

BOSTON EDISON COMPANY REPORT  
ON THE STATUS OF OFFSITE  
EMERGENCY PREPAREDNESS AROUND  
PILGRIM NUCLEAR POWER STATION

Nuclear Reactor Regulation  
Staff Meeting

October 5, 1988

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## I. INTRODUCTION

By letter dated September 26, 1988, the Nuclear Regulatory Commission (NRC) Staff requested that Boston Edison Company provide a written report describing our current state of knowledge concerning the status of: (1) the offsite emergency preparedness program around Pilgrim Nuclear Power Station (Pilgrim); and (2) the issues identified by the Federal Emergency Management Agency (FEMA) in its August, 1987 "Self-Initiated Review" (SIR). A copy of the Staff's letter is included as Attachment A to this report.

The purpose of this document is to provide the written report requested by the Staff. Section II provides an overview of the efforts made to enhance the offsite emergency response program to date. Section III addresses the actions taken to address the specific "SIR" issues. Section IV provides a brief conclusion.

An extensive effort has been underway to upgrade the offsite emergency response program around Pilgrim Station. That effort has involved all of the parties responsible for the offsite program for Pilgrim. Those parties include the Commonwealth of Massachusetts, the five towns in the Pilgrim plume exposure pathway emergency planning zone (EPZ) (the Towns of Plymouth, Kingston, Carver, Marshfield and Duxbury), and the two reception center communities of Taunton and Bridgewater. Though offsite emergency response is primarily the responsibility

of the Commonwealth and the local governments, Boston Edison Company has provided extensive assistance in the emergency planning effort.

As discussed in more detail below, a great deal of progress has been made in upgrading the state of offsite emergency preparedness around Pilgrim Station. This progress has been explicitly recognized by FEMA. In letters dated March 30, 1988 to Governor Dukakis and Mr. Robert Boulay (Director of the Massachusetts Civil Defense Agency and Office of Emergency Preparedness) (MCDA), FEMA stated that "some outstanding improvements are now underway in the PNPS emergency plans" and that "[i]t is gratifying ... to observe the progress ... made in the past year toward achieving an off-site plan that will provide reasonable assurance that the public health and safety will be protected ...."

We believe that the significant progress achieved to date is due, in some measure, to our recognition that the offsite emergency response program "belongs" to the Commonwealth and the towns, and that our legitimate role is to provide assistance in improving and maintaining their offsite program. Accordingly, it is important to stress that the views presented in this report are those of Boston Edison, and that we are not speaking on behalf of either the Commonwealth or the towns.

Boston Edison recognizes that the effort to improve the Commonwealth and local government emergency response program is not complete. We are, however, committed to providing continued assistance to further enhance and maintain the offsite program.

## II. OVERVIEW OF THE OFFSITE EMERGENCY RESPONSE PROGRAM ENHANCEMENT EFFORT

This section of the report summarizes the basic improvements to the offsite emergency response program made by the Commonwealth, the towns and Boston Edison, including: (1) management changes; (2) enhanced plans; (3) new implementing procedures; (4) implementation of a new training program; (5) a revised and updated ETE; and (6) numerous forms of technical and financial assistance provided by Boston Edison.

In 1987, Boston Edison made a number of changes in its executive management and emergency planning organization, including the hiring of Mr. Ralph G. Bird as Senior Vice President-Nuclear. Mr. Bird was formerly a rear admiral in the U.S. Navy and has served as commanding officer of a nuclear submarine, senior member of the Pacific Fleet Nuclear Propulsion Examining Board, and chief of staff of the Pacific Submarine Force.

Shortly after joining the Company, Mr. Bird hired Mr. Ronald A. Varley as his Special Assistant for Emergency Planning. Mr. Varley, who is now Manager of Boston Edison's Emergency Preparedness Department, previously served as Emergency Preparedness Manager at the Davis-Besse Nuclear Power Station. In that capacity he oversaw major revisions of the onsite and offsite emergency preparedness programs. Mr. Varley also spent five years as an emergency planning consultant for various utilities, and three years at Westinghouse Hanford's Fast Flux

Test Facility as Operations Engineer, Training Instructor for Operator Certification and Site Emergency Preparedness Coordinator. Before that, Mr. Varley served for nine years in the Naval Nuclear Propulsion program.

Since the summer of 1987, we believe that the relationship between the Company, the Commonwealth and the EPZ and reception center towns has improved significantly. Since that time, Boston Edison has been engaged in a comprehensive program of assistance to the Commonwealth and local governments. A team of 20 to 30 Boston Edison employees and professional emergency planning consultants has been working full time in an effort to assist the Commonwealth and local governments in upgrading the offsite program. Planners have been dedicated to each of the five EPZ and two reception center towns and to the MCDA Area II and Framingham offices. The planners have, since the summer of 1987, been working on a day to day basis with local and MCDA Area II emergency response officials. Boston Edison has spent about \$10 million in its assistance efforts since August, 1987 and expects to spend an additional \$5 million in 1989.

In addition, MCDA has hosted weekly staff meetings since July, 1987. These meetings have been regularly attended by local Civil Defense Directors, other town representatives and Boston Edison personnel, and have been a forum for discussion of local and State planning issues and developments. Periodic meetings have also been held between senior management-level

Commonwealth and Boston Edison officials in order to assure that efforts in improving the emergency plans are properly coordinated. The results of this effort are significant.

Drafts of revised emergency response plans for all seven towns and for MCDA Area II have been prepared through close cooperation between the responsible governmental officials and the professional planners. These plans were prepared and structured in accordance with NUREG-0654. Local Civil Defense Directors and other responsible town officials have been intimately involved in their preparation. Moreover, all seven towns have submitted drafts of their plans to the Commonwealth for transmittal to FEMA for informal review. On September 23, 1988, Mr. Boulay, the Director of MCDA, forwarded the draft Area II plan to FEMA for informal technical review as well.

FEMA provided the results of its review of the first group of draft plans it received (the Plymouth, Kingston, Carver and Taunton plans) on March 30, 1988. 1/ FEMA's March 30 letter stated that subject to review of additional planning documents and a suggestion for more detail in the reception community plans:

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1/ Letter, Edward A. Thomas to Robert Boulay (March 30, 1988). FEMA's March 30 letter stated that "[s]ince the plans submitted are generic for the EPZ communities, and are so nearly identical, further submission of EPZ community draft plans would serve no useful purpose at this time." With Boston Edison's assistance, each of the local draft plans was crafted with a consistent, parallel format and substance, in accordance with NUREG-0654 criteria.



