

June 22, 1994

NOTE TO: Don Lanham, IRM/IFMB
FROM: Falk Kantor, NRR/DRSS/PEPB
SUBJECT: DOCUMENT FOR PUBLIC DOCUMENT ROOM

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Findings on Issues of Offsite Emergency Preparedness for Pilgrim Nuclear Power Station

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Pilgrim Offsite Emergency Preparedness Task Force

U.S. Nuclear Regulatory Commission
Washington, DC 20555



ABSTRACT

This report presents the findings of the Pilgrim offsite emergency preparedness task force chartered to review issues in about 20 areas raised in a public meeting held by the U.S. Nuclear Regulatory Commission (NRC) in Plymouth, Massachusetts, September 6, 1990. The task force consisted of staff from the NRC and the Federal Emergency Management Agency supported by contractors. Factual information for this review was obtained primarily by task force teams working with State and local officials responsible for emergency preparedness in the area of the Pilgrim Nuclear Power Station.

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EXECUTIVE SUMMARY

Background

The Inspector General of the U.S. Nuclear Regulatory Commission (NRC) issued a report on July 26, 1990, that was critical of certain aspects of the NRC staff's determination of the status of emergency preparedness (EP) for the Pilgrim Nuclear Power Station in Massachusetts. The plant is operated by Boston Edison Company (BECO).

On September 6, 1990, the NRC held a public meeting in Plymouth, Massachusetts, to obtain information from public officials and private citizens regarding the current state of offsite radiological emergency planning and preparedness around the Pilgrim Nuclear Power Station. During the meeting, 25 persons, including Commonwealth and local officials and private citizens, testified and tendered documents regarding issues and concerns about emergency preparedness for the Pilgrim station.

On September 12, 1990, NRC's Executive Director for Operations (EDO) informed the Commission that he was establishing a special task force to review the assertions and documents presented to the staff at the public meeting on September 6, 1990. On September 24, 1990, the EDO forwarded the charter for the task force to the Commission, which included five specific tasks:

- (1) Identify Pilgrim offsite EP issues in dispute.
- (2) Determine the factual status of issues in dispute.
- (3) Describe the current status of offsite EP for Pilgrim.
- (4) Identify and assess the significance of existing EP problems.
- (5) Recommend whether the NRC should reconsider its reasonable assurance finding (that adequate protective measures can and will be taken in the event of a radiological emergency at the Pilgrim Nuclear Power Station).

The Task Force

The Pilgrim task force was made up of staff from the NRC and the Federal Emergency Management Agency (FEMA) supported by contractors. Factual information for this review was obtained primarily by task force teams working with State and local officials responsible for emergency preparedness in the area of the Pilgrim Nuclear Power Station.

Although staff from both the NRC and FEMA participated in this

effort, the task force activity was not intended as a substitute for NRC's normal regulatory oversight of Pilgrim EP nor as a substitute for FEMA's ongoing review of offsite EP for the Pilgrim station.

The task force compiled information from the September 6, 1990, public meeting into about 20 topics, which were then assigned to field teams for fact finding. The task force field teams started work on October 31, 1990.

Summary of Findings

Many issues were clarified and dispelled as a result of information gathered by the task force. Others were resolved through actions taken by the Commonwealth of Massachusetts, local communities, and the Boston Edison Company during the course of the task force inquiry. Nevertheless, as of the date of this report, the task force found several areas in offsite emergency preparedness for the Pilgrim Nuclear Power Station that warrant attention before the next full participation exercise in December 1991. These include:

- Emergency notification communications equipment (e.g., pagers and radios) for some emergency response personnel in some towns need improvement.
- Responsibility for maintenance of some emergency response equipment in some towns needs to be resolved.
- Participation in training for offsite emergency response personnel needs to be substantially increased.
- State and some town civil defense agencies need to incorporate results from the self-identification program survey into their lists of persons with special needs and provide for regular maintenance of those lists.
- Plans and implementing procedures for the Massachusetts Civil Defense Agency (MCDA) and the Department of Public Health and MCDA Area II need to be made consistent with those of the local communities.
 - Transportation procedures need to be better coordinated among MCDA Area II, transportation providers, and the towns.
 - State plans need specific procedures to guide officials who must make protective action decisions.

Draft Report and Public Meeting

Before issuing its final report and recommendation, the task force published a draft report for comment on May 28, 1991. It conducted a public meeting to receive comments on June 12, 1991.

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The task force is indebted to many persons who provided information, explained issues, and otherwise assisted in fact finding. In particular, it wishes to acknowledge the generous help and cooperation received from the following individuals:

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ABBREVIATIONS

ALS	advance life support
AP	administrative procedure
ARCA	area requiring corrective action
BECONS	Boston Edison Community Offsite Notification System
BECO	Boston Edison Company
BLS	basic life support
BWROG	Boiling Water Reactors Owners Group
CB	citizens band
CCC	congregate care center
CDD	Civil Defense Director
CEM	comprehensive emergency management
CFR	Code of Federal Regulations
CJTC	Criminal Justice Training Center
CMB	Chadwick, Martin and Bailey
CURE	Citizens Urging Responsible Energy
DNN	Digital Notification Network
DSIL	drywell spray initiation limit
DTVS	direct torus vent system
EALs	emergency action level
EBS	Emergency Broadcast System
EDO	Executive Direct for Operations
EMO	Emergency Management Officer
EMT	estimated mobilization time
EOC	emergency operations center
EOF	emergency operations facility
EOP	emergency operating procedure
EP	emergency preparedness
EP-IP	emergency plan-implementing procedure
EPG	emergency procedure guideline
EPZ	emergency planning zone
ETE	evacuation time estimate
EWMDS	emergency worker monitoring and decontamination station
FEMA	Federal Emergency Management Agency
GSA	Gurnet-Saquish Association
IP	implementing procedure
IPE	individual plant examination
JIC	joint information center
LCO	limiting condition for operation
LOA	letter of agreement
LPCI	low-pressure coolant injection
MBTA	Massachusetts Bay Transportation Authority
MCDA	Massachusetts Civil Defense Agency
MCI	Massachusetts Correctional Institute
MDEM	Massachusetts Department of Environmental Management
MDPH	Massachusetts Department of Public Health
MDPW	Massachusetts Department of Public Works
MHHW	mean higher high water

MHW mean high water
MLLW mean lower low water
MNG Massachusetts National Guard
MOHA Massachusetts Office of Handicapped Affairs
MOU memorandum of understanding
MT mobilization time
NGVD National Geodetic Vertical Datum
NIAT nuclear incident advisory team
NOAA National Oceanic and Atmospheric Administration
NOS National Ocean Service
NRC Nuclear Regulatory Commission
OIG Office of the Inspector General
PA protective action
PA public address
PAC Pilgrim Area Collaborative
PAG protective action guideline
PAR protective action recommendation
PCPL primary containment pressure limit
PIO Public Information Officer
psig pound(s) per square inch guage
PSP pressure suppression pressure
RACES Radio Amateur Civil Emergency Services
RCP Radiation Control Program
RERP Radiological Emergency Response Plan
RHR residual heat removal
RPV reactor pressure vessel
SGTS standby gas treatment system
SIP self-identification program
SRV safety/relief valve
STARC State Area Command
TDD telecommunications device for the deaf
TLD thermoluminescent dosimeter
TSA transportation staging area

1 INTRODUCTION

This chapter discusses the circumstances that led to the formation of the Pilgrim offsite emergency preparedness (EP) task force and the specific tasks assigned to the group. It also explains the purpose and scope of the effort and describes the methodology used by the task force.

1.1 Background

NRC's Inspector General issued a report on July 26, 1990, which was critical of certain aspects of the NRC staff's determination of the status of emergency preparedness for the Pilgrim Nuclear Power Plant in Massachusetts. The plant is operated by Boston Edison Company.

On September 6, 1990, the U.S. Nuclear Regulatory Commission (NRC) held a public meeting in Plymouth, Massachusetts, to obtain information from public officials and private citizens regarding the current state of offsite radiological emergency planning and preparedness around the Pilgrim Nuclear Power Station. During the meeting, 25 persons, including Commonwealth and local officials and private citizens, testified and tendered documents regarding issues and concerns about emergency preparedness for the Pilgrim station (PT-00)*.

On September 12, 1990, NRC's Executive Director for Operations (EDO) informed the Commission (PT-01) that he was establishing a special task force to review the assertions and documents presented to the staff at the public meeting on September 6, 1990. On September 24, 1990, the EDO forwarded the charter for the task force to the Commission (PT-02). On October 2, 1990, the EDO sent letters to Commonwealth and local officials who are involved with emergency planning for the Pilgrim station announcing formation of the task force (PT-05). The NRC issued a press release the next day announcing that the task force would be headed by Robert A. Erickson, Chief of the Emergency Preparedness Branch, Office of Nuclear Reactor Regulation in Rockville, Maryland. Richard W. Cooper II, Deputy Director of the Division of Radiation Safety and Safeguards at NRC's Region I office in King of Prussia, Pennsylvania, was designated as the Deputy Director of the task force. Other members were to be drawn from NRC regional offices around the nation, as well as from the Federal Emergency Management Agency (PT-06).

*The task force recorded pertinent documents that it obtained and assigned each a unique Pilgrim task force (PT) number. These documents are listed in Appendix A.

1.2 Task Force Charter

The charter of the task force includes the following five specific tasks:

- (1) Identify Pilgrim Offsite EP Issues in Dispute. Analyze the following documents: (1) transcript and documents obtained at the September 6, 1990, public meeting, (2) FEMA's [Federal Emergency Management Agency's] August 31, 1990, exercise report on Pilgrim, (3) the licensee's [Boston Edison Company's (BECO's)] analysis of these documents, (4) FEMA's forthcoming status report on EP planning for Pilgrim, and (5) other documents deemed pertinent.
- (2) Determine the Factual Status of Issues in Dispute. Establish the facts regarding each issue on the basis of authoritative documentation. Where necessary, independently verify and document facts and status through field visits (to include inspection of facilities and meetings with State and local officials responsible for emergency planning), personal observation, direct measurement, photographs, and other means, as appropriate.
- (3) Describe Current Status of Offsite EP for Pilgrim. Assemble factual information into a current description of the status of the issues in contention regarding offsite EP for the Pilgrim emergency planning zone.
- (4) Identify and Assess the Significance of Existing EP Problems. Review the current status of offsite EP to identify shortcomings, weaknesses, inadequacies, or other problems in emergency planning and preparedness for the Pilgrim emergency planning zone. Assess their significance relative to the appropriate standards in the EP regulations and in 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," and other NRC and FEMA guidance documents. The review should also consider compensatory measures that local and State entities may have established to address weaknesses while working towards a permanent resolution.
- (5) Recommend Whether the NRC Should Reconsider its Reasonable Assurance Finding. Based upon review and assessment of any new information uncovered by

*On February 22, 1991, FEMA concluded that this status report had been superseded by events including the task force's activities (PT-69).

the task force and the facts and status of offsite emergency planning and preparedness for the Pilgrim emergency planning zone, recommend whether the NRC should reconsider its finding 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 at the Pilgrim Nuclear Power Station.

