/} See note 16, *infra*.

^{13/} NUREG-0654, FEMA-REP-1, "Criteria for Preparation and Evaluation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (Rev. 1) (November 1980).

^{14/} Metropolitan Edison Company (Three Mile Island Nuclear Station, Unit No. 1), ALAB-698, 16 NRC 1290, 1298-99 (1982); Southern California Edison Company (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-82-39, 15 NRC 1163, 1270 (1982), aff'd, ALAB-717, 17 NRC 346 (1983).

^{15/} 45 Fed. Reg. 82713 (December 16, 1980).

for final, formal approval of State and local emergency plans, to provide 'findings and determinations on the current status of emergency preparedness around particular [nuclear power plant] sites . . . for use as needed in the NRC licensing process.' ^{16/} As distinguished from the final findings under 44 C.F.R. Part 350, such determinations are typically referred to as 'FEMA interim findings.'"

"We touch on this briefly because considerable testimony was adduced from the FEMA witnesses as to the rendering of FEMA interim findings for Limerick. As discussed below, the Board does not regard the completion of those findings as necessarily dispositive of the issues presented in this case [germane to our decision here]. Although FEMA interim findings are to be given the weight of a rebuttable presumption in an NRC licensing proceeding, ^{17/} the MOU recognizes that the most current interim findings may not be available at the time offsite emergency planning contentions are decided in an evidentiary hearing. Accordingly, the MOU further provides that FEMA routine support for the NRC licensing process 'will include providing assessments of State and local plans,' and that '[t]o support its findings and determinations, FEMA will make expert witnesses available,' inter alia, before NRC licensing boards. ^{18/}"

"Accordingly, it is the responsibility of the NRC Staff, taking due regard of the FEMA interim findings related to the offsite plan, to make

^{16/} Id. at 82714.

^{17/} 10 C.F.R. § 50.47(a)(2).

^{18/} 45 Fed. Reg. 82714 (December 16, 1980).

the findings required under 10 C.F.R. § 50.47(a)(1) for issuance of a full-power operating license on those matters not in controversy. A licensing board, by contrast, is limited to considering only those emergency planning issues in controversy among the parties.^{19/} However, a licensing board should consider FEMA interim findings to the extent they are available and related to matters in controversy. A licensing board is not required to await FEMA interim findings, but rather should base its own findings, as to any admitted contentions, on all of the evidence to determine whether reasonable assurance exists that offsite emergency plans are adequate and capable of being implemented. This would typically include the testimony of technical experts and consultants, governmental emergency planners and other officials, and any other individual with relevant, material and reliable testimony.^{20/} A board should also consider any approved emergency plans or the current version of draft plans in preparation for adoption, and any other documents which bear upon the adequacy or implementability of those plans. Accordingly, a license board's evidentiary findings may be but are not necessarily [are] independent of the FEMA interim findings."

"Another distinction is crucial to the Board's analytical framework. Unlike other safety-related findings by a licensing board, offsite emergency planning findings are predictive rather than merely descriptive in nature. Recognizing that development of offsite

^{19/} 10 C.F.R. § 2.760a; 10 C.F.R. Part 2, Appendix A, Section VIII.

^{20/} 10 C.F.R. 2.743(c).

emergency plans is a dynamic, evolving process, the Commission's regulations require only a finding that the plans are adequate and capable of being implemented, not that they have been finally approved or adopted by the respective State and local governments."

"This distinction has been emphasized by the Appeal Board in several cases. For example, in San Onofre, the Appeal Board noted that plans need not be complete prior to the close of hearings, stating:

Substantively, evidence must be sufficient for the Board to conclude that the state of emergency preparedness "provides 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). The Commission has stressed that this conclusion may be a predictive one, rather than a reflection of the actual state of emergency preparedness at the time of the [B]board's decision. 47 Fed. Reg. at 30233. [emphasis added] ^{21/}"

"The Appeal Board reiterated this important distinction in the Waterford proceeding, noting that, at one time, the Commission's regulations required a finding that 'the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protection measures can and will be taken in the event of a radiological emergency.' ^{22/} The Appeal Board pointed out that the reference to the 'state' of emergency preparedness was deliberately eliminated from

^{21/} San Onofre, supra, ALAB-717, 17 NRC 346, 380 n.57 (1983) (emphasis added).

^{22/} Louisiana Power and Light Company (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076, 1103-04 (1983). [citing 46 Fed. Reg. 61135 (December 15, 1981).]

the regulations. ^{23/} In the same rulemaking, the Commission emphasized that 'there should be reasonable assurance prior to license issuance that there are no barriers to emergency planning implementation or to a satisfactory state of emergency preparedness that cannot feasibly be removed.' ^{24/} In Waterford, the Appeal Board concluded that, for purposes of licensing decision, offsite emergency plans 'need not be 'final,' but only 'sufficiently developed to permit the board to make its 'reasonable assurance' finding.' ^{25/}"

"Finally, the Appeal Board in Fermi expressly held that NRC regulations do not 'mandate either a final local government emergency plan or a final evaluation of offsite preparedness by FEMA, the agency that has the principal responsibility to conduct such an evaluation.' ^{26/} Noting earlier decisions that hearings may be based upon plans 'sufficiently developed' to support affirmative findings, the Appeal Board stated that 'it is plain from the Commission's regulatory requirements that offsite plans need not be complete, nor finally evaluated by FEMA prior to conclusion of the adjudicatory process.' ^{27/}"

^{23/} Id. at 1103.

^{24/} Id. at 1104.

^{25/} Id.

^{26/} Detroit Edison Company (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-730, 17 NRC 1057, 1066 (1983).

^{27/} Id. The Board notes that none of the offsite emergency plans for the five nuclear power plants in Pennsylvania has yet received formal approval from FEMA under 44 C.F.R. Part 350 (Hippert, Tr. 19571-72).

"These principles have important application here, given the status of offsite emergency planning for Limerick. As discussed below, practically all of the various school districts, municipal and county emergency plans (Appl. Exh. E-1 to E-61; Chester County/Commonwealth Exh. E-1) were awaiting formal adoption at the time of the hearing. Moreover, the Pennsylvania Emergency Management Agency ("PEMA") had not at that point formally received the plans admitted in evidence for its review (see Commonwealth Exhs. F-13a, b, c). Under the formalized procedures for receipt and review of offsite emergency plans from PEMA, FEMA had likewise not yet commenced its review of the draft plans received into evidence (Kinard, Tr. 20328). As the FEMA witnesses testified, it is FEMA policy to review only those plans and related documents which it receives from either PEMA (see LEA Exh. E-1, p. 1; LEA Exh. E-71, p. 1), or the NRC upon a formal request to review those materials (Asher, Tr. 20167-68; Kinard, Tr. 20308, 20322-23). On the basis of that formal request and review, FEMA expects to forward supplemental interim findings ^{28/} to the NRC pursuant to the NRC/FEMA MOU (Asher, Tr. 20167-68)."

"Inasmuch as the FEMA witnesses had not yet had an opportunity to review the current draft plans received in evidence (Asher, Tr. 20304;

^{28/} The Regional Assistance Committee ("RAC"), Region III, FEMA, forwarded an informal evaluation of the offsite plans to the NRC in April 1984, based upon its review of plans submitted by PEMA in December 1983 (FEMA Exh. E-6). The RAC review resulted in the issuance of an initial set of interim findings by FEMA, dated April 17, 1984 (FEMA Exh. E-7). As discussed below, the plans received into evidence were far more advanced than those reviewed by FEMA.

Kinard, Tr. 20330), they were simply not in a position in several instances to address the adequacy or implementability of several aspects of the plans challenged by the LEA and FOE contentions. They acknowledged that their testimony would be changed just on the basis of other testimony before the Board (Asher, Tr. 20330). The Board notes, however, that the basic planning principles and procedures for the municipal and county plans have been essentially in place since the beginning of the planning process (Bradshaw, Tr. 17364). Furthermore, there have been very few instances where municipalities objected or revised the basic procedures in the plans (Id.). Nonetheless, the FEMA witnesses generally testified that applicable planning standards would be satisfied if the plans in evidence now reflect the information provided by the testimony of Commonwealth, county, municipal, school district and expert witnesses, which updated the status of planning in the various jurisdictions. Thus, incompleteness of the FEMA review at this time, including the receipt of any further planning documents necessary for that review, does not impede this Board's ability to make the necessary predictive findings."^{29/} However, the Board does have an obligation to address the outstanding Category A deficiencies found by FEMA as reflected in its written evaluation of the July 25 and November 20, 1984 Limerick exercises (FEMA Exhs. E-4, E-5) to the extent they pertain to the admitted

^{29/} [Nor is it the Board's task to address FEMA's review of outstanding deficiencies noted in Region III's April 1984 interim findings (FEMA Exh. E-7) and its written evaluations of the July 25 and November 20, 1984 Limerick exercises (FEMA Exhs. E-4, E-5), except as they pertain to specific contentions.]

contentions in this proceeding. This is so because a "Category A" deficiency is the type that precludes a finding of reasonable assurance (FEMA Exh. E-5, p. 9).

"The Board is satisfied that there is ample evidence upon which to make sound predictive findings. Applicant presented Robert Bradshaw, John Cunnington and Robin Wenger as a panel of witnesses from Energy Consultants, retained by Applicant in 1982 to assist local governments within the Limerick EPZ in preparing [preparation] adequate emergency plans. Energy Consultants has been actively engaged in that support function for two years by preparing draft plans for the risk counties, municipalities and school districts, utilizing prototype plans approved by PEMA and input from each respective unit of government. Based upon their consultant and liaison responsibilities, the Energy Consultant witnesses possessed detailed knowledge of the emergency plans and training programs. The Board found them to be well qualified by position, training and experience to explain the status and content of those plans and has relied heavily on their testimony." ["Similarly, the Board found Robert Klimm, who prepared an Evacuation Time Estimate study for the Limerick EPZ, to be highly knowledgeable and qualified in the area of transportation and traffic engineering and has also relied heavily on his testimony.]

"The NRC staff, FEMA and Commonwealth of Pennsylvania also presented witnesses whom the Board found to be knowledgeable, competent and credible. [to the extent they were familiar with the details of the plans." "As noted, their reviews are in progress.] Accordingly, the Board has relied heavily on their testimony to the extent the witnesses

were conversant with the present status of plans and planning within the Limerick EPZ.

"LEA subpoenaed a number of municipal officials to explain the status of planning in the respective townships. Those officials had almost entirely delegated responsibility for the development of a workable plan to their respective emergency coordinators, who were charged with submitting and recommending approval of a workable plan. Accordingly, those municipal officials had not yet reviewed their plans in great detail. While those witnesses attempted to be helpful, there were many instances in which they simply lacked an understanding of basic emergency planning assumptions as well as the plans themselves. The Board has given their testimony appropriate weight. Certain non-governmental witnesses sponsored by LEA [were very uncooperative and] exhibited unwillingness to learn about emergency planning for their facilities. Hence, some witnesses [they] knew very little about existing plans which have addressed or could address their concerns."

"A number of the contentions challenge the adequacy of particular aspects of emergency preparedness, such as notification of emergency workers, or the adequacy of planning for particular categories of the population, such as school children and children enrolled in day care facilities. Other contentions more broadly challenge the capability to implement the plans and questions whether the plans will in fact be adopted. Accordingly, the Board has not addressed the admitted contentions in numerical order, but rather in a sequence which provides the clearest understanding of the issues in controversy."

On January 28, 1985, we issued an order setting forth the schedule for filing of proposed findings of fact and conclusions of law. That schedule was modified on March 4, 1984. All parties have submitted proposed finding of fact and conclusions of law. The Board has considered all of the proposed findings of fact and conclusions of law filed by the parties. Those not incorporated directly or inferentially in this decision are rejected as unsupported by fact or law or as unnecessary to the rendering of this decision.

[II.] III. FINDING OF FACT

A. APPLICANT'S EVACUATION TIME ESTIMATES STUDY

LEA-23

The draft county plans are deficient because they do not contain reliable evacuation time estimates.

LEA-24/FOE-1

There is no assurance that plans for evacuation of the ten mile radius will not be impeded by traffic congestion in the vicinity of Marsh Creek State Park, Exton area (involving Route 100) and Valley Forge Park, King of Prussia area.

These areas should either be included in the Emergency Planning Zone or adequate plans for traffic control and direction should be made to avoid adverse effects on EPZ evacuation.

Methodology and Validity of Evacuation
Time Estimates Study

1. The Licensing Board noted in its April 20, 1984 Order that LEA 23, LEA-24, and FOE-1 are concerned with vehicular traffic and the reliability of the Applicant's evacuation time estimates. (19 NRC 1020, at 1064-67). With regard to LEA-23 the Board ruled that only two aspects

of the asserted contention were acceptable for litigation; aspect number one which concerns the bases in the Applicant's evacuation time estimate study assumption that "up to one hour may be required to assemble buses, transport vehicles and to load students onto buses" and aspect number six which deals with an asserted discrepancy between ECI survey figures concerning the transit dependent population and Census figures. (Licensing Board Order dated October 26, 1984, at 7.) With regard to LEA-24 and FOE-1 the Board ruled in its April 20, 1984 Order that the contentions be admitted "to the extent they call for planning against the effect traffic congestion in the areas outside the EPZ they name could have on evacuation of the plume exposure pathway EPZ. 19 NRC at 1066. The specific areas of traffic congestion the Board limited litigation to are the Marsh Creek State Park, Valley Forge National Historic Park, the King of Prussia area and Exton Mall. 19 NRC at 1067. The Board noted that the central issue joined by the two contentions is "whether the emergency plans provide reasonable assurance that traffic congestion in the four named areas will not significantly impede evacuation of the EPZ". 19 NRC at 1067. FEMA testified that Planning Standard J, Elements J(10)(i) and J(10)(1), calling for "projected traffic capacities of evacuation routes under emergency conditions" and "time estimates for evacuation of various sectors and distances based on a dynamic analysis and for the plume exposure pathway emergency planning zone" were the standards applicable to LEA-23, 24/FOE-1. (Asher and Kinard, ff. Tr. 20150 at 8 (deferred), 32 (admitted). Applicant retained HMM Associates, Inc. ("HMM Associates") of Concord, Massachusetts to prepare an evacuation time study of the Limerick EPZ. HMM Associates thereafter prepared "Evacuation Time Estimates for the Limerick Generating Station Plume Exposure

Emergency Planning Zone - Final Draft (May 1984) ("ETE study".) (Klimm, ff. Tr. 13794 at p. 1, Tr. 13795; Exh. E-67).

2. The Staff adopts and incorporates Applicant's proposed finding 2.

3. The Staff adopts and incorporates Applicant's proposed finding 3.

4. The Staff adopts and incorporates Applicant's proposed finding 4.

5. The Staff adopts and incorporates Applicant's proposed finding 5.

6. The methodology and assumptions used in the ETE study have been utilized at numerous sites throughout the country and have been determined to adequately address the criteria established in NUREG-0654 (Klimm, Tr. 13990, 14050). The NRC Staff's witness, Thomas Urbanik, an expert in the evaluation of evacuation time estimates prepared for fixed nuclear facilities in the United States, agreed that the ETE study is consistent with the assumptions and methodologies of NUREG-0654, Appendix 4 (Urbanik, Tr. 19223). He also testified that the evacuation time estimates contained in the ETE study were reasonably developed and soundly based (Urbanik, Tr. 19277). He added that while the ETE study met all the guidelines, such guidelines cannot be applied in isolation. He testified that there must be support for the assumption implicit in the ETE study that there is traffic control beyond the EPZ to allow people who reach the EPZ boundary to continue to move. (Urbanik, Tr. 19277-78).

7. The methodology and assumptions (including the assumptions regarding control of access of vehicles onto evacuation routes beyond the EPZ (See Tr. 13885-86 and see Finding 42a) utilized for the ETE study were reviewed with PEMA officials and emergency preparedness officials from Chester, Montgomery and Berks Counties. As a result of those meetings, the ETE study included input from local officials and planners, especially with respect to the Valley Forge National Park/King of Prussia area as well as the Marsh Creek State Park/Routes 100 and 113 area. Subsequent to its meetings with PEMA and local officials, HMM Associates developed a draft of the ETE study and reviewed it with those jurisdictions with regard to assumptions, methodology and input which had previously been discussed and offered a further opportunity for comment prior to submission of the final draft ETE study (Klimm, Tr. 13883, 13910).

8. The Staff adopts and incorporates Applicant's proposed finding 8.

9. The Staff adopts and incorporates Applicant's proposed finding 9.

Data Base for the Evacuation
Time Estimates Study

10. The Staff adopts and incorporates Applicant's proposed finding 10.

11. The Staff adopts and incorporates Applicant's proposed finding 11.

12. The Staff adopts and incorporates Applicant's proposed finding 12.

13. The Staff adopts and incorporates Applicant's proposed finding 13.

14. The Staff adopts and incorporates Applicant's proposed finding 14.

15. The Staff adopts and incorporates Applicant's proposed finding 15.

16. The time estimates for Limerick are reasonable, given the current radiological emergency response plans, including plans for traffic control and access control (Klimm, Tr. 13974). However, identification of traffic control points beyond the EPZ is necessary to support the implicit assumption in the ETE study that traffic leaving the EPZ can continue to move. (Urbanik, Tr. 19278; Finding 37).

Representative Fair and Adverse
Weather Conditions

17. The Staff adopts and incorporates Applicant's proposed finding 17.

18. The Staff adopts and incorporates Applicant's proposed finding 18.

19. The Staff adopts and incorporates Applicant's proposed finding 19.

20. The Staff adopts and incorporates Applicant's proposed finding 20.

21. The Staff adopts and incorporates Applicant's proposed finding 21.

22. The Staff adopts and incorporates Applicant's proposed finding 22.

Preparation and Mobilization Times

23. The Staff adopts and incorporates Applicant's proposed finding 23.

24. The Staff adopts and incorporates Applicant's proposed finding 24.

25. The ETE study utilizes a one-hour mobilization time (30 to 90 minutes following notification) for school buses. At page 5-5 of the ETE study it states: "For school facilities, it was assumed that up to one hour may be required to assemble buses, transport vehicles to schools and to load students onto buses. Vehicles stationed at the facilities at the time of the ordered evacuation could be loaded onto the buses in as little as 15 minutes following notification. Accordingly, school buses were loaded onto the evacuation network from the period between 30 and 90 minutes following the decision to evacuate" (Klimm, ff. Tr. 17191 at p. 16-17). Mr. Klimm testified that the one-hour mobilization time for school buses is site-specific for the Limerick EPZ [and as discussed with PEMA and county planning officials] was developed and concurred with by both the three county emergency preparedness offices, and PEMA, and was deemed to be representative and realistic. It includes the total time required to drive the buses to the schools and load students onto them. As a worst-case scenario, driver mobilization time would exceed one hour. For the ETE study, however, a worst-case

scenario was not desirable (Klimm, Tr. 17260; Cunningham, Tr. 17258-59; Klimm and Cunningham, Tr. 17373-74.

26. The Staff adopts and incorporates Applicant's proposed finding 26.

26a. A 100 percent increase in the period during which a bus would be mobilized, transported and loaded would not significantly increase the evacuation time estimate for the school district being evacuated. (Klimm, Tr. 17267).

26b. Based on the evidence in the record the Board finds that the Intervenor's concern about the assumption in the ETF study regarding assembling transport vehicles and buses and loading students on the buses may in a "worst case" situation have validity but does not significantly affect the evacuation time estimates.

Pre-existing Traffic Flows

27. The ETF study did not assume a pre-existing flow of traffic on particular roadway links. Instead, all vehicles within the EPZ were considered by simulating their movement from their respective points of origin. This was done whether the vehicles were actually in the area at the time of notification or were outside the area and driven into the EPZ before departing (Klimm, Tr. 13866, 13869, 17062). The movement of vehicles driven by permanent residents was simulated from their homes. The movement of vehicles by others, e.g., transients and those at schools, nursing homes and other special facilities, was simulated from their exact location. Accordingly, the ETF study accounts for all vehicles likely to be in the Limerick EPZ under a variety of conditions,

at different seasons of the year, at different times of day, and under different weather conditions (Klimm, Tr. 13866-67, 14035). To simulate evacuation traffic superimposed on existing traffic would have resulted in a double counting of those vehicles, which would represent an inaccurate base flow (Klimm, Tr. 13866-67, 13870; Urbanik, Tr. 19215, Tr. 19224).

28. The Staff adopts and incorporates Applicant's proposed finding 28.

Public Survey of Transportation Dependent

28a. The special needs (medical, transportation, notification) of the resident population within the Limerick Generating Station plume exposure pathway emergency planning zone were determined by means of a public survey. The survey was conducted by the three risk counties through the respective emergency management agencies and utilized a two-part form. A cover letter was provided to explain the survey and a pre-addressed/pre-posted envelope was enclosed for a response. Individuals were instructed to return the form if they or any member of their household had a special need. Individuals with questions were advised to contact the county office of emergency management. (Bradshaw, ff. Tr. 17191, at 17).

28b. Survey materials were distributed by mail to addresses in the EPZ. County social services agencies and municipal offices also made the survey available. The news media provided information about the survey. Responses were then compiled and needs were listed for each municipality. Names, addresses, telephone numbers and the indicated

special needs were catalogued. The lists were filed in the respective municipal emergency operations centers for use at the time of any emergency. Many of the municipalities reviewed their lists and verified their accuracy during the July 25 and November 20, 1984 Limerick exercises. (Bradshaw, ff. Tr. 17191, at 18).

28c. Original estimates for transit dependent population were obtained from the 1980 Census of Population and Housing, Work and Travel to Work characteristics. Estimates for mobility-impaired individuals were obtained through a United States Department of Health and Human Services document, entitled Prevalence of Selected Impairments - U.S. 1977. (Bradshaw, ff. Tr. 17191, at 18).

28d. An Applicant's witness testified that previous estimates for mobility-impaired individuals, based upon the federal estimates, closely approximate actual survey results, supporting the comprehensiveness of the survey. (Bradshaw, ff. Tr. 17191, at 18).

28e. Rita Banning, a Montgomery County Commissioner, testified that she was concerned about the accuracy of the survey. (Banning, ff. Tr. 17752, at 2 and 3). She testified that this concern was merely her opinion and was not based on any knowledge or information and that she was not familiar with different methods of conducting surveys. (Banning, Tr. 17637, 17680). She testified that Attachment G of draft 4 of the Pottstown Borough plan indicated that there were an estimated 4,175 residents needing transportation assistance in the event of an evacuation based on the 1980 Census Data. She further testified that this number as reported in Attachment G of draft 6 of the Pottstown Borough plan was

reduced to 605 residents requiring transportation based on data from the public survey (Banning, ff., Tr. 17752, at 3; 17636).

28f. The Applicant's witness testified that the difference between transportation statistics in the U.S. Census and the transportation needs determined by the county surveys is explained by the fact that the U.S. Census lists households without personal transportation, while the survey asks if the household has private transportation "available." Many residents did not request assistance even if they had no "personal" transportation because other private transportation was available to them through friends, neighbors, or relatives. The survey data supports this interpretation of the difference between the Census and actual survey data on available transportation in that the largest differences were in urban areas where more friends, neighbors or relatives would live in close proximity. In less populated areas, the survey results and Census estimates are comparable. (Bradshaw, ff., Tr. 17191, at 18-19).

28g. The needs survey data conducted by the counties provides more appropriate data for planning purposes than data from the U.S. Bureau of Census. Empirical data from past evacuations indicate that many households without access to vehicles will obtain rides with friends or neighbors and will not rely upon public transportation assistance. In any event, utilizing the vehicle demand data associated with this population from the 1980 Census would not affect the evacuation time estimates. (Bradshaw and Klimm, ff. Tr. 17191, at 19)..

28h. FEMA witnesses testified that consistent with Appendix 4 to NUREG-0654 (page 4-2) a survey can be an acceptable technique for

measuring the transport-dependent population within the Limerick EPZ. (Asher and Kinard, ff. Tr. 20150, at p. 9).

28i. Based on the evidence in the record we find that public survey conducted by the Applicant to identify transport-dependent individuals in the Limerick EPZ is accurate and is not inconsistent with the data from the U.S. Census. Accordingly, this aspect of Contention LEA-23 is without merit.

29. The Staff adopts and incorporates Applicant's proposed finding 29.

30. The Staff adopts and incorporates Applicant's proposed finding 30.

31. The Staff adopts and incorporates Applicant's proposed finding 31.

Traffic Control and Access Control Points

32. Table 7.2. of the ETE study contains traffic control point locations derived from the three county plans. Those locations were determined by Commonwealth and county authorities on the basis of local information (Kimm, Tr. 14083). Traffic control and access control points for the county and municipal plans have been designated and staffed through direct coordination with the Pennsylvania State Police. This information was presented to the municipalities, which determined whether other areas needed traffic or access control. The municipalities applied their own resources to those points and referred any unmet staffing needs to the counties. (Bradshaw, Tr. 17297). However,

specific locations for traffic control beyond the EPZ have not all been identified. (Klimm, Tr. 14079-80; see Klimm, Tr. 13972-74.)

33. The Staff adopts and incorporates Applicant's proposed finding 33.

34. The Staff adopts and incorporates Applicant's proposed finding 34.

35. The Staff adopts and incorporates Applicant's proposed finding 35.

36. The Staff adopts and incorporates Applicant's proposed finding 36.

36a. The Applicant's witness testified that the underlying assumption of the ETE study is that the traffic control would be in place during the course of the evacuation (Klimm, Tr. 13941).

37. [While the Staff witness stated that it might be necessary to identify additional traffic control points outside the EPZ in the southeastern area, no specific points were designated which would be necessary (Urbanik, Tr. 19280-81). There is no problem in establishing additional traffic control points for any areas beyond the EPZ for which they may be necessary (Urbanik, Tr. 19228-29; Proposed Findings 46, 56, 69).]

37. The NRC Staff witness testified with regard to the ETE study that the traffic control points beyond the EPZ were inadequate. (Urbanik, Tr. 19228). The NRC Staff witness added that traffic control points were necessary outside the EPZ, generally to the south and the east of the EPZ, to provide priority to evacuating traffic and to control traffic on routes that are not on the primary (planned) traffic routes. This would include

the areas designated in LEA contention LEA-24/FOE-1 specifically Marsh Creek State Park, Exton Area, Valley Forge Park and King of Prussia. (Urbanik, ff. Tr. 19203, at 3; Tr. 19204, 19280-81). Input for designation of such traffic control points would come from State and local officials (Urbanik, Tr. 19204). With the identification of such traffic control points, which he added can be done, there would be assurance that traffic would be manageable. (Urbanik, Tr. 19207, Tr. 19228). Dr. Urbanik added that such identification of traffic control points would support the implicit assumption in the ETE study that traffic leaving the EPZ can continue to move. (Urbanik, Tr. 19278). FEMA testified that the study should include all pertinent data. (Asher and Kinard, ff. Tr. 20150 at 33).

37a. We find based on the testimony of Dr. Urbanik, that PEMA and local officials should identify traffic control points to the south and east of the EPZ particularly in the areas of Marsh Creek State Park, Exton Area, Valley Forge Park and King of Prussia and that these traffic control points should be integrated in the ETE study.

Vehicle Queuing

38. The Staff adopts and incorporates Applicant's proposed finding 38.

39. The Staff adopts and incorporates Applicant's proposed finding 39.

40. HMM Associates [also reviewed the] did review road systems external to the EPZ to determine the potential effect that congestion outside the EPZ might have on vehicles exiting the EPZ (Klimm, Tr. 13825,

13,904). However, the impact of evacuation outside of the EPZ in every instance was not assessed. The intent was to develop realistic evacuation time estimates based on NUREG-0654 guidance (Klimm, Tr. 13972-73). As part of its site-specific review, HMM Associates conducted field surveillance of areas outside the EPZ which it had determined might possibly give rise to operational or geometric constraints affecting vehicle evacuation from the EPZ (Klimm, Tr. 13811).

41. The Staff adopts and incorporates Applicant's proposed finding 41.

42. Except for particular areas along main evacuation routes where traffic control would be necessary to effectuate an evacuation of the EPZ, such as the Valley Forge National Park and Marsh Creek State Park, the Applicant for purposes of [it was] the ETE determined that there was no need to consider traffic originating from areas beyond the EPZ inasmuch as evacuation along corridors from outside the EPZ would not significantly affect evacuation times of vehicles leaving the EPZ, due to the distance of population centers from the EPZ or excess roadway capacities. Furthermore, the Applicant assumed that for areas located outside the EPZ that evacuation would not be at the same time as for evacuation occurring within the EPZ. Given those factors, the Applicant assumed for purposes of the ETE that no congestion would occur which would affect evacuation along the corridors from the EPZ (Klimm, Tr. 13952, 13,955-56, 13970-73).

42a. The Applicant's witness, Mr. Klimm, testified when asked about areas beyond the EPZ that the underlying assumption of the ETE study is

that traffic control would be in place to restrict access to evacuation corridors (Klimm, Tr. 13941-42; 13952; 13993-94; 14107).

42b. We find therefore, based on the testimony of Dr. Urbanik (see Finding number 37A), that identification of traffic control points to the south and east of the EPZ particularly in the areas of Marsh Creek State Park, Exton area, Valley Forge Park and King of Prussia is necessary to support the implicit assumption in the ETE study that traffic leaving the EPZ can continue to move. However, nothing in the record supports a finding that the Limerick EPZ is not appropriately drawn. (See Kinard, Tr. 20293).

43. The Staff adopts and incorporates Applicant's proposed finding 43.

44. The Staff adopts and incorporates Applicant's proposed finding 44.

45. Although an alternative means exist to evacuate traffic from the park away from Route 100, [it was] the Applicant decided, based upon discussions with Chester County planning officials, to assume that park visitors would exit by way of Park Road (the main park entrance) to Route 100 and be directed south (Klimm, ff. Tr. 13794 at p. 3, Tr. 13967, 13970, 17055). Accordingly, the ETE study assumes that a peak traffic flow of 4,240 vehicles might be evacuated by this route along with other traffic directed south along Route 100 (Klimm, ff. Tr. 13794 at p. 3; Appl. Exh. E-67, p. A6-3).

46. The Staff adopts and incorporates Applicant's proposed finding 46.

47. The Staff adopts and incorporates Applicant's proposed finding 47.

48. The Staff adopts and incorporates Applicant's proposed finding 48.

49. [Traffic flows along Routes 100 and 113 South were fully analyzed on the same basis as other main evacuation corridors.] Traffic control points were established to preclude a bottleneck at their intersection, which is outside the EPZ (Proposed findings 50-53).]

50. The Staff adopts and incorporates Applicant's proposed finding 50.

51. The Staff adopts and incorporates Applicant's proposed finding 51.

52. The Staff adopts and incorporates Applicant's proposed finding 52.

53. The Staff adopts and incorporates Applicant's proposed finding 53.

Valley Forge National Park and the
Route 363 Evacuation Corridor

54. The Staff adopts and incorporates Applicant's proposed finding 54.

55. The Staff adopts and incorporates Applicant's proposed finding 55.

56. The Staff adopts and incorporates Applicant's proposed finding 56.

57. The Staff adopts and incorporates Applicant's proposed finding 57.

58. The Staff adopts and incorporates Applicant's proposed finding 58.

59. Pre-existing park traffic was not loaded onto evacuation routes for the ETE study because most of the park, especially the portion primarily used by visitors, lies outside the Limerick EPZ. Moreover, it is easy to control access of vehicles from the park onto evacuation routes (Klimm, Tr. 13844-85). It was a planning assumption reviewed with both PEMA and the counties that control of this access, number one, would be required and, number two, could easily be put in place to restrict access or eliminate the possibility of vehicles from the park to enter the major evacuation corridor through that area. (Klimm, Tr. 13,885).