We believe some outstanding improvements are now underway in the PNPS emergency plans. 2/

FEMA's March 30 letter enclosed detailed "technical review" documents which rated specific portions of the draft plans. In the Town of Kingston, for example, of 90 items evaluated, only seven were rated by FEMA as "inadequate." Even those seven items, however, did not identify significant errors or deficiencies in the draft plans themselves but, instead, pointed out that various supporting documents had not yet been provided or reviewed (e.g., implementing procedures, letters of agreement). Virtually identical comments were received on the Carver, Plymouth, Duxbury, Bridgewater and Taunton Draft plans as well. In response to FEMA's input, plan revisions incorporating changes based on FEMA's comments have been prepared in each of the towns and most of the supporting documents have been included in subsequent submittals to FEMA by the towns of Marshfield, Taunton and Bridgewater.

In addition, the Town of Bridgewater has submitted a document to the Commonwealth entitled "Corrective Action Response to Technical Review of the Town of Bridgewater Radiological Emergency Response Plan for Pilgrim (Revision 4, March, 1988)" (Bridgewater CAR) which describes, in detail, how each of FEMA's comments were addressed in the new Bridgewater plan revision.

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2/ FEMA's subsequent informal reviews of the draft Bridgewater and Duxbury plans reiterated this statement. Letter, Edward A. Thomas to Robert Boulay (August 3, 1988); Letter, Edward A. Thomas to Robert Boulay (August 8, 1988). The draft Marshfield plans are presently under FEMA review and the MCDA Area II plan was just recently submitted.

The Bridgewater CAR indicates that 53 FEMA comments on the draft Bridgewater plan required "no action"; 18 required submittal of supporting procedures or documentation; 17 required plan wording changes; and 7 required minor plan concept changes. No comments requiring major plan concept changes were identified.

In addition to the Town of Bridgewater, the City of Taunton has submitted to the Commonwealth a "Corrective Action Response" to FEMA's comments. That response indicates that 56 FEMA comments required "no action"; 16 required submittal of supporting procedures or documentation; 13 required plan wording changes; and 8 required minor plan concept changes. No comments requiring major plan concept changes were identified. Similar Corrective Action Responses are being prepared in the other towns. 3/

Thus, while the draft plans have not yet been formally approved by the towns, they were prepared in close cooperation with local officials. All have been authorized by Town Selectmen or Mayors for transmittal to FEMA for informal technical review, and all but one have been reviewed by FEMA. Revisions to each of the draft plans reflecting FEMA's informal review comments have been made. Complete drafts of the Commonwealth and Area II plans have also been prepared, through a cooperative effort between

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3/ Marshfield has not yet received FEMA's informal comments on its draft plan so no Corrective Action Response has been prepared for the Marshfield plan.

Commonwealth and Boston Edison planners. The Area II plan draft was recently forwarded to FEMA for informal technical review as well.

In addition to the plans themselves, hundreds of detailed draft implementing procedures for responsible officials and emergency workers in all seven towns and MCDA Area II have been prepared in close cooperation with local officials and agency heads. Drafts of facility specific procedures have been prepared for each school, licensed daycare center, nursing home or other special facility in the EPZ.

The implementing procedures contain detailed checklists of actions to be taken by responsible persons under each of the possible emergency classifications. The checklists carefully prioritize and specify individual responsibilities. Complete procedure packages for the Towns of Marshfield and Bridgewater, and the City of Taunton have been forwarded to the Commonwealth with requests to transmit the documents to FEMA for informal technical review. 4/ The Marshfield and Taunton packages were recently forwarded by the Commonwealth to FEMA.

Along with the procedures, tables of cross-references, identifying the specific portions of the draft plans and the specific steps in the implementing procedures which address each

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4/ Letter, Robert C. Spearin to Robert J. Boulay (August 15, 1988); Letter, Frank Maher to Robert J. Boulay (September 21, 1988); Letter, Daniel McGonagle to Robert J. Boulay (August 12, 1988).

of the criticisms in FEMA's SIR, have also been forwarded to the Commonwealth. 5/ The status of the SIR issues is discussed separately in section III of this report.

Development of the implementing procedures represents a significant accomplishment. They provide detailed, structured guidance which is integrated with the Commonwealth's response program. The new procedures will greatly assist the towns in performing effectively in the event of an emergency.

An entirely new training program is another important element of the effort to upgrade the Pilgrim offsite emergency preparedness program. On November 20, 1987, MCDA approved an overall training plan, which outlined the basic elements of the new training program. Since that time, over 100 training modules comprised of over 500 specific lesson plans have been prepared by the professional planners employed by Boston Edison. These training materials are designed to assist emergency response personnel in better understanding the specific tasks and responsibilities set forth in the detailed implementing procedures.

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5/ Similar cross-reference tables have been, or are being prepared, in the other towns. The tables cross-reference the plans and procedures to the SIR "subissues" identified in Boston Edison's September 17, 1987 "Action Plan and Schedule for Providing Assistance in Addressing FEMA Issues" (Action Plan). Since one of those subissues (Subissue F.2) cited unresolved issues from previous RAC and exercise reviews, Part II of the cross-reference tables shows how each of those unresolved issues has been addressed in the planning process.

Almost all of the training modules and lesson plans have been prepared, and training of emergency response personnel by Commonwealth certified instructors is well underway.

In addition to traditional classroom training, two additional tools have been developed that will further enhance the training effort. The first of these tools is the development of "Instructor's Guides" for the conduct of "hands-on" training of selected emergency workers. Instructor's Guides for the "hands-on" training of bus, van and ambulance drivers have been authorized by the Commonwealth for use in training, and are presently being utilized.

The hands-on training supplements the standard classroom training and enables participants to actively perform various key tasks associated with protection of several populations of special concern in the Pilgrim EPZ. Those populations are: (1) schools and daycare centers; (2) special needs population; and (3) persons who are transportation dependent. The key tasks which participants in the program are performing include receipt of dosimetry and driver or EMS crew information kits; use of dosimetry and route maps; and travel to and from dispatch points, staging areas, nursing homes, EPZ schools, host schools and reception centers, as appropriate. During such training, the instructor reviews the applicable responsibilities of the emergency workers, and observes their ability to carry out those responsibilities.

The hands-on training enables participants to demonstrate proficiency in the course of the training, thereby providing a higher level of preparedness. In addition, unlike drills, which provide for the active participation of a relatively small number of persons, the hands-on training is being conducted on a much larger scale, thereby providing the opportunity for a large group of emergency workers to demonstrate their ability to perform key tasks. To date, eight hands-on training sessions have been conducted and eight additional sessions have been scheduled through mid-October.