1.3 Purpose

The purpose of this report is to present factual findings of the task force regarding issues of offsite emergency preparedness for the Pilgrim Nuclear Power Station. The report also includes some discussion of pertinent regulatory standards and criteria that the task force will use to assess the facts. On the basis of its overall assessment of the issues, the task force will recommend whether the NRC should reconsider its finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the Pilgrim Nuclear Power Station.

1.4 Scope and Limitations

This report focuses on determining the factual status and assessing the significance of the issues raised in the public meeting of September 6, 1990 (Appendix B), and corollary issues that the task force identified in the course of its fact finding. The task force used BECO's analysis of the September 6, 1990, meeting and its analysis of the FEMA exercise report (PT-08) only if factual information was not available from State or local officials or where BECO's analyses helped the task force understand an issue. Finally, the limitations on the task force's review of the FEMA exercise report are discussed in Section 2.10.

Although staff from both the NRC and FEMA participated in this effort, the task force activity was not intended as a substitute for NRC's normal regulatory oversight of Pilgrim EP nor as a substitute for FEMA's ongoing review of offsite EP for the Pilgrim station. Specifically, the task force did not attempt to conduct a comprehensive review of offsite emergency plans such as FEMA might perform as part of its certification process under Part 350 of Title 44 of the Code of Federal Regulations (CFR).

1.5 Methodology

The task force compiled information from the September 6, 1990, public meeting into about 20 topics, which were then assigned to field teams for fact finding, as shown below. The section of this report in which the topic is discussed is given in parentheses.

FIELD TEAMS*

TOPIC

Team 1

Falk Kantor (NRC Headquarters)
Robert Trojanowski (NRC Region II)
Laura Deskins (FEMA Headquarters)

Carver Plans (Sec. 2.3)
Generic Plans (Sec. 2.1)
Gurnet-Saguish
(including Clarks
Island) (Sec. 2.7)
Kingston Plans (Sec. 2.4)
Marshfield Plans (Sec. 2.6)
Plymouth Plans (Sec. 2.2)

Team 2

Edward Podolak (NRC Headquarters)
Gail Good (NRC Region V)
Margaret Lawless (FEMA Headquarters)

Evacuation Time Estimates
(Sec. 2.8)
Exercise (Sec. 2.10)
Duxbury Plans (Sec. 2.5)
Public Information (Sec.
2.14)
Reception Centers (Sec.
2.11)
Shelter (Sec. 2.15)
Emergency Planning Zone
(Sec. 2.16)

Team 3

Aby Mohseni (NRC Headquarters)
Blair Spitzberg (NRC Region IV)
Stephen Borth (FEMA Region I)

Communications (Sec.
2.18.3)
Direct Torus Vent System
(Sec. 2.18.1)
Persons With Special Needs
(Sec. 2.12)
Potassium Iodide (Sec.
2.17)
Public Notification System
(Sec. 2.9)
Recovery and Reentry
(Sec. 2.18.2)
Transportation (Sec. 2.13)

The task force field teams started work on October 31, 1990. In the ensuing months they held numerous meetings and discussions about issues with Commonwealth and local officials responsible for emergency preparedness and visited emergency facilities throughout the Pilgrim emergency planning zone. The field teams summarized their respective activities and findings in individual team reports

*The field teams were often accompanied by other FEMA staff members and consultants, including John Dolan (FEMA Region I), Joseph Keller (Idaho National Engineering Laboratory), and Jerome Overstreet (Argonne National Laboratory).

(Appendix A) that constitute the principal source of factual information presented in this report.

1.6 Format of Report

Chapter 2 contains detailed discussions of the facts regarding emergency preparedness issues that the task force identified during its review. The discussion is organized by major topic headings under which individual issues appear. References to the September 6, 1990, public meeting transcript and related documents are keyed to Appendix A of this report.

The following describes the contents of each subsection within Chapter 2.

A. STATEMENT OF ISSUE

The task force analyzed the transcript of the September 6, 1990, public meeting in Plymouth, Massachusetts (including other material submitted for the meeting record), to extract issues for its inquiry. Statements made by individuals attending the meeting or submitted for the record of the meeting were loaded into a computer database that can be sorted by topic or by author. Appendix B lists those statements by topic. These statements became the core issues that focused the task force inquiry. Each section in Chapter 2 is devoted to one of the major topics. The first subsection in each section contains a summary description of the core issues drawn from Appendix B.

B. FINDINGS

In an attempt to establish the facts concerning the issues identified in subsection A, the task force interviewed Commonwealth and local officials, representatives of various organizations, and private citizens. The task force collected numerous documents (listed in Appendix A) to verify statements made by individuals. It also collected available offsite emergency plans and procedures (listed in Appendix C) from State and local officials. This subsection contains a summary of the factual information obtained by the task force pertinent to the issues being discussed.

C. TASK FORCE ASSESSMENT

In this subsection, the task force identifies the regulatory requirements and guidance that bear on the issues in question and assesses the significance of its findings regarding the issues.

D. APPENDICES

Appendix A lists the documents by PT number received by the task force. Appendix B lists the issues identified by the task force through its analysis of the transcript of the September 6, 1990, public meeting and other documents. Appendix C lists the State and local emergency plans and implementing procedures for emergency response at Pilgrim that were obtained by the task force. Appendix

D is the technical review by Dr. Thomas Urbanik (an NRC consultant) of the Pilgrim station evacuation time estimates and traffic management plan update (Rev. 2). Appendix E is the 16 planning standards of 10 CFR Part 50.47(b) and 44 CFR Part 350.5(a), which are also listed in NUREG-0654/FEMA REP-1, Rev. 1. These planning standards, as used in the task force assessment, are also quoted in the report. Appendix F is the comments received at the public meeting in Plymouth, Massachusetts, on June 12, 1991.

1.7 Summary of Findings

Many issues were clarified and dispelled as a result of information gathered by the task force. Others were resolved through actions taken by the Commonwealth of Massachusetts, local communities, and the Boston Edison Company during the course of the task force inquiry. Nevertheless, as of the date of this report, the task force found several areas in offsite emergency preparedness for the Pilgrim Nuclear Power Station that warrant attention before the next full participation exercise in December 1991. These include:

- Emergency notification communications equipment (e.g., pagers and radios) for some emergency response personnel in some towns need improvement.
- Responsibility for maintenance of some emergency response equipment in some towns needs to be resolved.
- Participation in training for offsite emergency response personnel needs to be substantially increased.
- State and some town civil defense agencies need to incorporate results from the self-identification program survey into their lists of persons with special needs and provide for regular maintenance of those lists.
- Plans and implementing procedures for the Massachusetts Civil Defense Agency (MCDA) and the Department of Public Health and MCDA Area II need to be made consistent with those of the local communities.
 - Transportation procedures need to be better coordinated among MCDA Area II, transportation providers, and the towns.
 - State plans need specific procedures to guide officials who must make protective action decisions.

2 DISCUSSION OF ISSUES

2.1 Generic Plans

Status of Plans and Procedures

The plans and procedures on file with the Federal Emergency Management Agency (FEMA) and the Massachusetts Civil Defense Agency (MCDA) at the time the task force initiated its review were for the most part those submitted to FEMA for informal technical review before the October 1989 exercise. In its initial meetings with town officials, the task force became aware that the plans and especially the procedures had been revised and, in fact, were still being revised primarily as a result of the exercise, and that the revised plans and procedures were not being forwarded to MCDA and FEMA. This led to an effort by the task force to acquire a current, up-to-date set of plans and procedures which would be used in an emergency for each of the emergency planning zone (EPZ) and reception center communities as well as the plans and procedures for the Commonwealth of Massachusetts applicable to the Pilgrim Nuclear Power Station.

A. STATEMENT OF ISSUE

At the public meeting on September 6, 1990, commenters raised the issue of the status of the emergency plans and implementing procedures (IPs) for the EPZ and reception center communities. In particular, comments were made that none of the school plans or procedures had been approved.

B. FINDINGS

From November 6, 1990, through February 26, 1991, the task force visited the emergency operations centers (EOCs) in each of the towns several times and met with town civil defense and other officials (PT-54, 55, 65, 66, 102 and 105). A primary objective of these visits was to discuss the status of the emergency plans and IPs and to obtain from the town Civil Defense Directors copies of the most current draft plans and procedures that the town response organizations would use if an emergency were to occur at the Pilgrim plant. Information obtained during these visits is discussed below.

Town officials generally use the terms "plan" and "procedure" interchangeably. Thus, reference by town officials to a school "plan," for example, is usually a reference to the implementing procedure for the school.

The term "approved" when used by town officials is reserved for plans and procedures that have been formally approved and forwarded to the State by the Board of Selectmen in each of the towns or, in some cases, by the senior town official authorized to approve such

documents. The term "approved in concept" is generally used to denote draft plans and procedures that have been approved by town department heads, Civil Defense Directors, or Board of Selectmen (or senior town official) for training purposes, use in an exercise, and use in an actual emergency at the Pilgrim plant. Although these are the plans which would be used in a real emergency, approval in concept in no way implies that the towns formally approve of the plans and procedures or intend to submit them to MCDA for formal review.

The process for the review and approval of revised plans and procedures in the towns is described generally as follows. The procedures are initially developed (or revised) in a cooperative effort involving the applicable town department head, the Civil Defense Director, and the BECo community representative. (BECo also provides administrative support to incorporate the changes into the final draft documents.) After the department head is satisfied with the procedure, the department head "signs off," that is, approves (in concept) the procedure. The draft procedure is then sent to the Radiological Emergency Response Plan (RERP) Committee in those towns that have such committees. Plymouth, Duxbury, Marshfield, and Taunton have active RERP committees. Following RERP Committee review and approval, the draft procedure is sent to the Board of Selectmen or a senior town official (e.g., the Mayor in Taunton) for review and approval. (The RERP Committee review in Duxbury is conducted in parallel with the Board of Selectmen review.) After the Board of Selectmen or senior town official approves the procedure, the revised procedure is forwarded to MCDA for review. MCDA is responsible for forwarding the approved procedure to FEMA for review.