60. The Staff adopts and incorporates Applicant's proposed finding 60.

61. The Staff adopts and incorporates Applicant's proposed finding 61.

62. The Staff adopts and incorporates Applicant's proposed finding 62.

63. [Likewise, figures for average daily vehicle counts entering the Park on Route 23 at its western boundary are unrelated to traffic flows or patterns which would exist in the event of an actual radiological emergency. This is also true of other vehicle counts reported by the National Park Service or the total number of park visitors (Fewlass, Tr. 14613-14, 14635-37, 14642).] The National Park Service representative admitted that he could only speculate as to traffic congestion along Route 23 through the park in the event of an actual emergency in any event (Fewlass, Tr. 14,588-89).

64. [Traffic congestion outside the EPZ along the Route 363/County Line Expressway evacuation corridor, which passes the eastern boundary of the Valley Forge National Park (Appl. Exh. E-92), will not impede an evacuation of the EPZ.] Route 363 extends from the eastern portion of the EPZ as Trooper Road and runs south to an interchange with the Schuylkill Expressway Extension; it then extends south to an interchange with Route 23. Thereafter, Route 363 continues west on Route 23 and then runs south-southeast through the Valley Forge/King of Prussia area to Route 202. North of the Route 23 interchange, Route 363 is a limited access, four-lane divided expressway. As the expressway continues south, it becomes the County Line Expressway at the Route 23 interchange. Therefore, the Route 363/County Line Expressway corridor is a limited access expressway from the interchange of the Schuylkill Expressway Extension southward (Klimm, ff. Tr. 13794 at pp. 5-6; Appl. Exh. E-92).

65. The Staff adopts and incorporates Applicant's proposed finding 65.

66. The Staff adopts and incorporates Applicant's proposed finding 66.

67. The Staff adopts and incorporates Applicant's proposed finding 67.

68. The Applicant's witness testified that [A] access to Route 252 on the west side of the Valley Forge area could also be controlled very easily, although from the standpoint of developing evacuation time estimates for the entire EPZ Route 252 is not a critical evacuation corridor. Even if vehicles from the park were permitted to enter that

corridor, they would not significantly affect the time estimates (Klimm, Tr. 13,887).

69. Based upon discussion among HMM Associates, PEMA and county planning officials, [it was well understood] the Applicant's witness testified that traffic control points along the Route 363/County Line Expressway corridor would be required and could easily be established (Klimm, Tr. 13885, 13938-39).

70. The Staff adopts and incorporates Applicant's proposed finding 70.

71. The Staff adopts and incorporates Applicant's proposed finding 71.

Schuylkill Township

72. The Staff adopts and incorporates Applicant's proposed finding 72.

73. [Mr. Vutz was not familiar with the planning principles and assumptions used in the ETE study.] Mr. Vutz had not reviewed the ETE study with respect to the methodology and assumptions prescribes under NUREG-0654 and could not, therefore, state whether his particular concerns were based upon some perceived deficiency in the study or the requirements of NUREG-0654 (Vutz, Tr. 14527-30). More basically, Mr. Vutz incorrectly asserted that evacuation time estimates should be based upon worst case meteorology, including, for example, the blizzard of 1978 or some other conditions which rendered the roads impassable (Vutz, Tr. 14451, 14521-23). [Mr. Vutz did not understand that it is

neither prudent nor reasonable to design evacuation plans for the worst case (Vutz, Tr. 14535).]

74. The Staff adopts and incorporates Applicant's proposed finding 74.

75. The Staff adopts and incorporates Applicant's proposed finding 75.

76. The Staff adopts and incorporates Applicant's proposed finding 76.

77. The Staff adopts and incorporates Applicant's proposed finding 77.

78. The Staff adopts and incorporates Applicant's proposed finding 78.

79. The Staff adopts and incorporates Applicant's proposed finding 79.

Upper Uwchlan Township

80. The Staff adopts and incorporates Applicant's proposed finding 80.

81. Mr. Feters acknowledged that, in the event of an evacuation, traffic could be diverted from the Marsh Creek State Park south along Moore Road, Dorlan Mills Road and Creek Road away from the EPZ if appropriate traffic control points were designated (Feters, Tr. 14756-57). He testified that there was traffic congestion [could not meaningfully relate peak flows associated with rush hour traffic] along Route 100 at the Downington interchange of the Pennsylvania Turnpike. However, he did not relate this congestion with any traffic

flow or traffic pattern which would exist in the event of an actual evacuation due to a radiological emergency (Fetters, Tr. 14747-48; Proposed Finding 28).

82. The Staff adopts and incorporates Applicant's proposed finding 82.

83. Finally, Mr. Fetters asserted that Routes 100 and 113 are paralyzed by any light covering snow (Fetters, Tr. 14712). [As a practical matter,] The Applicant's witness, Mr. Klimm, testified that the effect that adverse weather would have on any given roadway would depend upon weather conditions, rate of precipitation and ground temperature. Traffic flow analyses do not assume that any given route is automatically "paralyzed" by any amount of snow fall (Klimm, Tr. 17053-54). Although Mr. Fetters complained that PennDOT was slow in plowing State roads in Upper Uwchlan Township after snows (Fetters, Tr. 14750), he did not take into account the concerted efforts which would be made to plow those roads in the event it was necessary to facilitate an evacuation because of a radiological emergency at Limerick (Proposed Findings 364-370). Moreover, he conceded that Upper Uwchlan Township has the capability to plow or cinder those roads if need be (Fetters, Tr. 14750).

Upper Merion Township

84. The Staff adopts and incorporates Applicant's proposed finding 84.

85. While Mr. Wagenmann testified as to the roadway capacity of certain arteries passing through Upper Merion Township, e.g., North Gulph road, which he indicated handles approximately 26,000 to 29,000

vehicles a day, he confused roadway capacity with level of service (Wagenmann, Tr. 17433, 17463-64). [The latter concept is irrelevant to emergency planning.] Mr. Wagenmann properly conceded that he knew of no relationship between peak commuter traffic flow along township roads and the traffic flow associated with a Limerick emergency evacuation (Wagermann, Tr. 17465-66, 17468; Proposed Finding 28).

Conclusion

85a. The Board finds, based on the evidence in the record, that there is reasonable assurance that the ETE study is consistent with the assumptions and methodologies of NUREG-0654 and meets the appropriate elements of Planning Standard J (J(10)(i) and J(10)(1)). However, in light of the testimony of Dr. Urbanik, the Board is concerned about the adequacy of the identification of traffic control points beyond the EPZ in the areas of Marsh Creek State Park, Exton Area, Valley Forge Park and King of Prussia. Accordingly, the Board directs the Applicant to work with PEMA and local officials to identify such traffic control points and integrate these traffic control points into its ETE study. The Board, therefore, finds that contentions, LEA-23, LEA-24/FOE-1 are without merit. (See Findings 1, 6, 16, 37, 37a, 42a and 42b).

B. SPECIAL POPULATION GROUPS

1. Schools

LEA-11

The draft Chester and Montgomery County and School District RERP's are deficient in that there is insufficient information

available to reasonable assure that there will be enough buses to evacuate the schools, both public and private, in one lift.

Montgomery County

Compilation of Bus/Driver
Resource Data from Providers

85b. This contention was admitted by the Board in its Special Prehearing Conference Order of April 20, 1984 and further defined in its Memorandum and Order of September 24, 1984. In the Matter of Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), LBP-84-18, 19 NRC 1020, 1053 (1984); In the Matter of Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), Memorandum and Order Ruling On Reworded And Respecified Offsite Emergency Planning Contentions (Unpublished), slip op. at 5-7 (September 24, 1984). In admitting this contention, the Board specifically ruled out: (1) provisions for transportation from host schools to mass care centers; (2) any mention of required mobilization time; (3) issues regarding assumption in the Evacuation Time Estimate Study concerning the time it would take to assemble and load buses; and (4) whether there should be traffic control measures at the schools. Memorandum and Order Ruling On Reworded And Respecified Offsite Emergency Planning Contentions, slip op. at 6-7. The contention was construed to allege that the plans should show either that there were enough buses, or that a mechanism adequate for requiring them existed. (Id.) Accordingly, we consider the evidence and resolve the contention within the context of this prior guidance by the Licensing Board.

86. The Staff adopts and incorporates Applicant's proposed finding 86.

87. The Staff adopts and incorporates Applicant's proposed finding 87.

88. The Staff adopts and incorporates Applicant's proposed finding 88.

89. Thus, to the extent bus companies would give priority to their ordinary commercial operations at the time of an emergency, the bus survey accounts for this priority [took that into consideration] in reflecting the minimum number of buses and drivers available (Bradshaw and Cunnington, Tr. 12978).

90. Based upon its meetings with transportation coordinators, Montgomery County determined that it would be unnecessary and unrealistic to specify minimum numbers of buses available. It would be much more effective to estimate the units available and provide equipment and manpower on an as needed basis to the maximum extent possible (Cunnington, Tr. 12978, 16924).

91. The Staff adopts and incorporates Applicant's proposed finding 91.

92. The Staff adopts and incorporates Applicant's proposed finding 92.

93. The Staff adopts and incorporates Applicant's proposed finding 93.

94. The Staff adopts and incorporates Applicant's proposed finding 94.

95. The Staff adopts and incorporates Applicant's proposed finding 95.

Format of Letters of Agreement

96. The Staff adopts and incorporates Applicant's proposed finding 96.

97. The Staff adopts and incorporates Applicant's proposed finding 97.

98. The FEMA panel testified that the letters of agreement utilized by Montgomery and Chester Counties satisfy the planning standards of NUREG-0654 (Asher, Tr. 20163, 20196, 20199, 20296-97). A FEMA witness stated that, aside from FEMA/NRC standards, he personally felt the number of buses should be specified in the agreement (Asher, Tr. 20196-97). Nonetheless, FEMA acknowledged that the absence of such numbers in agreements would not preclude it from making a finding that the planning has been adequately addressed. (Asher, Tr. 20296-97). [He apparently did not, however, understand how the agreements were developed or how they reflect the underlying survey information as conservative estimates of available buses.]

99. The Staff adopts and incorporates Applicant's proposed finding 99.

100. The Montgomery County OEP has no reason to doubt the validity of the letters of understanding signed by the various bus providers who agreed to make their buses and drivers available to the maximum extent possible in an emergency (Bigelow, Tr. 14411-12, 14201, 14217).

101. Based upon discussions with private bus providers and the transportation representatives of public school districts, the Montgomery County OEP believes that transportation providers will support the county in an emergency. Verbal assurances to that effect have been

received from transportation providers who have not yet executed letters of understanding (Bigelow, Tr. 14216-17, 14367).

102. Even without written or verbal agreements from each of the providers, an adequate number of buses would be available in an actual emergency. The weight of the evidence clearly [conclusively] demonstrated that providers will respond in an emergency to the best of their capability as they always have, with or without an agreement (Bigelow, Tr. 14366-67; Cunnington, Tr. 12977).

103. The counties do not rely upon their agreements with bus providers as contractually enforceable. Rather, the purpose of the agreement is to reasonably determine and confirm the available resources and to assure that the providers are capable of providing those resources. This purpose is in accord with the criteria outlined in NUREG-0654, Criterion A.3. When PEMA and FEMA reviewed the draft plans in December 1983, neither agency indicated dissatisfaction with [the format of the] agreements of a similar nature and simply stated, that, upon completion, the agreements would meet regulatory requirements (Bradshaw, Tr. 12976-77 [12977]). Although the agreements do not themselves provide for compensation, bus providers will be paid out-of-pocket expenses in furnishing buses for an emergency response. Reimbursement could come from insurance, the Applicant, settlements under the Price-Anderson Act or from PEMA under Commonwealth legislation, including P.L. 1332 (Hippert, Tr. 19602-03, 19628; Appl. Exh., E-102).

104. The Staff adopts and incorporates Applicant's proposed finding 104.

105. The Staff adopts and incorporates Applicant's proposed finding 105.

106. The Staff adopts and incorporates Applicant's proposed finding 106.

107. The Staff adopts and incorporates Applicant's proposed finding 107.

108. The Staff adopts and incorporates Applicant's proposed finding 108.

109. On this basis, while each individual provider in Montgomery County has provided a conservative estimate of the number of buses and drivers it would reasonably anticipate to make available in an emergency, the Board believes that it is reasonable to expect [there is every expectation] that some providers would be able to furnish buses and drivers well in excess of their conservative estimates (Cunnington, Tr. 12980-81).

Limerick Assignments

110. The Staff adopts and incorporates Applicant's proposed finding 110.

111. The "Limerick assignments" contained in the Montgomery County plan, Annex I, Appendix I-2, have been made only to utilize the plan as a worksheet. Bus providers have not asked and the Montgomery County OEP had not indicated specifically where buses and drivers would be assigned. Rather, bus providers have simply agreed to make buses and drivers available to the maximum extent possible for all emergencies, including an accident at Limerick (Bigelow, Tr. 14177 [14178]-79, 14186, 14196, 14197).

112. The Staff adopts and incorporates Applicant's proposed finding 112.

113. The "Limerick assignments" in the Montgomery County plan reflect the greatest number of buses necessary to effect an evacuation. The information would be checked with bus providers at the time of an emergency, necessary adjustments would be made and final assignments would be given at the time (Cunnington, Tr. 16920-21; Appl. Exh. E-3, Appendix I-3). Procedures for making or adjusting assignments at the time of an emergency are outlined in the school district plans (Bradshaw, ff. Tr. 12764 [12761] at p. 24; Appl. Exhs. E-49 to E-61, Section V.B and Attachment 3; Appl. Exh. E-53, p. 6114.4(k) and Attachment 6).

Schools With Existing Contracts

114. With regard to other fixed nuclear power plant sites within the Commonwealth, it appears that PEMA has never required a school district which has an existing contract with a bus provider to obtain an ancillary agreement for radiological emergencies (Bradshaw, Tr. 16911). School district officials as well as the Montgomery County OEP and Chester County DES have not indicated the necessity to have such ancillary agreements [taken the same position] (Cunnington, Tr. 16912). It is unnecessary for a school district to enter into an ancillary agreement with a bus provider, or for the county to obtain a letter of understanding with a bus provider, to ensure that buses guaranteed under an existing contract would be provided in a radiological emergency (Cunnington, Tr. 16912).

115. The Staff adopts and incorporates Applicant's proposed finding 115.

116. The Staff adopts and incorporates Applicant's proposed finding 116.

Unsigned Agreements

117. The Staff adopts and incorporates Applicant's proposed finding 117.

118. The Staff adopts and incorporates Applicant's proposed finding 118.

119. The Staff adopts and incorporates Applicant's proposed finding 119.

120. The Staff adopts and incorporates Applicant's proposed finding 120.

121. The Staff adopts and incorporates Applicant's proposed finding 121.

122. The Staff adopts and incorporates Applicant's proposed finding 122.

123. The North Penn School District employs 86 bus drivers (Starkey, Tr. 16431). In order to fulfill the assignment for North Penn School District buses and drivers under the Montgomery County plan, as reflected in the bus survey form filled out by the district transportation agent, only 42 of 86 available drivers would have to be available (Starkey, Tr. 16457-58 [16458]; Appl. Exh. E-86).

Transportation for Private Schools

124. The Staff adopts and incorporates Applicant's proposed finding 124.

125. The Staff adopts and incorporates Applicant's proposed finding 125.

126. The Staff adopts and incorporates Applicant's proposed finding 126.

127. In Chester County, the planning task force in operation in the Owen J. Roberts School District has requested that responsibility for private schools within its district be eliminated from its plan (Cunnington, Tr. 12886, 12892). Chester County has modified the county plan to state that the transportation requirements for passed on to [onto] the county (Cunnington, Tr. 12886-87; Appl. Exh. E-2, Annex N, Appendix 3 [1]).

128. The Staff adopts and incorporates Applicant's proposed finding 128.

Reserve Buses

130. The Staff adopts and incorporates Applicant's proposed finding 130.

131. The Staff adopts and incorporates Applicant's proposed finding 131.

132. The Staff adopts and incorporates Applicant's proposed finding 132.

133. Montgomery County has a ready reserve of buses and drivers built into its plan inasmuch as it calls for the use of less than half of the available bus resources and between only 20 to 25 percent of the approximately 1,225 available drivers outside the Limerick EPZ. That pool of drivers will be sufficient. Nonetheless, Montgomery County intends to obtain an additional reserve which could provide further

back-up capability (Bigelow, Tr. 14269-70, 14297-99); Bradshaw, ff. Tr. 12764 [12761] at p. 23; Cunnington, Tr. 12991, 13629).

134. The Staff adopts and incorporates Applicant's proposed finding 134.

135. Thirty-seven buses from the Southeastern Pennsylvania Transportation Authority ("SEPTA") Frontier Division are designated in the Montgomery County plan only as a reserve (Bradshaw, Tr. 13145; Appl. Exh. E-3, pp. I-2-12, I-3-14). Other existing reserves are listed in Annex I, Appendix I-2, e.g., Ashbourne Transportation, Inc. (Bigelow, Tr. 14338; Appl. Exh. E-3, p. I-2-5). Buses and drivers which would be furnished by SEPTA upon request to Montgomery County in an emergency would logically be supplied from the buses stationed at the Frontier Division, in Morristown, Montgomery County, but SEPTA has depots all across five counties in Southeastern Pennsylvania and buses could be supplied from any of those locations (West, Tr. 16574; Hippert, ff. Tr. 1949E at pp. 10-11).

Chester County

136. The Staff adopts and incorporates Applicant's proposed finding 136.

137. The Staff adopts and incorporates Applicant's proposed finding 137.

138. The Staff adopts and incorporates Applicant's proposed finding 138.

139. The Chester County DES is continuing efforts to obtain written agreements with the balance of bus providers located within or serving Chester County with the objective of having [so that, ultimately,] all

potential providers [will be] under agreement (Campbell, Tr. 19866, 20027). There has been no indication that these commitments will not ultimately be reduced to writing (Bradshaw, Tr. 12922).

140. At this time, Chester and Montgomery Counties are negotiating an agreement with SEPTA to provide buses in the event of an emergency (Wert, Tr. 16607-08 [16608]). SEPTA has a total of approximately 1,500 buses and 4,000 employees who are drivers or licensed to drive buses (Wert, Tr. 16611).

141. The Staff adopts and incorporates Applicant's proposed finding 141.

142. The Staff adopts and incorporates Applicant's proposed finding 142.

143. The Deputy General Manager of SEPTA, Robert C. Wert, testified that SEPTA cannot commit in advance to furnish a specific number of buses that would be available at any given time, but that it is highly improbable that SEPTA could not furnish some buses (Wert, Tr. 16562, 16624). At any given time, about 300 buses are out of service because of [for] State inspection, accidents or routine maintenance (Wert, Tr. 16625). Presumably, most of those buses could be furnished promptly upon request in an emergency. Additionally, during non-peak daytime hours, about one-fourth to one-third of the operating buses would not be in service and would be provided as they became available (Wert, Tr. 16577-78, 16632-34).

144. The Staff adopts and incorporates Applicant's proposed finding 144.

145. The Staff adopts and incorporates Applicant's proposed finding 145.

146. The Staff adopts and incorporates Applicant's proposed finding 146.

147. The Staff adopts and incorporates Applicant's proposed finding 147.

148. If Chester County were to contact the providers who have not yet given written or verbal assurances, it would expect to receive buses in response to an emergency request (Campbell, Tr. 19982-83; Thompson, Tr. 18818). Such companies have previously placed their buses on stand-by for service upon request without prior verbal or written agreements (Campbell, Tr. 19983). In fact, in one other potential evacuation, Chester County requested buses, which were made available although they were not actually needed (Thompson, Tr. 18832-33, 18851).

149. Moreover, if for some unanticipated reason buses were unavailable by way of agreement, the Governor is empowered under Section 7301(f)(4) of P.L. 1332 to commandeer or utilize buses or any other private property necessary to cope with an emergency (Thompson, Tr. 18853; Hippert, ff. Tr. 19498 at pp. 9-11 [10], Tr. 19589).

150. The Staff adopts and incorporates Applicant's proposed finding 150.

Specific School District Needs

151. A number of school district superintendents testified as to the transportation needs of their districts and the availability of resources to satisfy those needs. The evidence indicates that adequate transportation resources are available within the three risk counties to

evacuate all students from the EPZ in one lift. Many school districts have sufficient resources of their own or under contract to evacuate their students. The testimony of Dr. Thomas Persing, Superintendent of the Upper Perkiomen School District, Dr. Royden Price, Superintendent of the Souderton Area School District, and Dr. Laird Warner, Superintendent of the Methacton School District indicates [testified] that their schools have no unmet transportation needs and can be evacuated [their students] in a single lift (Persing, Tr. 14784, 14850-51; Warner, Tr. 15658; Price, Tr. 15438-39, 15441; Appl. Exh. E-55, p. A-14; Appl. Exh. E-59, p. A-3-1).

152. The Staff adopts and incorporates Applicant's proposed finding 152.

153. The Staff adopts and incorporates Applicant's proposed finding 153.

154. The Staff adopts and incorporates Applicant's proposed finding 154.

155. The Staff adopts and incorporates Applicant's proposed finding 155.

156. The Staff adopts and incorporates Applicant's proposed finding 156.

157. The Staff adopts and incorporates Applicant's proposed finding 157.

158. Dr. Roy C. Claypool, Superintendent of the Owen J. Roberts School District, stated that his district requires about 55 buses to evacuate its enrollment of approximately 3200 to 3400 [3,300] students in a single lift (Claypool, Tr. 15854, 15863). Currently, 43 buses are available to the Owen J. Roberts School District under contract with the

Gross Bus Company (Claypool, Tr. 15863). Nonetheless, the Owen J. Roberts has reported an unmet need of 25 vehicles (Claypool, Tr. 15874; Appl. Exh. E-2, p. N-3-1).

159. The Staff adopts and incorporates Applicant's proposed finding 159.

School District Bus Providers from Outside the EPZ

160. [The statement of unmet needs by the school superintendents discussed above is offset by the testimony of the school superintendents whose districts would be providing buses to satisfy the unmet needs of the risk school districts in the event of an emergency. For example,] Dr. Bruce W. Kowalski, Superintendent of the Wissahickon School District, testified that his district had entered into an agreement with Montgomery County to provide buses and drivers to the maximum extent possible in an emergency. In doing so, the Wissahickon Board of Education acted upon an absolute commitment and unanimous consensus that the property of the school district would be made available to Montgomery County residents to transport them to safety in times of disaster (Kowalski, Tr. 16155, 16157-59). There was testimony about a general concern among school board members that the school district could not compel the bus drivers, who are employees of the school district, to drive the buses (Kowalski, Tr. 16160, 16178). In a November 28, 1984 letter from Superintendent Kowalski to Montgomery County Commissioner Banning, Kowalski reiterated this belief. (LEA Exh. E-33). However, the School Board determined that the bus drivers would act, in the event of an emergency, on a purely voluntary basis (Kowalski, Tr. 16201).

161. Dr. Thomas Davis, Superintendent of Schools for the Springfield School District, and Dr. Clare G. Brown, Jr., Superintendent of Schools for the Upper Dublin School District, both testified that their districts have entered into written agreements with Montgomery County for the provision of buses and drivers to the maximum extent possible in the event of an emergency (Brown, Tr. 16462, 16465-66 LEA Exh. E-11; Davis, Tr. 16644, 16646-47; LEA Exh. E-14). Even in the absence of a formal written agreement, the Upper Dublin School District would provide transportation resources to another school district to assist in an evacuation (Brown, Tr. 16487).

162. The Staff adopts and incorporates Applicant's proposed finding 162.

163. The Staff adopts and incorporates Applicant's proposed finding 163.

164. The school districts which operate their own buses have developed a highly sophisticated system in order to coordinate their transportation needs, which include transportation of children from private and parochial schools within ten miles of the school district boundary (Kowalski, Tr. 16195-97). The Board believes it reasonable to expect that the transportation officers of the various school districts responsible for handling such complex and sophisticated operations would [necessarily] have sufficient working knowledge of their systems to determine a realistic but conservative number of buses which could be made available in the event of an emergency.

165. Even in the absence of letters of agreement, school districts would provide whatever resources they have available, including vehicles

and drivers, upon request by a governmental agency. (Pugh, Tr. 16378, Appl. Exh. E-85; Brown, Tr. 16487). School superintendents and board members are sworn to uphold the constitution of the Commonwealth and its laws, and to serve the public of the entire Commonwealth, both within and without their county. As state officers, superintendents and board members feel strongly that they should make publicly financed facilities and resources of the school district available in an emergency. (Kowalski, Tr. 16211; Pugh, Tr. 16383-84; Starkey, Tr. 16454; Brown, Tr. 16486-87, [16493]; Davis, Tr. 16680-81).

166. [Not a single] None of the superintendents of [a] school districts outside the EPZ who testified expressed any doubt that his district would furnish buses and drivers upon request during an emergency at Limerick and thereby honor the commitment in its letter of understanding (Kowalski, Tr. 16207; Davis, Tr. 16659, 16679).

167. In fact, a number of superintendents testified that they would consider delaying the opening or closing of schools in their district so that buses could be released to evacuate schools within the Limerick EPZ. This would be handled just like a snow delay (Kowalski, Tr. 16200, 16217-18; Davis, Tr. 1663; see also Cunnington, Tr. 16953-54). Inasmuch as school districts inside and outside EPZ open and dismiss within a close range of times (Cunnington, Tr. 16954-55), it is likely that school districts outside the EPZ would not be called upon to provide buses at times of peak need within their own districts. Schools within the EPZ would be transporting their own students at that time pursuant to normal arrangements (Cunnington, Tr. 16956).

168. [Public schools] School district bus providers outside the Limerick EPZ which will be providing bus transportation for EPZ school districts routinely require bus drivers to be available as a matter of first priority to evacuate children in the case of snow or other emergency. There has never been a problem in obtaining drivers for such early dismissals, even if this involved obtaining substitute drivers (Kowalski, Tr. 16178-79; Murray, Tr. 15085-86, 15103-04; Cunnington, Tr. 12987).

169. Providers [inside] outside the EPZ have [far] more drivers than buses/drivers committed by letter of agreement, e.g., 60 drivers in the Wissahickon School District to drive 20 buses (Kowalski, Tr. 16208). Similar comparisons can be made from the numbers of drivers and the lesser number of buses/drivers with tentative Limerick assignments in the Montgomery County plan (App1. Exh. E-3, Annex I, App. I-2, Tab 3). [Additionally, the great majority of drivers employed by providers outside the EPZ themselves reside outside the EPZ (Kowalski, Tr. 16208).

170. The estimates of buses and drivers which could be made available in an emergency to Montgomery County are additionally conservative because they are based upon a very short mobilization time, i.e., typically one hour or less (App1. Exh. E-3, Annex I, App. I-2, Tab 3; App1. Exhs. E-75, E-83, E-87). For example, the Wissahickon School District could make 20 buses available within half an hour, but probably could make its entire fleet of 60 buses available thereafter (Kowalski, Tr. 16198-99). The Board believes that the [T]total buses available to Montgomery County under optimal conditions could [would] well exceed 1,000 (Bradshaw, Tr. 12970).

171. The [contractual obligations of school bus drivers are irrelevant to the letters of understanding between bus providers and Montgomery County because] bus drivers who would assist in a school evacuation would be volunteers (Kowalski, Tr. 16201). It was on that basis that the school districts entered into letters of understanding with Montgomery County to provide buses to the maximum extent possible (Kowalski, Tr. 16202).

Conclusion

171a. Based on FEMA's review and exercise evaluation of the 1983 drafts of the Chester and Montgomery County and School District radiological emergency response plans (RERP), it had found that, as part of a Category A deficiency, the planning had not been finalized for the number of school buses necessary and available for evacuation purposes (FEMA Exh. F-4, p. 136; Asher, Tr. 20258-59). FEMA testified that if the unmet needs of Chester and Montgomery County for these buses has been reflected in their plans and passed on to PEIA, planning for these school buses would comply with NUREG-0654. (Asher, Tr. 20258-59). The Board finds that FEMA's concerns have been resolved since the record demonstrates, as noted above, that: (1) Montgomery County now has no unmet and its unmet need for reserves has been passed on to PEMA; and (2) Chester County's unmet needs have been identified, reflected in their plan and passed on to PEIA. Pased on the record developed for this contention, the Board finds there is reasonable assurance that sufficient information is available for the draft Chester and Montgomery County and School District RERP's to reasonably assure that there

will be enough buses to evacuate schools, both public and private, in one lift.

LEA-12

The draft Montgomery, Chester, and Berks County RERP's and the School District RERP's are not capable of being implemented because there is not reasonable assurance that there will be sufficient numbers of teachers and staff required to stay at school during a radiological emergency if sheltering is recommended as a protective measure, or that there will be sufficient numbers of school staff available to evacuate with children in the event of a radiological emergency. Therefore, children are not adequately protected by the draft RERP's.

171b. This contention was admitted by the Licensing Board in its Special Prehearing Conference Order of April 20, 1984 and further defined in its Memorandum and Order of September 24, 1984. In the Matter of Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), LBP-84-18, 19 NRC 1020, 1054 (1984); In the Matter of Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), Memorandum And Order Ruling On Reworded And Respecified Offsite Emergency Planning Contentions (Unpublished), slip op. at 7-10, (September 24, 1984). The Board ruled that LEA-12 is solely about human response of school staff in a radiological emergency. Limerick 19 NRC 1055; Memorandum And Order Ruling On Reworded And Respecified Offsite Emergency Planning Contentions at 8. Consequently, the Board ruled out: parent/child behavior and family decision making patterns, except as they have an influence on whether staff would suffer conflicts between their public and their private duties, and what sort of conflicts; and the issue of minimum staffing requirements to cope with the psychological trauma that children will undergo in a radiological emergency. Memorandum And Order

Ruling On Reworded And Respecified Offsite Emergency Planning Contentions (Unpublished), slip op. at 8. Within these parameters, we now turn to the resolution of LEA-Contention 12.

172. A comprehensive training program for school administrators, teachers and bus drivers has been offered to all public and private school personnel within the EPZ (Proposed Findings 227-249). With one exception discussed below, no school district has indicated that its staff would be unwilling or unable to accompany students and remain with them in the event of an evacuation for personal or other reasons (Bradshaw, ff. Tr. 12764 [12761] at p. 12).

173. At all training sessions, instructors have advised persons involved in emergency response activities that they should discuss family arrangements during an emergency. Members of families of school personnel remaining on duty during a radiological emergency are members of the general public and are evacuated on that basis. Arrangements for evacuation of the general public under the various plans provide reasonable assurance to school personnel that family members will be protected in the event of a radiological emergency (Welliver, Tr. 15575; Bradshaw, ff. Tr. 12764 [12761] at p. 12; Bradshaw [and Wenger], Tr. 13059-62, Bradshaw and Wenger, Tr. 13103-05[,]; Bradshaw, Tr.13727).