The second tool used to supplement traditional classroom training will be the conduct of training drills. Boston Edison has been working to develop a detailed "drill program" that provides for the conduct of a series of specific tasks or "action-site" oriented drills.

In addition to our efforts to assist in the enhancement of plans, procedures and training, Boston Edison has undertaken a number of other significant initiatives to upgrade the offsite program. Boston Edison commissioned the development of an updated set of evacuation time estimates (ETE) to support the planning process. A final "Pilgrim Station Evacuation Time Estimates and Traffic Management Plan Update" (August 25, 1988) has been prepared by KLD Associates, Inc., a nationally recognized authority in the preparation of ETEs and traffic management analyses, and forwarded to the Commonwealth, the towns and the NRC. The August, 1988 ETE is based upon a state of the art

computer model (IDYNEV) which is approved by FEMA and conforms to NUREG-0654. The final ETE incorporates review comments by Commonwealth and local officials, as well as by police departments and other agencies that would be involved in traffic management activities in the event of an emergency at Pilgrim. Considerable comments were provided on the prior draft of the ETE from all of these sources during these reviews and have been factored into the ETE.

Boston Edison has also been engaged in funding and providing technical direction in the renovation of Emergency Operations Centers (EOCs) in all five EPZ towns, and the two reception center communities. Agreements providing for Boston Edison funding for such renovations have been entered into in all seven towns. Renovations have been completed in Taunton and Plymouth. Only non-operational items remain to be completed in Kingstons, Carver and Bridgewater. The Duxbury EOC construction effort should be completed shortly and the Marshfield EOC construction effort is scheduled for completion by the end of the year. Boston Edison is providing over \$2.5 million to renovate and equip these EOCs.

Finally, Boston Edison has entered into agreements to fund a full-time civil defense staff position in each of the seven towns for the operating life of Pilgrim. Also, comprehensive grant agreements entered into with each of the towns provide, among other things, for additional emergency response

material assistance such as purchasing of communications and traffic control equipment. Boston Edison is also compensating emergency workers for their time spent in training.

The actions described above represent a brief overview of the scope, status and accomplishments of the effort to upgrade the Pilgrim offsite emergency response program. What should be clear is that the program revisions and improvements now underway are comprehensive, go well beyond correction of the specific problems identified in FEMA's SIR, and demonstrate our considerable commitment to the improvement and effective maintenance of the offsite program.



### III. ACTIONS TAKEN TO ADDRESS THE SIR ISSUES

FEMA's August, 1987 SIR identified "six areas of major concern." 6/ Boston Edison's September 17, 1987 "Action Plan" took each of those areas and identified a number of "subissues" which collectively comprise the six areas. The following section quotes each of the subissues as designated in the Action Plan and describes the actions taken to address each of those subissues.

Before doing so, however, it should be noted that, as mentioned earlier, the Towns of Marshfield and Bridgewater, and the City of Taunton have transmitted to the Commonwealth tables which cross-referenced their draft plans and procedures with the specific SIR issues, and similar tables are being prepared in the other towns. In particular, the cross-reference tables identify each SIR subissue, list the specific portions of the plans and procedures which address that subissue, and provide a brief summary of the cited plan and procedure provisions. The purpose of the cross-reference tables is to show how the FEMA concerns are being specifically addressed in the detailed implementing documents for the offsite program.

#### A. SIR Issue A. Evacuation of Schools

##### Subissue A.1 (SIR, p. 15)

"The 1985 version of the town plans for Plymouth, Duxbury, Carver, Kingston, and Marshfield are inadequate in that they do not identify all private schools and daycare centers within the plume exposure emergency planning zone."

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6/ SIR, p. 10.

The draft plans for each of the five EPZ towns now contain lists which identify the public schools, private schools and licensed daycare centers in the EPZ. <sup>7/</sup> These listings are also contained in the relevant draft procedures (typically in the School Superintendents' checklists) so that they will be readily available to the persons principally responsible for ensuring that appropriate protective actions are taken for the school and daycare facility populations. The school and daycare listings have been reviewed for accuracy by local civil defense officials, and the daycare listings have also been verified against information provided by the Commonwealth of Massachusetts Office for Children.

The plans and procedures developed to ensure that children and staff in these institutions are protected are discussed under Subissues A.2 and A.3 below. Letters of Agreement are discussed under Subissue A.4 and training is discussed under Subissue A.5.

Subissue A.2 (SIR, p. 15)

"Detailed plans and procedures ~~also~~ be developed for these institutions, identifying sufficient resources and arranging for the availability of these resources to evacuate children and staff in the event of an accident at Pilgrim."

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<sup>7/</sup> Registered, as opposed to licensed, daycare centers are not listed. Registered centers may not accept more than 6 children and are treated in the plans as part of the general population.

Draft plans and procedures have been developed for public and private schools and daycare centers to ensure that children and staff can be efficiently evacuated in the event of an emergency at Pilgrim. The draft plans contain provisions for: (1) notification of school principals and daycare center administrators of the emergency and of protective action recommendations; and (2) notification of school and daycare center staffs. At the "ALERT" classification level, buses will be dispatched to EPZ schools and daycare centers in preparation for a precautionary transfer of children to their designated host schools. An adequate number of buses will be provided to transport the children out of the EPZ in a single trip. 8/

Specific implementing procedures provide detailed direction and guidance to responsible emergency response personnel in carrying out the plans. Draft procedures developed for EOC transportation officials, school and day care center officials and staff, and transportation providers contain detailed checklists of actions to be taken under different scenarios. Facility-specific procedures have also been developed for each school and licensed daycare center.

In particular, draft procedures have been established for town officials (such as the local police department or Civil Defense Director) to notify school Superintendents of the emergency classification and protective action recommendations.

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8/ A more detailed discussion of the adequacy of bus resources to achieve this objective is provided under Subissue A.4.

The procedures established for school Superintendents provide, among other things, for: (1) notification of specific schools and daycare centers of the emergency classification and protective action recommendations; (2) obtaining transportation resource needs from each of the schools and daycare centers; (3) notification of the EOC transportation officer to prestage vehicles at assigned schools and daycare centers; and (4) instruction to schools and daycare centers to transfer children to host schools or to implement evacuation or sheltering. The Superintendents' procedures include "School Status Sheets" which identify each school or daycare center, primary and secondary contacts at those locations, size of enrollment and staff, and maximum number (and types) of transportation resources needed for each. Separate detailed draft procedures have been developed for Superintendents' staff to assist the Superintendents in carrying out their functions.