The plans and procedures obtained by the task force and their draft numbers and dates are listed in Appendix C. The procedures are in various stages of the towns' review and approval processes. Most of the revised procedures in the towns have been signed off, that is, approved in concept, by the department heads. As indicated above, the task force obtained the draft plans and procedures from town officials with the understanding that these were the plans and procedures that would be used if an emergency were to occur at the Pilgrim plant. It was, and is, the task force's position that the final word on the status of the town plans and procedures, as well as copies of the plans and procedures themselves, could only be obtained from town officials. Thus, all references in this report to the status of town plans and procedures are the task force's understanding of the status as obtained during meetings and discussions with town officials.

The towns have not forwarded any of the revised plans and procedures to MCDA, for submittal to FEMA for formal review. MCDA is responsible for submitting plans and procedures to FEMA for formal review. The EPZ towns in particular emphasized that the plans and procedures are draft documents that have not been formally approved (PT-29, PT-30, and PT-36). However, a mechanism has been developed for incorporating the revised procedures into the Pilgrim training program. After town department heads approve

the revised procedures, BECo incorporates them into lesson plans, which it forwards to MCDA for review and comment. According to MCDA representatives at a January 31, 1991, meeting with the task force (PT-168), approval of a lesson plan for training means only that the module is checked for consistency with the relevant procedure. It does not mean that the procedure itself is checked for adequacy of content. After approval for training by MCDA, BECo then incorporates the revised procedures into the training program and, upon the approval of the town department head and Civil Defense Director, training can take place on the revised procedures.

The school procedures for the EPZ Towns of Plymouth, Duxbury, and Carver have been approved in concept by the school committees. In Kingston, the school procedure has not been approved in concept by one of two school committees because the committee is awaiting revision of the implementing procedure to reflect consolidation of its students into one host school rather than two. In Marshfield, town officials are concerned about the location of the host school designated in their school procedure and have been discussing possible revisions to this procedure with MCDA. School procedures are discussed in more detail in the sections on each of the individual towns.

In addition to town plans, State plans and procedures were collected by the task force. The most recent draft copies of MCDA's plans and procedures were provided to the task force (PT-76) with the caveat that they did not "constitute a formal submittal of approved documents." These included (1) implementing procedures for the State Emergency Operations Center, (2) Massachusetts Radiological Emergency Response Plan (RERP) Area II, and (3) implementing procedures for MCDA Area II. In addition, the draft State RERP and the Nuclear Incident Advisory Team (NIAT) Handbook developed and published by the Massachusetts Department of Public Health (MDPH) had been submitted to FEMA in September 1990, with the stipulation that the submittal did not "represent or imply final approval of the plan by the Commonwealth" (PT-157).

C. TASK FORCE ASSESSMENT

NUREG-0654, Evaluation Criterion P.4, provides that "each organization shall update its plan and agreements as needed, review and certify it to be current on an annual basis." The State submitted an Annual Letter of Certification in January 1991 to FEMA, which indicated that "EPZ and Reception Community plan and implementing procedure revisions were completed in 1990." However, it was difficult for the task force to determine the exact status of the plans and procedures. The task force acknowledges and accepts the caveats given by the towns about the status of the plans, for example, that many procedures have not been approved at the highest level within the town. However, based on the statements of local officials, the task force considers the plans and procedures listed in Appendix C as the best consolidation of plans and procedures that would be used in a real emergency. The draft plans and procedures obtained by the task force and FEMA are

currently being reviewed by FEMA as part of its ongoing examination of offsite emergency preparedness at Pilgrim.

As discussed in the section on transportation (Section 2.13), the task force found inconsistencies between the town IPs and the Area II IPs regarding assignment of transportation resources.

In its review of the MDPH procedures (NIAT Handbook), FEMA also found inconsistencies between the town IPs and the MDPH procedures. For example, the NIAT Handbook states that MDPH considers town and other State emergency responders as part of the general population. Towns and MCDA consider them as emergency workers (PT-167).

When MCDA approves the latest town procedures for training, it does not integrate these latest response procedures into the State response procedures. However, based on the statements of local officials, these are the procedures the towns would use in an emergency. As a result of that process, MCDA may not possess an up-to-date set of the plans and procedures that would be implemented in the event of an emergency at Pilgrim. MCDA must develop an organized system for the development, revision, and maintenance of integrated plans and procedures.

2.2 Plymouth Plans and Preparedness

2.2.1 Equipment Needs

A. STATEMENT OF ISSUE

At the public meeting on September 6, 1990, officials of the Town of Plymouth stated that the town needed certain equipment, some of which was identified as a result of the October 1989 exercise. However, BECo told them that it did not intend to meet all of the town's equipment needs. Plymouth officials also indicated they would not participate in the scheduled August 1991 exercise unless BECo met their equipment needs.

In Attachment 4 to the prepared statement submitted by Alba C. Thompson, Selectman, at the public meeting on September 6, 1990, Plymouth identified specific equipment needs revealed by the October 1989 exercise. These were (1) radios for schools, (2) communications equipment for Plymouth Beach lifeguards, and (3) an alternative communications center for the Police and Fire Departments. In his prepared statement submitted at the congressional hearing in Plymouth on October 30, 1990 (PT-136), the Civil Defense Director listed these three items plus radios for the Harbormaster and radios to be used by the Fire Department at the emergency worker monitoring and decontamination station.

B. FINDINGS

In its October 4, 1990, response to the NRC, BECo stated (PT-08) that its criterion for providing resources is whether or not a legitimate operational need for the equipment in question has been demonstrated. BECo identified several requests for equipment from

Plymouth that it did not believe were necessary to carry out the existing planning program. These included radios for lifeguards, additional four-wheel-drive vehicles for the police, and a mobile communications van. BECO also discussed the status of various other equipment requests from Plymouth that it had committed to meet.

The task force discussed Plymouth's equipment needs with town officials primarily during meetings on November 6 and 7, 1990 (PT-56), and November 26, 1990 (PT-54). Alba C. Thompson, Selectman (on November 6), and Douglas Hadfield, Civil Defense Director, were the principal spokespersons for the Town of Plymouth. Alfred Slaney, Massachusetts Civil Defense Agency (MCDA), also attended these meetings. Joel Leonardi, the BECO community representative, attended the meeting on November 26, 1990. The task force also discussed Plymouth equipment needs with BECO at meetings on November 8 and 9, 1990 (PT-59), and on February 25, 1991 (PT-70). As a result of these discussions, maintenance of portable Police Department radios and Fire Department pagers that were provided by BECO before the Comprehensive Grant Agreement between BECO and the Town of Plymouth went into effect, was identified as an additional issue.

Radios for Schools

In its October 4, 1990, response to the NRC, BECO stated (PT-08, p. II-41) that it had purchased 28 citizens band (CB) radio and beacon light kits for the Plymouth public schools (for the cars that lead and follow the bus convoy) and had approved the order to purchase 11 portable radios and 3 base stations for the Plymouth schools. In a meeting with the task force on January 17, 1991 (PT-71), Richard J. Silva, Assistant Superintendent for Administration and Instruction, Plymouth Public Schools and Plymouth-Carver Regional School District, stated that BECO had provided all of the communications equipment for the Plymouth schools and that he was satisfied with the equipment. The Civil Defense Director, who was also present at the meeting, confirmed that the communications equipment for the schools had been provided, but indicated that there was a concern about the reliability of the CB radios.

Communications Equipment for Plymouth Beach Lifeguards

In its October 4, 1990, response to the NRC, BECO stated (PT-08, p. II-41) that there is no emergency planning basis for providing radios for lifeguards for whom no assignment is specified in Plymouth emergency procedures. BECO stated that the evacuation of the Plymouth beaches is a function assigned by Plymouth implementing procedures (IPs) to the Department of Public Works under IP-05, "Department of Public Works." However, Plymouth officials, in the meeting with the task force on November 6, 1990, indicated that they believed radios for the lifeguards were necessary. They also stated that BECO had committed to provide the radios. BECO clarified this statement at the meeting on February 25, 1991, during which it stated that it was acting as an

intermediary (unrelated to the planning process) to make some excess radios from Marshfield available to the Plymouth lifeguards. BECo stated that since these radios (six in number) were not being provided as part of the response program for Pilgrim, they would not be covered under its maintenance agreement with the town. In a telephone conversation on May 8, 1991 (PT-177), the Civil Defense Director confirmed that the radios had been received.

Four-Wheel-Drive Vehicles for the Plymouth Police Department

In the meeting with the task force on November 7, 1990, George Madsen, Plymouth Chief of Police, discussed the role of the Plymouth Police Department in an emergency and stated that the department had several four-wheel-drive vehicles and did not need another such vehicle, nor had it requested one.

Radios for the Harbormaster

In its October 4, 1990, response to the NRC, BECo stated (PT-08, p. II-41) that the Plymouth Harbormaster had received four portable police radios, two bull horns, and a light bar for the Harbormaster's boat. BECo also stated that it had ordered a police mobile and a marine mobile radio for the Harbormaster. At the February 25, 1991, meeting between BECo and the task force, BECo stated that the radios for the Harbormaster were "purchased by the Company, provided to the Harbormaster in December, and installed." The Civil Defense Director confirmed in the telephone conversation on May 8, 1991, that the radios for the Harbormaster had been received.

Radios for the Emergency Worker Monitoring and Decontamination Station (EWMDS)

In its October 4, 1990, response to the NRC, BECo stated (PT-08, p. II-41) that it had approved the order to purchase two radios for use by the Plymouth Fire Department at the EWMDS. In his statement at the congressional hearing in Plymouth on October 30, 1990, the Civil Defense Director indicated that BECo had committed to provide these radios. At the February 25, 1991, meeting between BECo and the task force, BECo stated that the radios "will be installed very shortly." In the telephone conversation on May 8, 1991, the Civil Defense Director confirmed that the Fire Department radios for the EWMDS had been received.

Maintenance of Fire and Police Communications Equipment

At meetings on November 7, 1990, George Madsen, Plymouth Police Chief, and Thomas Fugazzi, Plymouth Fire Chief, identified an issue regarding replacement batteries for communications equipment. The Police Chief stated that BECo had purchased approximately 40 portable radios for the Police Department about 3 to 4 years ago, and that the town had a problem obtaining replacement batteries for the radios (cost approximately \$60 each). The Police Chief stated that his budget did not cover replacement costs for the batteries and since BECo had purchased the radios before the current

comprehensive grant/maintenance agreement between BECo and the Town of Plymouth was in effect (December 21, 1987), BECo was not willing to fund the purchase of the replacement batteries for the police radios. The Fire Chief indicated he was satisfied with the equipment provided by BECo for the Fire Department, except for replacement batteries for the pagers. He also indicated that the issue of replacement batteries for the pagers was being negotiated with BECo.

At the February 25, 1991, meeting between BECo and the task force, BECo stated that the replacement of batteries depends on whether the equipment was provided under the maintenance agreement. Since the communications equipment for the Police and Fire Departments was provided before the maintenance agreement was in effect, BECo stated that it was not obligated to fund the purchase of the replacement batteries. BECo's position regarding the maintenance of equipment provided to the towns before the Comprehensive Grant Agreements were executed was that it was the towns' responsibility to maintain and replace such equipment through their normal budgeting processes.