174. While a number of superintendents expressed the concerns of their teachers and staff regarding the welfare of their own families in the event of a radiological emergency (See, e.g. Murray, Tr. 15089; Claypool, Tr. 15894, 15950), the Board believes that to a large extent those concerns are being addressed and will continue to be addressed in the planning process. [are truly unrealistic.] A teacher's child[ren] who attends school[s]

outside the EPZ would [obviously] not be sent back into the EPZ at the time of an emergency (Persing, Tr. 14839-45; Appl. Exh. E-61, Section V.B.3.c, P. 18. The planning arrangements in operation under that particular school district plan would adequately protect the safety and welfare of children who attend other schools within the EPZ (Welliver, Tr. 15569).

175. Under Annex E, any protective action would be implemented for the entire 10-mile EPZ. If sheltering were implemented, it would impact all areas within the EPZ, including schools (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 11; Bradshaw, Tr. 16927). It would therefore be impractical[, futile] and possibly hazardous for teachers at schools within the EPZ to leave their assigned responsibilities to pick up their own children because other schools within the EPZ will be implementing the same protective action recommendations. The Board believes that if sheltering were recommended, it is more reasonable to expect that t[T]eachers would [logically] protect themselves by remaining in school and would not endanger their own children by taking them out of school (Proposed Findings 209-211).

176. The Staff adopts and incorporates Applicant's proposed finding 176.

177. Because of their training, most persons participating in an emergency response develop procedures to assure the safety of their families during emergency conditions. This pre-planning should allow individuals to fulfill their emergency duties with assurance that their families will be adequately protected. Accordingly, FEMA expects teachers to fulfill their responsibilities in protecting school children, irrespective of

family concerns (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 9-10). That view is shared by Dr. Michael A. Worman, Deputy Secretary for Administration, Pennsylvania Department of Education, who testified as to his professional opinion as well as his personal experience during the Three Mile Island accident in 1979 (Proposed Findings 203-204). Among school superintendents to testify, for example, Dr. William A. Welliver, superintendent of the Spring-Ford Area School District (Welliver, Tr. 15493), stated that teachers would be available and of service to students during any kind of emergency (Welliver, Tr. 15576). Other superintendents expressed a similar opinion [agreed], based on a knowledge of their faculties and past experiences (Feich, Tr. 14978; Price, Tr. 15422-23, 15443).

178. The overview at training sessions covers planning considerations for the public at large, including the existence and scope of municipal and county plans. (Bradshaw, Tr. 13104). In addition, the training sessions described the procedures for sheltering, evacuation and selective evacuation, and their impact on the general public and schools. (Cunnington, Tr. 13104). Furthermore, teachers were generally advised that they should discuss family arrangements with their families to determine what would happen during a radiological emergency. (Bradshaw, Tr. 13058-60; Wenger, Tr. 13103-04). Training sessions will be supplemented by a public information brochure that is being reviewed [approved] by county and Commonwealth planning officials (Bradshaw [and Wenger], Tr. 13104 [13103]-05; Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 9). This brochure will include such information as: (1) how individuals will learn of a nuclear accident; (2) what to do if you are instructed either to take

shelter or to evacuate; (3) what you should do if you need transportation; (4) school information; (5) where to go if you have to evacuate, including a map showing the major evacuation routes; (6) rumor control numbers; and (7) other general information, such as how accidents are classified and what is radiation. (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at pp. 9-10). Moreover, as FEMA has stated, this information is important to all members of the public, including teachers, so that they may be clearly informed concerning the procedures to be utilized during a radiological emergency. (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 10) The Board considers the dissemination of this information to be an important ingredient in the proper implementation of emergency planning within the Limerick EPZ. It is our understanding that this information was expected to be disseminated to the public in December 1984. (Bradshaw, Tr. 13104-05). FEMA should insure that this dissemination does take place. This information will provide teachers with assurance that they and their families, as part of the general public, will be cared for [protected] in an emergency. The historical record indicates that the knowledge of such plans and procedures provides personnel with a sense of security which will enable them to better perform their responsibilities in the event of an actual emergency (Bradshaw, Tr. 13061-62; Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 7).

179. Not all teachers would have family concerns. There are [Many] teachers who do not live within the EPZ, are unmarried, or have a spouse or other member of the extended family who could take custody of their children in an emergency (Cunnington, Tr. 13728). Evidence as to the number of married teachers, teachers with families, and, in particular, single-parent teachers who reside within the EPZ, was extremely sketchy

(e.g., Welliver, Tr. 15569-70; Warner, Tr. 15646-47). The Board believes that it is reasonable to expect that this information will be examined in greater detail by the schools as they proceed through the planning process. For example, the legitimate concerns of single-parent teachers and staff for the welfare of their children can be met by providing in the school district plans that they be dismissed at an early stage of an emergency (Feich, Tr. 14967).

180. In a number of [many] districts, the issue of teacher availability has never even been raised with the superintendent (e.g., Persing, Tr. 14857). The Board believes that this general acceptance of emergency responsibilities fairly reflects the expected conduct of school personnel as reasonable adults certified by the Commonwealth for the instruction and custody of school children. The education and certification process for teachers, which includes a demonstration of their maturity in dealing with students, would necessarily equip teachers with an ability to deal with unusual or stressful situations (Greaser, Tr. 15381; Bradshaw, ff. Tr. 12764 [12761] at pp. 12-13). The Board therefore is reasonably assured that teachers will remain with children during an evacuation or sheltering until relieved.

Staff/Student Ratio Appropriate for Supervision

181. The panel of witnesses from Applicant's consultant, who are experienced in emergency school planning in Pennsylvania, have not encountered a single school district whose representative stated that the district could not implement its radiological emergency response plan because of staffing considerations (Bradshaw, Tr. 13102-03 [13103]).

182. The Staff adopts and incorporates Applicant's proposed finding 182.

183. The Staff adopts and incorporates Applicant's proposed finding 183.

184. The Staff adopts and incorporates Applicant's proposed finding 184.

185. Consequently, there is no need to conduct a survey of teachers regarding the performance of assigned roles in an emergency (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 12; Bradshaw, ff. Tr. 12764 [12761] at p. 13, Tr. 13071-72, 13738; Campbell, Tr. 20048). Moreover, we note that neither the Commission's emergency planning regulations nor the emergency planning guidance require that such surveying be conducted. (See, 10 C.F.R. § 50.47; Appendix E, 10 C.F.R. Part 50; 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); Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 12). Any survey as to the unwillingness or unavailability of a particular individual to respond to an actual emergency is somewhat inadequate [inherently deficient] because it cannot fully translate a present unwillingness to a point in the future when plans would have to be implemented. For this reason, the historical record of human responses in actual emergencies is more reliable (Cunnington, Tr. 13074-75; Bradshaw, Tr. 13738). [As Dr. Welliver testified, such surveys are essentially uninterpretable (Welliver, Tr. 15576-77).]

186. The Staff adopts and incorporates Applicant's proposed finding 186.

186a. FEMA expects teachers to fulfill their responsibilities in protecting their school children, regardless of the concerns expressed by the Pennsylvania State Education Association about the availability of teachers in the event of a radiological emergency. (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 10). As we noted earlier, FEMA is not aware of any specific instance, either in Pennsylvania or nationwide, where significant numbers of teachers have refused to assist in the protection of their students in the event of an emergency. (Id. at p. 8). Since the infrastructure currently exists for teachers to be on hand at a school if there were a radiological emergency at Limerick and there is no definitive indication that teachers within the EPZ would not remain with their students (Id. at p. 10), we agree with FEMA that there is also no need to pre-designate teacher volunteers. (Id.; see also Campbell, Tr. 20042).

187. Based on discussions with school administrators, who have reviewed the functions that would need to be performed for either sheltering or evacuation; it was found that t[T]he school district plans can be implemented with less than all school administrators, teachers and other adult staff (collectively "teachers"). For example, an appropriate ratio might be the equivalent of study hall or field trip supervision. There would be no difference in the appropriate teacher/student ratio for evacuation or sheltering scenarios. Therefore, school plans adequately account for human response and other factors which may unexpectedly reduce usual teacher/student ratios (Bradshaw, ff. Tr. 12764 [12761] at p. 13-14; Bradshaw and Cunningham, Tr. 13635-36).

188. The Staff adopts and incorporates Applicant's proposed finding 188.

189. The Staff adopts and incorporates Applicant's proposed finding 189.

190. Various school superintendents stated that schools could sustain [would have no problem sustaining] an appropriate teacher/student ratio, even though the surveys by which they determined the number of teachers who would be available were seriously flawed. For example, the Pottstown School District would have a teacher/student ratio of 1:40 even if less than one-third of its staff responded to the emergency (Feich, Tr. 14958-60, 15000). Basing its calculations solely on the number of teachers who live outside the EPA or do not have children, the Phoenixville School District determined it could achieve a teacher/student ratio of 1:45 (Murray, Tr. 15118-19).

191. The Staff adopts and incorporates Applicant's proposed finding 191.

192. The Staff adopts and incorporates Applicant's proposed finding 192.

193. Dr. Claypool was unaware of any other school district superintendent which agreed that such a low ratio of teachers to students would be necessary in an emergency (Claypool, Tr. 15935). Other than a Board of Education policy setting a 1:35 ratio for field trips under normal conditions and a smaller ratio for emergencies, h[H]e was unable to state any special consideration for the Owen J. Roberts School District which would require a lower ratio of teachers to students than that which would be satisfactory for other school districts (Claypool, Tr. 15883, 15936). More important, Dr. Claypool subsequently acknowledged that a teacher/student ratio of 1:35 would be adequate (Claypool, Tr. 15937). Ninety-four teachers would be sufficient to achieve a 1:35 teacher/student ratio, based on the current enrollment of about

3,300 students (Claypool, Tr. 15935). Even given Dr. Claypool's minimum estimate of 60 to 65 available staff members, a teacher/student ratio in the range of 1:50 to 1:55 would exist.

194. The Board believes, however, that far more teachers would in fact be available in an emergency than indicated by Dr. Claypool's interpretation of his school district's teacher survey because the survey was seriously flawed. Dr. Claypool did not personally administer the survey and his description of its results is far from clear. Apparently, an effort was made to survey the entire faculty of 208 teachers, but only 137 teachers (66%) responded. Dr. Claypool did not know if an effort had been made to obtain responses from the 71 teachers (34%) who did not respond (Claypool), Tr. 15932, 15944; LEA Exh. E-29, p. 3). Further, teacher absences were not factored into the results. (LEA Exh. E-29, p. 3). Moreover, the survey instructions clearly indicated that signing the answer was optional, but Dr. Claypool inexplicably discounted unsigned answers, representing 40% of the 137 total responses, or about 55 teachers (Claypool, Tr. 15932-33; LEA Exh. E-29, p. 3); Appl Exh. E-105). Accordingly, only about 82 of the 208 district faculty members were actually surveyed (137 responses minus 55 discounted) (LEA Exh. E-29, p. 3).

195. The Staff adopts and incorporates Applicant's proposed finding 195.

196. The Staff adopts and incorporates Applicant's proposed finding 196.

197. The teacher survey at the Owen J. Roberts School District was also flawed because a prior survey (Appl. Exh. E-106) had been actively opposed by the local teachers' union. This opposition might well have affected

responses in the second survey upon which the school district relied in determining unmet staff needs (Claypool, Tr. 15944-45). Finally, the teacher survey did not advise teachers that their performance of assigned responsibilities in the event of a radiological emergency was an important element to the successful implementation of the school district plan, nor did it reflect a school district policy encouraging participation (Appl. Exh. 105; Claypool, Tr. 15931).

198. Despite the alleged teacher shortage, officials of the Owen J. Roberts School District would do everything humanly possible to get teachers and staff to volunteer and to work towards an agreement or understanding with the teachers' union toward that end (Claypool, Tr. 15955). Nevertheless [In the meantime], the number of staff identified in the Owen J. Roberts survey as unwilling to remain with students in the event of a radiological emergency has been passed on to [onto] Chester County as an unmet need (Bradshaw, ff. Tr. 12764 [12761] at p. 13).

Effect of Collective Bargaining Agreements

199. The Staff adopts and incorporates Applicant's proposed finding 199.

200. The Staff adopts and incorporates Applicant's proposed finding 200.

201. The Board's belief was supported [borne out] by the testimony of Dr. Michael A. Worman, The Deputy Secretary for Administration, Pennsylvania Department of Education (Worman, ff. Tr. 19329 at p. 2[1]); Tr. 19351. Dr. Worman testified that there is no legal authority by which a collective bargaining agreement or local rules adopted pursuant to a collective bargaining agreement would override the provisions of an evacuation plan

promulgated by a political subdivision pursuant to its obligations under P.L. 1332 (Worman, Tr. 19358). The broader implications of P.L. 1332 will be discussed at length below (Proposed Findings 396-398). A teacher's collective bargaining agreement would not preclude him or her from volunteering to perform assigned responsibilities in the event of a radiological emergency at Limerick (Worman, Tr. 19351).

202. The Staff adopts and incorporates Applicant's proposed finding 202.

203. In Dr. Worman's opinion, teachers could be expected to fulfill assigned responsibilities away from school buildings in a radiological emergency on the same basis as fire drills, real fire emergencies and other non-radiological emergencies (Worman, Tr. 19361). Even though those situations might not be specifically covered by collective bargaining agreements, they would entail a response by a teacher as a professional employee (Worman, Tr. 19363-64 [19364]).

204. The Staff adopts and incorporates Applicant's proposed finding 204.

Evacuation of Students to
Host Facilities and Transfer to Mass Care Centers

205. The Staff adopts and incorporates Applicant's proposed finding 205.

206. In the event of an actual emergency, students transported to a host facility would be transferred to a mass care center by 8:00 p.m. if not already picked up by their parents (Cunnington, Tr. 13107). Because schools dismiss on the average of no later than 3:00 p.m., an evacuation of school children to a host facility would occur at least on the average of

five hours prior to the transfer of school children to a mass care center. Since that time is consistent with the time frame for an evacuation of the entire EPZ, only a very few students, if any, would have to be transferred to a mass care center and they could probably be supervised by a school administrator (Bradshaw, ff. Tr. 12764 [12961] at p. 24, Tr. 13109; Cunnington, Tr., 13645-47). The information relevant to this procedure is contained in the School District Plans and in the Bus Driver Training Lesson Plan. (Bradshaw, ff. Tr. 12764 at p. 24; see, e.g., Applicant's Exh. 54, p. 20, Applicant's Exh. E-57, p. 17, Applicant's Exh. E-58, p. 21; Applicant's Exh. E-64, p. 32).

207. In any event, a number of faculty and staff members have indicated their willingness to evacuate with students and remain with them at host schools beyond ordinary dismissal times (Feich, Tr. 14979). There is no relevant, reliable and material evidence that this particular responsibility creates any problem for risk school teachers.

Sheltering

208. Margaret A. Reilly, Chief, Division of Environmental Radiation, Bureau of Radiation Protection, Pennsylvania Department of Environmental Resources, testified that under Annex E, an appropriate structure for sheltering may be a residential, commercial or public building, i.e., any building which is reasonably winter-worthy with windows and doors closed (Reilly, ff. Tr. 19381 at p. 3; Hippert, ff. Tr. 19498 at p. 15; Bradshaw, ff. Tr. 12764 [12761] at pp. 14-15; Commonwealth Exh. E-1, Appendix 12, Section 10.2.2.2, p. E-12-49). The absence of a basement does not necessarily render a building inadequate for sheltering (Reilly, Tr. 19386). Representatives of Energy Consultants have visited a number

of school buildings within the Limerick EPZ and have found them all to be winter worthy (Cunnington, Tr. 16913).

209. There is no provision in 10 C.F.R. § 50.47, 10 C.F.R. Part 50 Appendix E, NUREG-0654 or Annex E which requires an individualized evaluation of buildings to determine their adequacy for sheltering, nor has the Commonwealth undertaken any such evaluation for any other nuclear plant sites in Pennsylvania (Reilly, Tr. 19397-98; Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 11; Bradshaw, ff. Tr. 12764 [12761] at p. 14; Cunnington, Tr. 16913). If the Bureau of Radiation Protection were to undertake such evaluations, its ability to make protective action recommendations would not be enhanced because the individual protective value of a building is not relevant to the recommended protective action [irrelevant]. Protective action recommendations are based upon the dose projection for the entire populace rather than the occupants of any particular building. Evaluation of the protection afforded by structures within the EPZ will not make those buildings more suitable for sheltering or affect the choice of a sheltering option. (Reilly, Tr. 19398-99; Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 11; Bradshaw, ff. Tr. 12764 [12761] at p. 15, Tr. 13254). Protective action recommendations are based on the prognosis for the accident, time constraints and existing conditions (Reilly, Tr. 19382; Bradshaw, ff. Tr. 12764 [12761] at p. 15; Commonwealth Exh. E-1, Appendix 12, Section 10.2.2.2, p. E-12-49).

210. Sheltering as a protective action has the primary purpose of protecting an individual against the inhalation pathway rather than radiation shine. Inhalation pathway protection is measured in terms of the air exchange rate between the area outside and the area inside a building.

Therefore, the air exchange rate is a factor of the air tightness of a building, not its construction material (Bradshaw, Tr. 13261; Reilly, ff. Tr. 19381 at p. 2; Commonwealth Exh. E-1, Appendix 12, p. E-12-49). This understanding is consistent with Commonwealth guidance as well as protective action guidelines published by the Environmental Protection Agency for sheltering, neither of which refer to the protection factor of buildings as a consideration in recommending sheltering (Bradshaw, Tr. 13264).

211. In training school staff, instructors explain the circumstances under which sheltering would be the preferred protective action and provide information as to the procedures for implementing this option. Accordingly, school staff have the necessary information to be assured that sheltering, if implemented, provides the greatest level of protection for staff and students under the circumstances (Bradshaw, ff. Tr. 12764 [12761] at pp. 15-16; Proposed Findings 238, 242).

212. School district plans provide that students should be moved away from windows as part of the general direction to provide sheltering in those areas of the building which afford the greatest degree of comfort for students. (Cunnington, Tr. 16913; see, e.g., Applicant's Exh. E-57, p. 21; Applicant's Exh. E-58, p. 21). In very warm weather, a classroom without shades could become quite hot if windows were closed and ventilation/air conditioning were turned off. This might prompt officials to shelter students on the shady side of the building, using a hallway, gymnasium or auditorium to increase comfort (Cunnington, Tr. 16913-14). Sheltering in hallway or away from windows is absolutely unrelated to any radiological concern; students could be sheltered in any area of the building which is winter-worthy (Cunnington, Tr. 16914-15).

213. The Staff adopts and incorporates Applicant's proposed finding 213.

214. In certain instances, s[S]ome school district superintendents have apparently confused emergency planning concepts related to civil defense with those for fixed nuclear power plants. They wrongly believe that radiological considerations require sheltering in a basement away from areas with windows and exits and entrances (Persing, Tr. 14809, 14864; Feich, Tr. 14934-35, 14995-96, 15003-06; Murray, Tr. 15122). [At least one instance of such misapprehension arose from misinformation provided by LEA's counsel (Persing, Tr. 14864-65).] The Board believes that further coordination between school administrators and county or PEMA officials will clear up such a misunderstanding.

Exercises

214a. The Commission's emergency planning requirements (10 C.F.R. Section 50.47(b)(14)) and guidance (NUREG-0654 at p. 71) call for periodic exercises to evaluate emergency response capabilities and for drills to develop and maintain emergency response skills. (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 12). NUREG-0654, which implements the Commission's emergency planning requirements, provides that some exercises should be unannounced. (NUREG-0654 (November 1980) at p. 71). However, it is not essential that all exercises be unannounced. (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 12). FEMA believes that drills and exercises are always a good mechanism for testing the viability of plans. (Id.) Because of its concern over the lack of complete planning for school children and the fact that the July 25, 1984 exercise took place during the summer, FEMA highlighted the need for some type of demonstration of school

district evacuation plans. (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 12; FEMA Ex. E-4 at p. 136). Toward that end FEMA arranged to have a drill conducted on November 20, 1984. (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 12). Several days before the supplemental exercise was held on November 20, 1984, FEMA was informed that the participation of school districts would not be of a scale that was originally anticipated. (Id. at p. 1). FEMA was informed that certain school officials would be available to discuss their plans. Thus FEMA decided not to send observers to the various participating school districts. (Id.) As a result, FEMA continues to list the lack of a meaningful demonstration of the various school districts' capabilities to evacuate their students as a Category A deficiency. (FEMA Ex. E-8; Asher, Tr. 20259-60). A Category A deficiency is of the type that would cause a finding that offsite emergency preparedness was not adequate to provide reasonable assurance that appropriate protective measures can be taken to protect the health and safety of the public. (FEMA Ex. E-4, at p. 134). The FEMA witness, Mr. Asher, testified that it would be desirable in his professional opinion that the meaningful demonstration of school districts capabilities to evacuate their students involve the actual involvement of students in the exercise. (Asher, Tr. 20291). This involvement could be limited to either a class or a few students. (Id.) Based on conversations with FEMA, FEMA has been informed that, while no date has been established, FEMA is working on the feasibility of conducting a drill to demonstrate the capabilities of the school districts within the EPZ to evacuate their students. (Taylor, Tr. 19614; Asher, Tr. 20260-61). The Commission's emergency planning requirements expressly exclude mandatory public participation in conducting emergency planning exercises (10 C.F.R.

Part 50, Appendix E, Section IV.F.). The Board believes that given the importance that FEMA attaches to this matter that there should be a demonstration of school district capability to evacuate their students that is satisfactory to FEMA prior to operation above 5% rated power. This would provide in our view some indication that the capability exists. (Asher, Tr. 20291).

Conclusion

214b. Based on the evidence developed for this contention, the Board believes that the human response assumptions underlying these plans, i.e., that in an emergency individuals show a willingness to perform their duties and do not abandon their roles when they have a clear understanding of those roles, as demonstrated by the history of response to an emergency, are reasonable, (cf. In the Matter of Consolidated Edison Company of New York (Indian Point, Unit No. 2), Power Authority Of The State Of New York (Indian Point, Unit No. 3), LBP-83-68, 18 NRC 811, 958 (1983)) absent substantial evidence to the contrary (cf. In the Matter of Cincinnati Gas & Electric Company, et al. (Wm. H. Zimmer Nuclear Power Station, Unit No. 1), ALAR-727, 17 NRC 760, 772-73 (1983)). Given the substantial flaws in the Owen J. Roberts School District survey, we do not believe it constitutes such substantial contrary evidence because it is not reliable and material evidence. Considering all the evidence presented on this contention, the Board finds there is reasonable assurance that there will be sufficient numbers of teachers and staff to implement the protective action of either sheltering or evacuating school children within the EPZ, provided that FEMA determines the existence of an adequate capability to evacuate the school children prior to operation above 5% rated power.

LEA-14(a)

The School District RERP's and the Chester, Berks and Montgomery County RERP's are deficient because they are inadequate provisions of units of dosimetry-KI for school bus drivers, teachers, or school staff who may be required to remain in the EPZ for prolonged periods of time or who may be required to make multiple trips into the EPZ in the event of a radiological emergency due to shortages of equipment and personnel.

214c. LEA-14 was one of the contentions originally admitted for litigation in our April 20, 1984 Special Prehearing Conference Order (LBP-84-11, 19 NRC 1020). The Board therein construed LEA-14 as asking that the RERPs treat school bus drivers and school personnel as members of the general public who may, in certain circumstances, be designated as emergency workers and provided for, in terms of training programs and dosimetry, as such (19 NRC at 1061). By our September 24, 1984 Memorandum and Order on page 14, this Board accepted for litigation all the bases proffered by LEA for the respecified Contention LEA-14(a) which included allegations of: (1) inadequate provision in the School District and County RERP's of units of dosimetry for bus drivers when they are not scheduled to pass through a transportation staging area; (2) inadequate provision of a sufficient number of units of dosimetry at the County transportation staging areas; (3) inadequate provision of units of dosimetry to each school district for use by school staff; and (4) inadequate training of school staff in the use of dosimetry in the event that sheltering is recommended.

One Lift Evacuation Principle

215. Having identified the necessary transportation resources, the basic concept of the risk county and school district plans is that

school evacuation and evacuation of transportation-dependent individuals will be accomplished in a single lift. Accordingly, it is not anticipated that any school bus driver, teacher or school staff would remain within or re-enter the EPZ in the event of an emergency (Hippert/Taylor ff. Tr. 19498 at p. 13; Bigelow, Tr. 14137-38, 14360; Reber (Admitted Contentions), ff. Tr. 19729 at p. 3; Campbell, Tr. 19995-96; Bradshaw, ff. Tr. 12764 [12761] at p. 18; Appl. Exhs. E-49 to [E-61] E-52 and E-54 to E-60, Section II.G.3.c; Appl. Exh. E-53, p. 6114.4(f)).

215a. The Bureau of Radiation Protection will make any sheltering recommendation based on data from its sources, federal agencies and the plant itself. School teachers and staff, as well as the students, are considered part of the general public in a sheltering scenario, and dosimetry is not issued to the public as a precondition to determining the initiation or termination of sheltering as a protective action. (Hippert/Taylor, ff. Tr. 19498 at p. 14-15). Therefore, if there is a sheltering recommendation, there is no corresponding need for dosimetry (Bradshaw, Tr. 13336).

216. [Accordingly, there is no need to have dosimetry or potassium iodide ("KI") available for bus drivers, teachers or school staff.] Dosimetry/KI are issued only to emergency workers, which would not include bus drivers or school staff accompanying evacuating school children (Hippert/Taylor ff. Tr. 19498 at p. 13-14); Campbell (Admitted Contentions), ff. Tr. 19852 at p. 9; Reber (Admitted Contentions), ff. Tr. 19729 at p. 3; Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 19).

217. It is the Commonwealth's policy for all fixed nuclear power plant facilities that the general population with the EPZ not be given dosimetry and that school bus drivers, teachers and school staff be considered part of the general public (Hippert, Tr. 19619-20).

218. The Staff adopts and incorporates Applicant's proposed finding 218.

218a. FEMA chose to defer delivering an opinion on whether the PERPs should provide for distribution of dosimetry and KI to bus drivers, school teachers and staff until LEA-11 involving the ability of the school districts to evacuate in one lift is resolved (Asher and Kinard (Admitted Contentions) ff. Tr. 20150 at 18-19). This Board has previously stated that it has reasonable assurance that evacuation of the school districts can be conducted in one lift. (See Proposed Findings 86-171). FEMA did state that if it were determined that enough bus resources were available to evacuate students in one lift, then bus drivers, school teachers and staff would be considered as the general public, i.e., not in need of KI and dosimetry (Asher and Kinard (Admitted Contentions) ff. Tr. 20150 pp. 10-20).

219. All vehicles which enter the EPZ for the purpose of evacuating school children or transportation dependent persons will first pass through a county transportation staging area (Bigelow, Tr. 14343-44; Reber, Tr. 19822, Bradshaw, ff. Tr. [12761] 12764 at pp. 18-19; Appl. Exhs. E-1, p. I-1; E-2, p. I-1; E-3, p. I-1). If it were necessary for a driver to re-enter the EPZ for some unforeseen reason after the time frame for evacuating the general public, he would re-enter through a transportation staging area and be provided with

dosimetry/KI. Chester and Montgomery Counties will retain a supply of dosimetry and KI at each transportation staging area. Berks County has a reserve of units of dosimetry available in its EOC that could be transported to the transportation staging area for distribution if it became necessary. Appropriate instruction in the use of dosimetry/KI could be given quickly (Bigelow, Tr. 14138-39, 13309, 13608; Appl. Exhs. E-2, p. M-3-3; E-3, p. M-3-9). The decision to administer KI would be made by the Commonwealth (Bigelow, Tr. 14139, 14284).

220. By agreement dated September 6, 1984, Applicant agreed to fund the procurement of dosimetry necessary to protect offsite emergency workers responding to a radiological emergency at Limerick (Appl. Exh. E-104). If this agreement were formally transmitted to FEMA for review, and those pieces of equipment were purchased and disseminated according to the distribution scheme in the RERPs, then FEMA would have no more concerns regarding the Category "A" deficiency cited in the FEMA Exercise Evaluation Report on the July 25, 1984 exercise (FEMA Exh. E-4) regarding inadequate provisions of dosimetry. (Asher, Tr. 20262-63; see also, Asher and Kinard (Admitted Contentions) ff. Tr. 20150 at 28-29).

220a. The Commonwealth provided testimony that the Pennsylvania Department of Health had purchased the KI needed for Limerick in amounts sufficient to satisfy the need identified by FEMA (Hippert, Tr. 19580, 20422). FEMA agreed that if this information were formally transmitted to FEMA the Commonwealth's actions would satisfy the Category "A" deficiency cited in the FEMA Exercise Evaluation Report (FEMA Exh. E-4, p. 136) where there had been a failure to demonstrate the availability of KI in a quantity sufficient for emergency workers. (Asher, Tr. 20261-62).

[On that basis, the Commonwealth withdrew its previously admitted contention (Commonwealth-1) regarding availability of dosimetry.]

221. The Staff adopts and incorporates Applicant's proposed finding 221.

222. Under the county plans, a "unit" of dosimetry/KI includes two self-reading dosimeters, a thermoluminescent dosimeter, one dosimetry-KI Report Form and a 14-day supply of KI (Bradshaw, Tr. 13398; Campbell (Admitted Contentions), ff. Tr. 19852 at p. 12; Appl. Exhs. E-1, p. M-5-1; E-2, p. M-3-3; E-3, p. M-3-9). The number of dosimetry/KI units available at each of the transportation staging areas represents a conservative estimate of potential needs (Bradshaw, ff. Tr. [12761] 12764 at p. 20; Cunnington, Tr. 13307-08, 13329). Accordingly, if it became necessary for buses to re-enter the EPZ, adequate supplies of dosimetry and KI are available (Campbell, Tr. 20001; Bigelow, Tr. 14360-61; Reber, Tr. 19821-22).

223. Berks County does not distribute dosimetry/KI to transportation staging areas under its plan because, given the [excessive] number of available buses, [there is not even a remote possibility that] a multiple lift would not be required. Berks County has 252 buses and drivers available to meet a total need of 97 buses for county schools and all other unmet transportation needs. Nonetheless, the Berks County EOC has an unassigned reserve of 100 units which could supply the transportation staging areas if necessary (Reber (Admitted Contentions), ff. Tr. 19729 at p. 3, Tr. 19821; Bradshaw, ff. Tr. [12761] 12764 at pp. 19-20, Tr. 13320; Appl. Exh. E-1, p. M-4-1).

224. Dosimetry/KI units at transportation staging areas are reserved for bus drivers and are not needed for emergency workers because supplies for emergency workers have been predistributed to the municipalities and emergency service organizations (Bigelow, Tr. 14361; Applicant's Exhibits E-1 and E-2, Appendix 3, Annex M; E-3, Appendix M-2, Annex M).

225. If a bus driver were required to re-enter the EPZ, the dosimetry issued the driver would also provide exposure indication for any other individuals on the bus. It is a common planning practice throughout the United States to assign dosimetry to a vehicle rather than to an individual (Bradshaw, ff. Tf. [12761] 12764 at p. 19, Tr. 13285). Any school children or staff on the bus would be treated as members of the general public with regard to dosimetry/KI supplies since they would not be subjected to the same dose commitment as a driver making multiple runs (Bradshaw, Tr. 13287).

226. The Staff adopts and incorporates Applicant's proposed finding 226.

Conclusion

226a. This Board has reasonable assurance, based on the evidentiary record before it, that the risk county RERPs contain adequate provisions for dosimetry in the form of reserves maintained by the risk counties for emergency workers if bus drivers volunteer to reenter the plume exposure EPZ. Further, this Board finds that there are also provisions in the plans for providing training in the use dosimetry at the transportation staging areas to any bus driver who chooses to re-enter the EPZ as an emergency worker.