Separate draft facility-specific procedures for school principals specify, among other things, the actions to be taken to: (1) notify school staff of the emergency and protective action recommendations; (2) provide the Superintendent with the number and types of vehicles needed; (3) coordinate sign out of students picked up by parents; (4) assist in relocation, evacuation or sheltering of students; and (5) ensure accountability of children. "Transportation Needs Worksheets" for each school are provided to assist in determining specific transportation needs.

Individual draft procedures for each daycare facility have also been established which describe actions to be taken by the facility administrator similar to those established for school principals and for other facility personnel.

"Transportation Needs Worksheets" are provided, as with schools, to assist in determining specific needs.

Draft procedures for teachers provide checklists for: (1) ensuring accountability of students; (2) assisting in transporting students; (3) supervising students during relocation, evacuation or sheltering; and (4) releasing students to parents. Procedures have also been prepared for school nurses/health aides and school maintenance staff to assist, as appropriate, in the relocation, evacuation or sheltering process.

In addition to the school department and daycare facility procedures, specific draft procedures designate the responsibilities of: (1) local and/or school transportation officers (located at EOCs), and the MCDA Area II transportation officer, who respond to requests for supplemental vehicles from the Superintendent or other responsible official; and (2) supplemental vehicle providers (who dispatch vehicles). The "sufficiency" of the resources available is discussed under Subissue A.4 below.

In short, the process of notification, vehicle dispatch, and implementation of precautionary transfer or evacuation of children and staff at public and private schools and licensed daycare centers in the EPZ has been fully proceduralized and incorporated into the Pilgrim offsite planning program.

While not relevant to Subissue A.2, it should be noted that sheltering of the school and daycare center populations has also been proceduralized, and incorporated into the offsite program as an available option for protecting this segment of the public.

Subissue A.3 (SIR, p. 15)

"The Commonwealth's current position is that it will not use the vast state controlled bus resources of the MBTA and that it can no longer rely on ad hoc planning, at least during a fast breaking accident. Detailed plans and procedures must, therefore, be developed for the early dismissal and evacuation of each community's schools and daycare centers."

SIR Subissue A.3 first stated that the Commonwealth does not intend to use Metropolitan Boston Transit Authority (MBTA) resources in the event of an emergency at Pilgrim. However, in Commonwealth Secretary of Public Safety, Charles V. Barry's December 16, 1987 "Report on Emergency Preparedness for An Accident at Pilgrim Nuclear Power Station" (p. 13), the Commonwealth stated:

At least one finding of the Self-Initiated Review is based upon a misimpression by FEMA. In evaluating resources available for transport dependent people, FEMA contended that the Commonwealth would not use MBTA buses if they

are needed to assist an evacuation in the Pilgrim EPZ. In fact, the Commonwealth will endeavor to make these buses and all other public resources available to assist in emergency response if they are needed to supplement resources available in the more immediate vicinity of Pilgrim.

In a March 30, 1988 letter from FEMA to Governor Dukakis, 9/ FEMA stated that in order for the "plans [to utilize MBTA resources] to be acceptable, the specific resources and plans for their anticipated use would have to be detailed."

While it was useful for the Commonwealth to clarify the availability of MBTA vehicles as a backup resource, the current planning program does not rely on the availability of these resources. On the contrary, more than adequate resources exist, and are available, in the more immediate vicinity of Pilgrim Station. The sufficiency of such resources is discussed under Subissue A.4.

Subissue A.3 also stated that detailed plans and procedures must be developed for early dismissal and evacuation of schools and daycare centers. As discussed under Subissue A.2 above, draft plans and procedures have now been established for precautionary transfer of students and children at daycare facilities prior to any evacuation recommendation for the general public. Accordingly, detailed draft plans and procedures have been established to provide for the early transfer of students and children at daycare centers before any protective action recommendation for the general public.

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9/ Letter, Henry G. Vickers to Honorable Michael S. Dukakis (March 30, 1988).

Subissue A.4 (SIR, p. 15)

"Letters of Agreement with transportation providers not under direct control must be obtained."

In Subissues A.1-A.3 above, we addressed the plans and procedures for the protection of students and children at schools and daycare centers. In this Subissue, we will describe the program to ensure that sufficient resources are actually available to provide assurance that those plans and procedures can be effectively implemented.

In order to identify the scope of the "need" for vehicles by schools and daycare centers, professional planners provided by Boston Edison personally contacted school districts and daycare facilities in the EPZ to identify the size of their enrollments. For planning purposes, it was conservatively assumed that in an emergency, 100% of the enrolled students or children would be in attendance. Information was next obtained on the number of children that could be accommodated in an individual bus. In order to calculate the maximum number of buses that would be needed, the bus capacity number provided by the school districts for elementary schools (65 children per bus), and for junior and senior high school students (44 children per bus) were utilized. The elementary school bus capacity number of 65 children was also used for daycare centers. In addition, for small schools and daycare centers, vans have been identified for use, rather than buses. The maximum total "need"



was estimated in this way at about 313 buses and 26 vans, and assumes that each vehicle will make only a single pickup of children.

For planning purposes there are two general types of transportation providers: (1) those owned by or under existing contracts with schools or daycare centers to provide day-to-day transportation services (i.e., those under "direct control"); and (2) "supplemental" providers that would provide additional resources, as necessary, in an emergency. Subissue A.4 stated that Letters of Agreement (LOAs) for the provision of emergency assistance must be obtained only with those "not under direct control", and, therefore, it is not necessary to enter into separate agreements with contract carriers. Nevertheless, even those transportation providers that are under existing contracts with the schools have signed separate agreements to provide vehicles for the evacuation or transfer of school students and children at daycare centers in the event of an emergency. 10/

While the maximum total "need" for school and daycare facility transportation services is about 313 buses and 26 vans, agreements have been signed by providers representing over 1,100 buses and 147 vans. 11/ Thus, transportation providers have

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10/ These agreements have been signed by the providers and forwarded to the Commonwealth for signature.

11/ Many of these resources will also be used to provide transportation assistance to mobility-impaired persons and the transportation-dependent population. Thus, Boston Edison recognizes that any assessment of the adequacy of available transportation resources should take into account all three  
(footnote continued)

signed formal agreements that control resources in excess of the maximum estimated total need. More than sufficient resources will therefore be available to transport school and daycare center populations.

Subissue A.5 (SIR, p. 15).

"Personnel designated to drive vehicles during an evacuation must also receive proper training as emergency workers."