In his statement at the February 25, 1991, meeting, the Civil Defense Director noted the importance of the portable police radios for emergency response because the police use them to maintain traffic and access control. He stated that the batteries were getting to a point where they could not be charged anymore. Loss of radio contact, according to the Civil Defense Director, requires the police officer using the radio to return to the police station, thereby leaving the traffic and access control point uncovered. A telephone call to the Fire Chief on March 7, 1991, revealed that BECo had not provided replacement batteries for the pagers and had taken the position that the town should fund the cost of the batteries for the (about 135) pagers, because BECo had purchased the pagers for the town before the maintenance agreement went into effect.

Fixed or Mobile Communications Equipment for the Fire and Police Departments

As a result of the October 1989 exercise, the Town of Plymouth became concerned that if Subarea 3 of the emergency planning zone (EPZ) (Fig. 2.1) had to be evacuated, the central police and fire stations as well as the Town Hall and the emergency operations center (EOC) in Plymouth would have to be abandoned; therefore, there would be no central location from which the town government could function. In particular, essential Police and Fire Department services for those subareas in Plymouth that might not be under an evacuation directive would not be maintained. In its October 4, 1990, response to the NRC, BECo stated (PT-08, p. II-57) that police and fire personnel are considered emergency workers and as such would be expected to stay in the EPZ, taking proper radiation protection precautions, after the public had evacuated. Another option, according to BECo, was for police and fire dispatchers to relocate to another one of the six fire stations in

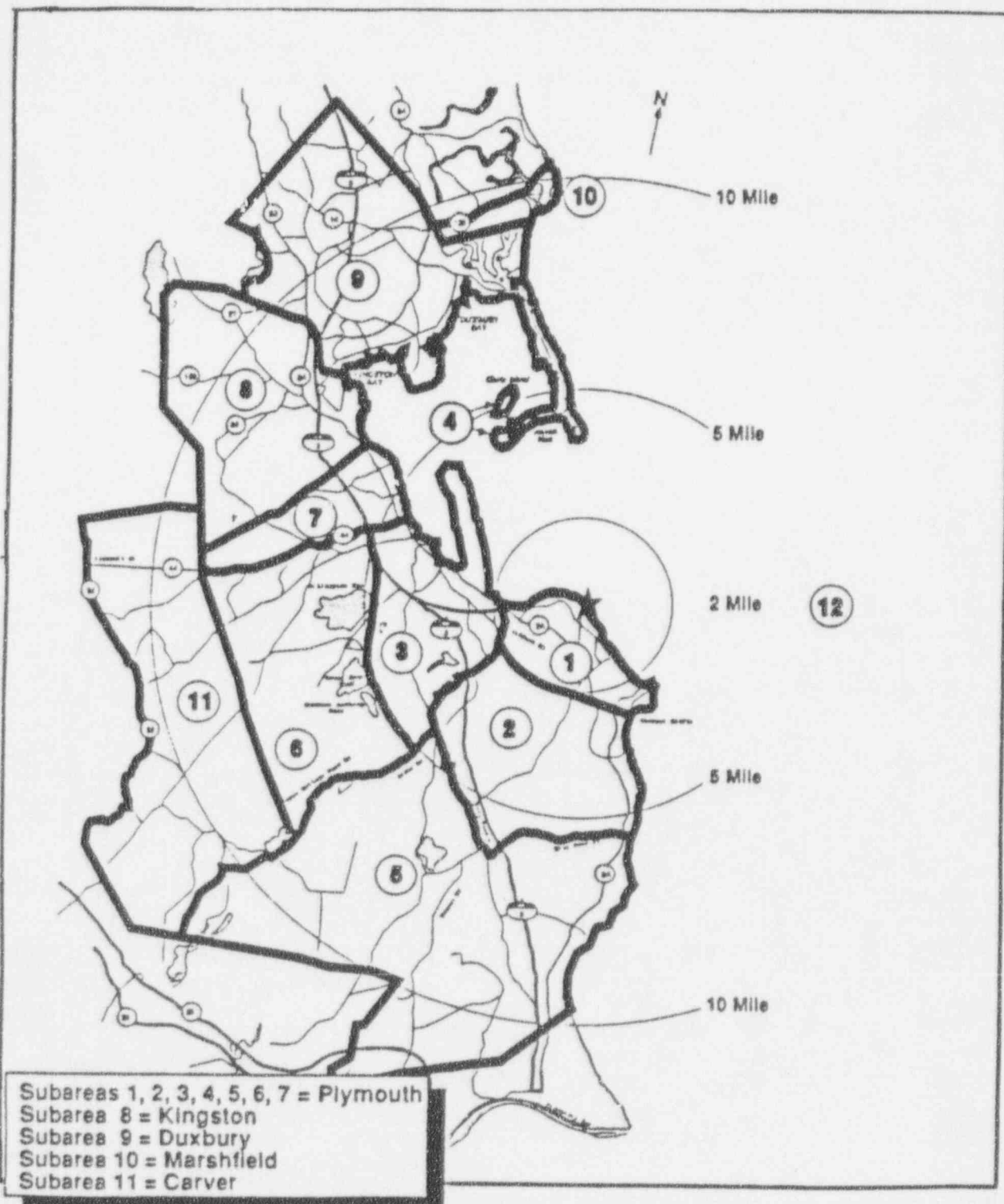


Figure 2.1 Pilgrim plume exposure pathway emergency planning zone with subareas

Plymouth with emergency lines being call-forwarded to the new location. Finally, BECo noted that alternate EOC capabilities had been provided for Plymouth at the MCDA Area II EOC, which is located at the Bridgewater State Corrections complex. (The task force did not evaluate the adequacy of the accommodations at Area II.)

During the meetings with town officials on November 6 and 7, 1990, the task force discussed the issue of simultaneous evacuation of the central police and fire stations and the EOC. The police station in Plymouth is located about 5 miles west-northwest of the Pilgrim plant. The Police Chief indicated that it would not be possible for the police to function from the alternate EOC at MCDA Area II in Bridgewater, which is located about 27 road miles west of the plant, or from the nearest police station in the Towns of Kingston and Carver. He stated that the preferred alternative would be a mobile communications van.

The central fire station, which is located about 4 miles west-northwest of the plant, is the communications center for the Plymouth Fire Department. Fire Department officials noted that telephone calls from the public and alarms from the town's fire alarm (pull box) system come into the central fire station. According to Peter Gage, Superintendent of Fire Alarm, the hard-wired fire alarm system could function on battery power or a backup generator for an extended time, but there was no way to transfer the six telephone lines used by the public to call for assistance to another fire station. The Fire Chief indicated that a mobile communications van would not entirely satisfy the Fire Department's concern if the central fire station had to be abandoned. Rather, he indicated that the Fire Department would prefer an alternative facility from which to operate. He also indicated that the MCDA Area II EOC in Bridgewater was not adequate because it was too far from the Town of Plymouth (PT-56).

In general, Plymouth officials would prefer a fixed facility as an alternate communications center at a closer site, such as Plymouth Airport, which is about 8 miles west of the plant, or a mobile communications van. Plymouth officials stated that, in retrospect, it would have been better to have built a new EOC at another location, such as the airport, rather than to renovate the old EOC at its present location in Memorial Hall, about 5 miles west-northwest of the plant. According to these officials, the original proposal by BECo when it began upgrading Plymouth's offsite emergency preparedness program in 1987 was to renovate the existing EOC rather than construct a new one. In addition to its location in Subarea 3, the present Plymouth EOC is relatively small and the town officials stated it becomes noisy and crowded when activated, as occurred during the exercise. The Civil Defense Director noted that this situation will only become worse because certain EOC functions had been expanded since the EOC was renovated (e.g., notification of persons with special needs) (PT-56).

Participation in Exercise

In a letter dated October 4, 1990 (PT-130), to Ralph G. Bird, Senior Vice President-Nuclear, BECo, William R. Griffin, Executive Secretary, Town of Plymouth, advised BECo that the Board of Selectmen had voted in favor of participating in the next scheduled exercise. Mr. Griffin stated, "It is critically important that the Boston Edison Company continues its commitment to support the town's radiological emergency response effort."

C. TASK FORCE ASSESSMENT

10 CFR 50.47(b)(5) (Planning Standard E in NUREG-0654) requires that "procedures have been established for notification, by the licensee of State and local response organizations and for notification of emergency personnel by all response organizations . . ." NUREG-0654, Evaluation Criterion E.2 provides that "each organization shall establish procedures for alerting, notifying, and mobilizing emergency response personnel."

10 CFR 50.47(b)(6) (Planning Standard F in NUREG-0654) requires the following: "Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public." 10 CFR 50.47(b)(8) (Planning Standard H in NUREG-0654) requires the following: "Adequate emergency facilities and equipment to support the emergency response are provided and maintained."

The task force evaluated the findings regarding emergency equipment in Plymouth against these standards.

Most of the equipment needs identified by the Town of Plymouth have been met. These include school radios, radios for lifeguards, EWMDS radios, and radios for the Harbormaster. However, BECo has not agreed to maintain or provide replacement batteries for portable Police Department radios and Fire Department pagers purchased by BECo and provided to the town before the comprehensive grant/maintenance agreement was executed. Both the Police and Fire Departments have critically important responsibilities under the Plymouth emergency plan, and these organizations have identified portable radios for the police and Fire Department pagers as necessary communications equipment. If this equipment is not maintained satisfactorily, communication failures could result. Therefore, the task force finds that the maintenance aspect of Planning Standard 10 CFR 50.47(b)(8) is not met for this equipment in Plymouth until the issue involving maintenance of the portable radios for the police and the pagers for the Fire Department has been satisfactorily resolved.

Regarding the need for an alternative fixed communications center or a mobile communications van for the Plymouth Police and Fire Departments, the applicable guidance is found in NUREG-0654, Evaluation Criterion H.3, which states, "Each organization shall establish an emergency operations center for use in directing and controlling response functions." The evaluation criterion does

not address the location of the EOC relative to the EPZ, nor does it specify an alternative or backup capability if the EOC has to be evacuated. Arrangements have been made for an alternate EOC for each of the EPZ towns in the MCDA Area II EOC in Bridgewater. However, Plymouth officials feel that this EOC is too far from their town for them to provide effective assistance to the citizens of Plymouth if it becomes necessary for emergency workers to evacuate EPZ Subarea 3, which includes the police station, the central fire station, and the EOC.