226b. The Board has reasonable assurance, based upon the testimony by the Commonwealth and the agreement between the Applicant and the Commonwealth (Applicant's Exh. E-104), that supplies of dosimetry and KI have been purchased in quantities sufficient to satisfy FEMA's concerns as expressed in the FEMA Exercise Evaluation Report (FEMA Exh. E-4, p. 136, #3). The Board expects the Applicant and the Commonwealth to formally transmit this information to FEMA.

226c. This Board has reasonable assurance, based on the record before it, that the school staff who may be required to remain in the EPZ for a prolonged period in the event of a sheltering advisory are not in need of provisions of dosimetry because the school staff would be considered part of the general public. Dosimetry is not issued to the general public as precondition to initiating or terminating sheltering as a protective action.

LEA-14(b)

The Chester, Berks, and Montgomery County School District RERP's fail to provide reasonable assurance that school bus drivers, teachers or other school staff are properly trained for radiological emergencies.

226d. This Board, by the terms of our September 24, 1984 Memorandum and Order, admitted for litigation LEA-14(b) as reworded and stated above and the bases LEA proffered in support of its contention. Those bases included alleged inadequacies in the provisions in the school district RERPs for training the school staff and bus drivers in (1) procedures for handling contaminated individual and equipment; (2) risks of radiation exposure and proper use of any necessary equipment, which LEA explained included: instruc-

tion in the use of dosimetry and in the adequacy of school district buildings for sheltering and instruction in dealing with children under stress conditions, and insuring that school staff clearly understood their roles and responsibilities in the implementation of school district RERPs, as evidenced by a post-training survey to identify willing volunteers. The last proffered basis included inadequacies in insuring the bus drivers' familiarity with their assigned routes.

Training Availability

227. Although they are not considered emergency workers, training for school teachers, staff and bus drivers for response to a radiological accident has been and continues to be offered by Energy Consultants through the three county emergency management agencies (Hippert/Taylor ff. Tr. 19498 at p. [22]16; Bigelow, Tr. 14132; Reber (Admitted Contentions), ff. Tr. 19729 at p. 3; Campbell (Admitted Contentions), ff. Tr. 19852 at p. 5; Bradshaw, ff. Tr. 12764 [12761] at p. 20-21; Appl. Exhs. E-64, E-65, E-66, E-76, E-99).

228. The Staff adopts and incorporates Applicant's proposed finding 228.

229. Although some witnesses [quibbled over] differed in their characterization of whether teachers had actually received "training" as opposed to an "orientation," the Board is satisfied upon reviewing the training materials and testimony that the information provided teachers constitutes appropriate preparation for assignments in an emergency. (See e.g. Bradshaw, ff. Tr. 12764 at p. 11; Persing, Tr. 14806-7; Bigelow, Tr. 14278). Whatever its label, teachers who participated in these programs were [fully] provided

background information and were informed of the content of their plans and general operating procedures (Wenger, Tr. 13088-89).

230. Annual retraining of school staff will be provided [even though they are professionals and the procedures they would implement in an emergency are very basic] (Bigelow, Tr. 14364; Campbell, Tr. 19996; Bradshaw, Tr. 13631; Appl. Exh. E-1, p. R-3). The Philadelphia Electric Company has taken under advisement a request for it to make a long-term commitment to provide radiological emergency response training. (Campbell, Tr. 19996; see also, Bradshaw, Tr. 13631). [Given the expenditures by Applicant to date in providing counties, municipalities, school districts, health care institutions and fire companies with needed equipment, and its desire for a 40-year operating license for Limerick,] It is expected that there should be no problem in obtaining a long-term commitment to train personnel (Bigelow, Tr. 14279; Campbell, Tr. 19962-63).

231. The Staff adopts and incorporates Applicant's proposed finding 231.

232. [County planning officials evaluated the adequacy of the lesson plans and attended the training programs offered by Energy Consultants to monitor the quality of that training. They were satisfied that the training provided by Energy Consultants to school administrators, faculty and bus drivers provides an adequate understanding of their roles and responsibilities under their respective plans (Bigelow, Tr. 14275; Reber, Tr. 19746-47, 19796-97; Campbell, Tr. 19889-90).] County planning officials and their staffs have been evaluating the adequacy of the Energy Consultants' training program by either reviewing the lesson plans and/or attending the training programs. (Bigelow, Tr. 14275; Reber, Tr. 19745, 19796-97; Campbell,

Tr. 19893-94). While county planning officials are generally satisfied that the training provided by Energy Consultants for school administrators, school teachers and staff, and bus drivers provide an adequate understanding of their respective rules and responsibilities (see, Bigelow, Tr. 14275; Reber, Tr. 19745-47, 19797, 19833), there were instances where pre- and post-class testing signaled a problem with the participants' retention of the information presented to them and thereby indicated a possible need for reevaluation and improvement of the lesson plans and content of the training program. (Campbell, Tr. 19891-92). In those instances, the pre- and post-testing reflected a measurable educational gain in all groups that were tested, however, the participants in those programs did not meet the standard established by a county training and public education coordinator (Campbell, Tr. 19891-92). While this Board is concerned with the progress of the training program participants, it does not believe that the limited testimony on the post-training results provides any basis for concluding that the training program does not adequately inform the participants about their respective roles in a radiological emergency. The Board expects and believes that changes to the training program signaled by such pre- and post-training testing, or other surveys requesting critiques of the standardized training program, would be a normal occurrence, and such input would be used in improving the training program. Indeed, Energy Consultants has been responsive to requests for changes to its program. (Campbell, Tr. 19890, 19893; Bradshaw, Tr. 13632, 16916-17).

233. The Staff adopts and incorporates Applicant's proposed finding 233.

234. [Given the limited responsibilities of teachers in accompanying students during an evacuation, there is no need to conduct post-training surveys to evaluate the effectiveness of the program.] Neither NUREG-0654 nor the provisions of 10 C.F.R. § 50.47 require post-training survey of teachers and school staff. Such post-training surveys are not necessary for a workable plan (Campbell, Tr. 20048). There are [FEMA sees] no special considerations requiring a post-training survey of teachers to determine their willingness to volunteer, given the limited responsibilities of teachers in accompanying students during an evacuation. (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 12; Bradshaw, ff. Tr. 12764 [12761] at p. 14).

235. [Nor is] There is no [a] need to conduct special drills for an actual evacuation of the schools in accordance with the radiological emergency plans since this merely involves escorting students out of school buildings, which occurs normally during fire drills, and transporting them by bus to other locations. Staff supervision of students during an evacuation would therefore be similar to supervision of large student groups during any number of other outside activities and would not be enhanced by drills (Bradshaw, ff. Tr. 12764 [12761] at p. 14). Nonetheless, Energy Consultants has been and continues to be willing to provide assistance to school districts in conducting sheltering/evacuation drills (Bradshaw and Cunnington, Tr. 16917-18).

235a. The Board's previous finding should not be considered as obviating the need for a demonstration of the viability of the school district RERPs required by the NRC and FEMA in accordance with Planning Standard N of

NUREG-0654 and 10 C.F.R. § 50.47(b)(14) (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 12, Tr. 20162-63); See Proposed Finding 214a. and 214b.).

Assigned Responsibilities for
Which Teachers Have Been Trained

236. The basic responsibilities of assigned school teachers and staff to accompany evacuated students and remain with them at host schools until relieved is described in each school district plan. No special training for these [elementary responsibility] basic responsibilities is necessary because teachers routinely supervise students in similar situations (Bradshaw, ff. Tr. 12764 [12761] at p. 11; Appl. Exhs. E-49 [to E-61] to E-50, E-54 to E-60, Section V.D.2.d.; Appl. Exh. E-53, pp. 6114.4(f), 6114.4(g)). School districts periodically implement early dismissal procedures comparable to the evacuation procedures for a radiological emergency. Those situations include boiler breakdowns, gas leaks, bomb threats, or severe weather (Persing, Tr. 14831; Feich, Tr. 14973). Because emergency and routine responsibilities are comparable, pre-identification of teacher volunteers is not required to make the plans workable, nor is it a requirement of NUREG-0654 (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 10; Kinard, Tr. 20298).

237. Nonetheless, training for teachers and staff has been provided to familiarize them with nuclear plant operations, radiation hazards and related emergency planning concepts. Training is available on an ongoing basis for school staff assigned to perform this function, as explained in the county and school district plans. (Bradshaw, ff. Tr. 12764 [12761] at p. 11; Appl. Exhs. E-1, p. R-3; E-2, p. R-2; E-3, p. R-3; E-49 to E-61, Section III). As a result of this training, school staff will be informed about the likely

risks involved in an actual emergency and prepared to perform their limited escort function without unrealistic fears or apprehension (Wenger[Bradshaw], ff. Tr. 12764 [12761] at pp. 11-12).

238. The Staff adopts and incorporates Applicant's proposed finding 238.

239. The Staff adopts and incorporates Applicant's proposed finding 239.

240. [There is no need to train school staff to deal with stress which might be experienced by school children in a radiological emergency.] There was testimony by certain witnesses that children are subject to higher stress levels during natural or man-made emergencies and that training in handling these situations would be helpful. (Greaser, Tr. 15356-57, 15390-91; Price, Tr. 15430, 15444). Stressful conditions exist in other non-radiological emergencies, such as evacuation for a fire or bomb threat. (Campbell (Admitted Contentions), ff. Tr. 19852 at p. 6). However, there was also testimony that in the past teachers have not had any problems maintaining discipline and order during fire drills, evacuations due to bomb scares and field trips. (Price, Tr. 15452-53; Welliver, Tr. 15,575). The Board believes that if a school district believes such training is necessary, it should be arranged by the district involved. (Campbell, (Admitted Contentions), ff. Tr. 19852 at p. 6).

241. The Staff adopts and incorporates Applicant's proposed finding 241.

242. The Staff adopts and incorporates Applicant's proposed finding 242.

243. The Staff adopts and incorporates Applicant's proposed finding 243.

244. The Staff adopts and incorporates Applicant's proposed finding 244.

Bus Driver Training

245. The Staff adopts and incorporates Applicant's proposed finding 245.

246. Accordingly, training has been offered to school bus drivers regarding their assigned responsibilities in the event of a radiological emergency and will continue to be offered on an ongoing basis (Bradshaw, Tr. 13289-90; Bigelow, Tr. 14139-40; Reber, ff. 17729 at p. 3; Campbell, ff. Tr. 19852 at p. 11).

247. The Staff adopts and incorporates Applicant's proposed finding 247.

248. Training does not include route assignments. Buses would be given their assignment to evacuate a particular facility or segment of the population at the time of an actual emergency (Campbell, ff. Tr. 19852 at pp. 10-11; Bigelow, Tr. 14128-29). If drivers are unfamiliar with the assigned routes, they will be provided with strip maps (Hippert/Taylor, ff. Tr. 19498 at p. 17 [23]; Cunnington, Tr. 13745-46). It is standard practice throughout the Commonwealth for all five nuclear power plants to issue strip maps to bus drivers unfamiliar with assigned routes (Hippert, Tr. 19621). The use of such maps will be sufficient to provide drivers with directions to their assigned locations (Kinard, Tr. 20300).

249. The Staff adopts and incorporates Applicant's proposed finding 249.

Conclusion

249a. The Licensing Board has reasonable assurance, based on the evidentiary record before it, that the training that has been provided to bus drivers, teachers and other school staff has adequately prepared them for their respective roles in a radiological emergency. This Board has not heard any evidence that would lead us to believe there is any need for teachers to be trained in handling contaminated individuals or equipment. This Board has already stated that it has reasonable assurance that evacuation of the affected school districts can take place in one lift. Thus, school staff and teachers are in the same position as that of the general public. Therefore, this Board will not reach the question of whether teachers and school staff should be trained in the use of dosimetry and in the adequacy of school district buildings for sheltering. As stated in Proposed Finding 240, the Board believes that if a school district has particular concerns about the discipline of children during a radiological emergency, these are matters that can be resolved by the school districts with the cooperation of Energy Consultants, who are providing the training.

249b. The Licensing Board also has reasonable assurance based on the evidentiary record, that the Applicant will make a long-term commitment to provide radiological emergency response training on an annual basis.

LEA CONTENTION 15

The Chester and Montgomery County RERP's and the School District RERP's are not capable of being implemented because the provisions made to provide bus drivers who are committed to being available during a radiological emergency, or even during preliminary stages of alert are inadequate.

249c. In its April 20, 1984 Special Prehearing Conference Order Ruling on Admissibility of Offsite Emergency Planning Contentions (LBP-84-18, 19 NRC 1020 (1984)), this Board ruled that LEA-15 belonged to a group of contentions raised by intervenors dealing with human response during a radiological emergency. Id. at 1054. The Board ruled that LEA-15 is about whether there is reasonable assurance that in an emergency there would be enough school personnel to implement the school plans and involves letters of agreement only to the extent that such letters are one way to establish such reasonable assurance. Id. at 1055. The Board considered LEA-15 "to be solely about human response in a radiological emergency," Id. at 1055. In its September 24, 1984, Memorandum and Order Ruling on Reworded and Respecified Offsite Emergency Planning Contentions, the Board ruled out intervenors specifications dealing with communications with bus drivers, mobilization time, concerns about whether some drivers are being assigned to evacuate both the school population and the general public and transportation for private school students.

249d. FEMA witnesses testified that NUREG-0654, Planning Standard C and 10 C.F.R. § 50.47(b)(3) require that procedures be developed to provide reasonable assurance that adequate numbers of bus drivers will be available during a radiological emergency, but that such procedures have not yet been developed in the event of a radiological emergency at Limerick. (FEMA, ff. Tr. 20150 at p. 24).

250. The basic responsibilities and procedures regarding bus driver assignments in a radiological emergency are described in the bus driver training program (Appl. Exh. E-64). The training program offered to bus drivers provides general information on nuclear technology and terminology, radiation measurement and effects, emergency planning and response operations. This encourages drivers to plan ahead for emergency contingencies in

order to eliminate conflicts between volunteer and family responsibilities (Bradshaw, ff. Tr. 12761 at pp. 24-25; Appl. Exh. E-64). Also, training [eliminates any] addresses misconceptions held by drivers as to the nature of their emergency responsibilities or the risks they are likely to face in carrying out their assignments (Proposed Findings 227-229, 245-249).

251. Because the basic principle governing evacuation within the EPZ is that all transportation-dependent individuals will be evacuated in a single lift (Proposed Finding 215), bus drivers will not be subjected to greater radiological hazards than those facing the general public (Proposed Finding 216-218). Accordingly, bus drivers are instructed in training sessions that they would not be expected to do more than drive a bus as they do in carrying out routine school assignments (Bigelow, Tr. 14294; Bradshaw, Tr. 13730; Appl. Exh. E-64, pp. 30-32). See para. 256 addressing the extent to which bus driver training has been accomplished.

252. FEMA witnesses testified that NUREG-0654, Planning Standard C(4) indicates that there is a need for letters of agreement with bus companies with regard to providing adequate numbers of bus drivers, but could not comment on the adequacy of any letters of agreement because they (FEMA) had not had an opportunity to review them (FEMA, ff. Tr. 20150 at p. 24). Chester County presently has six signed agreements with bus companies covering school evacuation (Campbell, Tr. 19854). Montgomery County has completed 20 of 33 agreements with transportation providers. (Bradshaw, ff. Tr. 17191 at 13 and Bigelow Tr. 14127, 14345, 14366). In discussing arrangements for obtaining additional buses with non-EPZ school districts and private bus companies, Montgomery and Chester County planning officials had a clear understanding, except when expressly stated to the contrary, that a commitment by the provider of its transportation

resources included a driver for each bus. The counties explained to each provider why buses and drivers were being requested and, obviously, the providers understood that it would be meaningless to provide a bus without a driver (Proposed Findings 86-95, 136-146). [Each agreement expressly states the providers commitment to furnish a driver for every bus, based upon personal knowledge of resources and manpower] (Thompson, Tr. 18813, 18863; Campbell, Tr. 19861, 20033; Bigelow, Tr. 14126; [e.g., LEA Exhs. E-4, E-63.]. LEA Exhs. E-4 and E-63 show the providers agreement to provide buses and drivers "to the maximum extent possible" (for E-4) and as determined "to be available" (for E-63). These agreements are subject to the willingness of the bus drivers to participate. The record is clear that such drivers will be volunteers (Kowalski, Tr. 16201, Wert Tr. 16581). Providers agreed generally to use best efforts with respect to drivers, but none stated that drivers would be ordered to participate. Applicant's witnesses testified that there is a large body of social/scientific knowledge that addresses individual and group behavior in a disaster; that volunteers respond in an emergency; that community goals prevail over individual goals and that community goals are balanced with family goals (Bradshaw, Tr. 13070). FEMA witnesses expressed the belief that once a bus company has agreed to provide its bus resources for the evacuation of school children from the 10-mile EPZ, such company has committed itself to ensuring that bus drivers are available to drive the buses in the absence of indications to the contrary. (FEMA, ff. Tr. 20150 at p. 25).

253. As demonstrated above, both Montgomery and Chester Counties have conservatively estimated the number of buses and drivers available under commitments from bus providers and will ultimately have commitments which far exceed any possible unmet need. It is expected also that people in adjoining counties would respond to a need for buses. Tr. 19982-85.

Nonetheless, pools of back-up drivers are also being formed (Proposed Finding 133). Typically, bus providers have far more drivers than buses (Kowalski, Tr. 16208-09), and certainly more than the number conservatively estimated by providers under their letters of agreement with the counties (Proposed Finding 169). Also, many drivers will not have family concerns (Proposed Findings 179). The Montgomery County plan will utilize only 20 to 25 percent of all available drivers employed by providers outside the EPZ. That pool will suffice (Bigelow, Tr. 14270, 14298-99). Within the EPZ, Montgomery County expects to utilize only two-thirds of the available drivers. (Bigelow, Tr. 14299).

254. The agreements between the three county emergency planning agencies and bus companies are general and do not specify buses or drivers for a particular use or assignment. Advance assignments may or may not be made in practice (Bradshaw, ff. Tr. 12761 at p. 23; Appl. Exh. E-1, Annex T, App. T-23 to T-27). The same procedure of assigning buses and drivers at the time of an actual emergency has been used by the counties previously. Bus companies have provided buses and drivers promptly upon request on those occasions. Accordingly, drivers willing to perform their assignments have been obtained under those ad hoc procedures in the past (Bradshaw, ff. Tr. 12764 [12761] at p. 24).

255. The Staff adopts and incorporates Applicant's proposed finding 255.

256. The evidence in the record of this proceeding supports the historic record that drivers will perform assigned functions. FEMA witnesses testified that the history of response to emergencies shows a willingness by individuals to perform their duties and that individuals who have a clear understanding of their roles in an emergency plan do not abandon these roles in time of emergency. A comprehensive training program for bus drivers is

needed to provide a clear understanding of what is required. FEMA was unable to make any determinations as to the adequacy of the on-going bus driver training because they were not familiar with the specifics of such training. (FEMA, ff. Tr. 20150 at pp. 26-27). The lesson plans that have been reviewed by FEMA are however, for the most part, comprehensive in nature. (Kinard, Tr. 20208). As of December 3, 1984, in Montgomery County, 39 bus drivers had received training (Bigelow, Tr. 14,140). In Chester County, as of January 23, 1985, 43 bus drivers have been trained (Campbell, Tr. 19890). Verbal and written notice by the Montgomery County Office of Emergency Preparedness have been made to all bus providers, however, at the time of the hearing no bus provider in Montgomery County had taken advantage of bus driver training offered by Energy Consultants. (Bigelow, Tr. 14140-1 and 14188-90). Training will be continued to be offered. (Bigelow, Tr. 14140). Several school district superintendents testified that they have required buses for early school dismissal without prior notification a number of times each year and that they had experienced no difficulty in obtaining a full complement of buses and drivers (Persing, Tr. 14854; Feich, Tr. 14997; Murray, Tr. 15085-86, 15103-04; Price, Tr. 15439-40; Welliver, Tr. 15554-55, 15585-86; Warner, Tr. 15659-61).

257. Not a single bus driver has refused to drive a bus during emergency circumstances, notwithstanding that drivers often face very hazardous conditions while driving in inclement weather (Kowalski, Tr. 16206-07). [The consultants who provided training for school administrators, teachers and staff are unaware of any instance in which trained individuals stated an unwillingness to participate in response to an actual radiological emergency (Bradshaw and Cunnington, Tr. 13046-47).] Bus drivers are particularly capable and caring individuals. They especially care about children and

would therefore want to serve in an emergency if the safety of school children were threatened (Kowalski, Tr. 16210, 16216).

258. The Staff adopts and incorporates Applicant's proposed finding 258.

259. A number of the school superintendents had surveyed their drivers to determine their willingness to transport students in the event of a radiological emergency. Because of the paucity of information provided to drivers at that time and the informality or inadequacy of those surveys, the Board finds their results to be unreliable. For example, in a driver survey of the Gross Bus Company by the Superintendent of the Owen J. Roberts School District, approximately 25 of 43 bus drivers indicated they would perform assigned responsibilities in an emergency. However, while there is some question as to how many drivers will respond many of the drivers expressed the concern that in an emergency their families would come first, and they must be assured that their children had been taken care of (LEA Ex. 29, p. 2). Others were unsure or stated that they would attend to personal needs first, although no clear breakdown was given (Claypool, Tr. 15870; LEA Ex. E-29, p. 2). This survey, however, was limited to the 43 drivers who routinely drive buses to and from schools in the Owen J. Roberts School District, and did not include other drivers employed by that provider. The Superintendent did not know the total number of drivers at either of the two locations utilized by the Gross Bus Company who could also be called upon in an emergency (Claypool, Tr. 15912-13).

260. The Staff adopts and incorporates Applicant's proposed finding 260.

261. The Staff adopts and incorporates Applicant's proposed finding 261.

262. The Staff adopts and incorporates Applicant's proposed finding 262.

263. The Staff adopts and incorporates Applicant's proposed finding 263.

264. [The Board believes that the very conduct of such informal surveys may very well create a problem where none exists. As noted, there is no evidence to validate those surveys or to establish the impartiality of the survey takers. Given the open hostility of a number of witnesses called by LEA to the licensing of Limerick, there are no small concerns. Where it has simply been assumed, on the other hand, that drivers will accept their emergency assignments, no unwillingness has surfaced. For example, no school bus driver in the Springfield Township School District has stated to the district superintendent that he or she would not perform assigned responsibilities in the event of a radiological emergency (Davis, Tr. 16679-80).]

265. Roger Tauss is president of Local 234, Transport Workers Union of America, AFL-CIO, which represents SEPTA bus drivers of the City Transit and Frontier Divisions (Tauss, Tr. 16736-38, 16766). [Family concerns would not influence SEPTA bus drivers' willingness to volunteer because] The vast majority of the Local 234 union members live outside the EPZ (Tauss, Tr. 16787). Nonetheless, Mr. Tauss stated that his drivers would not go into an area of a "nuclear emergency," and that he would instruct them not to do so (Tauss, Tr. 16741-42). His position was that "there is no way that Local 234 bus drivers are going to drive into a nuclear meltdown situation"

because he wished to avoid their being subjected to any "devastating potential of injury" (Tauss, Tr. 16743-44, 16784-85).

266. Mr. Tauss's concern regarding a "meltdown situation" is based upon his distrust of government officials and scientists. Specifically, he would distrust any information from the Pennsylvania Bureau of Radiological Protection or PEMA that it was safe for drivers to enter the EPZ to evacuate residents (Tauss, Tr. 16773-75). His basic position was that "[e]verybody is for sale these days" and "will say what they are paid to say" (Tauss, Tr. 16813). He has [no] little knowledge of emergency planning concepts pertaining to radiological accidents or how those concepts would be employed in the event of a real emergency to protect the public health and safety (Tauss, Tr. 16775, 16808-10).

267. Mr. Tauss testified that he has surveyed [a number of] 30 SEPTA drivers and found all of them unwilling to assist in the event of an emergency at Limerick (Tauss, Tr. 16782). He said the reaction to his survey was "vehement panic" (Tr. 16815). The people he spoke to were "terrified." (Tr. 16,807). [Despite his disclaimers,] The Board believes that Mr. Tauss's informal survey of 30 SEPTA bus drivers was not sufficient to establish how SEPTA bus drivers would react in radiological emergency. [necessarily infected with his own distrust of planning for radiological emergencies and that the responses he received simply reflect his personal opinion.]

268. Mr. Tauss's stated his reasons for his belief that SEPTA would attempt to coerce bus drivers to accept assignments in a radiological emergency [is wholly speculative] (Tauss, Tr. 16803-04). Mr. Tauss testified, however, that a SEPTA request for volunteer bus drivers would not violate its collective bargaining agreement and that if Local 234 bus drivers

did volunteer, no union sanctions could be taken against them (Tauss, Tr. 16778-79, 16797, 16800, 16811). Also, if training were offered to SEPTA bus drivers, the union would not oppose it (Tauss, Tr. 16759, 16793-94).

269. Mr. Tauss's unwillingness to participate in any kind of emergency situation, including non-radiological emergencies, where it might be necessary to evacuate residents from a potential threat to the public health and safety (Tauss, Tr. 16798-99), is [totally] against the weight of the historic record as well as the record in this proceeding regarding the actions of bus drivers in other emergencies. See discussions of behavior of volunteers in an emergency. Para. 252 and 256.

269a. The record here, as discussed above (Para. 252) and in the context of LEA Contention 12, clearly shows the willingness of volunteers to fulfill their responsibilities in an emergency. (See, In the Matter of Consolidated Edison Company of New York (Indian Point, Unit No. 2), Power Authority of the State of New York (Indian Point Unit No. 3), LBP-83-68, 18 NRC 811, 958 (1983)). This is in contrast to the situation where the only evidence in the record raised serious questions as to whether volunteers would be willing to respond in an emergency. See, In the Matter of Cincinnati Gas and Electric Company, (Wm. H. Zimmer Nuclear Power Station, Unit No. 1), ALAB-727, 17 NRC 760, 772-73 (1983).

270. FEMA witnesses assumed that bus driver training would include instructions regarding transport of students from host schools to mass care centers, and was aware that bus driver training is being conducted by Energy Consultants. FEMA was not familiar with the specifics of such training and therefore could not comment on the adequacy of such training. (FEMA, ff. Tr. 20150 at p. 26). Transporting students from host schools to

mass care centers is a very simple procedure occurring at least five hours after an evacuation notice and requiring transport of only a small number, if any, of the total number of students evacuated. There is no reason to assume that bus drivers would be unwilling to do this. Information relevant to this procedure is contained in the school district plans and the bus driver training lesson plan (Bradshaw, ff. Tr. 12761 at p. 24; e.g., Appl. Exh. E-49, p. 25; App. Exh. E-64, p. 32).

Conclusion

270a. Based on the evidence developed for this contention, the Board believes the human response assumptions underlying these plans, i.e. that in an emergency individuals show a willingness to perform their duties and do not abandon their roles when they have a clear understanding of these roles (See above findings Para. 252, 256). FEMA testified that procedures had not yet been developed to provide reasonable assurance that adequate numbers of bus drivers will be available during a radiological emergency. FEMA's conclusion was based on plans submitted in December 1983. (Para. 249b, 394). However, we note that the record addresses facts that took place subsequent to FEMA's review. Based upon this record, we find that there is reasonable assurance that adequate provisions are being made to assure availability of bus drivers and there will be a sufficient number of bus drivers willing to participate in response to an emergency at Limerick.

2. DAY CARE FACILITIES

LEA-13

There must be specific and adequate plans for children in day care, nursery and pre-school programs in order to provide reasonable assurance that this particularly sensitive segment of the population is adequately protected.

Development and Content of
Model Day Care Facility Plan

270b. In its September 24, 1984 Memorandum and Order Ruling on Rerworded and Respecified Offsite Emergency Planning Contentions, this Board reiterated its April 20, 1984 Order (LBP-84-18, 19 NRC 1020 (1984)) concerning the meaning of the word "specific" in LEA-13. It does not call for institution-specific plans. It only asserts that, to be adequate, whatever planning is done for these institutions must be specific. Id. p. 11. This Board also ruled out specification one, dealing with procedures used to contact parents and guardians. Id., p. 12. The remaining five items of specification were left intact.

271. The Staff adopts and incorporates Applicant's proposed finding 271.

272. The Staff adopts and incorporates Applicant's proposed finding 272.

273. The Staff adopts and incorporates Applicant's proposed finding 273.

274. The Staff adopts and incorporates Applicant's proposed finding 274.

275. Nonetheless, to assist day care facilities in their own planning, a model radiological emergency response plan for use by day care facilities ("model day care plan") was developed by PEMA in coordination with the Pennsylvania Department of Education and Department of Public Welfare for

use in emergency planning at Limerick (Hippert, ff. Tr. 19498 at [p. 17] pp. 15-17; Bradshaw, Tr. 13177-[78]-79; Appl. Exh. E-63). The model day care plan provides policy guidelines, recommended procedures for notifying parents at the alert stage in the event of a radiological emergency, and a specification of actions to be taken under each emergency classification. FEMA found the model day care plan adequate for responding to an incident at Limerick. (FEMA, ff. Tr. 20150 at p. 2). A sample letter to parents, including an explanation of actions that would be taken by the day care facility, is included as Appendix 3 of the model plan (Hippert, ff. Tr. 19498 at p. [17] 16; Appl. Exh. E-63, p. 3-1).

276. The Staff adopts and incorporates Applicant's proposed finding 276.

277. The Staff adopts and incorporates Applicant's proposed finding 277.

278. The Staff adopts and incorporates Applicant's proposed finding 278.

279. The Staff adopts and incorporates Applicant's proposed finding 279.

Identification of Day Care Facilities

280. The Commonwealth's Department of Education and Department of Public Welfare identified all licensed day care facilities within the EPZ and forwarded them a copy of the model plan to assist them in developing their own plans (Bigelow, Tr. 14133-34; Campbell, Tr. 19992; Hippert, ff. Tr. 19498 at p. 17). The Montgomery County OEP, Chester County DES and Berks County EMA identified unlicensed day care

facilities by checking telephone directories, surveying area churches and youth services and through other informal contacts (Bigelow, Tr. 14134, [14356-57]; Reber, Tr. 19735-36, 19837-38; Campbell (Admitted Contentions), ff. Tr. 19852, at pp. 7-8, [Tr. 19900]). Energy Consultants assisted the counties in identifying unlicensed facilities throughout the EPZ by soliciting information from county and municipal staff and various organizations and by conducting telephone book surveys (Bradshaw, Tr. 13184, 13226, 13734-35). Energy Consultants also utilized a list of day care facilities provided by LEA (Bradshaw, Tr. 13185).

281. The Staff adopts and incorporates Applicant's proposed finding 281.

282. The Staff adopts and incorporates Applicant's proposed finding 282.

283. Under the model day care plan, facility operators are responsible for arranging transportation and identifying a host facility (Hippert, ff. Tr. 19498 at pp. 17-18; Bigelow, Tr. 14137, 14305-06; Bradshaw, Tr. 13242; Appl. Exh. E-63, p. 3; Appl. Exh. E-91). If there is any problem in doing so, municipal or county officials [will, as stated in the cover letter accompanying the model plan, assist in arranging the necessary resources] should be contacted. (Bradshaw, Tr. 13242-43, 13245; Bigelow, Tr. 14134, 14308; Appl. Exh. E-91). The counties will assume responsibility for ensuring that municipal plans reflect identified needs of day care facilities for notification and transportation (Campbell, Tr. 19914-15).