In accordance with the overall training plan approved by MCDA on November 20, 1987, training modules have been prepared and approved by MCDA which contain specific lesson plans directed at bus and van drivers (as well as liftvan and ambulance drivers). Driver training includes specific lessons on:

- (1) "Introduction to Radiation", which discusses basic principles of radiation;
- (2) "Introduction to Emergency Response", which provides an overview of the overall offsite program;
- (3) "Introduction to Transportation", which familiarizes drivers with the basic response activities performed by transportation providers;
- (4) "School Van/Bus Driver"; and
- (5) "Dosimetry."

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(footnote continued from previous page)

of these segments of the population. In this subsection, the planning basis for calculating the transportation needs of the school and daycare center populations was summarized. Similar summaries are presented for the mobility impaired and transportation dependent populations in the context of SIR Issues D and E below. A table (Table III-I) summarizing the "needs versus available resources under LOA" for each of these segments of the community is included at the end of this Section, and shows that the available transportation resources exceed the combined need by an ample margin.

The "School Van/Bus Driver" lesson plan (which is based upon the drivers' implementing procedure) provides drivers with an understanding of the system utilized to coordinate transportation needs, familiarizes drivers with their prepackaged information kits (maps and written directions) and most importantly, instructs drivers on specific response actions they should take at the various emergency classification levels. The "Dosimetry" lesson plan instructs drivers in the purpose and use of dosimetry, exposure limits for emergency workers, methods for obtaining and returning dosimetry, and use of potassium iodide (KI) (even though current plans call for drivers to make only a single trip at the "ALERT/SITE AREA EMERGENCY" stage before leaving the EPZ). Training in dosimetry provides flexibility to permit, on an ad hoc "as needed" basis, additional trips into the EPZ.

As discussed earlier in Section II (pp. 11-12), apart from traditional classroom training, bus and van drivers (as well as liftvan and ambulance drivers) are receiving special attention, through the use of "hands-on" training techniques developed by Boston Edison's professional planners and approved for use by the Commonwealth. Training of bus and van drivers is well underway. To date, over 450 bus drivers have received full classroom training.

Finally, a "one-lift" transfer plan has been developed at Pilgrim, which will be implemented at the "SITE AREA EMERGENCY" stage. This means that school children and their bus

drivers will have been transferred from the EPZ before the need to evacuate materializes. Nevertheless, school bus drivers participating in the Pilgrim one-lift plan are and will continue to receive training based upon the lesson plans described above (which include training for dosimetry and KI use).

B. SIR Issue B. Reception Center

Subissue B.1 (SIR, p. 19)

"[A] new reception center must be found to replace Hanover."

At the time that the SIR was issued, the existing offsite emergency program utilized the Taunton State Hospital and Bridgewater State College as reception centers for persons evacuating from the EPZ. The Hanover Mall had previously been designated as a third reception center, but was no longer available for that purpose.

Boston Edison's September 17, 1987 "Action Plan" stated that an evaluation of the feasibility of using the two existing reception centers would be undertaken. On December 23, 1987, Boston Edison transmitted to the Commonwealth, the NRC and local officials a report entitled "Reception Center Feasibility Analysis", which assessed the capability of the Taunton and Bridgewater facilities to monitor the population for contamination in the Pilgrim EPZ in accordance with applicable federal guidance. 12/ While the report addressed other aspects of

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12/ Letter, Ronald A. Varley to Peter Agnes, Jr. (December 23, 1987).

reception center operations, the primary purpose of the analysis was to determine whether the objective of that guidance could be achieved using two, rather than three, reception centers.

The analysis summarized in the report was conducted by planners provided by Boston Edison, in coordination with Taunton and Bridgewater officials, and concluded that the Taunton and Bridgewater facilities (with appropriate improvements and equipment procurement) would have the capability of monitoring the requisite number of persons evacuating from the EPZ in the event of an emergency at Pilgrim. While there have since been some minor changes in some of the specific logistics, the conclusions of the analysis remain valid.

Apparently, on February 17, 1988, the Commonwealth submitted the Reception Center Feasibility Analysis to FEMA, which subsequently concluded in its informal technical review comments on the draft Taunton and Bridgewater plans that:

The Reception Center Feasibility Analysis . . . adequately addresses [the capability to monitor and register evacuees in a 12-hour period]. 13/

Boston Edison has committed to undertake facility improvements and equipment procurement as soon as the arrangements with the Commonwealth are concluded. 14/

13/ FEMA Technical Review - City of Taunton Radiological Emergency Response Plan for Pilgrim (Revision 3, 11-14-87), dated March 29, 1988 at 9; FEMA Technical Review-Town of Bridgewater Radiological Emergency Response Plan for Pilgrim (Revision 4, March 1988), dated July 27, 1988 at 10.

14/ The Commonwealth has proposed that the Massachusetts Department of Public Works facility in the Town of Wellesley  
(footnote continued)

Subissue B.2 (SIR, p. 19)

"[P]lans and procedures must be developed to register and monitor evacuees."

Detailed draft plans and procedures have been developed in support of the full scope of activities of the two existing reception centers. Provisions for the registration and monitoring of evacuees at the reception centers are a central element of those plans and procedures. The draft plans contain provisions governing personnel and vehicle monitoring and personnel registration, as well as provisions covering other aspects of reception center operations.

Specific draft procedures contain detailed direction and guidance to reception center managers, monitoring and decontamination team leaders, personnel group leaders, vehicle group leaders, monitoring personnel, recording personnel, registration coordinators, registration workers and others. Personnel and vehicle traffic diagrams and facility layouts are included in the procedures for both reception centers, showing the locations for registration, monitoring and other activities.

The draft procedures for the Reception Center Managers address, among other things: (1) activation of the reception center upon notification of the "SITE AREA EMERGENCY" classification from the local EOC representative; and (2) set up of the

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be used as a third reception center. Boston Edison has expressed its willingness to assist the Commonwealth in this effort should it designate the Wellesley facility as a third reception center.

registration area and monitoring stations. The procedures for the monitoring and decontamination team leaders provide instructions for the supervision of monitoring and decontamination activities. These include, among other things: (1) assembling monitoring personnel; (2) assigning responsibilities; (3) distributing and verifying compliance with specific checklists for individual team members; and (4) responding to specific problems. A detailed checklist for completing the registration form and the registration form itself are also included. Accordingly, detailed draft plans and procedures have now been developed to monitor and register evacuees.