It appears to the task force that BECO upgraded the Plymouth EOC in good faith and the town accepted it in good faith. The EOC is relatively small and the potential for crowding certainly exists. Plymouth is also unique in that part of the town's population may remain at the same time that the EOC and communications centers would have to be evacuated. In spite of the fact that there is no regulatory requirement, an alternate EOC has been designated at MCDA Area II. However, the task force believes that BECO should continue to work with town officials to find an acceptable solution to the town's concern about possible evacuation from EPZ Subarea 3.

2.2.2 Status of Plans and Procedures

A. STATEMENT OF ISSUE

At the public meeting on September 6, 1990, Plymouth officials raised the issue of the status of the Plymouth school plan in particular and the Plymouth emergency plan and implementing procedures in general. In particular, comments were made that none of the school plans or procedures had been approved. (The school plan is discussed separately in Section 2.2.3.)

B. FINDINGS

The task force discussed the status of the Plymouth emergency plan and implementing procedures (IPs) and the town's approval process during meetings with town officials on November 6, 1990 (PT-56), and November 26, 1990 (PT-54). It acquired a copy of the current plan and IPs for Plymouth during the meeting on November 26, 1990, with the understanding that they were the documents that would be used if an incident were to occur at the Pilgrim plant. Town officials emphasized that the plan and IPs were draft documents and should not be considered to be the final and/or approved plans and IPs for the town. Town officials use the term "approved in concept" to describe draft documents which have been approved for use at the local level but have not been formally approved. This issue is discussed further in Section 2.1.

The town's approval process for IPs according to town officials (statement attached to PT-54) involves the following steps:

- (1) The draft IP is reviewed and approved by the town's department head.

- (2) The draft IP is reviewed and approved by the Radiological Emergency Response Plan Committee.
- (3) The draft IP is reviewed and approved by the Board of Selectmen.

These draft IPs are then reviewed at the State and Federal level. At any of these review stages, the draft IP can be found to need additional work and must then go through the process again.

The plan and the revised IPs have not been formally approved by the Selectmen or forwarded by the town to the State. The emergency plan for Plymouth obtained by the task force from the Civil Defense Director during the November 26, 1990, meeting was draft Revision 9, dated May 18, 1990. The task force obtained 95 draft IPs during the meeting. These IPs and their draft numbers and dates are listed in Appendix C. Forty-one IPs have been revised since the October 1989 exercise.

The task force discussed the process for incorporating the revised draft IPs into the town's training program with the Civil Defense Director and the MCDA representative at the meeting on November 26, 1990. This was also discussed with BECo on November 8 and 9, 1990 (PT-59). The review process is discussed in Section 2.1.

C. TASK FORCE ASSESSMENT

The significance of this matter is discussed in Section 2.1 of this report.

2.2.3 Plymouth Schools

A. STATEMENT OF ISSUE

At the September 6, 1990, public meeting, Plymouth officials stated that they did not have an approved plan for Plymouth school children. In addition, statements were made that there were problems involving radio equipment for the schools and the availability of transportation providers. At the October 30, 1990, congressional hearing in Plymouth (PT-78), the town's Civil Defense Director reiterated the statement made by Plymouth officials at the September 6, 1990, public meeting; namely, the Plymouth school IP had never been approved. He indicated that the school committees had a problem with the availability of buses to evacuate the school population. He noted that providing this transportation is a responsibility of the Commonwealth of Massachusetts and is not under Plymouth's control.

B. FINDINGS

The task force met with Richard J. Silva, Assistant Superintendent for Administration and Instruction, Plymouth Public Schools and Plymouth-Carver Regional School District, on January 17, 1991 (PT-71). Douglas Hadfield, Plymouth Civil Defense Director, and Alfred Slaney, Massachusetts Civil Defense Agency (MCDA), were also

present. The purpose of the meeting was to discuss the status of Plymouth IP-06 (Draft 5, June 15, 1990), "Plymouth Public Schools and Plymouth-Carver Regional School District." (IP-06 is generally referred to by town officials as the "school plan.")

Mr. Silva stated that both he and the Superintendent of Schools (Dr. Bernard Sidman) had been closely involved in the development and modification of the school procedure. The school committees had not approved the existing draft procedure before the October 1989 exercise, but had authorized participation in the exercise using that draft of the school IP. (Note: "Approve" as used here means "approve in concept.") Following the exercise, the school IP was revised to include the lessons learned as a result of the exercise.

At a joint meeting on October 30, 1990, the Plymouth School Committee and the Plymouth-Carver Regional District School Committee reviewed and approved in concept the school procedure (IP-06, Draft 5). The school committees directed the Superintendent to forward a copy of the document to Plymouth's Board of Selectmen with a recommendation that the document be submitted to appropriate State and Federal agencies for their review (letter attached to PT-71 from Bernard Sidman, Superintendent of Schools, to Bruce Arons, Chairman, Plymouth Board of Selectmen, dated November 16, 1990). As indicated in the Superintendent's letter, considerable time and manpower were expended to develop the school procedure. The procedure, a copy of which was obtained by the task force, is a comprehensive document, 145 pages long, covering staff responsibilities, response actions, and transportation needs worksheets.

On December 21, 1990, MCDA submitted IP-06, Draft 5, to FEMA for informal technical review and comment (letter attached to PT-71). On March 15, 1991, FEMA delivered a detailed review of the school procedure (PT-158) to A. David Rodham, the Director of MCDA, and requested a working session with appropriate State, local, and BECO officials in which these review comments could be discussed. A copy of the review was also sent to the Chairman of the Plymouth Board of Selectmen on March 20, 1991.

At the January 17, 1991, meeting, Mr. Silva indicated that there were no outstanding issues regarding the transportation of Plymouth students to host schools and communications equipment for the Plymouth schools provided by BECO, other than a concern about the reliability of the CB radios in the cars that lead and follow the bus convoys. Regarding the actual implementation of the school procedure, Mr. Silva indicated that the only remaining concern of the school administration was educating the public regarding the information in the procedure. To address this concern, the school administration has drafted a letter that it has sent to all parents informing them of the actions that will be taken to provide for the safety of the students in the event of an emergency at Pilgrim. A copy obtained by the task force includes maps showing the route from each Plymouth school to its designated host school in Taunton (PT-201).

C. TASK FORCE ASSESSMENT

The task force acknowledges that the Plymouth plan for school children has not been approved by the Board of Selectmen. However, there is a school procedure "Plymouth Public Schools and Plymouth-Carver Regional School District" (Draft 5, June 15, 1990), which was approved in concept at the October 30, 1990, joint school committee meeting and would be used in a real emergency. It was reviewed by FEMA and no serious shortcomings were found (PT-158). The issue of school radios has also been resolved, since BECo has provided the necessary radio equipment; however, the Civil Defense Director with the assistance of BECO should address the concern regarding the reliability of the CB radios. The issue of the availability of sufficient transportation resources for evacuating Plymouth school children is discussed in Section 2.13 of this report.

2.2.4 Staffing of Emergency Worker Monitoring and Decontamination Station

A. STATEMENT OF ISSUE

The emergency worker monitoring and decontamination station (EWMDS) at Plymouth Airport is intended to be a joint Plymouth-Carver facility. However, the Town of Carver has not provided any staff for the facility. Thus, the entire burden of staffing the EWMDS has fallen on the Town of Plymouth, in particular, the Plymouth Fire Department. Plymouth officials feel that they should not have to provide the entire staff and that Carver should fulfill its staffing responsibilities. Both Plymouth and Carver officials in meetings with the task force identified the staffing of the joint Plymouth-Carver EWMDS as an issue (PT-56, PT-107).

B. FINDINGS

The task force discussed this issue with Plymouth officials at the meetings on November 6 and 7, 1990 (PT-56). According to these officials, the EWMDS at Plymouth Airport is supposed to be a facility shared with the Town of Carver. However, Carver has not provided any staffing nor has it participated in any training for the facility. As discussed in Section 2.3.4, Carver officials have made an effort to find replacements for the Fire Department personnel to staff the 11 EWMDS positions assigned to Carver. At a meeting on January 16, 1991 (PT-107), the Carver Deputy Civil Defense Director indicated that seven volunteers had been identified to perform EWMDS functions and that these volunteers had received some basic training; however, they were not yet fully trained to assume their EWMDS duties. Plymouth provides two shifts of trained firefighters (11 per shift) for the EWMDS. The Plymouth Fire Chief indicated that he would like Carver to meet its responsibility of staffing the EWMDS so that Plymouth could use some of its currently assigned EWMDS firefighters for other duties during an emergency. However, until that occurs, Plymouth officials indicated that Plymouth would continue to staff the EWMDS

and accommodate emergency workers from both Plymouth and Carver in a real emergency.

C. TASK FORCE ASSESSMENT

The staffing at the EWMS is adequate. Plymouth is more than meeting its responsibility in staffing the joint Plymouth-Carver EWMS. Although Carver has not yet met its commitment under its plan, it is attempting to rectify this situation, as discussed in Section 2.3.4 of this report. NUREG-0654, Evaluation Criterion K.5.b addresses requirements for monitoring and decontamination facilities for emergency workers. The Plymouth-Carver EWMS meets that criterion; however, Carver should continue its efforts to meet its commitment under the emergency plan.

2.2.5 Staffing and Training

A. STATEMENT OF ISSUE

At the September 6, 1990, public meeting and in comments on the October 1989 exercise, Plymouth officials stated that staffing of Plymouth's emergency response organization was a concern, particularly in the areas of rumor control and public information, and that retraining of emergency response personnel was a serious concern. In addition to these issues, the Civil Defense Director (CDD) identified an additional issue concerning special needs callers in a meeting with the task force on November 6, 1990 (PT-56).

B. FINDINGS

Staffing and training of Plymouth's emergency response organization were discussed during task force meetings with Plymouth officials, in particular the CDD, at the meeting on November 6, 1990 (PT-56). The CDD indicated that staffing difficulties were being encountered in the areas of public information, special needs callers, and rumor control. The CDD also identified an issue related to the training of summertime personnel at camps and campgrounds because of the transitory staffing of these facilities. As the CDD noted in his statement at the February 25, 1991, meeting between the task force and BECo (PT-70), directors had not been appointed for some of these camps and the number of people attending the camps was not known. The CDD was particularly concerned that this training be completed before the exercise. (The exercise is scheduled for December 1991.)

In a telephone conversation on May 8, 1991 (PT-177), the CDD stated that at least one person had been assigned for every position but that backup personnel were still needed in some positions including those in the areas of rumor control and special needs. The CDD indicated that training was an ongoing concern and that the need to revise the procedures in 1990 following the exercise detracted from the training effort. Attention was now being focused on completing the required training in 1991. The Annual Letter of Certification submitted to FEMA on January 30, 1991 (PT-93), showed

that the Plymouth emergency organization had completed only 13.4 percent of the total training hours assigned. An amended training report dated June 1, 1991, was received from MCDA at the June 12, 1991, public meeting in Plymouth (Appendix F). This report appears to indicate a dedicated training effort in 1991.