284. The Staff adopts and incorporates Applicant's proposed finding 284.

285. The Staff adopts and incorporates Applicant's proposed finding 285.

286. There is no planning standard requiring a general public needs survey by emergency planners. FEMA has never reviewed such surveys nor even seen them before (Kinard, Tr. 20184). Nonetheless, the transportation needs for children in day care facilities were also determined by a general public needs survey within the EPZ conducted in the fall of 1983 (Bigelow, Tr. 14135; Reber, Tr. 19813-14; Bradshaw, ff. Tr. [12761] 12764 at p. 16, Tr. 13179; Appl. Exhs. E-70, E-71, E-100; LEA Exh. E-44). The survey, which was prepared in consultation with the risk counties, was designed to cover the general populace, including day care centers. Each respondent was asked to identify transportation, medical or other special needs for the persons at that address. Each day care center therefore had an opportunity to report any need for inclusion within its municipal plan (Bigelow, Tr. 14135; Reber, Tr. 19813-14; Bradshaw, ff. Tr. [12761] 12764 at p. 16, Tr. 13188-89; Appl. Exhs. E-70, E-71, E-100; LEA Exh. E-44).

287. The Staff adopts and incorporates Applicant's proposed finding 287.

288. The lack of response from particular day care facilities does not indicate the survey was less than effective, since addressees were instructed to respond only to report a special need (Bradshaw, Tr. 13191; LEA Exh. E-44). If a particular day care facility has not requested emergency planning assistance from the municipality or county, it would be logical to infer that the facility, like any other institution treated as a member of the general public, did not have any unmet needs or unresolved planning problems requiring assistance (Reber, Tr. 19826). [As of this time

there have no been] Mr. Bradshaw, Applicant's witness, was not aware of any requests for assistance from day care centers to [the risk counties] Chester County for transportation or other special needs of infants and very young children (Bradshaw, Tr. 13239-40).

289. The Staff adopts and incorporates Applicant's proposed finding 289.

290. In the event any children have not yet been picked up at the time an evacuation is recommended, they would be evacuated to a designated host school. The name and location of the designated host facility is specified in the sample letter to parents, which advises parents that their children will be at that location if an evacuation occurs before they are able to pick them up. Thus, except in the most extreme emergencies involving rapidly developing scenarios, parents themselves would transport their children from the day care facility. (Hippert, ff. Tr. 19498 at pp. 17-18; Bradshaw, ff. Tr. [12761] 12764 at p. 17).

291. The Staff adopts and incorporates Applicant's proposed finding 291.

292. [Day care facility staff will not abandon children in an emergency.] The [uncontroverted] historical record of human response in emergencies leads to the conclusion that, as with teachers and bus drivers, the family concerns of day care facility directors and staff would be balanced against larger community concerns (see Proposed Finding 181-184 see also Tr. 13070). In actual emergencies, such individuals have been found to balance those concerns so as to perform their obligations with regard to other individuals entrusted to their care (Bradshaw, Tr. 13222, 13273). The documented record demonstrates that reasonable adults will

perform such duties in a disaster situation in the absence of training or predefined responsibilities. One can only assume that persons who care for young children have a sense of commitment and that this is acknowledged by the parents in placing their children in the custody of day care facility staff (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 17; Campbell (Admitted Contentions), ff. Tr. 19852 at p. 8, Tr. 20000-01, 20081; Bradshaw, ff. Tr. [12761] 12764 at pp. 17-18, Tr. 13215).

Day Care Facility Witnesses

293. The Staff adopts and incorporates Applicant's proposed finding 293.

Little People's Pre-School of the
Pughtown Baptist Church

294. The Staff concurs in this proposed finding.

295. [The Board believes that Mrs. Troisi has not to this point made a good faith effort to avail herself and her pre-school of all of the information and assistance which is available at the municipal and county levels. For example,] Mrs. Troisi testified that she had not received the model day care facility plan (App'l. Exh. E-63) furnished by PEMA and the counties (Troisi, ff. Tr. 15780 at p. 5), and stated that she had not been contacted [about the model plan by the Chester County DES] by the county, township, municipal or state until December 14, 1984 (Troisi, ff. Tr. 15791). [Nevertheless,] Mrs. Troisi [admitted] stated that she had [known about the] read in the paper that a model day care plan [for several months,] existed but had not attempted to contact either

county or municipal emergency planning officials (Troisi, ff. Tr. 15780 at p. 5, Tr. 15796-97). Mrs. Troisi [further admitted] stated that she had [made no effort to contact] not contacted emergency planning officials because it was [not her responsibility to take this initiative] her belief that they should contact her (Troisi, Tr. 15799, 15819, 15833). [The Board therefore believes that Mrs. Troisi has not yet availed herself of assistance from local officials to assure the safety and welfare of children in her pre-school. Her position that] She will comply with whatever information is disseminated to her [is the only apparent reason why these concerns have not yet been addressed for her pre-school] (Troisi, Tr. 15809).

296. Mrs. Troisi testified that she had received a public needs survey form regarding her own family from the Chester County DES requesting information for those who would need assistance in the event of an emergency (Troisi, Tr. 15818-19). The Board believes that the survey, along with the other information known to Mrs. Troisi at the time, was sufficient to prompt her [and any other reasonably prudent day care facility owner or director] to seek further guidance as to the special needs for their facilities (Troisi, Tr. 15816; LEA Exh. E-44).

297. Mrs. Troisi stated that both members of her staff have a number of unresolved concerns and feel a need to get home to their own children (Tr. 15804-07-08). These teachers have told Mrs. Troisi they would not stay in a radiological emergency, but would return to their families as soon as possible. (Tr. 15820-21). Mrs. Troisi stated that she would need assurances regarding notification of her facility and transportation for children to a host facility in order to [ensure the availability of her own staff] say that "perhaps" her staff would be available. (Troisi,

Tr. 15808). Arrangements already exist at the Little People's Pre-School for staff to transport students offsite in the event of a medical emergency (Troisi, Tr. 15802-03). Mrs. Troisi has not requested any additional transportation resources for her facility. She stated her intention to review carefully the model day care plan and any other information provided by the Chester County DES to take whatever steps are necessary to secure the safety of her preschool's children (Troisi, Tr. 15812).

298. The Staff adopts and incorporates Applicant's proposed finding 298.

299. The Staff adopts and incorporates Applicant's proposed finding 299.

300. The Staff adopts and incorporates Applicant's proposed finding 300.

Day Care Association of Montgomery
County, Inc. - Pottstown Center

301. The Staff adopts and incorporates Applicant's proposed finding 301.

302. [The Board did not accord much weight to the concerns expressed by Mrs. Seidel. She was generally unknowledgeable as to emergency planning concepts applicable to her school. More importantly, arrangements with the Montgomery County OEP for the Pottstown Center are being handled out of the parent organization's central office (Seidel, Tr. 16842-43). Moreover, the Board cannot accord credibility to the testimony of a witness who has expressly stated that, "[d]epending upon what type of situation it is, I might [fabricate an excuse]" for school authorities in order to pick up

her child at school. Notably, Mrs. Seidel's child attends a school which is not even within the EPZ (Seidel, Tr. 16852-53).]

303. The Staff adopts and incorporates Applicant's proposed finding 303.

304. [The only concern expressed by] Mrs. Seidel expressed concerns regarding the application of the model day care plan to the Pottstown Center [was parental identification at the time of children pick-up, which would simply require the parent or guardian to present a social security card or driver's license and sign a release] involving the mechanics of notice to the parents and picking up the children at school. (Seidel, Tr. 16857).

305. The Staff adopts and incorporates Applicant's proposed finding 305.

306. [Mrs. Seidel stated that approximately ten staff members might not be available in any emergency because of concerns regarding their children in other school districts (Seidel, Tr. 16846).] Mrs. Seidel testified that approximately 10 of 17 teachers stated they are not willing to stay. (Tr. 16846). Nor is Mrs. Seidel willing to stay (Tr. 16850-52). Mrs. Seidel would find her own 5 year old child (outside the EPZ) regardless of what she is told, and "might" fabricate an excuse to pick up her child in the event of a problem at Limerick (Tr. 16851-53). Those staff, however, have not been adequately informed as to the provisions which would be taken by the respective school districts within the EPZ for the protection of their children, including evacuation to a host facility, in the event of a radiological emergency (Seidel, Tr. 16849-50).

307. Only one of the staff at the Pottstown Center is a single parent. The evidence indicated no reason why arrangements could not be made for the families of other staff members to have the non-staff parent or some other person pick up children at school, assuming they attend school within the EPZ and that school officials would permit parental pick-up prior to evacuation (Seidel, Tr. 16855-56). There is no known circumstance in which Pottstown Center staff have abandoned children during times of stress or personal emergency [and Mrs. Seidel believes that they would not do so in the event of an emergency at Limerick if the children at the Pottstown Center were threatened] (Seidel, Tr. 16859).

308. The Pottstown Center has a contract with CMD Bus Service of Pottstown for routine transportation. There is [every] no reason to believe that CMD Bus Service would not cooperate in [making a commitment to provide] providing transportation for the Pottstown Center (Seidel, Tr. 16839). If not, the Pottstown Center intends to report unmet transportation needs to the Montgomery County OEP (Seidel, Tr. 16848).

Upattinas School Open
Community Corporation

309. The Staff adopts and incorporates Applicant's proposed finding 309.

310. The Staff adopts and incorporates Applicant's proposed finding 310.

311. The Staff adopts and incorporates Applicant's proposed finding 311.

312. The Staff adopts and incorporates Applicant's proposed finding 312.

Conclusion

312a. Plans for children in day care, nursery and pre-school programs are sufficiently specific to provide reasonable assurance that this particular sensitive segment of the population will be adequately protected.

3. Residential Facilities for the Mentally Retarded

LEA-27

There must be specific and adequate plans to protect Camphill Village Special School, Inc. in East Mantmeal Twp., Chester County and for Camphill Village School in West Vincent Twp., Chester County.

Camphill Village Kimberton Hills, Inc.

312a. This contention was admitted for purposes of litigation in the Licensing Board's Special Prehearing Conference Order of April 20, 1984 and its Memorandum and Order of September 24, 1984. In the Matter of Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), LBP-84-18, 19 NRC 1020, 1025 (1984); In the Matter of Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), Memorandum And Order Ruling On Reworded And Respecified Offsite Emergency Planning Contentions, (Unpublished), slip op. at 11, (September 24, 1984). In admitting this contention for litigation, the Licensing Board ruled that the use of the word "specific" in this contention was not meant to call for institution-specific plans, but only to assert that for planning to be adequate for these institutions the planning must be specific. Limerick, 19 NRC 1058; Memorandum And Order Ruling On Reworded And Respecified Offsite Emergency Planning Contentions at 11.

Furthermore, the Board ruled that concerns about human response, telecommunications and adoptability of the plans are not within the scope of this admitted contention. Memorandum And Order Ruling On Reworded And Respecified Offsite Emergency Planning Contentions at 13. Accordingly, we approach the resolution of this contention within the confines of these prior rulings.

313. The Camphill Village Kimberton Hills, Inc. facility, located in [Kimberton] West Vincent Township, Chester County, is a residential community for the mentally retarded comprised of 12 houses on 400 acres of farmland. Five to ten individuals, including mentally retarded persons, reside together in each house (Zipperlen, Tr. 16016, 16022, 16028). Camphill Village Kimberton Farms, Inc. is [not a school,] neither a licensed facility for the mentally retarded nor a school, but a residential community for mentally retarded individuals [of all ages] from age 18 to near 60 (Zipperlen Testimony, ff. Tr. 16070 at p. 1; Tr. [16016, 16018,] 16016-18, 16030-31). The mentally retarded residents are ambulatory and are not profoundly retarded. They are not individuals who cannot do for themselves (Zipperlen, Tr. 16024). They are able to join their resident families for shopping, entertainment and vacations. They also visit their natural families outside the community; however, someone generally accompanies them on such visits (Zipperlen, Tr. 16025-027).

314. The Staff adopts and incorporates Applicant's proposed finding 314.

315. Neither the Commission's emergency planning requirements nor FEMA require that specific emergency plans be developed for this facility. (See, 10 C.F.R. § 50.47 and Appendix E, 10 C.F.R. Part 50; Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 37). Furthermore, under [Under]

the basic policy of the Commonwealth as set forth in Annex E, particularized written plans need not be prepared for a private facility such as Camphill Village Kimberton Farms, Inc. Rather, the special needs of any such facility, if any, should be incorporated in the appropriate municipal and county plan (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 37; Campbell (Admitted Contentions), ff. Tr. 19852 at pp. 14-15; Bradshaw, ff. Tr. [12761] 12764 at pp. 28-29).

316. [The Camphill Village Kimberton Hills, Inc. facility lies within jurisdiction of West Vincent Township, Chester County.] The West Vincent Township plan and implementing procedures provide[s] for special notification of [that] the Camphill Village Kimberton Hills, Inc. facility beginning at the alert stage of an emergency (Campbell (Admitted Contentions), ff. Tr. 19852 at pp. 14-15; Bradshaw, ff. Tr. [12761] 12764 at p. 29; Appl. Exh. E-41. p. 20; Zipperlen, Tr. 16062-63).

317. The Camphill Village Kimberton Hills, Inc. facility responded to the public needs survey conducted by Chester County. The Chester County Department of Emergency Services was advised by the administrator of the facility that the transportation available to it could not transport more than 1/3 to 1/2 of their residents in one trip. (Zipperlen, Tr. 16058-60). That information was provided to the West Vincent coordinator, who contacted a representative of the facility to confirm its transportation needs and incorporated those needs into the West Vincent plan (Bradshaw, ff. Tr. [12761] 12764 at p. 29, Tr. 13459-60; Zipperlen, Tr. [16060] 16058-61; Appl. Exh. E-41, Attachments G and O). Ultimately, any transportation need would also be reflected in the Chester County plan (Campbell, Tr. 20005; Chester County/Commonwealth Exh. E-1, pp. N-3-2, I-2-1).

318. The Chester County DES has entered into an agreement with the Devereaux School for the mentally retarded to act as a host facility for Camphill Village Kimberton Hills, Inc. (Campbell, Tr. 20005-06). The administrator of the Camphill Village Kimberton Hills facility is aware that Chester County has entered into an agreement with the Devereaux School to utilize it as a host facility for the Camphill Village Kimberton facility. (Zipperlen Testimony, ff. Tr. 16070 at p. 2, Tr. 16053). Moreover, West Vincent Township representatives have informed the administrator of the facility that the facility would be notified of a radiological emergency at Limerick and that the Emergency Coordinator will have three buses sent to the facility to evacuate its residents to the host facility at the Devereaux School. (Zipperlen, Tr. 16062, 16055, 16061). The provision of three buses having a capacity of 40 persons, which is the capacity used in the West Vincent Township plan, would be adequate to transport the residents of the facility if there were a radiological emergency at Limerick. (Applicant's Ex. E-41; Zipperlen, Tr. 16069). Accordingly, the special notification, transportation and host facility needs of this facility have been met, thereby providing adequate planning consideration (Bradshaw, ff. Tr. [12761] 12764 at p. 29, Tr. 13471-72; Campbell, Tr. 20005-06).

319. No special expertise or training is required by staff in order to perform the basic tasks of remaining with facility residents and escorting them on buses to the host facility (see Proposed Findings 236-239). The Board believes these should not be insurmountable tasks to perform during an emergency since all of the staff of the Camphill Village Kimberton Hills facility have had some training or experience in the care and training of mentally retarded adults. (Zipperlen, Tr. 16046.) That training or exper-

ience ranges from many years to a few weeks. (Id.) For the Camphill Special Schools, all of the staff members enroll in the facility's four-year seminar that provides theoretical and practical training in supervising mentally retarded children. (Wolf, Tr. 16266-67). Nevertheless, t[T]raining as provided to public and private schools has been [nonetheless] offered to the administrative personnel and operating staff of both Camphill Village Kimberton Hills, Inc. and Camphill Special Schools, Inc. (Zipperlen, Tr. 16063, 16067; Wolf, Tr. 16238; Appl. Exhs. E-77 and E-78; Bradshaw, ff. Tr. 12764 at p. 30). Training will alleviate any unjustified fear or apprehension which might otherwise interfere with the fulfillment of assigned responsibilities. Information as to radiation and its biological effects puts certain questions and myths to rest. In that way, trained personnel have a better understanding of what situations they might encounter and makes them more likely to efficiently implement their responsibilities (Bradshaw, ff. Tr. [12761] 12764 at p. 30, Tr. 13491). While this training may have these benefits, the Board notes that these benefits have not been realized to date since the staff of these facilities have not yet had such training. (Zipperlen, Tr. 16063, 16067; Wolf, Tr. 16239, 16262-63; Applicant's Ex's E-77-79). However, the administrator of the Camphill Village Kimberton Hills facility has attended a number of training sessions, including a session that was held at the facility. (Zipperlen, Tr. 16063, 16066-67).

320. As with school teachers charged with the responsibility for their assigned students, the administrators and staff of the Camphill facilities can be expected to conduct themselves as responsible adults charged with the care and custody of intellectually and physically impaired individuals

in the event of any emergency (Bradshaw, ff. Tr. [12761] 12764 at p. 30). Helen Zipperlen, the administrator of the Camphill Village Kimberton Hills, Inc. facility, described her own staff as volunteers acting out of conscience (Zipperlen, ff. Tr. 16070 at p. 3).

321. [There is no cogent reason why presumably conscientious staff might decline to assume responsibility for transporting mentally retarded individuals with whom they reside to a host facility in the event of a radiological emergency (Zipperlen, Tr. 16053-54). Certainly,] The administrator of the facility does not know whether the facility staff would, if necessary, either remain with the mentally retarded residents or provide escort for those individuals during a radiological emergency at Limerick. (Zipperlen, Tr. 16058). During the accident at Three Mile Island, however, the staff of the facility remained there and provided attention to the mentally retarded residents. (Zipperlen, Tr. 16047-48). Moreover, no staff member has ever stated to the administrator that he or she would not remain to assist in providing an escort for mentally retarded individuals to a host facility (Zipperlen, Tr. 16058).

322. There is no reason why the families of the Camphill Kimberton Farms, Inc. facility could not be evacuated with the mentally retarded residents to the same host facility (Zipperlen, Tr. 16050). Because resident staff of the Camphill communities would themselves need to relocate in the event of an evacuation, [it is logical] the Board believes it is reasonable to expect that they would relocate with the client residents at the designated host facility (Bradshaw, Tr. 13486). The children at the facility attend the Kimberton Farms School. (Zipperlen Testimony, ff. Tr. 16070 at 1; Tr. 16017). If children of the resident staff were in school at [in] the time

of an emergency, they would be protected under the provisions of the Kimberton Farms School plan (Appl. Exh. E-82).

Camphill Special Schools, Inc.

323. Bernard Wolf, is co-director of the Camphill Special Schools, Inc., located in East Nantmeal Township (Wolf, ff. Tr. 16320 at cover page, Tr. 16234-35). Camphill Special Schools, Inc. is a residential community for mentally retarded children licensed by the Commonwealth of Pennsylvania. The population of the facility varies, but averages 62 to 72 mentally retarded children, 55 to 65 staff members, plus 20 to 30 staff children (Wolf, ff. Tr. 16310 at p. 1). The facility is comprised of 10 residences, which average six to eight [clientele] mentally retarded children each (Wolf, Tr. 16276). Also, each residence has zero to five staff children and four to six adult staff members. (Wolf, Tr. 16276-77).

324. [The Board found Mr. Wolf to be an uncooperative witness and has weighed his testimony accordingly.] The Board [also] notes that there is a higher level [of] directorate above Mr. Wolf that oversees operations of the facility, which would be responsible for approval of emergency planning provisions (Wolf, Tr. 16236-67). [Under those circumstances,] Consequently, the Board does not regard Mr. Wolf's statement of concerns as necessarily the views of his superiors regarding measures to adequately ensuring the safety and welfare of individuals at the Camphill Special Schools, Inc. facility in the event of a radiological emergency.

325. [In particular,] Mr. Wolf has been uncooperative in responding to [numerous] attempts by representatives of Energy Consultants as well as local emergency planning authorities who were attempting to assist Camphill Special Schools, Inc. to identify and meet any emergency planning needs

(Wolf, Tr. 16237-41, [16261]16260-62, 16266). [The only apparent impediment to progress in planning for the facility was Mr. Wolf's insistence that Applicant provide remuneration for facility staff for time spent in emergency planning (Wolf, Tr. 16262-63, 16271, 16308-10).] Additional progress in planning for the facility appears to be impeded by Mr. Wolf's unwillingness to engage in any further efforts at planning until he determines whether the Applicant will provide remuneration to the facility's staff for such efforts. (Wolf, Tr. 16262-63, 16270-71, 16308-09). Despite repeated attempts by Energy Consultants to meet and discuss specific concerns (Appl. Exhs. E-77, E-79), Mr. Wolf has not contacted Energy Consultants for assistance since his letter of August 14, 1984, [stating his demand for compensation from Applicant] urging that the question of compensation from Applicant for the facility staff be resolved before the facility engages in further planning. (Bradshaw, Tr. 16950, 16963-64; Appl. Exh. E-78; Wolf, Tr. 16238-39).

326. The public needs survey conducted by Chester County compiled information provided by Camphill Special Schools, Inc., which was provided to the East Nantmeal Township coordinator, who contacted a representative of the facility to confirm transportation needs, which have likewise been incorporated in the East Nantmeal plan (Bradshaw, ff. Tr. [12761] 12764 at p. 29, Tr. 13459-60; Appl. Exh. E-29, Attachments G and O. The Director of the facility has indicated to the Emergency Management Coordinator of East Nantmeal Township that he wanted to arrange for the availability of adequate buses to move the entire population of the facility in one trip. (Wolf, Tr. 16243-44; Applicant's Ex. E-81). In addition, Chester County has entered into an agreement with the Devereaux School to act as a host facility

for the Camphill Special School. (Campbell, Tr. 20005-06). Mr. Wolf has been informed that the Devereaux School is the host facility for the Camphill Special School. (Wolf, Tr. 16268).

327. The Board [also found] does not find Mr. Wolf's testimony [in]consistent with regard to existing plans for evacuation of the facility in an emergency. Under 55 Pa. Code § 6400.194 (Appl. Exh. 80), all resident facilities for the mentally retarded are required to have in place a plan, inter alia, for the evacuation of residents in the event of an emergency. Camphill Special Schools, Inc. has formulated such an emergency plan, which it forwarded on March 8, 1982 to the emergency coordinator for East Nantmeal Township, where the facility is located (Wolf, Tr. 16242-43; Bradshaw, ff. Tr. [12761] 12764 at p. 31; Appl. Exh. E-81). There is no reason why the State-required emergency plan, which makes no such distinction between man-made accidents or natural catastrophes, could not be applied to a radiological emergency at Limerick (Wolf, Tr. 16249; Bradshaw, ff. Tr. [12761] 12764 at p. 31; Appl. Exh. E-81).

328. [As stated in the existing plan,] Camphill Special Schools, Inc. has a sizable fleet of trucks, station wagons, cars and vans with a total capacity of up to 80 passengers which would be used in an evacuation. The emergency capacity of these vehicles would be even higher (Wolf, Tr. 16246-47; Appl. EXh. E-81, p. 2). Referring to the facility's State-required plan, Mr. Wolf stated that this fleet would suffice to evacuate all of the facility's mentally retarded residents and the nineteen supervisory staff members. [facility clientele and nineteen supervisory staff] (Appl. E-81, p. 2). Transportation for about 21 remaining staff and 25 staff children would be provided by East Nantmeal Township, based upon the facility's response to the

Chester County public needs survey (Proposed Finding 326). This is consistent with the procedure outlined in the State-required plan, which indicates that the Director of the facility will contact the local emergency management office to mobilize pre-arranged buses necessary to accomplish the evacuation of the facility. (Wolf, Tr. 16246; Appl. Exh. E-81, p. 2).

329. Similarly, the existing facility plan requires that parents be notified to pick up their child within 36 hours. There is no reason why the same provision could not be utilized in the event of a radiological emergency, whereby parents could pick up children at the designated host facility for the school (Wolf, Tr. 16256). Any special problems associated with evacuating the facility would be associated with the mentally retarded children [clientele] rather than staff and staff children, whose needs are addressed in the existing plan (Wolf, Tr. 16303-04). The existing facility plan requires, among other things, that supervisory staff at the residence will assure that all students dependent on medications, specialized equipment, etc., are evacuated with adequate provisions. (Appl. Exh. E-81, p. 5). The children of facility staff who attend the Kimberton Farms School would be protected under the plan for that school (Wolf, Tr. 16289; Appl. Exh. E-82).

330. [No survey of facility staff was conducted when the existing emergency plan was filed with the East Nantmeal coordinator. The plan simply assumed that whatever staff might be necessary to evacuate the facility would be available (Wolf, Tr. 16255-56; Appl. Exh. E-81).] Mr. Wolf did not find it necessary to survey the facility's staff concerning their willingness to respond in emergencies before filing the existing emergency plan with the East Nantmeal Township Coordinator. (Wolf, Tr. 16255-56). Furthermore,

he stated that he would do what is needed to evacuate the residents of the facility if that were necessary, including contacting governmental agencies that are available. (Wolf, Tr. 16274-75).

331. Facility staff live with the facility's mentally retarded residents on a full-time basis and have developed a surrogate parent relationship with the children (Wolf, Tr. 16267). The State-required facility plan states that a 1:4 ratio would provide adequate supervision to effectuate an evacuation (Appl. Exh. E-81, p. 1), which could be easily met with current staff/client enrollment. [Under those circumstances, the Board believes that there will be adequate staff available to supervise the implementation of any protective action necessary for the facility's clientele in the event of a radiological emergency.] Mr. Wolf's explanation that he had since changed his mind about the ratios (Wolf, ff. Tr. 16310 at p. 3) is unpersuasive inasmuch as he has not amended the ratio of 1:4 contained in the existing plan on file since 1982 (Wolf, Tr. 16291). Further, the Pennsylvania Department of Public Welfare, which ordered the facility to develop the evacuation plan, has conducted inspections of the facility's plan on a yearly basis. (Wolf, Tr. 16252, 16282) The facility, whose license is contingent on the outcome of those inspections, has passed every inspection. (Id.) More importantly, however, for those children with convulsive disorder and behavioral problems that may be exacerbated during an evacuation who are the reason for Mr. Wolf's concern about the adequacy of the 1:4 ratio, the Board notes that the staff of the facility deal with this situation on a daily basis and have medication available through the facility's full-time resident physician if needed. (Wolf, Tr. 16264-66; Tr. 16285). Thus this behavior is not unfamiliar to the facility's staff. Furthermore, Mr. Wolf

did not indicate how many of the facility's mentally retarded children exhibit this particular behavior. As we observed earlier, all of the facility staff engage in training for the supervision of mentally regarded children (see Proposed Finding 319). Moreover, the facility's staff is familiar with the State-required evacuation plan since they have reviewed that plan and provided input into its development. (Wolf, Tr. 16282). Under these circumstances, the Board believes that there will be adequate staff available to supervise the implementation of any protective action necessary for the facility's mentally retarded residents during a radiological emergency.

331a. Mr. Wolf was concerned about the absence of any evaluation of the facility's buildings to determine their feasibility for sheltering. (Wolf Testimony, ff. Tr. 16310, p. 2). The Commission's emergency planning standards (10 C.F.R. § 50.47) do not require that such determinations for sheltering be made. (Asher/Kinard Testimony, ff. Tr. 20150, pp. 11, 38). The Commonwealth of Pennsylvania has adopted the policy that if a protective action, such as sheltering, is necessary then it will be implemented for the entire 10-mile EPZ. (Id. at 11). With respect to the adequacy of a building for sheltering, the Commonwealth of Pennsylvania's Department of Environmental Resources, Bureau of Radiation Protection Plan for Nuclear Generating Station Incidents provides that this protective action involves persons sheltering themselves in a building that can be made temporarily somewhat airtight. (Commonwealth Ex. E-1, Appendix 12, p. E-12-49). It also provides that a structure for sheltering may be a home, commercial or public building. (Id; Reilly Testimony, ff. Tr. 19381, p. 3). Furthermore, it provides that for the general climate of the Commonwealth, any building that is reasonably win

ter worthy will suffice with windows and doors closed, and such a building is adequate for 2 hours protection from inhalation hazards (Id.). All of the Camphill Special Schools facility residences have a large room in either the basement or living areas as part of the design. (Wolf, Tr. 16277-78). These residences are insulated and, with heating, can keep residents warm during the winter. (Id.) Further, all of the residents of the facility have windows that can be closed, although some windows can not be closed tightly in that they are subject to a little draft. (Wolf, Tr. 16278-79). Thus all facility residents in a particular residence can gather in one room and windows can be closed. (Id.) Accordingly, the Board believes that the Camphill Special Schools facility residences are sufficient to implement sheltering as a protective action in the event that were necessary.

CONCLUSION

313b. LEA has contended that for this contention there should be some assurance that municipal and County planners have identified the special needs of these two facilities and that these needs will be addressed. Tr. 16012, 16040-41). Based on this record, we find that local planners have identified and addressed the special needs of these two facilities. While further planning is beneficial, we believe the planning to date has been sufficient to address LEA's concerns. Although FEMA concluded that it believed the arrangements for these facilities was not adequate to protect their residents, FEMA's conclusion was based on a review of draft plans submitted to it in December 1983. (Asher/Kinard Testimony, ff. Tr. 20150, Introduction, p. 37). However, we note that this record consists of updated drafts of the relevant plans and planning that took place subsequent to FEMA's review.

Based on this record, we find there is reasonable assurance that adequate planning has been done for these two institutions, and that planning has been sufficiently specific. Consequently, the Board is of the view that FEMA's concern has been sufficiently resolved by the evidence of further planning that has been developed on this record.

4. Farmers

LEA-??

The State, County, and Municipal RERP's are inadequate because farmers who may be designated as emergency workers in order to tend to livestock in the event of a radiological emergency have not been provided adequate training and dosimetry.

331b. The Board in its April 20, 1984 Special Prehearing Conference Order accepted for litigation LEA-??. (LBP-84-18, 19 NRC 1020 at 1060). The concern that LEA sought resolution of was that the RERPs make specific provisions for training farmers in the use of potassium iodide (KI) and dosimetry and for allowing farmers reentry to the EPZ to care for livestock. At that time the Board thought this contention was capable of settlement. However, this contention was voluntarily narrowed and respecified pursuant to the Board's August 15, 1984 Order. The Board, by our September 24, 1984 Memorandum and Order at pages 13-14, accepted the respecified LEA-22 and all of the proffered bases. LEA alleged in its bases that the state and county REPPs were inadequate because they did not contain (1) provisions for dosimetry sufficient for multiple re-entries into the EPZ by the actual number of farmers in the EPZ; (2) definitions of "livestock" and "farmer"; (3) provisions for the disbursement of an

informational brochure directed to the farming community; and (4) provisions for training to farmers.