C. SIR Issue C. Beach Population

Subissue C.1 (SIR, p. 26)

"FEMA and the RAC . . . must receive the following additional information:

- (1) an updated geographical description of the beaches and their capacity;"

By letter dated October 26, 1987, Boston Edison transmitted to the Commonwealth and to the NRC a report entitled "Pilgrim EPZ Public Beach Population Analysis" (October 14, 1987) prepared by KLD Associates, Inc. The purpose of the KLD Beach Report was to address FEMA SIR Subissues C.1 and C.2.

With respect to Subissue C.1 in particular, the Report transmitted (as Report Attachments A-G) relevant portions of United States Geological Survey quad sheets identifying each of the major beaches in the EPZ. In addition, the report provided

verified estimates of the expected maximum number of people on each of the beaches and described the method for establishing the capacity estimates. 15/

While Subissue C.1 only requests that information be provided on the beaches and their capacity, draft plans and procedures have, of course, been developed incorporating the information developed in response to Subissue C.1. For example, draft local plans and procedures for each of the coastal EPZ towns contain detailed directions for notifying and implementing protective actions for the beach population within their boundaries. Arrangements for sheltering the beach population (discussed in greater detail under Subissues C.4 and C.5) are based upon the capacity estimates in the Report.

Thus, the information requested by FEMA has been developed and incorporated, as appropriate, into the upgraded offsite program.

Subissue C.2 (SIR, p. 26)

"FEMA and the RAC . . . must receive the following additional information:

- (2) a detailed analysis of the beach population, including the number of permanent and temporary residents and the number of day visitors, together with their geographical dispersion;"

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15/ Pilgrim EPZ Public Beach Population Analysis (October 14, 1987), pp. 1-3.



The KLD Beach Report discussed under Subissue C.1 above also addressed Subissue C.2. In response to FEMA's request for information on the "geographical dispersion" of the beach population, the Report provided histograms on USGS quad sheets showing the distribution of observed persons on each of the beaches on the study day. 16/

Subissue C.2 also requested information on the number of permanent and temporary residents and day visitors on the beaches. Boston Edison's September 17, 1987 "Action Plan" stated that "[s]ince the current planning process is proceeding on the basis that sufficient sheltering capacity will be found for the entire beach population, a breakdown of the number of permanent and temporary residents and day visitors is not presently being developed." As discussed in greater detail under Subissue C.4 and C.5, a comprehensive draft shelter implementation program has now been established at Pilgrim which provides accessible shelter capacity for the beach population (as well as for persons at campgrounds and other major outdoor recreational areas in the EPZ).

Subissue C.3 (SIR, p. 26)

"FEMA and the RAC . . . must receive the following additional information:

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16/ The "study day" was Sunday, July 5, 1987. Conditions on that day were clear and sunny, low humidity, temperature approximately 85 degrees. The aerial photographs from which the histograms were derived were taken between about 1 p.m. and 3 p.m.

(3) an updated estimate of the length of time it would take to evacuate the beach population;"

The August, 1988 ETE provides updated estimates of the length of time it would take to evacuate those portions of the EPZ encompassing each of the beaches. Time estimates specific only to the beaches themselves have not been prepared but would, most likely, result in shorter evacuation times, since the current offsite program provides for the precautionary clearing of the beaches at the "ALERT" classification. Under such circumstances, the movement of the beach population is likely to precede, or be contemporaneous with, the movement of the general population out of the EPZ. In any event, the revised estimates in the new ETE conservatively represent the actual beach evacuation times.

Subissue C.4 (SIR, pp. 26-27)

"FEMA and the RAC . . . must receive the following additional information:

(4) a list of suitable buildings available for sheltering the beach population at each beach, including the capacities of these buildings and their distances from the beaches."

A comprehensive "shelter implementation program" far exceeding applicable regulatory requirements has been developed at Pilgrim. The program will ensure that persons on the beaches and at other major outdoor recreational areas as well, are adequately protected in the event of an emergency at Pilgrim. A "Shelter Implementation Program Summary" for the Town of

Marshfield has been forwarded to the Commonwealth for transmittal to FEMA, and similar summaries have been or are being prepared in the other towns. The basic elements of the shelter implementation program are summarized below.

First, pursuant to the upgraded emergency plans and procedures, both sheltering and evacuation of the beaches and non-beach recreational areas will be considered by responsible decision-makers in the event of an emergency. 17/ Criteria have been established under which sheltering would only be recommended if it were determined that such action would provide the most effective protective response under the particular circumstances at hand.

Second, it was necessary to identify the population that may require public sheltering in the event of an emergency. In addition to the maximum, expected beach population, the shelter implementation program also addresses the population at campgrounds, parks and other major outdoor recreational areas in the EPZ. Conservative estimates of the size of the population at these locations were also developed. For the beaches, the expected maximum number of people identified in KLD Associates' October 14, 1987 Beach Report were utilized. For parks, campgrounds and other major outdoor recreational areas, estimates were obtained from facility Administrators and supervisors.

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17/ Of course, as discussed above, precautionary clearing of the beaches at the "ALERT" classification is also an important element of the upgraded offsite program.

Third, in order to ensure that adequate sheltering capacity exists, local officials assisted by professional planners provided by Boston Edison, met over the course of the last year with building management in each of the towns to identify available shelter capacity. Individual buildings were determined to be readily accessible before they were designated as public shelters. Structures were selected that were near the beach and recreational area locations. Each was visually inspected to ensure its accessibility and to develop specific floor plans. During these visits, the purpose of the shelter program was explained to building management and they were asked if they would be willing to participate in the program. Once structures were determined to be accessible, suitable and available, Boston Edison entered into LOAs with private building owners to formalize agreements for their use, or obtained municipal authorizations for buildings owned by the towns.

Subissue C.4 specifically requested a list of suitable buildings available for sheltering the beach population, including their capacities and distances from the beaches. As described above, the Shelter Implementation Program Summaries reflect substantial shelter capacity that is proximate to the beaches or recreational areas and suitable for sheltering.

The Summaries contain a matrix (Summary Attachment 1) which lists, among other things, the following information: (1) beaches and recreational areas in the town and their maximum expected capacity; (2) shelters (whose owners have entered into

binding LOAs or municipal authorizations) matched by location to each of these areas; and (3) available and agreed upon shelter capacity. Copies of the signed LOAs and municipal authorizations are included in the Summaries as well. LOAs that are still "in process" are also identified.

The final basic element of the Shelter Implementation Program is that shelters are being equipped with tone alert radios, and procedures have been developed for shelter managers and maintenance personnel that will enable them to advise shelterees regarding necessary actions. Advice and direction will be provided by shelter officials at the local EOCs and through EBS messages. Should subsequent evacuation be required, shelter managers will, therefore, be equipped to facilitate prompt evacuation.