In its October 4, 1990, response to the NRC, BECo stated (PT-08, p. II-38) that training is conducted under the State's Emergency Worker Training Program for Plymouth police, fire, and other emergency workers. This program was developed by MCDA with input from the local communities and assistance from BECo. The BECo Emergency Preparedness Department assists the MCDA Training Coordinator by maintaining a data base that tracks all training for offsite emergency response personnel. This provides a reporting mechanism for MCDA, the local communities, and BECo on the status of training.

C. TASK FORCE ASSESSMENT

10 CFR 50.47(b)(15) (Planning Standard O in NUREG-0654) requires the following: "Radiological emergency response training is provided to those who may be called on to assist in an emergency." NUREG-0654, Evaluation Criterion 0.5 provides that "each organization shall provide for the initial and annual retraining of personnel with emergency response responsibilities." The evaluation criterion was not met in 1990. BECo and MCDA should place increased emphasis on training in Plymouth in 1991.

Information provided by MCDA at the public meeting in Plymouth on June 12, 1991, appears to indicate a dedicated training effort in 1991.

The staffing shortages identified for Plymouth are not atypical. Recruiting and training of volunteer staff are ongoing requirements and it is recognized that shortfalls will occasionally occur. The task force believes the CDD is correct in focusing attention on the need to provide training for camp counselors and staff, when they are identified.

2.3 Carver Plans and Preparedness

2.3.1 Equipment Needs

A. STATEMENT OF ISSUE

No specific equipment needs for the Town of Carver were identified at the public meeting on September 6, 1990. However, in subsequent meetings between the task force and Carver officials, Carver officials identified the following issues related to equipment (and facilities):

- maintenance and replacement of pagers for the Carver Fire Department that BECo had provided before the maintenance agreement went into effect

- inadequate communications capabilities for Carver at the alternate emergency operations center (EOC) in the Massachusetts Civil Defense Agency (MCDA) Area II EOC in Bridgewater
- limitations in the size of the Carver EOC and possible interference with Carver Police Department operations.

B. FINDINGS

The task force met with Carver officials on November 8, 1990 (PT-58), December 5 and 6, 1990 (PT-55), and January 16, 1991 (PT-107). Information on Carver's equipment needs was provided primarily by Frank Mazzilli, Selectman and Civil Defense Director; Helen Copello, Administrative Assistant, Deputy Civil Defense Director; and Dana Harriman, Chief, Carver Fire Department. Carver officials were generally appreciative of the assistance and resources provided by BECo, but had some specific concerns, as discussed below. Carver officials provided copies of correspondence and other documentation regarding their concerns to the task force during the meetings. The task force also discussed Carver's equipment needs with BECo emergency planning representatives at meetings on November 8 and 9, 1990 (PT-59), January 17, 1991 (PT-64), and February 25, 1991 (PT-70).

Fire Department Pagers

The issue of Fire Department pagers involves approximately 50 pagers that BECo had provided to the Carver Fire Department in 1982 before the Comprehensive Grant Agreement between BECo and the Town of Carver was executed. According to the Fire Chief, the pagers are now outdated, unreliable, and expensive to maintain. The Fire Chief, who is full-time, explained that he operates a "call fire department" which is made up of volunteer firefighters, many of whom work in cranberry bogs and other outdoor locations that do not have telephone service. He stated that reliable pagers are essential to alert and mobilize Fire Department personnel when an emergency arises. He identified the pagers as a critical link in the Fire Department's communications system.

The Fire Chief identified the need for new pagers in an application for assistance to BECo in July 1989. In a letter to BECo dated September 11, 1989, the town's Executive Secretary requested that the agreement between the town and BECo be reopened and noted that because of budget constraints, the town "will no longer be able to maintain (the Fire Department) pagers at town expense." In a letter dated April 19, 1990, the Fire Chief informed the Executive Secretary for Carver that the pagers had been maintained since July 1989, but at a cost that had a heavy impact on the Chief's budget. On December 3, 1990, BECo responded that it had paid for the pagers in 1982 with the understanding that their replacement and repair would be the responsibility of the Fire Department. BECo noted that, as stated in the Comprehensive Grant Agreement, only equipment that was given to the town under the terms of that agreement is covered under the maintenance program. BECo concluded

that, in keeping with the agreement, it must deny the request to repair or replace the Fire Department pagers. In a reply to BECO dated December 19, 1990, the Chief, noting BECO's statement that the Fire Department pagers do not fall under the terms of the agreement, stated, "The obvious question becomes, why? They were purchased by the same company (BECO) for the same reasons as the other equipment that is under the agreement."

Town officials believe the pagers are a necessary piece of equipment if they are to meet their responsibilities under the Carver emergency plan. According to the procedure, the Carver Fire Department is responsible for conducting route alerting if sirens should fail and for covering areas outside the coverage of sirens (Carver IP-04, Draft 5, January 30, 1990). It is also responsible for siren spotting to determine if the Carver sirens sounded when the prompt notification system was activated. The Fire Department does not provide personnel to staff the joint Plymouth-Carver emergency worker monitoring and decontamination station (EWMDS) because the Fire Chief believes that the Fire Department does not have a sufficient number of firefighters to support the EWMDS and also to meet its other responsibilities under the emergency plan and to respond to other emergencies in town. (The EWMDS issue is discussed in more detail below.) According to the Chief, BECO would probably provide the pagers if he provided Fire Department personnel to staff the EWMDS, but he will not make a commitment that he believes will overburden his department (PT-55).

In its meeting with the task force on January 17, 1991, BECO stated that pagers for the Fire Department are not required, and that a telephone call tree would be adequate for the Fire Department to perform its backup mobile route alerting and siren spotting functions called for under the Carver emergency plan. BECO's position regarding the maintenance of equipment provided to the towns before the Comprehensive Grant Agreements were executed, as stated at the February 25, 1991, meeting, is that it is the responsibility of the towns to maintain and replace such equipment through the towns' normal budgeting processes.

Adequacy of Communications in the Alternate EOC

In the meeting with the task force on December 5, 1990, Carver officials raised the issue of the adequacy of communications for Carver in the alternate EOC, which is located in the MCDA Area II EOC in Bridgewater. Carver officials visited the alternate EOC in November 1990 to become familiar with its layout and the equipment that would be available for the town's use. Carver's understanding had been that the police radio in the alternate EOC designated for Carver's use would be shared with the Town of Plymouth because the radio frequencies for Carver and Plymouth were identical. Apparently, Carver officials were informed that the frequencies were being modified so that each town will have its own frequency and understood that the police radio in the alternate EOC will be set to the Plymouth frequency. In addition, they could not find an antenna connection that would be available if they brought their own radio to the alternate EOC.

In the meeting on January 17, 1991, BECo stated that when the EOC for Area II was designed, the intent was to provide the same communications equipment and capability for each of the five emergency planning zone (EPZ) towns that would relocate there. BECo stated that the final design of this facility was developed under the direction of MCDA and that it was not aware of the Carver issue. At the February 25, 1991, meeting with the task force, BECo stated that the original design of the communications capability in the alternate EOC was to provide radios with two frequencies for use by each of the towns that would cover the entire Plymouth County. The two police radio frequencies were to be augmented by a Radio Amateur Civil Emergency Services (RACES) frequency. Thus, there are three antenna jacks to accommodate the town radios in the alternate EOC. BECo believes that Carver officials, when inspecting the installation, got the impression that there were provisions for only three radios and that two of the towns had not been included.

Size of the EOC and Possible Interference With Police Operations

The Carver EOC is located in the Carver police station. As a result of the October 1989 exercise and subsequent use of the EOC, Carver officials have determined that more space is needed in the EOC and some modifications are necessary to prevent interference with Police Department operations. This issue was brought to the attention of the task force during the meetings on November 8, 1990, December 5, 1990, and January 16, 1991. Carver officials stated that they had discussed their concern with BECo regarding the problems with the Carver EOC, but BECo had not been responsive.

In a letter to Carver, dated September 18, 1990, in response to the Carver request for EOC modifications, BECo provided a brief chronology of events concerning the design and construction of the facility. BECo had originally proposed that the EOC be located in the Carver Town Hall where the then-existing EOC was located, but subsequently agreed, at the request of town officials, to construct the EOC in the police station. BECo noted that a number of modifications were made in the EOC at the request of the former Police Chief to enhance the operation and efficiency of the Police Department. On December 3, 1990, in a letter to the chairman of the Board of Selectmen following a meeting between BECo and town officials, BECo informed the town that all funds set aside for the renovation or improvement of all town EOCs had been expended. Therefore, no funds were available for relocating the Carver EOC. At the February 25, 1991, meeting between BECo and the task force, BECo stated that although it recognized that things had changed and that the Police Department might now wish to have more room, Carver should pay for any modifications to the EOC as part of its normal planning and budget process.

C. TASK FORCE ASSESSMENT

10.CFR 50.47(b)(5) (Planning Standard E in NUREG-0654) requires that "procedures have been established for notification, by the licensee of State and local response organizations and for notification of

emergency personnel by all response organizations . . ." NUREG-0654, Evaluation Criterion E.2 provides that "each organization shall establish procedures for alerting, notifying, and mobilizing emergency response personnel."

10 CFR 50.47(b)(6) (Planning Standard F in NUREG-0654) requires the following: "Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public." 10 CFR 50.47(b)(8) (Planning Standard H in NUREG-0654) requires the following: "Adequate emergency facilities and equipment to support the emergency response are provided and maintained."

The task force evaluated the findings regarding emergency equipment in Carver against these standards.

Fire Department Pagers

The pagers for the Fire Department are a critical link in its communications system and essential for alerting and mobilizing the Fire Department. BECo views the Fire Department's role under the emergency plan to be such that a telephone call tree would be adequate. Evaluation Criterion E.2 states that each organization shall establish procedures for alerting, notifying and mobilizing emergency response personnel. This explicitly includes alerting or activating emergency personnel in each response organization. The Carver Fire Department is an essential response organization under the Carver emergency plan for Pilgrim, and the pagers are a necessary component of its communications system. The question of responsibility for maintaining the pagers is at issue. BECo believes it is the town's responsibility, while the town, especially considering its budget constraints, believes BECo should maintain the pagers. On the basis of the town's statement that it will no longer be able to maintain the Fire Department pagers and BECo's position that it will not maintain that equipment, the maintenance aspect of Planning Standard 10 CFR 50.47(b)(8) is not met for this equipment in Carver.