Farmer Designation for Re-Entry Into the EPZ

332. The procedure for designating farmers as emergency workers in the three risk county plans reflects Commonwealth policy. The plans do not constrain re-entry by those claiming to be farmers. In an actual emergency, county agents of the Extension Service of the United States Department of Agriculture and county planners would determine who is a "farmer" and what constitutes "livestock" consistent[ly] with Annex E (Furrer, Tr. 19428). Neither Annex E nor the county plans restrict the type of livestock farmer who would be permitted to re-enter the EPZ in the event of an emergency (Hippert/Taylor, ff. Tr. 19498 at pp. 19-20 [25-26]; Reber, Tr. 19752-54; Bradshaw, ff. Tr. 12764 [12761] at p. 26, Tr. 13383-84; Cunnington, Tr. 13389-90; Appl. Exh. E-1, pp. 0-2, 0-3; Appl. Exh. E-2, pp. 0-2, 0-3; Appl. Exh. E-3, pp. 0-2, 0-3; Commonwealth Exh. E-1, App. 16, pp. E-16-2, E-16-8, E-16-9).

333. The Staff adopts and incorporates Applicant's proposed finding 333.

334. The Staff adopts and incorporates Applicant's proposed finding 334.

Dosimetry/KI for Farmers

335. Farmers would be designated as emergency workers because they could be exposed to radiation in the course of attending livestock within the plume exposure pathway EPZ and would be given dosimetry and potassium iodide ("KI") upon reentering the EPZ. (Commonwealth Exh. E-1,

App. 16, II.M., p. E-16-2,). As a practical matter, however, farmers would not be performing assigned responsibilities similar to those of a fireman or policeman acting as an emergency worker (Bigelow, Tr. 14143; Appl. Exhs. E-1, E-2, E-3, Appendix 0; Appl. Exh. E-101). Nonetheless, farmers designated as "emergency workers" receive the same training on dosimetry as other designated emergency workers (Bradshaw, Tr. 13,384, Hippert/Taylor, ff. Tr. 19498 at 21; Reber, ff. Tr. 19729 at p. 4).

336. In general, county planners obtained a conservatively high estimate of the number of farmers who might seek designation as emergency workers from the local Extension Service Agent, the County Agricultural and Stabilization and Conservation Committee, and the Bureau of Soil Conservation, based on documents on file as to the farmers in the EPZ who receive materials from those agencies and operate farms. The counties supplemented this estimate with their own review of a mailing list provided to them to confirm that the number was a conservative estimate of those farmers who might wish to tend to livestock in an emergency (Hippert/Taylor, ff. Tr. 19498 at p. [25-26] 19-20; Campbell, Tr. 20003; Bradshaw, ff. Tr. [12761] 12764 at p. 26; Cunnington, Tr. 13392).

336a. The Berks County Emergency Management Coordinator testified that Berks County relied on the list developed by the USDA Director in identifying the farmers in that county. A total of 100 persons were identified, and all of those persons were contacted. If, in the event of a radiological emergency, a person properly identifying himself as a farmer sought access to the EPZ, he would be eligible for a permit allowing entry into the EPZ. (Reber, Tr. 19752-53).

337. The Staff adopts and incorporates Applicant's proposed finding 337.

338. The dosimetry/KI unit supplied for farmers designated as emergency workers in each county (Appl. Exhs. E-1, E-2, E-3, Annex M, Appendix 3) is the same as for all other emergency workers (Bradshaw, Tr. 13398-99). Each farmer will be issued two self-reading dosimeters and a permanent-record dosimeter, as well as 14-day supply of KI and a Dosimetry-KI Report Form when authorized access to the EPZ. The self-reading dosimeters can be used repeatedly, if necessary by rezeroing on dosimetry chargers located at the issuing points. The permanent-record dosimeters are to be used only by the individuals to whom originally issued, and are to be retained by that person until no further reentries are to be made into the EPZ (Hippert/Taylor, ff. Tr. 19498 at p. 20; Bradshaw, Tr. 13398; see also, Asher/Kinard (Admitted Contentions) ff. 20150 at p. 29). [A unit of dosimetry includes a 14-day supply of KI. Dosimetry is a reusable item.] Accordingly, there is ample time for sufficient replenishment of supplies of needed. (Campbell (Admitted Contentions), ff. Tr. 19852 at p. 12); [Bradshaw, Tr. 13398]). The estimated numbers contained in the county plans are conservative enough to cover the situation where more than one individual per farm might require re-entry (Cunnington, Tr. 13397-98). In addition to existing supplies specifically designated for farmers, there is a reserve supply of dosimetry/KI at each county EOC and transportation staging area (Bigelow, Tr. 14321; Bradshaw, ff. Tr. [12761] 12764 at p. 26, Tr. 13399; Appl. Exh. E-1, p. M-4-1; Appl. Exh. E-2, pp. M-3-1, M-3-3; Appl. Exh. E-3, pp. M-3-1, M-3-9).

339. The Staff adopts and incorporates Applicant's proposed finding 339.

339a. By agreement dated September 6, 1984, Applicant agreed to fund the procurement of dosimetry necessary to protect offsite emergency workers responding to a radiological emergency at Limerick (Appl. Exh. E-104). If this agreement were formally transmitted to FEMA for review, and those pieces of equipment were purchased and disseminated according to the distribution scheme in the RERPs, then FEMA would have no more concerns regarding the Category "A" deficiency cited in the FEMA Exercise Evaluation Report on the July 25, 1984 exercise (FEMA Exh. E-4) regarding inadequate provisions of dosimetry. (Asher, Tr. 20262-63; see also, Asher and Kinard (Admitted Contentions) ff. Tr. 20150 at 28-29).

339b. The Commonwealth provided testimony that the Pennsylvania Department of Health had purchased the KI needed for Limerick in amounts sufficient to satisfy the need identified by FEMA (Hippert, Tr. 19580, 20422). FEMA agreed that if this information were formally transmitted to FEMA the Commonwealth's actions would satisfy the Category "A" deficiency cited in the FEMA Exercise Evaluation Report (FEMA Exh. E-4, p. 136) where there had been a failure to demonstrate the availability of KI in a quantity adequate for emergency workers. (Asher, Tr. 20261-62).

Farmer Training and Information

340. Under Annex E, an Emergency Workers Instructor Course is available for those who will provide information to farmers. Training for farmers themselves on emergency planning and procedures in a radiological emergency is currently available and has been offered by Energy Consultants. Such training will continue to be made available to

all farmers in the EPZ. (Hippert/Taylor, ff. Tr. 19498 at p. [26-27] 20-21; Bigelow, Tr. 14142, 14315-16; Bradshaw, ff. Tr. [12761] 12764, at p. 26; Appl. Exh. E-101). That training and the corresponding lesson plans have [has] been reviewed and found to adequately cover the various aspects of a radiological emergency response [fully adequate] (Asher and Kinard (Update), ff. Tr. at 20150 at p. 1, 28, 31; Reber, Tr. 19796-97). As with other personnel, training will be provided periodically in the future for farmers wishing to be designated as emergency workers in the event of a radiological emergency (Bigelow, Tr. 14143; Campbell, ff. Tr. 19852 at pp. 12-13). In an actual emergency, a brief refresher course on dosimetry use and record keeping would be sufficient for farmers wishing to re-enter the EPZ (Furrer, Tr. 19422-23; Reber, ff. Tr. 19927 at p. 4).

341. The Staff adopts and incorporates Applicant's proposed finding 341.

342. While there is no planning standard in NUREG-0654 or regulatory requirement that requires the distribution of informational brochures to emergency workers generally or farmers in particular (Asher and Kinard admitted Contentions) ff. Tr. 20150 at p. 30, [A] a brochure to provide farmers with information about remaining with their livestock or re-entering the EPZ in an emergency was developed by the Pennsylvania Department of Agriculture for the Three Mile Island facility. It [will assist] assisted farmers in protecting livestock and taking other beneficial actions in the event of a radiological emergency (Furrer, Tr. 19416; Bradshaw, ff. Tr. [12761] 12764 at p. 26, Tr. 13405). The brochure could easily be adapted for use within the Limerick EPZ (Hippert/Taylor, ff. Tr. 19498 at

p. 21[27]); See, "Farmers Emergency Information, What You Should Know About Nuclear Power Plant Incidents" attached to the FEMA testimony ff. Tr. 20150).

A request has been made by Applicant to the Secretary of Agriculture to utilize the Three Mile Island brochure on that basis and the Department has concurred in that request (Furrer, Tr. 19416-17, 19429-30). The responsible Commonwealth official has stated that he would make every effort to expedite any further action necessary for the prompt printing and distribution of the brochure (Furrer, Tr. 19430-31).

Conclusion

342a. The Board has reasonable assurance, based on the evidence before it, that the State, county and municipal RERPs make adequate provision for and do not unduly restrict the designation of farmers with livestock to tend in the EPZ as emergency workers capable of reentering the plume exposure EPZ. Further, measures have been taken to identify farmers within the risk counties and to provide those farmers with training in emergency planning procedures for a radiological emergency, including the use of dosimetry and KI. This training has been and shall continue to be provided on an annual basis to the farming community. In addition, a basic refresher course in the use of dosimetry will be conducted at the time of issuance of dosimetry in an actual emergency.

342b. The RERPs reflect that provisions have been made for dosimetry in sufficient quantity for the farmers who have been identified in the risk counties, and that reserves exist for any other farmers properly identifying themselves as such at the time of an actual emergency. The Board has reasonable assurance, based upon the testimony by the Commonwealth and the agreement between the Applicant and the Commonwealth (Applicant's

Exh. E-104), that supplies of dosimetry and KI have been purchased in quantities sufficient to satisfy FEMA's concerns as expressed in the FEMA Exercise Evaluation Report (FEMA Exh. E-4, p. 136, #3). The Board expects such formal transmittal of this information to FEMA.

342c. The Board has reviewed the informational brochure that the Applicant seeks to have reproduced in a form adapted to the Limerick plant. There has been testimony from the Commonwealth that provisions are being made for expediting the Applicant's request to reproduce the brochure. The Board urges the appropriate officials to complete this action. Even though the distribution of such a brochure is not required by any emergency planning regulation, NUREG-0654, Planning Standard G, 1. suggests the use of informational brochures as a means of disseminating information to the public regarding how they will be notified and what their actions should be in an emergency. However, this Board has heard ample testimony that the Applicant is making provisions for distribution of such an informational brochure directed to the Limerick area farming community, and we therefore have reasonable assurance that such a brochure will be printed and distributed.

C. EMERGENCY RESPONSE STAFF AND SUPPORT ORGANIZATIONS

1. Notification and Route Alerting

LEA-26

The Draft County and Municipal RERP's are deficient in that they do not comply with 10 C.F.R. § 50.47(b)(5) because there is no assurance of prompt notification of emergency workers

who must be in place before an evacuation alert can be implemented, and there is no assurance of adequate capability to conduct route alerting.

342d. In our April 20, 1984 Special Prehearing Conference Order, we admitted portions of LEA-26 that related to "the issues of resources for route alerting, the order of telephone calls by which emergency response organizations would be notified, and the arrangements for securing 24-hour-a-day broadcast capability for the EBS" (LBP-84-18, 19 NRC 1020 at 1070-1073). We found it necessary to reiterate previously stated rulings in our September 24, 1984 Memorandum and Order at pages 15 and 16. Thus, we again excluded from litigation the first of LEA's reworded bases for LEA-26 which raised questions about the effectiveness of the siren system and all the specifying material, i.e. allegations of ineffectiveness of the siren system related to loss of offsite power. We also rejected for litigation any issue about the effectiveness and timeliness of route alerting. Inasmuch as LEA also sought to raise concerns about human response to a radiological emergency that were not in the originally admitted version of LEA-26, we rejected any attempt to litigate them now. The issue of human response is covered adequately in contentions LEA-8, LEA-12 and LEA-15. Although LEA has not explicitly stated that it is dropping the originally admitted portion of LEA-26 concerning twenty-four hour EBS broadcast capability, its failure to include this issue in its most recent rewording of LEA-26 constitutes a withdrawal of this concern.

342b. This Board did accept two of LEA's proffered bases for LEA-26. The first is basically that the notification system of emergency response organizations, prior to public notification, by the

county EOCs must not delay siren activation. The second accepted basis is that the municipal RERPs fail to indicate sufficient resources available for route alerting.

Provisions to Notify Emergency Workers

343. Specific provisions exist within the county plans and implementing procedures, municipal plans and implementing procedures and procedures for special facilities to notify all emergency workers. Each county Emergency Operations Center ("EOC") is manned at all times and has a 24-hour operations capability. The public alert and notification system in each county could be activated upon notification from PEMA on the authority of the county coordinator or his alternate (Bradshaw, ff. Tr. 12764 [12761] at p. 27, Tr. 13413).

344. It is not necessary that county and municipal EOC's be fully manned and mobilized before activation of the public alert and notification (siren) system. Sirens can be activated from the county communications centers, each of which is manned 24-hours a day. Thus, even in the worst case situation of a rapidly escalating scenario, the sirens could be activated almost instantaneously by on-duty personnel upon authorization of county coordinators (Hippert/Taylor ff. Tr. 19498 at pp. 21-22 [27-28]; Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 36; Bradshaw, Tr. 13412-14, 13746-47).

345. The sole purpose of activating the sirens is to alert the public to tune their radios or televisions to the Emergency Broadcast System ("EBS"). The siren signal is not a notification to evacuate. Annex E, Appendix 8, paragraph V.B., page E-8-2 (Commonwealth Exhibit

E-1) provides that the sirens may be sounded when: (1) there is significant information that will reassure the public of their safety; (2) the public is to be informed of a plant status that may lead them to implement specific actions on their own; or (3) specific actions (including protective actions) are to be taken by the public.

Broadcast of a sheltering/evacuation message over the EBS could also be performed without mobilizing the county and municipal EOC's (Hippert /Taylor, ff. TR. 19498 at p. 23-24 [28]; Bradshaw, Tr. 13413).

346. The Staff adopts and incorporates Applicant's proposed finding 346.

347. Predesignated county and municipal EOC staff personnel can be notified on a 24-hour basis by a pre-recorded message from a computer-assisted automatic dialing system known as the RECALL system once it is operational. As established at the three county EOC's, it has four telephone lines and the capability to dial pre-programmed individuals at home and business, according to the time of day activated. The system is capable of storing telephone numbers for use during different periods of the day or days of the week. It calls numbers in a listed sequence and will record a coded response which shows receipt and acknowledgement of the message. Different lists have been programmed into the system based upon the priority for reaching particular individuals. An average call takes about 30 seconds. Four calls can be made simultaneously and would proceed through the notification list until completed. Unanswered numbers will be redialed until answered. (Bigelow, Tr. 14145-46, 14402-05, Reber (Admitted Contentions), ff. Tr. 19729 at pp. 4-5, Tr. 19759-61; Bradshaw, ff. Tr. 12764 [12761] at p. 27; Tr. 13409-10,

13415-16; Commonwealth/Chester County Exh. E-1, p. C-2-1; Appl. Exh. E-3, p. C-6-1).

348. The Staff adopts and incorporates Applicant's proposed finding 348.

348a. While the RECALL computer based dialing systems have been delivered to the county EOCs, they are not yet operational. (See Bigelow, Tr. 14403; Reber, Tr. 19759; Campbell, Tr. 20055-56). During the July 25, 1984 exercise, the county planning officials saw demonstration of the RECALL system (Bigelow, Tr. 14403; Bradshaw, Tr. 13417). The notification lists for activation and staffing of the county EOCs during the exercise were completed manually (Reber, Tr. 19763; Campbell, Tr. 20055).

348b. FEMA, in its Exercise Evaluation Report of the July 25, 1984 exercise, found that Montgomery County prematurely staffed the EOC and cited this as a Category "B" deficiency. (FEMA Exh. E-4, p. 16 and 140). Chester County's EOC staff were activated promptly and in accordance with the plans. (FEMA Exh. E-4, p. 62). The Berks County EOC staff were in transit during the activation stages which required subsequent calls by those manning the EOC (Reber, Tr. 19767; FEMA Exh. E-4, p. 110); this was cited as a Category "B" deficiency. (FEMA Exh. E-4, p. 155). FEMA believes the RECALL system will alleviate this type of problem (FEMA Exhibit F-4, p. 110). Category "B" deficiencies includes deficiencies where demonstrated performance during the exercise was considered faulty and corrective actions are considered necessary but other factors indicate that reasonable assurance could be given that, in the event of an actual radiological emergency, appropriate measures can be taken to protect the health and safety of the public. Category "B" deficiencies also include

areas where performance was considered adequate, but a correctable weakness was noted. (FEMA Exh. E-4, p. 134).

Conclusion

348c. This Board, based on the evidentiary record before us, has reasonable assurance that the notification system of emergency response organizations as provided in the County RERPs complies with 10 C.F.R. § 50.47(b)(5), and the additional guidance provided by NUREG-0654, Planning Standard E.

Route Alerting

349. Route alerting would be necessary only as a backup if the siren system failed to function (Pigelow, Tr. 14146-47; Bradshaw, ff. Tr. 12764 [12761] at p. 27; Appl. Exh. E-4, p. C-5-1). There is no planning standard which requires the installation of a redundant or supplemental public alert and notification system, such as route alerting (Asher and Kinard (Admitted Contentions), ff. Tr. 20150 at p. 35).

350. In implementing route alerting procedures, firemen will travel throughout predesignated sectors, and by using loudspeakers or going door-to-door if necessary, will ensure that all persons receive notification of the protective action to be taken (Bradshaw, ff. Tr. 12764 [12761] at p. 27; Appl. Exh. E-1, p. C-6-1; Appl. Exh. E-2, p. C-6-1; Appl. Exh. E-3, p. C-5-1).

351. Under the Limerick offsite emergency plans, there are some 50 fire companies involved in route alerting assignments throughout the

43 municipalities. In all but two municipalities, Lower Providence Township and Skippack Township, the resources for conducting route alerting have been identified. All but one or two fire companies of the remaining 48 have finalized their route alerting sectors (Bradshaw, Tr. 13449, 13451). Lower Providence Township has indicated that it has the capability to conduct route alerting, but has not yet made formal route assignments. The Township is in the process of deciding whether they need additional vehicles and better defining who will be utilized to perform the route alerting function. In this vein, the Fire Chief of the Lower Providence Township testified that there are not enough people to conduct route alerting (Miller, Tr. 18142). He further testified that during the November 20, 1984 exercise route alerting for the hearing impaired was performed by volunteers but this did not resolve his concerns (Miller, Tr. 18147). County planning officials have stated that the county EOCs could provide personnel to take over notification functions, such as route alerting, necessary (Reber, Tr. 19807; Campbell, Tr. 19975-76). Indeed, nothing under Annex E (Commonwealth Exh. E-1) restricts route alerting to fire departments; it can be done by police, auxiliary police or even contracted to private individuals (Hippert, Tr. 19588).

352. The Applicant has an equipment purchasing program whereby the [R]route alerting equipment requested by individual fire companies have been passed onto the Applicant (Bigelow, Tr. 14401-02; Bradshaw, Tr. 12861-62). Applicant has agreed to purchase all equipment requested by the fire companies which is necessary for route alerting, i.e., additional public address systems (Bradshaw, Tr. 12862, 13452).

353. No fire company with responsibility for route alerting has indicated any problems of manpower availability based upon daytime or evening shift considerations. Route alerting will utilize only a small percentage of the total personnel available to volunteer fire companies. Where a single fire company has responsibility for more than one township, that consideration has been taken into account in developing the sectors and assignments. Assignments have been reviewed with the fire companies and they have indicated that they can fulfill their assigned responsibilities (Bradshaw, ff. Tr. 12764 [12761] at pp. 27-28; Cunnington and Bradshaw, Tr. 13454-55). Moreover, route alerting need not be performed solely by fire departments. It can be done by fire police, auxiliary police or private individuals (Hippert, Tr. 19588).

Conclusion

353a. Based on the foregoing, this Board has reasonable assurance that the county and municipal RERPs demonstrate adequate resources capable of conducting route alerting.

Roadway Clearance

LEA-28(a)

There is no assurance in the County or Municipal RERP's that the National Guard will have time to mobilize to carry out its responsibilities with regard to towing and providing emergency fuel supplies along state roads.

354. The thrust of this contention as stated by the Board in its April 20, 1984 Order is length of time for mobilization of the National

Guard. (19 NPC 1020 at 1073). Under Annex E as well as the county plans, the National Guard has the capability to assist, inter alia, with towing and providing emergency fuel supplies. As stated in the plans, this assistance would be furnished as needed in coordination with and supplementary to the capabilities of municipal and county governments and other state agencies (Commonwealth Exh. E-1, Basic Plan, Sections VII.A.17.h, VII.A.22.c and VII.A.22.d; Appl. Exhs. E-1, E-2 and E-3, Annex H, Section III; Bradshaw, ff. Tr. [12761] 12764 at p. 32).

355. As further stated in Annex E and the county plans, the Pennsylvania Department of Transportation ("PennDOT") has shared responsibility for clearance of obstacles to traffic flow, including disabled vehicles on main evacuation routes, and for establishing emergency fuel distribution points on such routes. Road clearance equipment from the PennDOT District Office will be dispatched, if needed, to keep roads clear of stalled or abandoned vehicles. Essentially, this provides a back-up support service for the counties if they lack adequate resources. Fuel and towing resources will be provided by the National Guard and PennDOT for all main evacuation routes, regardless of whether they are State or non-State roads. Under Annex E, major arteries are used as main evacuation routes to assure, to the maximum extent possible, that those routes will remain usable and unrestricted in the event of an actual evacuation (Commonwealth Exh. E-1, Basic Plan, Sections VII.A.22.c and VII.A.22.d; Appl. Exhs. E-1, E-2, and E-3, Annex K, Section III; Bradshaw, ff. Tr. [12761] 12764 at pp. 32-33; Starasinic, ff. Tr. 20099 at pp. 4-5).

356. Annex E also states that the Pennsylvania State Police are responsible for coordinating with PEMA, PennDOT and the National Guard to control the orderly evacuation of the EPZ and, particularly, to conduct traffic surveillance to ensure that roads and highways designated as major evacuation routes are open and capable of handling the projected and actual traffic loads (Commonwealth Exh. E-1, Basic Plan, Sections VII.A.19.b and VII.A.19.e; Bradshaw, ff. Tr. [12761] 12764 at p. 33).

357. PennDOT maintains several facilities in each of the three risk counties, each of which may be promptly activated during non-business hours by means of a 24-hour emergency telephone number available to PEMA and the county emergency management agencies. Accordingly, the PennDOT facilities could be activated and deployed rapidly, if needed, independent of and prior to National Guard mobilization (Bradshaw, ff. Tr. [12761] 12764 at pp. 33-34).

358. Col. Eugene P. Klynoot is the Chief of Staff for the Pennsylvania Army National Guard (Klynoot, Tr. 19638). As the organized and equipped State militia of Pennsylvania, the Pennsylvania National Guard is ready to respond to the orders of the Governor placing it on active duty in the event of emergencies or potential emergencies within the Commonwealth (Klynoot, ff. Tr. 19642 at p. 2). The Pennsylvania National Guard has previously responded effectively to a wide variety of [previous] emergencies, including the Johnstown flood, the Agnes flood, other floods, major snow emergencies, and trucker strikes [and other emergencies] (Klynoot, ff. Tr. 19642 at p. 2-3). The Guard has previously had very good success in mobilizing under severe weather

conditions (Klynoot, Tr. 19657). The designated response units are primarily equipped with all-terrain vehicles designed for off-road travel (Klynoot, Tr. 19665).

359. The Staff adopts and incorporates Applicant's proposed finding 359.

360. The Staff adopts and incorporates Applicant's proposed finding 360.

361. The main body of each designated unit will be prepared to deploy when about 75% of the unit has assembled. For a worst case scenario, it would take six hours to deploy the unit assigned to Chester County, eight hours for Berks County and six hours for Montgomery County. Advance segments of each unit, however, would be dispatched to the deployment area as soon as mobilized if there were a need. For example, each unit could dispatch its gasoline tanker truck to a point designated by planning officials within an hour to an hour and a half after notification. A wrecker truck could be similarly deployed very shortly after notification (Klynoot, ff. Tr. 19642 at pp. 7-10, Tr. 19666-67; Bradshaw, ff. Tr. 12761 at p. 34). If given advance notification by PEIA of a possible need to deploy troops, the Guard could begin the early steps of a mobilization to reduce the overall mobilization time. The Guard's plans provide for it to act upon such notice (Klynoot, Tr. 19668-69; Bradshaw, ff. Tr. [12761] 12764 at p. 34).

362. The Staff adopts and incorporates Applicant's proposed finding 362.

363. The Staff adopts and incorporates Applicant's proposed finding 363.

363a. "The FEMA witnesses testified that consistent with NUREG-0654, planning Standard E(2), emergency assistance provided by the National Guard "will be furnished in coordination with and supplementary to the capabilities of municipal and county governments and other state agencies and departments." (Asher and Kinard, ff. Tr. 20150 at 39).

They added that primary and initial emergency response services are the responsibilities of the State, county and municipal authorities. (Asher and Kinard, ff. Tr. 20150 at 40).

Conclusion

363b. Based on the foregoing evidence the Board finds that there is reasonable assurance that the National Guard will have time to mobilize to carry out its responsibilities with regard to towing and providing emergency fuel supplies along State as well as non-State roads. Accordingly, LEA Contention 28(a) is without merit.

LEA-28(b)

There is no assurance provided in the Municipal, or County RERP's that there are sufficient resources available to provide towing, gasoline, and snow removal along non-state roads. According to FEMA, the National Guard has neither the resources for snow removal nor the responsibilities for it, according to the Commonwealth's Disaster Operations Plan.

364. The thrust of this contention as stated by the Board in its April 20, 1984 Order is whether there is assurance of enough resources to provide towing, gasoline, and snow removal on non-State roads.

(19 NRC at 1074). As stated in Annex E, PennDOT has responsibilities for clearance of disabled vehicles and snow from evacuation routes and for providing emergency fuel distribution point on such routes. In describing PennDOT's responsibilities, Annex E does not distinguish between state and non-state roads. Rather, these provisions encompass all evacuation routes listed in the municipal plans and referenced in plan evacuation maps (Bradshaw, ff. Tr. [12761] 12764 at p. 34; Commonwealth, Exh. E-1, Basic Plan, Section VII.A.22; Appl. Exhs. E-6 to E-48, Section II.E.2.d and Attachments J and Q).

364a. FEMA witnesses, citing Planning Standard J(10)(k) (which calls for "identification of and means for dealing with potential impediments . . . to use of evacuation routes, and contingency measures"), testified that based on the 1983 plans there was not assurance that the county and Municipal RERP's contain adequate procedures for providing resources for towing, gasoline supplies and snow removal. They added that additional information, including more specific implementing procedures, letters of agreement with towing services, gas station and resource requirements is needed. (Asher and Kirard, ff. Tr. 20150 at 40).

365. Personnel from the National Guard, PennDOT or other support organizations providing tow truck, snow removal or emergency fuel services will be performing the same functions for which they have already been trained with regard to non-radiological emergencies and will be performing those tasks within the same time frame as an evacuation of the general public. Thus, they would not be required to remain in the EPZ any longer than the evacuating public. Accordingly,

no special training is required for such individuals (Bradshaw, ff. Tr. [12761] 12764 at p. 35). PennDOT does not consider snow clearing in a radiological emergency different from any other snow emergency (Farrell, Tr. 20112, 20119, 20127).

366. Under municipal plans, snow and other debris on evacuation routes will be removed by the municipality and PennDOT. Each municipality either has its own snow removal resources or has contracted for such services. Those contracts encompass all snow emergencies and make no distinction as regards other possible circumstances such as a radiological emergency at Limerick. Moreover, PennDOT would be available to provide back-up snow removal services to the municipalities for non-evacuation routes, if needed. The Commonwealth has a vast inventory of snow removal equipment and personnel in southeastern Pennsylvania that could be used on a priority basis in the event of a radiological emergency. Unusually severe snow storm conditions would be considered by the Commonwealth in determining whether evacuation of the EPZ would be undertaken (Bradshaw, ff. Tr. [12761] 12764 at p. 36; Appl. Exhs. E-6 to E-42, Section II.E.2.k(2)).

367. The Staff adopts and incorporates Applicant's proposed finding 367.

368. The Staff adopts and incorporates Applicant's proposed finding 368.

369. The Staff adopts and incorporates Applicant's proposed finding 369.

370. The Staff adopts and incorporates Applicant's proposed finding 370.

371. Representatives of the Pennsylvania State Police and PennDOT are included as liaisons to each county EOC. This will enable coordination with the county to implement State Police and PennDOT responsibilities. Additionally, the State Police have been directly involved in designating the traffic and access control points which they are assigned to man in an emergency (Bradshaw, Tr. [13449] 13499-500, 13513).

372. It is unnecessary for the counties to obtain agreements with tow truck operators because tow trucks are routinely dispatched by the counties on a daily basis without any agreement. Extensive towing resources are listed in the resource manuals of the County Communications Centers. The several hundred tow trucks available in each of the three counties greatly exceed the number which might be needed. Additionally, PennDot will provide its own equipment to assist in the removal of disabled vehicles and other road obstacles (Bradshaw, ff. Tr. [12761] 12764 at p. 35; Bradshaw, Tr. 13517; Cunnington, Tr. 13528).

373. In many instances, it would be unnecessary to provide gas or towing services for a stranded or disabled vehicle. It could simply be pushed to the side of the road (Campbell, Tr. 20007; Bradshaw, ff. Tr. [12761] 12764 at pp. 35-36). Persons having vehicles without enough fuel to travel out of the EPZ would be included as members of the general public without transportation. The public information brochure will instruct residents in the EPZ as to how to obtain publicly provided transportation (Bradshaw, ff. Tr. [12761] 12764 at p. 35).

374. Mr. Reber, Director of the Berks County Emergency Management Agency, testified that the Berks County RERP, Annex K, at K-3-1 (Appl.

Exh. E-1) states, [A] "current list of wrecker/tow operators is maintained on file in the Berks County Communications Center." [which] This facility is fully staffed on a 24-hour basis, 7 days a week. Dispatching wreckers/tow trucks is a routine operation and there has never been a shortage of these resources in Berks County. Additionally, the Berks County plan lists gas stations/operators who have agreed to open or remain open in emergencies. Telephone numbers for 24-hour contact with those resources are on file. Given these resources, there is no need for any written agreements (Reber (Admitted Contentions), ff. Tr. 19,29 at p. 5). Although it has never been necessary, additional tow trucks could be obtained upon request from Schuylkill, Lebanon or Lancaster Counties (Reber, Tr. 19824).

375. Mr. Bigelow, the Coordinator of Emergency Preparedness for Montgomery County testified that [D]during an actual evacuation, the Montgomery County OEP would utilize police to monitor road conditions, including potential traffic congestion. Field services, such as Public Works Department personnel would also be utilized (Bigelow, Tr. 14150). Roadway clearance resources are also available to the County (Bigelow, Tr. 14150; App1. Exh. E-3, Appendix K-3).

376. Mr. Campbell, the Director, Department of Emergency Services of the County of Chester, Pennsylvania, testified that [I]in Chester County, there are more than 100 towing services which are dispatched on a daily basis; some services have more than one tow truck (Campbell, ff. Tr. 19852, Tr. 20007). He added that towing or road clearance can be provided from inside or outside the EPZ in accordance with customary procedures with reasonable assurance. Sufficient gas stations are ex-

pected to be available outside the plume EPZ. The Pennsylvania National Guard will have emergency supplies of gasoline on main evacuation routes. Municipalities already have contract or their own equipment for snow removal. (Campbell, ff. Tr. 19852 at 15).