Subissue C.5 (SIR, p. 27)

"If these buildings are not open to the public, the plans must clearly state how they will be made accessible and letters of agreement must be obtained as appropriate."

To the extent that Subissue C.5 addressed accessibility in terms of the securing of LOAs for private buildings, as discussed under Subissue C.4, LOAs have been secured providing ample shelter capacity. However, the Shelter Implementation Program also addresses physical accessibility (e.g., proximity to beaches, procedures to ensure the public knows where the shelters are, a program to ensure the facilities are opened to the public).

In order to ensure that persons receive prompt and appropriate sheltering instructions, signs will be posted at beach and non-beach recreational areas providing general sheltering instructions, EBS messages will also provide appropriate instructions, and route alerting emergency personnel will be assigned to identify specific shelter locations and provide other necessary direction. Of course, the current plans to clear the beaches at the "ALERT" classification will greatly reduce the likelihood of the need for a sheltering recommendation for the beach population, while facilitating prompt sheltering should such a recommendation be given.

D. SIR Issue D. Special Needs Population

Subissue D.1 (SIR, p. 35)

The information on mobility impaired persons "must include the updated, comprehensive procedures used to identify the mobility impaired, together with the program in place to periodically review and update all relevant information pertaining to them;"

In May, 1987, a Special Needs Survey was conducted which requested that individuals that may need special assistance identify themselves. The broad scope of the questions and the large response (apparently about 1,200 persons) provided a very conservative estimate of the size of the special needs population. 18/

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18/ For example, the Survey included persons who were not mobility impaired but simply required transportation assistance (i.e., transportation-dependent), and did not distinguish between those whose disabilities were severe  
(footnote continued)

The relevant information was provided to local Civil Defense authorities. Those authorities currently hold confidential lists of names and telephone numbers of persons who responded to the survey. Boston Edison has encouraged the towns to update the lists through phone contacts with the listed individuals or members of their households and through communications with local social service organizations.

Accordingly, while the information generated in the May, 1987 survey was of only limited value, in and of itself, it provides a basis for efforts of local Civil Defense authorities to revise and update existing information on special needs population in their communities. 19/

In addition to these efforts to establish a "baseline" of information on the special needs population, an improved program has been developed to "periodically review and update" that information, and to ensure that those who may not have responded to prior efforts to identify them have the opportunity to identify themselves, and to receive appropriate assistance during an emergency. On December 28, 1987, the Commonwealth

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enough to impair their mobility and those whose disabilities would not limit their ability to evacuate unaided.

19/ Moreover, as a separate initiative, the Commonwealth and Boston Edison have agreed on the scope of work of a separate study that will provide additional information on the size and characteristics of the special needs population. The one outstanding issue that must be resolved before the RFP is issued is for the Commonwealth to forward, and Boston Edison to review, the Commonwealth's policy on protection of the special needs population.

transmitted to residents of the EPZ an "Interim Public Information Brochure" which, among other things, informs individuals who need special assistance in the event of an emergency to call their local Civil Defense offices and which provides appropriate telephone numbers. The Commonwealth's Brochure also encourages persons with special needs to call officials in advance so that special arrangements can be made. 20/

Moreover, a detailed draft procedure governing the maintenance and updating of the special needs lists has been developed for each town. In addition, draft procedures in each of the towns establish a system for Civil Defense officials to verify the needs of individuals identified on their special needs lists, as well as to allow individuals to self-identify during an emergency.

Accordingly, draft plans and procedures both for identifying persons who are mobility-impaired, and for periodically reviewing and updating that information have been established.

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20/ The interim brochure was transmitted to the NRC on December 29, 1987. Letter, R.G. Bird to U.S. Nuclear Regulatory Commission.



Subissue D.2 (SIR, p. 35)

"The resources available to meet the needs of . . . this group;"

The resources available to assist mobility-impaired persons in the event of an emergency at Pilgrim include buses, vans, lift vans and ambulances. As discussed in greater detail under Subissue D.3 below, transportation providers that control a sufficient number of vehicles to meet the needs of the mobility-impaired community have signed LOAs.

Subissue D.3 (SIR, p. 35)

"Letters of Agreement for the use of these resources as appropriate."

The mobility-impaired population is comprised of both institutionalized (e.g., nursing homes, group homes or hospitals) and non-institutionalized persons. In order to determine the transportation needs of the institutionalized population, Boston Edison planners visited each such facility in the EPZ and obtained information on the maximum numbers of persons expected to reside in those facilities from the facility administrators. Using this information, the transportation needs for institutionalized persons were calculated to be about 20 buses, 4 vans, 61 liftvans and 66 ambulances. 21/

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21/ It should be noted that while these estimates are based on maximum facility populations, special facility procedures contain provisions for the release of those residents who can safely be released at the "ALERT" classification. This will, of course, reduce the number of public vehicles needed to evacuate the facility.

For non-institutionalized persons, Boston Edison utilized the results of the May, 1987 special needs survey discussed under Subissue D.1 to estimate transportation needs. The resulting estimates are: 12 vans, 18 liftvans and 21 ambulances. The total estimated transportation requirements for the mobility-impaired population are 20 buses, 16 vans, 79 liftvans, and 87 ambulances.

As shown in Table III-I, LOAs have been signed by transportation providers representing a sufficient number of vehicles to evacuate mobility-impaired persons in an emergency. Moreover, no credit has been taken in the planning process for the percentage of the mobility-impaired population that has access to vehicles (e.g., persons who own lift vans or who can be readily transported by family members in a family car).

E. SIR Issue E. Transportation Dependent Population  
Subissue E.1 (SIR, p.40)

"FEMA and the RAC...must receive detailed plans and procedures for protection of the transportation dependent population, including: estimates of the number of people involved,"

Estimates of the size of the transportation-dependent population are contained in the new ETE at Table 10-5.

Detailed draft plans and procedures to protect this segment of the population have also been developed. Draft local plans provide for the dispatch of buses to specific bus routes in

the EPZ for pickup of persons requiring transportation assistance. Individuals could be notified of the location of the bus routes through the Public Information Brochure and EBS messages.

Specific procedures have been established which delineate the responsibilities of members of the town "transportation groups" (typically including a transportation officer, staging area officer and vehicle dispatchers) as well as for transportation providers. Provisions have been established for the transportation officers to: (1) notify staging area staff and vehicle dispatchers of necessary actions including preparations for dispatch of vehicles at the "ALERT" or "SITE AREA EMERGENCY" classification; and for (2) actual dispatch of vehicles at the "GENERAL EMERGENCY" classification.