Adequacy of Communications in the Alternate EOC

Although no standards or guidance criteria cover alternate EOC communications, it appears that the original intent in the design of the communications installation in the alternate EOC was that each of the five EPZ towns have the same equipment and capability. BECo should continue to pursue this issue with MCDA Area II officials in order to develop a clear understanding of the existing communications capability for each of the towns in the alternate EOC and determine if there has been any deviation from the original design. Carver as well as the other EPZ towns should be informed of the communications capability that exists in the alternate EOC, and if any problems remain, they should be resolved in a mutually satisfactory manner by BECo, MCDA, and town officials.

Size of EOC and Possible Interference With Police Operations

From an emergency planning standpoint, the Carver EOC is adequate as an emergency response facility.

2.3.2 Status of Plans and Procedures

A. STATEMENT OF ISSUE

At the public meeting on September 6, 1990, commenters raised the issue of the status of the emergency plans and implementing procedures for the EPZ and reception center towns. In particular, some commenters stated that none of the school plans or procedures had been approved.

B. FINDINGS

The plans and procedures on file with MCDA when the task force initiated its review were the plans and procedures submitted before the October 1989 exercise. Therefore, the task force visited each of the town EOCs and met with town officials, including Carver officials, on December 5, 1990 (PT-55), with the purpose of acquiring a current set of emergency plans and procedures, that is, the plans and procedures that would be used in the event of an emergency.

The task force discussed the status of the Carver emergency plan and implementing procedures (IPs) and the town process for approving these documents during the meetings with town officials on November 8, 1990 (PT-58), and December 5, 1990 (PT-55). The task force acquired a set of the current plan and IPs for the Town of Carver during the December 5, 1990, meeting. Town officials emphasized that the plan and IPs were draft documents and should not be considered to be the final and/or approved plans for the town, but stated that they are the documents that would be used if an incident were to occur at the Pilgrim plant [Town of Carver's statement dated December 5, 1990 (PT-36)].

Since the October 1989 exercise, the Carver plan and most of the IPs have been revised and are in various stages of the town's approval process. According to Carver officials, the town's approval process for IPs is as follows: a draft IP is reviewed and "approved in concept" by the department head, then it is reviewed and approved in concept by the Civil Defense Director (in other towns, it is then sent to a Radiological Emergency Response Plan Committee; however, Carver does not have such a committee). After approval in concept by the Civil Defense Director, the draft IP is forwarded to MCDA for preparation of, and incorporation into, lesson plans for training purposes only. Draft IPs are then forwarded to MCDA for formal review after they are approved by the Board of Selectmen; MCDA is responsible for forwarding the procedures to FEMA for formal review. However, neither the Carver plan nor any of IPs had been formally approved by the Selectmen or forwarded to the MCDA or FEMA for formal review.

The term "approved in concept" describes the draft plan and IPs that have been approved by department heads and the Civil Defense Director for training purposes, use in an exercise, and in an actual emergency at the Pilgrim plant. Approval in concept does not mean that the town formally approves the plan and IPs or intends to submit them to MCDA or FEMA for formal review.

The emergency plan for Carver obtained by the task force was draft Revision 6, dated December 1, 1989; however, some of the revised pages were dated May 16, 1990. Section V, "Implementing Procedure Listing," of the plan listed 41 IPs. The task force obtained 41 draft IPs (listed in Appendix C of this report); since Revision 6 of the plan was issued, two IPs (IP-29 and IP-30) have been added and IPs-48, 50, and 60 have been deleted. Section V of the plan had not been revised to reflect the change in IP status. Of the 41 IPs that support the Carver plan, 37 had been revised since the October 1989 exercise.

C. TASK FORCE ASSESSMENT

The significance of this matter is discussed in Section 2.1.

2.3.3 Carver Schools

A. STATEMENT OF ISSUE

At the public meeting on September 6, 1990, commenters stated that none of the EPZ towns had an approved school plan (i.e., implementing procedure).

B. FINDINGS

The task force discussed the status of the school implementing procedure with Carver officials during the meeting on November 8, 1990 (PT-58). The Deputy Civil Defense Director informed the task force that some Carver school officials, including the Superintendent of Schools, had asked for a full demonstration of the Carver school procedure before its approval by the school committee. In the meeting on December 5, 1990 (PT-55), the Deputy Civil Defense Director told the task force that the school committee had recently met to discuss the school procedure and had essentially approved the procedure in concept. However, some school officials still felt that the school procedure should be demonstrated before it was approved. To pursue this matter further, the task force met with Dr. Martin T. Hanley, Jr., Superintendent of Carver Public Schools, on January 15, 1991 (PT-106), to discuss the status of the school procedure. The Deputy Civil Defense Director as well as BECO and MCDA representatives also attended this meeting.

The Superintendent briefly described the Carver schools within the Carver EPZ, and noted that one high school and two elementary schools would have to be relocated to host schools or the reception center in the Town of Bridgewater in an emergency. The Superintendent stated that he, the school committee, and other town

officials had approved in concept the Carver school procedure (Carver IP-06, "School Department"). However, the Superintendent stated that the school committee still had reservations as to whether the "procedure would really work as planned."

Carver school officials have considered conducting a demonstration of the school procedure, or as an alternative, a field trip, during which the transportation resources would be dispatched and the students physically moved. However, Carver school officials feel that even this would not fully alleviate their concern regarding the implementability of the school procedure in an actual emergency. The MCDA representative at the meeting indicated that if Carver officials choose to conduct such a demonstration, the town must assume all liabilities associated with the movement of students.

The Superintendent stated that other than the concern regarding the implementability of the school procedure, neither he nor other Carver officials had any problems with any other aspect of the school procedure. All vehicles are equipped with radios and there were no outstanding equipment problems. Adequate arrangements were in place to handle the special education students in an emergency. The Superintendent sent a letter dated January 1991 (attached to PT-106) to the parents of school children in the EPZ schools informing them of the plans for protecting the Carver school children in case of an accident at the Pilgrim plant. The letter identified the host schools, informed parents of how they would be notified if the students were moved, and included maps showing directions to each host school.

C. TASK FORCE ASSESSMENT

The task force finds that the issue of lack of an approved plan for Carver school children has been resolved with the approval in concept of Carver IP-06 (Draft 4, February 1, 1990), "School Department," by the school committee, town officials, and the Superintendent of Carver Public Schools. Regarding the town's proposal to actually evacuate school children in an exercise, NRC regulation 10 CFR 50, Appendix E, IV.F.1, requires exercises that test as much of the licensee, State, and local emergency plans as is reasonably achievable without mandatory public participation. Both the NRC and FEMA generally discourage evacuation of the general public during an exercise.

2.3.4 Staffing of Emergency Worker Monitoring and Decontamination Station

A. STATEMENT OF ISSUE

The emergency worker monitoring and decontamination station (EWMDS) at Plymouth Airport is intended to be a joint Plymouth-Carver facility. However, the Town of Carver has not provided any staff for the facility. Plymouth officials feel that they should not have to provide the entire staff and that Carver should meet its staffing responsibilities. The staffing of the joint Plymouth-

Carver EWMS was identified as an issue by Plymouth officials during meetings with the task force and by Carver's Deputy Civil Defense Director at the September 6, 1990, public meeting.

B. FINDINGS

The task force discussed this issue with Carver officials during the meetings on November 8, 1990 (PT-58), December 5, 1990 (PT-55), and January 16, 1991 (PT-107). Town officials initially assumed that the Carver Fire Department personnel would staff the EWMS. However, the Fire Chief will not provide Fire Department personnel to staff the EWMS because of his concern that the all-volunteer Carver Fire Department does not have a sufficient number of firefighters to support the EWMS and also to meet its other responsibilities under the emergency plan.

Carver officials have made an effort to find replacements for the Fire Department personnel to staff the 11 EWMS positions assigned to Carver out of a total of 22 positions for 2 shifts. As of January 16, 1991, seven volunteers had been identified to perform EWMS functions. The Deputy Civil Defense Director indicated that these volunteers had received some basic training; however, they were not yet fully trained to assume their EWMS duties. As discussed in Section 2.2.4 of this report, the Plymouth Fire Department provides 2 shifts of trained firefighters (11 per shift) for the EWMS. Although Plymouth would like Carver to meet its responsibility of staffing the EWMS so that Plymouth could use some of assigned firefighters for other duties in an emergency, Plymouth officials stated that Plymouth would continue to staff the EWMS and accommodate emergency workers from both Plymouth and Carver in an actual emergency.

C. TASK FORCE ASSESSMENT

The staffing at the EWMS is adequate. Plymouth is more than meeting its responsibility in staffing the joint Plymouth-Carver EWMS. Although Carver has not yet met its commitment under its plan, it is attempting to rectify this situation, as discussed above. NUREG-0654, Evaluation Criterion K.5.b, addresses requirements for monitoring and decontamination facilities for emergency workers. The Plymouth-Carver EWMS meets the criterion; however, Carver should continue its efforts to meet its emergency plan staffing responsibility for the EWMS. At the public meeting in Plymouth on June 12, 1991, the Deputy Civil Defense Director stated that this issue was resolved because Carver staff at the EWMS will work under the direction of Plymouth staff.

2.3.5 Transportation Staging Area

A. STATEMENT OF ISSUE

An issue identified by FEMA during the October 1989 exercise and raised by Carver officials during the meeting with the task force on November 8, 1990 (PT-58), concerned the transportation staging area (TSA) for Carver. Carver had initially identified a TSA that

was located at the Governor John Carver School. During the exercise, some confusion occurred at the Carver TSA regarding whether an arriving bus was to be used to relocate the school students or to be dispatched to evacuate the general public.

B. FINDINGS

During the meeting with the task force on December 5, 1990 (PT-55), Carver officials stated that the relocation of the TSA from the Carver school to the town's maintenance building had been approved and the site was being prepared for this use.

C. TASK FORCE ASSESSMENT

The task force finds that the issue of the relocation of the Carver TSA is being resolved based on the identification of the town's maintenance building as the new TSA. FEMA will evaluate procedures that are modified to reflect this change.

2.4 Kingston Plans and Preparedness

At the public meeting on September 6, 1990, a private citizen and resident of the Town of Kingston, speaking on behalf of a Kingston Selectman who had to leave the meeting, expressed concerns about the state of preparedness in the event of an accident at the Pilgrim Nuclear Power Station. The commenter specifically expressed concerns about the adequacy of the reception center located at the Bridgewater State College, the availability of school buses, the adequacy of training for emergency response personnel, communications, and shelters.

At the congressional hearing on October 30, 1990 (PT-136), a member of Kingston's Board of Selectmen reiterated these concerns and raised several new issues. These new issues were the adequacy of the alert and notification system, the adequacy of the staff at Jordan Hospital to handle multiple radiation victims, and the capability to identify the special needs population and to provide appropriate transportation.