377. The Staff adopts and incorporates Applicant's proposed finding 377.

378. The Staff adopts and incorporates Applicant's proposed finding 378.

Conclusion

378a. Based on the evidence in the record, particularly the testimony of the Applicant (Mr. Bradshaw), the Commonwealth (Mr. Farrell and Mr. Starasinic) and the three risk counties (Mr. Bigelow, Mr. Campbell and Mr. Reber) the Board finds sufficient information and procedures in the County and Municipal plans to provide the additional information that FEMA testimony indicated was required regarding the adequacy of the County and Municipal plans on the matter of resources for towing, gasoline supplies and snow removal. (See Finding 364a) The Board finds based on this evidence that the pertinent element of Planning Standard J of NUREG-0654 has been satisfied and that Contention LEA-28(b) is without merit.

3. Staffing of Emergency Operations Centers

LEA-2

The unadopted RERP's fail to provide reasonable assurance that each principal response organization has sufficient staff to

respond to and to augment its initial response on a 24-hour continual basis, or that the assigned staff can respond in a prompt manner in case of a radiological emergency at Limerick.

378b. "The thrust of this contention as noted by the Board is that unmet municipal staffing needs preclude a reasonable assurance that the requirement in 10 C.F.R. § 50.47(b)(1), i.e., that each principal response organization has sufficient staff for initial and continuous response, will be met. ^{30/}

378c. FEMA testified that 10 C.F.R. 50.47(b)(1) calls for each principal response organization to have "staff to respond and to augment its initial response on a continuous basis." NUREG-0654, Planning Standard A.4. calls for each principal organization to be "capable of continuous (24-hour) operations for a protracted period." Principal organizations are defined in Appendix S to NUREG-0654 as "federal, state, local agencies or departments or executive offices and nuclear utilities (licensees) having major or lead roles in emergency planning and preparedness. Because the emergency response network established in the Commonwealth of Pennsylvania relies on the coordinated efforts of state, county and municipal governments, along with school districts, FEMA regards municipal governments as principal organizations. (Asher and Kinard, ff. Tr. 20150 at 3).

378d. FEMA also testified that in the April 1984 "Interim Findings on the Offsite Radiological Emergency Response Plans for the Limerick Generating Station," FEMA established a "Category A" Deficiency that stated

30/ Memorandum and Order on LEA's Deferred and Respecified Offsite Emergency Planning Contentions, dated October 26, 1984 at 4.

twenty-four hour emergency response at the municipal level is not assured due to the fact that many staff positions are vacant, according to the latest municipal draft plans." The problem of lack of 24-hour staffing was confirmed in sixteen municipalities during the July 25, 1984 REP exercise (see page 135 of the FEMA/RAC Exercise Evaluation Report, dated September 19, 1984, Summary of Category "A" Deficiencies). The Exercise Evaluation Report also revealed that certain municipalities had adequate staffing to respond to long-term emergency at Limerick but that the information, i.e., the names of response personnel, would have to be officially recorded in the plans before FEMA would regard the situation as being resolved. Accordingly, to information supplied by Energy Consultants, dated August 27, 1984, the staffing needs of most municipal EOCs had been dealt with through the assistance of Philadelphia Electric Company personnel. However, the municipal plans supplied to FEMA by PEMA and the July 25, 1984 Limerick REP exercise indicate that staffing of municipal EOCs remains an open issue. Therefore FEMA testified that there is not reasonable assurance that all risk municipalities have 24-hour staffing capability. (Asher and Kinard, ff. Tr. 20150 at 4; FEMA Exh. F-4 at 135).

379. The Applicant's witness testified that [P]previous to development of the plans, few municipal emergency management agencies had any staff other than a designated coordinator. As planning requirements were clarified, the recruitment process began. Significant and steady progress in this process has been made since the first drafts of the plans. All but one (possibly two due to South Coventry) of the 43 municipalities now have a complete first shift. Most have a complete second shift. The few remaining vacancies can be filled by the municipalities, but could if

need be, be passed on to the counties (Bradshaw, ff. Tr. 17191 at p. 3, Tr. 17291-92, Tr. 17384)

380. The Staff adopts and incorporates Applicant's proposed finding 380.

381. The Staff adopts and incorporates Applicant's proposed finding 381.

382. The Staff adopts and incorporates Applicant's proposed finding 382.

383. The Staff adopts and incorporates Applicant's proposed finding 383.

384. The Staff adopts and incorporates Applicant's proposed finding 384.

385. The Staff adopts and incorporates Applicant's proposed finding 385.

386. The Staff adopts and incorporates Applicant's proposed finding 386.

387. The Chester County plan indicates that the DES intends to satisfy reported municipal EOC staff needs for seven persons in an actual emergency (Bradshaw, Tr. 17335; Appl. Exh. E-1, p. 0-i-1). The unmet need for Chester County municipal staffs would be essentially zero, however, for a radiological emergency. This includes consideration of South Coventry. (Bradshaw, Tr. 17337, 17361). Accordingly, Chester County has the capacity to meet additional municipal staffing needs which have not been reported yet, especially for a second shift.

388. The Staff adopts and incorporates Applicant's proposed finding 388.

389. The Staff adopts and incorporates Applicant's proposed finding 389.

389a. On cross-examination, FEMA's witness, Mr. Kinard, testified that he would accept Mr. Bradshaw's testimony regarding current staffing of the various jurisdictions subject to verification by the jurisdiction involved and that with such verification the "Category A" deficiency stated in its April 1984 interim findings would be satisfied and resolved. (Kinard, Tr. 20253-57).

Conclusion

389b. Based on this evidence, the Board finds that there is reasonable assurance that there is sufficient municipal staffing, satisfying the requirement in 10 C.F.R. § 50.47(b)(1), provided that prior to operation above 5% of rated power FEMA receives verification of satisfaction of the unmet staffing needs.

LETTERS OF AGREEMENT

LEA-5

The Emergency Response Organizations (including federal, state, and local governments and support organizations) have failed to fully document the existence of appropriate letters of agreement with support organizations and agencies. Thus, there is no reasonable assurance that the emergency plans can be implemented.

398c. In its October 26, 1984 Memorandum and Order on LEA's Deferred and Respecified Offsite Emergency Planning Contentions, this Board ruled that the parts of LEA-5 which call for letters of agreement with individuals, or with organizations whose response functions are covered by laws, regula-

tions or executive orders were not acceptable. The Board commented that it remained to be determined whether letters still to be drawn up constitute an obstacle to a finding that there is reasonable assurance that the plans can and will be implemented.

398d. 10 C.F.P. 50.47 (b)(3) calls for the identification of "other organizations capable of augmenting the planned response. . .", while NUREG-0654, Planning Standard C.4. states that "each organization shall identify nuclear and other facilities, organizations or individuals which can be relied upon in an emergency to provide assistance. Such assistance shall be identified and supported by appropriate letters of agreement." FEMA, ff. Tr. 20150 at p. 7.

390. The Staff adopts and incorporates Applicant's proposed finding 390.

391. The Staff adopts and incorporates Applicant's proposed finding 391.

392. The Staff adopts and incorporates Applicant's proposed finding 392.

393. The Staff adopts and incorporates Applicant's proposed finding 393.

394. Although FEMA testified that in most instances the draft plans they reviewed (submitted by PEMA in December, 1983 - Tr. 20177) do not include letters of agreement with organizations that have agreed to provide support in the event of an accident at Limerick (FEMA, ff. Tr. 20150 at p. 7), the record shows that about three-fourths of all agreements are now complete (Bradshaw, ff. Tr. 17191 at pp. 12-15). In any event, the absence

of written agreements does not preclude the workability of the plan (Thompson, Tr. 18832-33).

395. The Staff adopts and incorporates Applicant's proposed finding 395.

Conclusion

395a. The Board has reasonable assurance that letters of agreement necessary for implementation of emergency plans can be obtained.

D. PLAN ADOPTION

1. Counties, Municipalities and School Districts Within the Limerick EPZ.

LEA-1

The Risk Counties, Municipalities, School Districts, and Institutions haven't promulgated or adopted final radiological emergency response plans, nor have they approved and adopted plans drawn up for them by Energy Consultants, Inc., a Harrisburg firm hired by Philadelphia Electric Company. There is no reasonable assurance that the present state of planning is predictive of final approval, or that the plans are capable of being implemented.

Emergency Planning Requirements in the Commonwealth of Pennsylvania

395a. This contention was admitted by the Licensing Board's Memorandum and Order of October 26, 1984. In the Matter of Philadelphia Electric Company (Limerick Generating Station, Units 1 and 2), Memorandum and Order On LEA's Deferred And Respecified Off site Emergency Planning Contentions, (Unpublished), slip op. at 2-4, (October 26, 1984). In its Memorandum and Order admitting this contention, the Board excluded

the first basis, which contended that there is no reasonable assurance that PEMA can provide for the unmet needs LEA alleges exist in Chester and Montgomery Counties for buses and ambulances. Id. at 2. Further, the Board ruled out the fourth basis, which alleged that there is no reasonable assurance that the planning approaches some local jurisdictions are considering as alternatives to the approaches proposed by the Applicant's consultant will conform to NUREG-0654. Id. at 3. Thus any evidence concerning these matters has not been considered by the Board in resolving this contention.

396. The Staff adopts and incorporates Applicant's proposed finding 396.

397. The Staff adopts and incorporates Applicant's proposed finding 397.

398. From the testimony of the county and municipal officials and planners, there emerged a clear consensus that P.L. 1332 imposes mandatory, not discretionary, obligations upon local governments to have in place a workable emergency plan, an emergency response organization, and an emergency operations center and related resources necessary to respond to any disaster emergency, whether radiological or non-radiological, natural or man-made. Similarly, each county and municipal official testified that it was the intention of his Board of Commissioners or Board of Supervisors to comply with the requirements of P.L. 1332, without distinction between radiological and non-radiological disaster emergencies, by working toward the adoption of a workable emergency plan (Bartle, Tr. 18622-23 [18623]; Thompson, Tr. 18858; Grenz, Tr. 17950-52, 17954; Yeager, Tr. 18046-48 [47]; Skarbeck, Tr. 17835; Waterman and

Templeton, Tr. 18095-96, 18099-101; Brown, Tr. 18180-81, 18225-26, 18230; Whitlock, Tr. 18471; Kelly, Tr. 18571-72; August, Tr. 18903; Giamo, Tr. 19125-29).

399. The Staff adopts and incorporates Applicant's proposed finding 399.

400. A number of township supervisors testified as to their personal concerns regarding certain plan provisions. In general, most concerns fell into two categories. First, a number of supervisors stated that greater work had to be done in identifying "unmet needs" at the local level and pinpointing the source which would satisfy that need. (See Proposed Findings 398-99). The Board sees this as nothing more than the logical culmination of the planning process in Pennsylvania under P.L. 1332, which requires municipalities to report any unmet needs at the local level to their respective counties and on to PEMA, if necessary (Hippert, ff. Tr. 19498 at pp. 8-9 [p. 9]; Bradshaw, ff. Tr. 12764 [12761] at p. 3).

401. As a second category, some township supervisors stated various concerns which resulted from a misunderstanding of the basic planning principles and assumptions under Annex E and P.L. 1332, a need for further coordination with county and/or PEMA officials, or an understandable lack of familiarity with the details of their plans. (See Proposed Findings 398-99). With the assistance of the three county coordinators and PEMA officials, all of whom demonstrated a highly professional attitude before this Board, we are convinced that those concerns, which are being pursued, will also be resolved. The unanimous declaration by all government officials of their intent to comply with P.L. 1332, in the Board's view, indicates that

we can reasonably expect [overrides] the relatively minor concerns stated by some officials to be adequately addressed.

402. Some township officials have felt a lack of interest on the part of PEMA in assisting them in complying with their responsibilities under P.L. 1332 or have detected indifference with respect to the enforcement of its mandatory provisions (e.g., Kelly, Tr. 18562-63, 18565, 18675-76). Some officials acknowledged that, although the requirements of P.L. 1332 are mandatory and have been in existence for some time, they have not yet conformed to the law (Brown, Tr. 18226-27). The Board believes that as PEMA and the counties continue to assist municipalities in their present efforts to comply with P.L. 1332, this situation will change.

Development of Offsite Emergency Plans

403. The 61 county, municipal and school district draft plans received in evidence (App'l. Exhs. E-1 through E-61) represented the current status of emergency planning for the respective jurisdictions within the EPZ at the time of the hearing (Bradshaw, Tr. 16930). These draft plans were developed with the assistance of Energy Consultants and have undergone numerous reviews by county and municipal emergency personnel and school district officials, as well as the Commonwealth (Bradshaw, ff. Tr. 12764 [12761] at p. 1). Earlier versions of these draft plans were reviewed by FEMA. (Asher and Kinard (Introduction), ff. Tr. 20150; Kinard, Tr. 20301).

404. The Staff adopts and incorporates Applicant's proposed finding 404.

405. The Staff adopts and incorporates Applicant's proposed finding 405.

406. The planning process has involved Energy Consultants in providing assistance to the various jurisdictions in developing their draft plans, including[. This process has included] hundreds of meetings, thousands of correspondence exchanges and training as appropriate (Bradshaw, Tr. 12861). Energy Consultants routinely changed the plans as requested by the respective jurisdictions (Reber, Tr. 19790; Campbell, Tr. 19950-51; Warner, Tr. 15662-63; Cunnington, Tr. 16929-30).

407. The Staff adopts and incorporates Applicant's proposed finding 407.

408. The Staff adopts and incorporates Applicant's proposed finding 408.

409. Additionally, any time a jurisdiction perceives a need to revise information, it can be added. This dynamic, ongoing process is reflected in revisions to the Downington School District plan subsequent to its formal adoption on February 8, 1984 (Bradshaw and Cunnington, Tr. 12850-51). Any plan must be updated to remain viable. In that sense, it is hard to call any plan final (Waterman, Tr. 18096; McGill, Tr. 20369-70).

410. The Staff adopts and incorporates Applicant's proposed finding 410.

411. The Staff adopts and incorporates Applicant's proposed finding 411.

412. The Staff adopts and incorporates Applicant's proposed finding 412.

413. The Staff adopts and incorporates Applicant's proposed finding 413.

414. Responses from FEMA on the informal Regional Assistance Committee review were not made available to the counties and municipalities until May 1984. The counties chose not to make plan amendments that close to the July 25, 1984 exercise. As expected, the July 25 exercise resulted in revisions to some plans. Municipal plan revisions incorporating the RAC comments and other changes resulting from the July 25 exercise were incorporated into the September and October municipal plan drafts. The municipalities are in the process of taking action on those changes (Bradshaw, ff. Tr. 17191 at p. 2, Tr. 17284, 17323; FEMA Exhs. E-4, 6, 7). The basic planning principles and procedures for the municipal and county plans have been essentially in place since the beginning of the planning process. (Bradshaw, Tr. 17364). There have been very few instances where municipalities objected or revised the basic procedures in the plans. (Id.)

415. The Staff adopts and incorporates Applicant's proposed finding 415.

416. [The plans in evidence provide assurance that the necessary actions can be taken in the event of an emergency.] The ability to implement the emergency plans for entities within the EPZ does not depend upon formal adoption of the plans by the various jurisdictions because, as PEMA has acknowledged, the plans accurately reflect the current capacity to respond to an emergency in each jurisdiction (Bradshaw, ff. Tr. 17191 at p. 2, Tr. 17283; Commonwealth Exhs. E-10, E-13a, b, c). For example, the Collegeville plan has been utilized in response to a flood (Bradshaw, Tr. 17283). Several families in Collegeville and Perkiomen Townships

were evacuated and a mass care center was established (Cunnington, Tr. 17317). Collegetown EOC staff were promptly notified, the EOC was activated, and all members of the general public requiring protective action were notified in accordance with the provisions of the plan (Bradshaw, Tr. 17318).

417. The plans in evidence have been provided to municipal coordinators for review by planning staff and local officials. After completion of certain items identified in the most recent draft, the municipal plans should be considered ready for review by Commonwealth and federal authorities. For example, some plans were amended to fill in the one or two remaining staff vacancies in the municipal EOC's (Bradshaw, Tr. 17276[17277]-78). In general, the time frame for consideration and adoption of the municipal plans would be February and March 1985 (Bradshaw, Tr. 17276-77, 17284, 17364).

418. PEMA is of the view [concur] that if the most recent drafts of the county, municipal and school district plans reflect the changes, corrections and additions it recommended in the fall of 1983 and those recommended by FEMA in April 1984, the plans should be adequate and capable of being implemented (Hippert, ff. Tr. 19498 at p. 2). PEMA takes the position that the current plans would, in a practical sense, be the basis for the counties, municipalities and school districts to respond to a radiological emergency at Limerick if an accident occurred prior to formal adoption of the plans. The general provisions in Annex E plus any site specific information would be utilized by PEMA in responding to such an accident (Hippert, Tr. 19573-74; Commonwealth, Exh. E-10).

419. Although LEA solicited testimony from PEMA and FEMA officials regarding the status of their reviews (Hippert, Tr. 19501-25; Asher and

Kinard, Tr. 20153-67), there is no evidence linking those reviews with formal adoption by the school districts, municipalities and counties of their respective plans. To the extent necessary to reach a decision on whether those plans are workable, or [in] will be workable in final form, the Board has sufficient evidence to reach its own conclusions, independent of any review that will be conducted by PEMA and FEMA pursuant to 44 C.F.R. Part 350. Accordingly, the Board does not regard the status of those reviews as material [relevant] to its disposition of the LEA/FOE contentions. (See In the Matter of Pacific Gas and Electric Company (Diablo Canyon Nuclear Power, Units 1 and 2), ALAB-776, 19 NRC 1373, 1376-78 (1984)).

420. It is not essential either from the viewpoint of legal requirements or practical workability that local school districts or municipalities adopt their emergency plans before a county adopts its own plan (Bradshaw, Tr. 12905-06; In the Matter of Detroit Edison Company, et al. (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-730, 17 NRC 1057, 1066 (1983)). Even if the municipalities and school districts have not formally adopted their draft plans, PEMA could nonetheless find them acceptable as in consonance with the county plan and Annex E where the plan is capable of being implemented. There might be unknown reasons entirely unrelated to those concerns for which a Board of Supervisors or Board of Education might not wish to sign the plan (Hippert, Tr. 19625-26).

421. Even assuming that they are not legally required by P.L. 1322 to adopt emergency plans, school districts would adopt such plans, consistent with the plans developed by political subdivisions covered by P.L. 1322, in order to protect the health and safety of school children (Murray, Tr. 15166). Two school districts were preparing their plans for

formal submission to their school boards at the time of the hearing. Another three school districts were awaiting formal completion of host school agreements. In the interim, they are completing other aspects of their plans so that, when host school agreements are signed, their plans will be reviewable and adoptable by their respective school boards. The remaining districts are making either minor changes to their plans or developing implementing procedures prior to formal submission of their plans to the school boards. In general, the schedule for formal submission for adoption ranges from January through April 1985 (Cunnington, Tr. 17275-76 [17276]). The school superintendents unanimously stated the intent of their respective school districts to work toward the development and adoption of a workable plan (e.g., Feich, Tr. 14927; Murray, Tr. 15096-97, 15166; Welliver, Tr. 15548-49; Warner, Tr. 15635-36).

422. The Staff adopts and incorporates Applicant's proposed finding 422.

423. The Staff adopts and incorporates Applicant's proposed finding 423.

Montgomery County

424. The Staff adopts and incorporates Applicant's proposed finding 424.

425. Based upon previous County responses to flood and fire emergencies, Montgomery County volunteers would respond to a radiological emergency (Bartle, Tr. 18626-27 [18627]). Mr. Bartle expressed his confidence that, in an actual emergency, school districts would be responsive to requests for emergency bus transportation (Bartle, Tr. 18631).

426. The Staff adopts and incorporates Applicant's proposed finding 426.

427. The Staff adopts and incorporates Applicant's proposed finding 427.

428. Rita C. Banning is the Minority Commissioner of the Montgomery County Board of Commissioners (Banning, ff. Tr. 17752 at p. 1, Tr. 17554). She has no formal education or training in emergency planning, radiation health effects or traffic engineering (Banning, Tr. 17534-35). While she has reviewed the Montgomery County plan, Mrs. Banning had not yet become familiar with planning concepts contained in the Montgomery County plan by discussing her planning matters with any Commonwealth or county planning officials (Banning, ff. Tr. 17752 at p. 1, Tr. 17547-51, 17554-57, 17607-15).

429. The Staff adopts and incorporates Applicant's proposed finding 429.

430. Although Mrs. Banning attributed her lack of information about the Montgomery County plan in part to her status as a minority commissioner (Banning, Tr. 17554-55, 17558-59, 17730-32), the Board believes otherwise (Bartle, Tr. 18636-38; Banning, Tr. 17563-74, 17749-50, 17620-21, 17744).

431. The Staff adopts and incorporates Applicant's proposed finding 431.

432. The Staff adopts and incorporates Applicant's proposed finding 432.

433. Mrs. Banning plans to review the Montgomery County plan based upon her "intuitive," "subjective" or "just common sense judgment" (Banning, Tr. 17618). For those areas she perceives as either flawed

or unsatisfactory, she will, as time permits, pursue those with experts;
however, [S]she was unable to identify other specific sources of information, including planning officials or experts at the State and federal levels whose opinions or advice she would utilize in determining whether the Montgomery County proposed plan met appropriate planning standards (Banning, Tr. 17585-86, 17618-19). Nonetheless, the Board notes Mrs. Banning's hope that planners would be able to address her criticisms and suggestions of deficiencies to make the plan as good as possible (Banning, Tr. 17621). Mrs. Banning agreed that if there were an emergency at Limerick prior to formal adoption of the plan, the current draft plan should be utilized (Banning, Tr. 17736).

Chester County

434. Robert J. Thompson is the Chairman of the Chester County Board of Commissioners (Thompson, Tr. 18807). Timothy R. Campbell is the Director of Emergency Services for Chester County (Campbell (Admitted Contentions), ff. Tr. 19852 at p. 1). Both indicated [testified] that Chester County is well prepared for disaster emergencies. The Chester County DES has received three achievement awards from the National Association of Counties, including one for the development of an emergency plan for the Peach Bottom Atomic Power Station (Thompson, Tr. 18857-58; Campbell, Tr. 19943-44, 19947).

435. The Staff adopts and incorporates Applicant's proposed finding 435.

436. The Staff adopts and incorporates Applicant's proposed finding 436.

437. Chester County believes that it is imperative that an emergency plan be reviewed and adopted prior to the issuance of a full-power license for Limerick (Thompson, Tr. 18829). It is also important that a plan be in place to meet any nonradiological emergency. While a particular plan has not been adopted, Chester County is nonetheless prepared to meet an emergency at Limerick at the current time (Thompson, Tr. 18831-32). Subject to further changes resulting from observer comments on the July 25 and November 20, 1984 exercises, the current Chester County plan (Commonwealth/Chester County Exh. E-1) represents the intended response of the county to an accident at Limerick. When appropriate, the final version will be [re]presented to the County Commissioners for formal approval (Campbell (Deferred Contentions), ff. Tr. 19852 at p. 2).

438. The Staff adopts and incorporates Applicant's proposed finding 438.

439. The Staff adopts and incorporates Applicant's proposed finding 439.

Berks County

440. LEA did not seriously contend that the Berks County Board of Commissioners would not adopt a form of the current draft plan received into evidence. [In fact, LEA withdrew its proffer of Donald W. Bagenstose, Chairman of the Berks County Board of Commissioners (Tr. 18115). Accordingly,] LEA presented no witness who could testify directly as to the intention of the Commissioners with regard to adoption of a plan.

441. The Staff adopts and incorporates Applicant's proposed finding 441.

442. The Staff adopts and incorporates Applicant's proposed finding 442.

Borough of Pottstown

443. Mr. Edmund Skarbeck is president of the Borough of Pottstown (Skarbeck, Tr. 17763-64 [17764]). Mr. Carroll Mattingly is the Pottstown transportation officer under its emergency plan (Mattingly, Tr. 17764).

444. The Staff adopts and incorporates Applicant's proposed finding 444.

445. The Pottstown transportation officer expressed only generalized concerns regarding availability of buses, based upon speculation as to congested traffic conditions and panic (Mattingly, Tr. 17814). The transportation officer had not reviewed the ETE study and has no experience, formal training or other background in traffic engineering, transportation engineering or model simulation of traffic flows (Mattingly, Tr. 17830-31). [Nor had the traffic safety officer who had allegedly expressed similar concerns (Mattingly, Tr. 17848-49).]

446. The Staff adopts and incorporates Applicant's proposed finding 446.

447. A number of Pottstown residents responding to the public needs survey who requested ambulance transportation did not actually require it. (Mattingly, Tr. 17868). The Pottstown transportation officer confirmed with the Goodwill Ambulance Company that sufficient ambulances would be available to meet the stated needs under the Pottstown plan (Mattingly, Tr. 17800-01). Moreover, there is a mutual aid system by which townships can request ambulances from other Montgomery County town-

ships (Mattingly, Tr. 17843-44). Some [Many] hearing-impaired individuals were taken off the hearing-impaired list because they have hearing aids (Mattingly, Tr. 17868).

447a. The council of the Borough of Pottstown will probably adopt the plan after reviewing and satisfying any reservations it may have. (Skarbeck, Tr. 17835). Moreover, the president of the Borough of Pottstown expressed his intention to work toward the development and adoption of a workable plan for the township. (Skarbeck, Tr. 17835).

Uwchlan Township

448. The Staff adopts and incorporates Applicant's proposed finding 448.

449. The Staff adopts and incorporates Applicant's proposed finding 449.

East Pikeland Township

450. The Staff adopts and incorporates Applicant's proposed finding 450.

451. The Staff adopts and incorporates Applicant's proposed finding 451.

452. Subject to making those changes they thought would be necessary to improve the plan, it is the intention of the East Pikeland Township Board of Supervisors to adopt a workable and implementable plan for radio-logical emergencies at Limerick. (Yeager, Tr. 18046-47). Although the citizens committee reviewing the East Pikeland plan provided certain comments to the East Pikeland Planning Commission, (Yeager, Tr. 18016;

LEA Exh. E-48), there is no evidence that the committee's informal comments represent the views of the Board of Supervisors or the Township coordinator. Moreover, the letter dated July 18, 1984 from the Township Clerk to PEMA does not necessarily reflect the position of the township supervisors at this time (Yeager, Tr. 18017). Accordingly, the Board does not regard LEA-Exh. E-48 to be reliable and material evidence, and thus it is not probative evidence on the issue under consideration.

Upper Providence Township

453. The Staff adopts and incorporates Applicant's proposed finding 453.

454. Despite speculative concerns as to whether volunteers would show up to man the township EOC in an actual emergency, the Upper Providence Township witness panel testified that the township coordinator and other EOC staff had determined the suitability and qualifications of individual volunteers to perform assigned responsibilities in an emergency (Templeton, Tr. 18089-90). The Township Manager, who is the communications officer during an emergency, stated that he is not aware of any [No] volunteer EOC staff individual who has stated that he would be unavailable or unwilling to perform assigned responsibilities (Waterman, Tr. 18090, 18092), nor did any fail to do so during the July 25, 1984 exercise (Waterman and Templeton, Tr. 18091-94). The Upper Providence Township EMC reported that there were 25-30 volunteers for the July 25, 1984 Limerick exercise and that he was more than satisfied with the volunteer program [their performance.] (Templeton, Tr. 18064).

455. The Staff adopts and incorporates Applicant's proposed finding 455.

456. Short of speculative concern as to whether the plan could manage an "all-out evacuation," the Upper Providence Township panel did not cite any portion of its draft plan it regarded as unworkable (Waterman, Tr. 18096-97). Such concern should [is unwarranted and will] eventually be resolved as township officials become more knowledgeable about [in] realistic evacuation assumptions (Proposed Findings 1-85). In any event, it is the intention of Upper Providence Township to work toward an adoptable plan. (Waterman and Templeton, Tr. 18096).

Lower Providence Township

457. The Staff adopts and incorporates Applicant's proposed finding 457.

458. Mr. Miller testified that fire company personnel from the Lower Providence Township Volunteer Unit cannot perform route alerting in a radiological emergency because 15 volunteers and a field officer are needed to maintain normal rescue and fire service within the township (Miller, Tr. 18142). Route alerting during the November 20, 1984 exercise was conducted by township volunteers other than fire company volunteers (Brown, Tr. 18147). At that time, however, forty additional unassigned volunteers were available to perform route alerting if required. Only twenty-four individuals are required to cover all route alerting sectors (Miller, Tr. 18184-85). Route alerting in Lower Providence Township can be performed by volunteers other than fire company personnel utilizing automobiles with portable public address units (Miller, Tr. 18156).

459. The Staff adopts and incorporates Applicant's proposed finding 459.

460. It is expected that Applicant's employees who have volunteered for these assignments would [have agreed to] serve for both radiological and nonradiological emergencies (Brown, Tr. 18197). Normal municipal staff turnover, including emergency staffing, ordinarily requires recruitment and retraining of new staff members (Brown, Tr. 18197). The Board sees no merit in speculating about the motive of Applicant's employees in volunteering for such service, nor has the Board any reason to question their civic-mindedness in doing so (Brown, Tr. 18197). Certainly, no responsible coordinator would reject a volunteer simply because he is employed by the Applicant (Brown, Tr. 18197).

461. Lower Providence Township has passed an unmet need of four ambulances to Montgomery County to evacuate its non-ambulatory residents (Conroe, Tr. 18154, Appl. Exh. E-12, p. 0-1). Under the Lower Providence Township plan, only nine residents require ambulance transportation (Appl. Exh. E-12, p. F-1). Mr. Conroe raised concerns regarding his ability to contact ambulance service workers (Conroe, Tr. 18157-58). His concern was evidently based on an overstated [a highly exaggerated] need for ambulances, created by his misreading of the plan's figures of those requiring ambulance transportation (Conroe, Tr. 18199). Moreover, the former chief of the Township Ambulance Squad, who participated in the November 20, 1984 exercise, concluded that several of the nine individuals listed in the plan for ambulance transportation could be moved by automobile (Miller, Tr. 18200).

462. There are two township ambulances; a third will be in service shortly (Conroe, Tr. 18200, 18203). The township's plan, however, commits only one ambulance for radiological emergencies (Appl. Exh. E-12, p. 0-1). There are 45 to 55 active ambulance crew members in service at any given time (Conroe, Tr. 18204). The one crew committed to service under the plan is always on duty and immediately available (Conroe, Tr. 18204-05). The Board does not believe there is a [sees no] notification problem with such an ample staff. Moreover, use of several individual pagers should resolve any concern.

463. Mr. Brown also contended that Lower Providence Township has responsibility for evacuating members of the public who might be within that portion of Valley Forge National Park located in Lower Providence Township in the event of a radiological emergencies[, but failed to state any particular responsibility which the township had with respect to those individuals] (Brown, Tr. 18172 [,18209]).

464. The Board notes that the public alert and notification capability required under NUREG-0654, Criterion E.6, and Annex E will be provided by the siren system operated, in this instance, by Montgomery County (Appl. Exh. E-3, pp. C-1, C-2). One siren in particular is sited in the vicinity of that portion of the park in Lower Providence Township (Brown, Tr. 18238). Moreover, the National Park Service will receive notification at the alert stage from Chester County (Fewlass, Tr. 14680). The Park Service would then inform park visitors of the alert so as to give them the opportunity to take whatever actions they felt prudent. This could be accomplished by the various public address systems in the park's buildings and patrol vehicles (Fewlass, Tr. 14681). The Board

believes that this adequately addresses the NUREG-0654, II.J.10c. criterion that calls for means of notifying all segments of the population, including transients. [The Board finds no requirement or necessity for the Lower Providence plan to make special provisions for individuals utilizing the recreational areas of this portion of the park. The Board assumes that there are a variety of recreational areas in the EPZ covered by the siren system.]