Staging Area Managers ensure that the staging areas are operational, that vehicles and drivers are prepared for operations and that buses are dispatched to designated bus routes. Vehicle dispatchers are responsible for actual dispatch to the designated bus routes.

Accordingly, estimates of the size of the transportation-dependent population have been developed, and detailed plans and procedures have been prepared to provide for protection of this segment of the population.

Subissue E.2 (SIR, p. 40)

"[L]ists indicating the resources needed and identified,"

Buses will be used to assist the transportation-dependent population in the event of an emergency at Pilgrim. Based on the size of this segment of the population, the new ETE estimates that 70 buses will be needed, assuming each runs a single route. As discussed in greater detail under Subissue E.3, transportation providers that control a sufficient number of buses to meet the needs of this segment of the population have signed LOAs.

Subissue E.3 (SIR, P. 40)

"[A]ppropriate letters of agreement."

As shown in Table III-I, LOAs have been signed by transportation providers controlling over 1,100 buses. Since about 70 buses would be needed to evacuate transportation-dependent persons in the EPZ (see Subissue E.2 above), there are sufficient resources under LOA to ensure that the transportation-dependent population can be evacuated in the event of an emergency at Pilgrim.

F. SIR Issue F. Overall Lack of Progress in Planning and Apparent Diminution in Emergency Preparedness

Subissue F.1 (SIR, pp. 43, 47)

"(1) [T]he Commonwealth has failed to correct the numerous problems noted in FEMA's review of its plans and during its exercises . . . including issues from:"

- (a) the 1981 Regional Assistance Committee (RAC) review;
- (b) the 1982 RAC review;
- (c) the March 3, 1982 Exercise;
- (d) the June 19, 1983 Exercise; and
- (e) the September 5, 1985 Exercise.

Whatever the status of the emergency preparedness program at the time that the SIR was issued, dramatic strides have been made since that time. As discussed in Section II of this report, a comprehensive program has been underway to upgrade the overall effectiveness of the offsite program. Clearly, the current situation is markedly different from the circumstances that existed when the SIR was issued.

The efforts undertaken over the last year have included not only correction of specific SIR criticisms set forth in the other subissues, but also resolution of the specific concerns reflected in the FEMA reviews cited in this Subissue. This is reflected in the SIR cross-reference tables mentioned earlier. Part II of those tables responds directly to Subissue F.1 by listing the outstanding RAC and exercise issues identified in FEMA's October 30, 1985 letter to the Commonwealth. <sup>22/</sup> That letter reviewed "the current status of the application" for approval of the Pilgrim offsite plans pursuant to 44 CFR Part 350, and listed issues from prior RAC and exercise reviews that "remain[ed] unresolved." Part II of the tables identifies the specific plan and procedure provisions which address each of the RAC and exercise issues, and summarizes how they have been addressed.

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<sup>22/</sup> Letter, Edward A. Thomas to Robert J. Boulay (October 30, 1985).

Subissues F.2 - F.7 (SIR, p. 47)

"(2) [The Commonwealth] has not updated its plan, and so advised FEMA of its actions on an annual basis...; (3) it has not implemented State and local training...; (4) it has not pursued an adequate program of public education and information for the media...; (5) and it has not ... submitted to FEMA the required Annual Letters of Certification for calendar years 1985 and 1986. (6) In addition, representatives of the Commonwealth have indicated that the state and local plan is inadequate; and (7) they have been unable to answer numerous questions posed by the public and by local officials in public meetings

Significant improvements in the Commonwealth's emergency preparedness program have been made over the last year. For example, both a substantially revised and updated version of the Commonwealth's state-wide emergency plan and a new draft MCDA Area II plan have been developed through a cooperative effort between Commonwealth officials and utility representatives. The draft Area II plan was recently forwarded by the Commonwealth to FEMA for informal technical review.

In addition, training of Commonwealth officials on new implementing procedures is ongoing and, as described earlier, the Commonwealth is participating in a revamped training program for local emergency response workers and officials. Moreover, with respect to public information efforts, the Commonwealth published an "Interim Public Information Brochure" in December, 1987 and is working with Boston Edison to resolve the last outstanding issues associated with the publication of a full PIB.

Subissue F.8 (SIR, pp. 47-48)

"[A]dditional areas of plan weakness are identified in the FEMA Report, 'Analysis of Emergency Preparedness Issues at Pilgrim Nuclear Power Station Raised in a Petition to the NRC Dated July 15, 1986.'"

Page 33 of the FEMA Report on the July 15, 1986 Petition states that the "Commonwealth's plan would be enhanced if the policy for the administration of KI to institutionalized people were clearly stated; and if procedures for the distribution of KI to the institutions were more fully developed."

The policy for the administration of KI to institutionalized persons has now been clearly established based on consultations between MCDA, MDPH, Boston Edison and local officials. Pursuant to the draft plans, KI will be distributed only to those institutionalized individuals whose evacuation, in the opinion of their attending medical officials, would be life threatening. Specific procedures have been established detailing the responsibilities of Commonwealth and facility personnel for authorization of KI use, distribution (to facilities housing intensive care and level one patients) and administration.

TABLE III-I

Summary of Transportation Needs and Resources

Three segments of the Pilgrim EPZ population may require transportation assistance in the event of an emergency at Pilgrim. Those three segments are: (1) the school and licensed daycare center populations; (2) mobility-impaired individuals; and (3) persons who are transportation dependent. The discussion in Section III under SIR Subissues A.4, D.2 and 3, and E.2 and 3 describes the specific planning bases used to assure that sufficient resources have been made available to efficiently evacuate these three segments of the population.

The information below provides an overall summary of the transportation needs of these groups and the available resources. The determination of availability is based upon the particular transportation provider's signature of an LOA.

<u>Vehicle Type</u>	<u>Approx. Number Under LOA</u>	<u>Estimated School/Day-Care Center Need</u>	<u>Estimated Mobility-Impaired Need</u>	<u>Estimated Transportation Dependent Need</u>	<u>Excess Over Maximum Need</u>
Bus	1,160	313	20	70	757
Van	147	26	16	-	105
Lift Van	122	-	79	-	43
Ambulance	111	-	87	-	24



#### IV. CONCLUSION

The progress in improving the offsite emergency preparedness program for the communities around Pilgrim Station that has been achieved to date is the product of a cooperative effort between offsite officials and Boston Edison. We are firmly committed to continuing to assist the Commonwealth and the towns in improving and maintaining their offsite emergency response programs.