465. Mr. Brown also stated concerns regarding the evacuation route for Lower Providence Township and, like many other witnesses unfamiliar with large-scale emergency evacuation planning or the ETE study, erroneously confused peak hour commuter traffic problems with evacuation traffic (Brown, Tr. 18173). [Like other lay witnesses,] Mr. Brown was unfamiliar with the ETE study, had erroneously assumed that evacuation planning did not consider traffic congestion, and had no expertise or experience in transportation engineering, traffic engineering or traffic flow simulation of evacuation scenarios (Brown, Tr. 18212-18). Ultimately, Mr. Brown agreed that comparisons of commuter peak hour traffic and evacuation traffic were meaningless (Brown, Tr. 18218).

466. The Staff adopts and incorporates Applicant's proposed finding 466.

467. Mr. Brown stated his concern regarding emergency telephone communications, which the township intends to resolve through the introduction of a private switch network (Brown, Tr. 18226). Once that is resolved, the Chairman of the Board of Supervisors intends to recommend supporting the adoption of the plan. (Brown, Tr. 18226). Nevertheless, t[T]he Board believes this concern may be overstated since

it [regards this concern as unrealistic. It] is important to bear in mind that, in the event of an actual emergency, not all EOC staff and support organization staff need to be reached immediately, nor must they be contacted by telephone (Proposed Findings 344-346, 348, 381-382). Once the underlying planning principles regarding alert and notification of emergency volunteers and facilities requiring special notification become clear to township officials, the Board believes it is reasonable to expect that this concern will resolve itself. Even if there were some perceived problem in prompt telephone notification of those who must respond initially, the Board believes that the problem can be resolved, for example, by the purchase and use of individual pagers for key personnel as recommended by Mr. Conroe (Conroe, Tr. 18235).

South Coventry Township

468. W.[P.] Richard Whitlock is the Chairman of the South Coventry Township Board of Supervisors (Whitlock, Tr. 18376). Because of certain actions taken by the township, Mr. Whitlock has not yet become knowledgeable as to the emergency planning principles and assumptions reflected in the various Limerick offsite plans. For example, Mr. Whitlock did not know that evacuation of the general public would not be in progress at or prior to the time volunteers would be reporting to the township EOC (Whitlock, Tr. 18435-36), or that it would be impossible for South Coventry to implement its emergency plan without the existence and operation of a township EOC (Whitlock, Tr. [18410,] 18450). Finally, Mr. Whitlock did not understand that the Owen J. Roberts School District would implement its own plan and assume responsibility for the safety of its school children

under that plan in the event of a radiological emergency (Whitlock, Tr. 18465-67).

469. The Staff adopts and incorporates Applicant's proposed finding 469.

470. The Staff adopts and incorporates Applicant's proposed finding 470.

471. In any event, the emergency concerns expressed by Mr. Whitlock, as discussed below, are either being addressed or have been resolved by the planning process. With regard to the necessary funds to provide and maintain emergency planning equipment, the Board takes judicial notice of the provisions of P.L. 1332, which, in accordance with the undisputed testimony of local, county and Commonwealth governmental officials, imposes a mandatory obligation under Section 7501 and 7503 to maintain an emergency plan and applicable equipment and resources in place for use in responding to any emergency, radiological or nonradiological, natural or man-made. South Coventry officials intend to discuss with PEMA or other Commonwealth officials the availability of reimbursement for expenses incurred for emergency planning (Whitlock, Tr. 18445). Section 503 of Pennsylvania Act No. 147, approved July 10, 1984, was enacted in response, in part, to the concerns expressed by South Coventry regarding reimbursement for emergency planning and preparation expenses (Whitlock, Tr. 18511). Further, Applicant has [already] made an [considerable] effort to provide EOC equipment and other resources, and any remaining unmet needs could be passed on to [onto] the county or PEMA (Whitlock, Tr. 18401, 18491 [18486]).

472. Similarly, with regard to alleged manpower shortages, the record demonstrates that, with one other exception, each of the five

counties and other 42 municipalities involved in emergency planning for Limerick have been able to muster the necessary staff (Proposed Findings 379-380). The Board therefore regards this as a [resoluble] problem that is capable of being resolved.

473. The Staff adopts and incorporates Applicant's proposed finding 473.

474. The Staff adopts and incorporates Applicant's proposed finding 474.

475. The Staff adopts and incorporates Applicant's proposed finding 475.

476. The Staff adopts and incorporates Applicant's proposed finding 476.

477. The Staff adopts and incorporates Applicant's proposed finding 477.

478. The Staff adopts and incorporates Applicant's proposed finding 478.

479. The Staff adopts and incorporates Applicant's proposed finding 479.

480. The Staff adopts and incorporates Applicant's proposed finding 480.

480a. FEMA is unable to conclude that emergency preparedness is adequate to provide reasonable assurance that appropriate protective measures can be taken to protect the residents of South Coventry Township, since the Township did not participate in either the initial or supplemental exercise. (FEMA Ex. E-5, p. 30; FEMA Ex. E-8). However, the Board reaches a different conclusion based on the evidence developed in this record.

481. The Staff adopts and incorporates Applicant's proposed finding 481.

482. The Staff adopts and incorporates Applicant's proposed finding 482.

483. South Coventry has a population of 1556 persons (Campbell, Tr. 19973; Chester County/Commonwealth Exh. E-1, p. L-1-1). For a community of that size, Chester County could perform a number of the functions which ordinarily would be performed at the township EOC, i.e., notification and verification, maintenance of a relocation information point for evacuated citizens, deployment of county employees to conduct route alerting and coordination of the Pennsylvania State Police, which is the normal law enforcement agency for South Coventry (Campbell, Tr. 19975-76). In the absence of any unique planning needs not yet identified and after appropriate instructions from PEMA, Chester County would be able to carry out all of the emergency response functions which would otherwise be performed by South Coventry under its plan, i.e., provision of bus transportation for transportation-dependent individuals, assistance to disabled persons, providing ambulances where necessary, providing equipment for traffic control points, providing equipment for route alerting teams and other typical municipality needs. It would be possible to set up a subgroup of Chester County EOC staff in West Chester or some other location who could carry out those functions. It would not be necessary to man a local EOC within South Coventry (Campbell, Tr. 19976, 20010-11). PEMA concurs that this alternative means of providing an emergency response for South Coventry Township is adequate (Hippert, Tr. 19582-83). PEMA will coordinate with Chester County and supplement its response if necessary (Hippert and Taylor,

Tr. 19611, 19613). To satisfy the requirements of NUREG-0654, FEMA testified that the actions that would be taken by Chester County and PEMA to protect the citizens of South Coventry Township, assuming the Township's continued non-participation, would be adequate, if that information concerning those actions was reflected in the plans for the County and the Commonwealth and there is a demonstration that those provisions could be implemented. (Asher, Tr. 20268). FEMA sees no reason why this cannot be accomplished, nor do we (Asher, Tr. 20268). There is no evidence to suggest that Chester County can not perform those emergency response functions necessary to protect the citizens of South Coventry Township. We note that South Coventry Township is relatively small, with a population of only 1556 residents, and that the evidence indicates that the Chester County plan is workable and capable of being implemented by Chester County (See Proposed Findings 434-439). Chester County has participated in a full scale emergency planning exercise for the Limerick EPZ. (FEMA Ex. E-4, p. vii). Further, PEMA has been negotiating with Chester County to finalize those actions it could take in conjunction with the county to protect the residents of South Coventry Township. (Taylor, Tr. 19613). Moreover, in the event that South Coventry defaults in its obligations for any reason, Chester County has the responsibility and authority to act under P.L. 1332 to protect the public health and safety of the residents of South Coventry Township. (See Proposed Findings 481-82). Based on this record, the Board finds there is reasonable assurance that the residents of South Coventry Township will be adequately protected in the event of a radiological emergency at Limerick, provided that Chester County and PEMA satisfy FEMA that they can perform those actions outlined above for South Coventry Township prior to operation above 5% of rated power.

Douglass Township, Montgomery County

484. The Staff adopts and incorporates Applicant's proposed finding 484.

485. The Staff adopts and incorporates Applicant's proposed finding 485.

486. The Staff adopts and incorporates Applicant's proposed finding 486.

487. The Staff adopts and incorporates Applicant's proposed finding 487.

488. The Staff adopts and incorporates Applicant's proposed finding 488.

489. Mr. Kelly also expressed reservations about the effectuation of an actual evacuation (Kelly, Tr. 18552-53). As with other witnesses, Mr. Kelly's concerns regarding commuter peak hour traffic congestion (Kelly, Tr. 18669-70) have no bearing upon an emergency evacuation because of the inherent differences in the origin and destination of commuter and evacuation traffic flows (Proposed Finding 28). In any event, there is very little that Douglas Township can do to reduce overall traffic congestion. Therefore, this is not an issue which we believe is likely to affect the adoption of the Douglas Township plan.

Union Township

490. A little less than half of Union Township lies within the EPZ (Lowery, Tr. 18762; Commonwealth Exh. E-9). Mary C. Lowery is the Union Township emergency coordinator (Lowery, Tr. 18683). Miss Lowery has informed the Board of Supervisors some time ago that she might not par-

ticipate in an actual emergency, depending upon her personal situation (Lowery, Tr. 18733; Reber, Tr. 19804). Miss Lowery has missed all but a half dozen monthly training sessions over the past three years (Reber, Tr. 19803-04). As a coordinator, she will not vote on final approval of a plan, nor did she state that her testimony, with one exception, represented the views of the Union Township Board of Supervisors (Lowery, Tr. 18714). Accordingly, the Board did not give [was unable to] give her testimony much weight.

491. The Staff adopts and incorporates Applicant's proposed finding 491.

492. Miss Lowery has not compared her estimated staffing needs with other townships of comparable size [or discussed them with Berks County planning officials] (Lowery, Tr. 18734). The Board has reviewed Miss Lowery's explanation of her staffing needs in that context. Given the comparatively small population of Union Township, about 1,100 people living in the EPZ (Reber, Tr. 19800; Appl. Exh. E-47, p. 1), the Board believes that those staffing needs are truly overestimated and that many of the functions identified by Miss Lowery (Tr. 18746-48) could be eliminated altogether or combined with other assigned functions as Mr. Reber has recommended (Reber, Tr. 19801). This view is supported by Mr. Reber's testimony that the unmet staffing needs reported by the Union Township EMC are beyond all belief (Reber, Tr. 19776-77).

493. [Some EOC staff functions could be combined with those of a neighboring municipality, as Mr. Reber has recommended (Reber, Tr. 19801). Even without such cooperation, o] Only ten persons are needed to man the Union Township EOC effectively on a 24-hour basis in

event of an emergency. Many unassigned functions under the Union Township plan could readily be combined with other functions to reduce outstanding^v needs, i.e., the deputy police service officer could also be the fire coordinator, the deputy fire/rescue officer could also be the deputy radiological officer, and the transportation officer could function as the medical officer (Reber, Tr. 19801-03; Appl. Exh. E-47, p. I-1). Mr. Reber had scheduled a meeting for February 5, 1985 with the Union Township Board of Supervisors to resolve unmet EOC staffing needs (Reber, Tr. 19782).

494. Mr. Reber, Director of the Berks County EMA, testified that it might be desirable for Union Township to find another emergency coordinator who would be more interested in the job and willing to do whatever is necessary to get the job done (Reber, Tr. 19805-06). A replacement need not be a resident of Union Township (Reber, Tr. 19806). Mr. Reber stated that he would assist Union Township in finding a replacement (Reber, Tr. 19804), and do whatever is necessary in assisting Union Township to achieve full preparedness (Appl. Exh. E-93). In the Board's view, the unmet staffing needs for the Union Township EOC is an isolated problem. Given the evident determination by Berks County and Union Township, the Board believes it is reasonable to expect that the problem will be satisfactorily resolved.

495. The Staff adopts and incorporates Applicant's proposed finding 495.

496. Miss Lowery stated that, at the present time, the Union Township Fire Company has been unwilling to identify volunteers or make a commitment to performing its assigned responsibilities under the Union

Township plan (Lowery, Tr. 18707). A maximum of six individuals would be needed for route alerting in Union Township. Twenty-six fire company volunteers have been trained for this and other assignments given the fire company under the Union Township plan (Lowery, Tr. 18737-38). The only apparent stumbling block is Miss Lowery's belief that not all twenty-six trained individuals are qualified to perform route alerting and her unwillingness to survey the fireman with regard to this assignment (Lowery, Tr. 18738-42). There is, however, a substantial historical record that volunteer fire companies do have available personnel and the capacity to respond to emergencies when needed (Campbell (Admitted Contentions), ff. Tr. 19852 at p. 14). Finding no significant [particular] problem which would preclude the fire company from performing its assigned responsibilities, the Board is confident that the Union Township Board will be able to overcome this problem.

497. Comparing the list of persons requiring special assistance in an evacuation with actual survey responses and an interview with a manager of a boarding home, Miss Lowery stated that she found certain discrepancies (Lowery, Tr. 18694-97). Although concerned with conflicting responses, Miss Lowery has not yet contacted the respondents to obtain clarification but intends to do so (Lowery, Tr. 18722). Another survey will be taken by all three counties (Hippert, Tr. 19587-88; Bradshaw, Tr. 16952, 17022-23, 17348). Mrs. Lowery can check any particular responses or nonresponses of concern to her at that time.

498. Miss Lowery's concerns regarding traffic congestion along the evacuation route arise from her apparent [unfounded] assumption that such congestion would be unanticipated or would somehow render a planned

evacuation ineffective (Lowery, Tr. 18711-13), and a misunderstanding of the time frame within which it is anticipated that an evacuation would be accomplished (Lowery, Tr. 18758-59). The Board regards both misconceptions as immaterial [irrelevant] (Proposed Findings 18, 28, 38-39).

Borough of Phoenixville

499. The Staff adopts and incorporates Applicant's proposed finding 499.

500. Some of Mrs. August's prior statements raise doubts as to her knowledge of planning for Phoenixville. For example, she has publicly questioned whether \$5,000 worth of equipment contributed to Phoenixville by Applicant for emergency preparation would be adequate, but has not discussed the equipment with the Phoenixville emergency coordinator (August, Tr. 18928 [18929]-30; Appl. Exh. E-97). Nor did Mrs. August attempt to resolve any other outstanding concerns with the Phoenixville coordinator (August, Tr. 18931) or representatives of Energy Consultants, Applicant or Chester County DES (August, Tr. 18971-72). Only one other council member has allegedly expressed concerns similar to those of Mrs. August, and those concerns related solely to the adequacy of the evacuation routes (August, Tr. 18909-10).

501. The Staff adopts and incorporates Applicant's proposed finding 501.

502. With regard to senior citizens in the community, the Board likewise finds no basis for her assumption that a large number of ambulances would be required (August, Tr. 18881, 18882-84). Mrs. August was unfamiliar with the borough's list of transportation-dependent and

special needs residents identified by the Chester County survey and could not state whether particular individuals of concern to her were included in the list (August, Tr. 18933-34; Appl. Exh. E-33, pp. F-1, G-1). Further, her reference to a few wheelchair residents in a senior citizen apartment house does not demonstrate any deficiency in the plan (August, Tr. 18883). Persons in wheelchairs frequently travel by automobile and it is quite possible that those individuals have made prior arrangements with friends or families. Even if necessary, it would be a simple matter to survey the 50 apartments in that building to confirm the accuracy of this data (August, Tr. 18883, 18938). In short, Mrs. August's concern regarding the need for more ambulances than those listed in the Phoenixville plan is speculative (August, Tr. 18941-42).

503. The Staff adopts and incorporates Applicant's proposed finding 503.

504. The Staff adopts and incorporates Applicant's proposed finding 504.

505. The Staff adopts and incorporates Applicant's proposed finding 505.

506. The Staff adopts and incorporates Applicant's proposed finding 506.

507. Mrs. August expressed concerns regarding the possible contamination of Phoenixville water supplies in the event of an accident at Limerick. The Board believes that the generic concern among all Schuylkill users would be addressed by Commonwealth planning authorities such as PEMA, the Bureau of Radiation Protection and Department of Environmental Resources. Mrs. August stated a willingness to resolve

her concerns with those agencies (August, Tr. 18965-66 [18966]).

Accordingly, the Board believes that concerns regarding possible contamination of Phoenixville water supplies will not affect adoption of its plan.

508. The Staff adopts and incorporates Applicant's proposed finding 508.

509. The Staff adopts and incorporates Applicant's proposed finding 509.

Skippack Township

510. Michael Giamo is a supervisor on the Board of Supervisors for Skippack Township (Giamo, Tr. 19068). While Mr. Giamo stated generally that no progress has been made in the ability of Skippack Township to provide for its transportation-dependent individuals (Giamo, Tr. 19082), the plan states that Skippack Township has requested two buses and that Montgomery County has identified and will meet that transportation need (Appl. Exh. E-3, p. I-3-3; Appl. Exh. E-20, p. 0-1). Similarly, the unmet need for traffic control point personnel has been passed on to [onto] Montgomery County (Appl. Exhs. E-3, p. Q-1-1; Appl. Exh. E-20, p. 0-1). Mr. Giamo did not appear to understand the planning process by which unmet needs at the township level are passed on to [onto] the county for satisfaction (Giamo, Tr. 19110; Proposed Finding 400).

511. The Staff adopts and incorporates Applicant's proposed finding 511.

512. The Staff adopts and incorporates Applicant's proposed finding 512.

513. The Staff adopts and incorporates Applicant's proposed finding 513.

514. The Staff adopts and incorporates Applicant's proposed finding 514.

515. The Staff adopts and incorporates Applicant's proposed finding 515.

516. The Staff adopts and incorporates Applicant's proposed finding 516.

517. The Staff adopts and incorporates Applicant's proposed finding 517.

518. Mr. Giamo initially asserted that assignments for traffic control points in Skippack Township have not been resolved (Giamo, Tr. 19082). He later acknowledged that township fire police have volunteered to man traffic control points as stated in the township plan (Giamo, Tr. 19123-24; Appl. Ex. E-20, p. 15).

519. The Staff adopts and incorporates Applicant's proposed finding 519.

Conclusion

519a. The Board has previously addressed South Coventry Township with respect to this contention (see Proposed Finding 483) and thus finds no need to address here. For the remaining risk counties, municipalities, school districts and institutions, the Board finds, based on the whole record, that the plans in contention have been sufficiently developed so that there is reasonable assurance that the present state of planning is predictive of final approval. Moreover, we find there is reasonable

assurance that the plans can be implemented by either the municipality or the appropriate county.

2. Bucks County

LEA-3

The Montgomery County RERP fails to provide reasonable assurance that the public will be adequately protected in that the Bucks County Support Plan, which is essential to the workability of the MontCo RERP, may not be approved. The present Board of Commissioners have [sic] little knowledge of the contents and implications of the Bucks County Support Plan. There is no assurance that the County will assume the responsibilities assigned to it in the Support Plan, rather than use County resources to help Bucks County people first. The Montgomery County Plan relies on the Support Plan in at least these ways:

1. facilities for relocation and mass care of evacuees;
2. augmentation of emergency workers, including use of county resources, on a continuous 24 hour basis;
3. See attachment "Excerpts and comments on the Bucks County Draft Evacuation Plan" for additional areas of support and interface.

It is contended that without the approval of Bucks County Support Plan, the MontCo RERP is unworkable as it now stands.

519b. In our April 20, 1984 Special Prehearing Conference Order, this Board deferred ruling on the admissibility of LEA-3. While we agreed that LEA's concerns that the responsibilities Bucks County agreed to fulfill for Montgomery County in the event of a radiological emergency might, if not performed, leave a deficiency in the Montgomery County plan, this Board did not, by then admitting the contention, want to burden this proceeding with unnecessary litigation if the Bucks County RERP were subsequently adopted. (LBP-84-18, 19 NRC 1020, pp. 1041-44).

However, that plan was not adopted in the interim, and in response to this Board's August 15, 1984 Memorandum and Order LEA reworded and resubmitted this deferred contention for reconsideration. In support of its contention, LEA appended a July 17, 1984 letter from the Bucks County Commissioners to PEMA which sets forth the County's reservation about its role in the emergency planning for Limerick. In light of Bucks County's stated concerns, this Board admitted LEA-3 for litigation. (Memorandum and Order dated September 24, 1984 at p. 5).

520. Bucks County has maintained an emergency plan for at least 15 years. An annex to the plan addresses preparedness for radiological emergencies (McGill, Tr. 20365). At the time of the Three Mile Island accident in 1979, Bucks County assumed responsibility to receive and care for 15,000 evacuees. Although contacted on Sunday morning, plans were in effect by Monday afternoon to accommodate 15,000 potential evacuees from the Lancaster County area (McGill, Tr. 20366-67; Taylor, Tr. 19584-19585).

521. The Bucks County Fixed Nuclear Facility Incidents Support Plan, [support plan], which was identified as Applicant's Exhibit E-4 dated October 1984, could be implemented in the event of a radiological emergency at Limerick so as to accommodate evacuees from Montgomery County. In order to respond to such an emergency, Bucks County would utilize the current draft plan (McGill, Tr. 20367-20369, 20410-02).

522. The Staff adopts and incorporates Applicant's proposed finding 522.

523. The Bucks County Commissioners are withholding formal action on their support plan while awaiting the outcome of the evidentiary

hearing before this Licensing Board as well as litigation in Bucks County regarding the construction of the Point Pleasant Pump Station (McGill, Tr. 20381). [Thus, it appears that primarily political considerations must be resolved prior to formal adoption of the plan.] In the interim, there is no reason why Bucks County emergency planning officials cannot rely upon the unadopted plan as a basis for responding to any radiological emergency at Limerick (McGill, Tr. 20400-[01]02).

524. The Staff adopts and incorporates Applicant's proposed finding 524.

525. The Staff adopts and incorporates Applicant's proposed finding 525.

526. The Staff adopts and incorporates Applicant's proposed finding 526.

527. The Staff adopts and incorporates Applicant's proposed finding 527.

528. The Staff adopts and incorporates Applicant's proposed finding 528.

529. A meeting was held on November 7, 1984 between PEMA Director John Patten and Commissioner Carl Fonash of the Bucks County Board of Commissioners Tr. 19526). To memorialize their discussions, Mr. Patten prepared a memorandum of understanding, which he signed and sent to Commissioner Fonash. In the memorandum, PEMA recognized some of Bucks County's concerns and stated its willingness to work with Bucks County to resolve or eliminate those concerns (Hippert, Tr. 19529, 19532; LEA Exh. E-61). The Memorandum of Understanding prepared by PEMA to record discussions in the November 7, 1984 meeting between Bucks County and

PEMA accurately reflects the discussion and agreement that took place at that time (McGill, Tr. 20380-81). However, no action has been taken by the Bucks County Commissioners on this Memorandum of Understanding (McGill, Tr. 20380).

530. From the perspective of PEMA, the Bucks County Commissioners' concern that emergency planning should include residents of Bucks County residing from 15 to 30 miles beyond Limerick results largely from a lack of communication and understanding (Hippert, Tr. 19535). At this point, the Bucks County Commissioners have not indicated to PEMA its decision regarding what, if any, measures it might choose to implement to protect Bucks County residents in the event of a radiological emergency (Hippert, Tr. 19545). [PEMA staff who reviewed the October 1983 draft of the Bucks County support plan considered it to be a very excellent plan suitable for use as a model by other counties (Hippert, Tr. 19584).] PEMA believes that Bucks County has the resources and expertise to meet the requirements of Annex E and NUREG-0654 as a support county (Hippert and Taylor, Tr. 19585).

531. William H. Reiser, the Chief Clerk and County Administrator of Bucks County, supervises all operating departments under the County Commissioner's jurisdiction, including the Bucks County Department of Emergency Services, however, he was unfamiliar with the draft support plan for Bucks County (Reiser, Tr. 18264-65, 18267; Appl. Exh. E-4). [LEA withdrew its proffer of testimony by the Chairman of the Bucks County Commissioners.] Charles McGill, the Director of Emergency Services for Bucks County (McGill, Tr. 20363) did in fact testify as to his review and development of the Bucks County support plan. [Therefore, the Board has given relatively

little weight to Mr. Reiser's hearsay statements of the concerns expressed by some of the Bucks County Commissioners.]

532. The Bucks County Commissioners have not assigned Mr. Reiser any particular responsibilities with regard to emergency planning (Reiser, Tr. 18286). Mr. Reiser was not familiar with any meetings held between the Bucks County Commissioners and PEMA officials since the July 25, 1984 exercise regarding the Bucks County support plan (Applicant's Exh. E-4). The Commissioners have not given any direction to Mr. Reiser with regard to particular plan procedures, or discussed their views with regard to particular plan procedures, or discussed their views with regard to reviewing adopting a final draft of the Bucks County support plan (Reiser, Tr. 18296-97, 18306-07). As regards the letter dated July 17, 1984 from two Bucks County Commissioners to PEMA, Mr. Reiser edited drafts of the letter at the request of the Bucks County Commissioners, but he did not know the source of the draft provided to him, and he had had no discussions with either Commissioner prior to sending the letter. His knowledge of the matter was limited to the content of the letter itself (Reiser, Tr. 18301, 18308).

533. Nonetheless, Mr. Reiser acknowledged that the Bucks County Board of Commissioners supports helping its neighbors in times of emergency and will try to adopt a plan based upon what they regard as reasonable concerns (Reiser, Tr. 19302-03, 18325, 18344). The Commissioners have never stated that they would be unwilling to consider a workable support plan for Bucks County (Reiser, Tr. 18309).

534. Mr. Reiser, who is the supervisor of the Director of Emergency Services (Reiser, Tr. 18265), testified that Mr. McGill is professionally

competent and has adequately performed his responsibilities. Both Mr. Reiser and the Bucks County Commissioners would look to Mr. McGill with regard to his opinions and judgment as to the adequacy of emergency planning for Bucks County (Reiser, Tr. 18315).

Conclusion

534a. Based on the evidentiary record before us, this Board has reasonable assurance that, in the event of a radiological emergency at the Limerick Generating Station, Bucks County would implement its RERP and perform its support function of Montgomery County.

IV. CONCLUSIONS OF LAW

In reaching this decision, the Board has considered all the evidence submitted by the parties and the entire record in this proceeding on the offsite emergency planning issues. Based upon a review of that record and the foregoing Findings of Fact, which are supported by reliable, probative and substantial evidence, the Board, with respect to the issues in controversy before us, Concludes that:

1. the emergency plans meet the requirements of 10 C.F.R. § 50.47, and Appendix E to 10 C.F.R. Part 50, as well as the criteria of NUREG-0654, and provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

2. the issuance of operating licenses to the Applicant, as conditioned in the Order, will not be inimical to the common defense and security or to the health and safety of the public, and

3. pursuant to 10 C.F.R. § 2.760a and 10 C.F.R. § 50.57, that the Director of Nuclear Reactor Regulation is authorized to issue to the Applicant, upon making requisite findings with respect to the matters not embraced in this Third Partial Initial Decision, licenses authorizing

operation of Limerick Generating Station, Units 1 and 2, subject to the satisfaction of the conditions set forth in the Order.

V. ORDER

Wherefore, It is Ordered, in accordance with 10 C.F.R. § 2.760a and 10 C.F.R. § 50.57, that the Director of Nuclear Reactor Regulation is authorized to issue to the Applicant, upon making requisite findings with respect to matters not embraced in this Third Partial Initial Decision, the licenses authorizing the operation of Limerick Generating Station, Units 1 and 2 provided that the following conditions are met following the initial issuance of an operating license.

1. FEMA shall receive verification of the satisfaction of the unmet municipal staffing needs as they relate to a capability of continuous 24-hour operation during a radiological emergency, prior to operation above 5% rated power.

2. FEMA shall determine the existence of an adequate capability by school districts to evacuate the school children, prior to operation above 5% rated power.

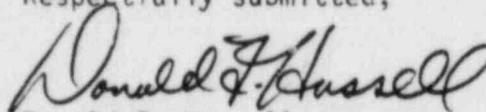
3. FEMA shall receive verification to its satisfaction that Chester County in conjunction with PEMA can perform those actions necessary, i.e., see Proposed Finding 483, to protect the health and safety of the residents of South Coventry during a radiological emergency, prior to operation above 5% rated power.

In accordance with 10 C.F.R. § 2.764, this authorization will not become effective pending the decision of the Commission upon its review to determine whether our Third Partial Initial Decision should become immediately effective. Pursuant to 10 C.F.R. § 2.760(a) of the Commission's Rules of Practice, this Third Partial Initial Decision will

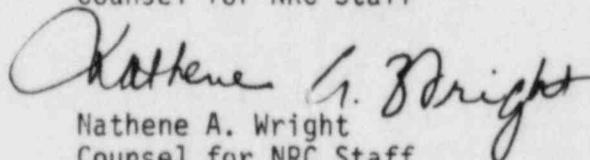
constitute the final decision of the Commission forty-five (45) days from the date of issuance, unless an appeal is taken in accordance with 10 C.F.R. § 2.762 or the Commission directs otherwise. (See also 10 C.F.R. §§ 2.764, 2.785 and 2.786).

Any party may take an appeal from this decision by filing a Notice of Appeal within ten (10) days after service of this decision. Each appellant must file a brief supporting its position on appeal within thirty (30) days after filing its Notice of Appeal (forty (40) days if the Staff is the appellant). Within thirty (30) days after the period has expired for the filing and service of the briefs of all appellants, (forty (40) days in the case of the Staff), a party who is not an appellant may file a brief in support of or in opposition to the appeal of any other party. A responding party shall file a single, responsive brief regardless of the number of appellant's briefs filed. (See 10 C.F.R. § 2.762(c)).

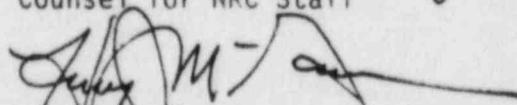
Respectfully submitted,



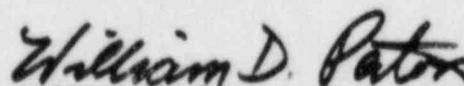
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William D. Paton
Counsel for NRC Staff

Dated in Bethesda, Maryland
this 7th day of March, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

NOTICE OF APPEARANCE

Notice is hereby given that the undersigned attorney herewith enters an appearance in the captioned matter. In accordance with §2.713(a), 10 C.F.R. Part 2, the following information is provided:

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Name of Party:	U.S. Nuclear Regulatory Commission Staff Washington, D.C. 20555

William D Paton
William D. Paton
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 7th day of March, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW IN THE FORM OF A PARTIAL INITIAL DECISION RELATING TO OFFSITE EMERGENCY PLANNING CONTENTIONS" and "NOTICE OF APPEARANCE" (for W. D. Paton) in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or as indicated by an asterisk through deposit in the Nuclear Regulatory Commission's internal mail system, or as indicated by a double asterisk by hand-delivery, this 7th day of March, 1985:

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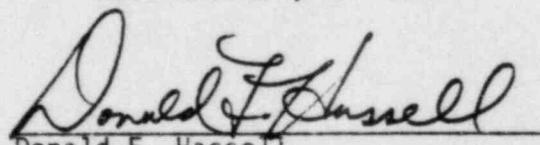
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555*

Atomic Safety and Licensing Appeal
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Docketing and Service Section
Office of the Secretary
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