The task force's assessment of all these concerns, except the concern about the training of emergency response personnel (addressed in Section 2.4.4), is given in the following sections of this task force report: public notification system, Section 2.9; reception centers, Section 2.11; special needs, Section 2.12; transportation, Section 2.13; and shelter, Section 2.15. Jordan Hospital provides medical services for onsite BECo personnel. It does not have an agreement to provide medical services for members of the general public.

The task force met with Kingston officials in Kingston's emergency operations center (EOC) on December 7, 1990 (PT-65), February 1, 1991 (PT-72), and February 26, 1991, (PT-112), to discuss Kingston's plans and implementing procedures. Dennis Tavares, Civil Defense Director (on February 26, 1991), and Frederick Woodworth, Deputy Civil Defense Director, were the principal

spokespersons for the Town of Kingston. Alfred Slaney, Massachusetts Civil Defense Agency (MCDA), attended the meetings, and Evalyn Fisher represented BECo. The major issues discussed with the task force during these meetings are summarized below.

2.4.1 Equipment Needs

A. STATEMENT OF ISSUE

No specific equipment needs for the Town of Kingston other than the equipment needed for Bridgewater State College (addressed in Section 2.11) were identified at the September 6, 1990, public meeting. However, during the meeting with the task force on February 26, 1991, Kingston officials stated that there were two outstanding equipment needs: radios at the Kingston transportation staging area (TSA) and a backup communications system for the Kingston School Department. They also stated that this issue was being resolved.

B. FINDINGS

Radios at the Kingston Transportation Staging Area

At the February 26, 1991, meeting, Kingston officials stated that although all the radio kits needed for the TSA had been delivered as of January 25, 1991, the radios would not be fully operational until MCDA assigned appropriate frequencies and BECo coordinated the incorporation of these frequencies into the radio network. However, Kingston officials stated that they did not expect that there would be any problems resolving this issue.

During a telephone conversation on April 16, 1991 (PT-172), Kingston's Deputy Civil Defense Director told the task force that some progress had been made in resolving this issue. He stated that MCDA was expected to assign frequencies for the TSA radios very soon and that Kingston officials expected the radios to be fully operational in the near future.

Backup Communications System for the Kingston School Department

At the February 26, 1991, meeting, Kingston officials stated that the town had reached an agreement with BECo that BECo would provide a backup communications system for the Kingston School Department. This system will enable the Kingston School Superintendent's office to communicate with each of the schools in the town in case the primary communications system failed. The backup system will include citizens band (CB) radios at the Kingston High School, Kingston Elementary School, and Sacred Heart Parochial School, which will be tied to a base station in the Superintendent's office. Kingston officials further stated that this equipment had been ordered and that delivery was expected in March 1991.

During the telephone conversation on April 16, 1991, Kingston's Deputy Civil Defense Director told the task force that the CB

radios had not yet been delivered, but delivery was expected shortly.

C. TASK FORCE ASSESSMENT

Although BECo has met, or has committed to meet, all the equipment needs identified by the Town of Kingston, two equipment needs were still outstanding. Appropriate actions to meet these needs have been initiated.

The task force evaluated communications equipment needs against the following standard. 10 CFR 50.47(b)(6) (Planning Standard F in NUREG-0654) requires the following, "Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public." Evaluation Criterion F.1 in NUREG-0654 states, "Each organization shall establish reliable primary and backup means of communications for licensees, local and State response organizations."

Radios at the Kingston Transportation Staging Area

Although BECo has provided the necessary radios to Kingston to establish communications between the TSA and the Kingston EOC, the State is responsible for assigning a specific radio frequency to Kingston for use in this system. Previously, all of the emergency planning zone (EPZ) towns had operated on one common radio frequency, but MCDA is now planning to assign distinct frequencies for each town.

Neither Kingston officials nor BECo anticipates any major problems in resolving this issue. During the telephone conversation on April 16, 1991, Kingston's Deputy Civil Defense Director stated that he expected that this issue would be fully resolved in the near future. On June 4, 1991, Kingston officials stated that the radio frequency had been assigned (PT-216). The task force concludes that this issue is resolved based on the assignment of a radio frequency to Kingston by MCDA.

Backup Communications System for the Kingston School Department

BECo and Kingston officials have reached an agreement on a backup communications system (CB radios) for the Kingston School Department. Based on this agreement and the Deputy Civil Defense Director's expectation that the CB radios would be delivered soon, the task force concludes that the planning standard and guidance criterion will be met, contingent on the delivery of the radios.

2.4.2 Status of Plans and Procedures

A. STATEMENT OF ISSUE

At the public meeting on September 6, 1990, the issue of the status of the emergency plans and implementing procedures for the EPZ and

reception center towns was raised. In particular, comments were made that none of the school plans or procedures had been approved.

B. FINDINGS

Town officials discussed the status of the Kingston emergency plan and associated implementing procedures (IPs), including the town's process for reviewing and approving the IPs, with the task force on December 7, 1990, February 1, 1991, and February 26, 1991. During the first meeting, the task force obtained a complete set of the most current version of the plans and IPs for Kingston. Although the Kingston officials noted that the plan and IPs had not been approved by the Board of Selectmen, they stated that the draft copies acquired by the task force were the documents that would be used in the event of a real emergency at the Pilgrim Nuclear Power Station.

At the December 7, 1990, meeting, Kingston officials stated that the town does not use a Radiological Emergency Response Planning (RERP) Committee in the review process, which they described as follows. Draft IPs are reviewed and approved in concept by town department heads, sent to the Civil Defense Director for review and approval in concept, and then to the Board of Selectmen for review. They are then sent to MCDA along with lesson plans to be reviewed for training purposes. However, Kingston officials stated that no formal mechanism existed for obtaining approval from the Board of Selectmen after the IPs had been approved in concept by the applicable department heads, nor was there a process whereby the Board of Selectmen formally transmitted the IPs to MCDA for technical review. The task force understands that BECO is developing an administrative procedure (AP-05), applicable to all the EPZ towns, that will clarify and outline the administrative processes for each town for submitting plans and IPs to MCDA. MCDA is responsible for submitting plans and procedures to FEMA for review.

The Kingston plan and IPs, with the exception of IP-06, "Kingston Schools," have been approved in concept by the applicable department heads and the Civil Defense Director, but not the Board of Selectmen. The status of IP-06 is discussed in Section 2.4.3 of this report.

C. TASK FORCE ASSESSMENT

The plan and most of the IPs had been revised since the October 1989 exercise. A mechanism is in place for forwarding to MCDA the revised draft procedures for inclusion in the training program, after they are approved in concept by the responsible department head and Civil Defense Director. However, neither the plan nor any of the procedures had been formally approved by the Board of Selectmen, and none of the documents had been submitted to MCDA and FEMA for formal review. The significance of this matter is discussed in Section 2.1 of this report.

2.4.3 Kingston Schools

A. STATEMENT OF ISSUE

At the public meeting on September 6, 1990, commenters stated that none of the school plans or procedures had been approved.

B. FINDINGS

At meetings on December 7, 1990, February 1, 1991, and February 26, 1991, Kingston officials advised the task force that the High School Committee had approved in concept the Kingston school procedure, IP-06, Draft 7, October 15, 1990, but that the Elementary School Committee had not approved the procedure because it specifies that Kingston students would be relocated to two different host schools in Bridgewater if evacuation was necessary. The Elementary School Committee felt that this relocation would only add to the confusion during an emergency and requested that only one host school in Bridgewater be designated and that IP-06 be revised accordingly.

During the telephone conversation on April 16, 1991, the Deputy Civil Defense Director told the task force that one host school in Bridgewater, the Bridgewater Middle School, had been designated for Kingston students and that MCDA and Bridgewater officials agreed with this action. They felt that after the logistical arrangements had been completed and IP-06 had been revised to reflect this change, the Elementary School Committee would approve the school procedure and that this approval would be obtained in the near future.

C. TASK FORCE ASSESSMENT

The task force notes that although it may be preferable to have only one host school designated in Bridgewater for the Kingston students, the current school procedure, although not endorsed by the Elementary School Committee, is not inconsistent with any existing planning standards or guidance criteria.

The interested parties representing Kingston, Bridgewater, and MCDA appear to be negotiating in good faith to achieve a mutually agreeable solution to this issue. FEMA will evaluate any revised procedure.

2.4.4 Staffing and Training

A. STATEMENT OF ISSUE

At the meeting with the task force on February 26, 1991, Kingston expressed concerns about being able to maintain adequate staffing levels for the emergency response organization. At the public meeting on September 6, 1990, a private citizen and resident of Kingston, speaking on behalf of a Kingston Selectman, expressed concern about the lack of adequate training for the town's elementary school teachers. This concern was reiterated by a

member of Kingston's Board of Selectmen during the congressional hearing on October 30, 1990.

B. FINDINGS

Staffing

During the meeting on February 26, 1991, Kingston officials told the task force that one shift of emergency responders in the Kingston EOC consists of 28 positions. They also stated that if the EOC was activated, two 12-hour shifts (56 positions) would be used. During the telephone conversation on April 16, 1991, the Kingston Deputy Civil Defense Director stated that all the emergency response positions, both those in the EOC and those in the field, had been filled according to the organization specified in the emergency plan.

Training

During meetings on December 7, 1990, February 1, 1991, and February 26, 1991, Kingston officials told the task force that although training and refresher training were ongoing processes, initial training for all identified emergency response personnel was expected to be completed by February 1991, including training for the elementary school teachers. During the telephone conversation on April 16, 1991, the Kingston Deputy Civil Defense Director stated that all initial training for emergency response personnel had been completed, except for one new Selectman who had been elected to the Board of Selectmen during the week of April 8, 1991. Training for this individual had been scheduled and was expected to be completed by April 30, 1991. Training records are maintained by BECo and Kingston officials, and training status statistics are provided to MCDA. According to the State's Annual Letter of Certification dated January 30, 1991 (PT-93), 17.2 percent of the total training hours assigned to the Kingston offsite emergency response organizations in 1990 and 14.3 percent of the total training hours assigned to the Kingston teachers were completed. An amended training report dated June 1, 1991, was received from MCDA at the June 12, 1991, public meeting in Plymouth (Appendix F). This report appears to indicate a dedicated training effort in 1991.

C. TASK FORCE ASSESSMENT

10 CFR 50.47(b)(15) (Planning Standard O in NUREG-0654) requires the following: "Radiological emergency response training is provided to those who may be called on to assist in an emergency." NUREG-0654, Evaluation Criterion 0.5 provides that "each organization shall provide for the initial and annual retraining of personnel with emergency response responsibilities." The evaluation criterion was not met in 1990. BECo and MCDA should place increased emphasis on training in Kingston in 1991. Information provided by MCDA at the public meeting in Plymouth on June 12, 1991, appears to indicate a dedicated training effort in 1991.

The task force concludes that there are no outstanding issues related to staffing of the Kingston EOC.

2.5 Duxbury Plans and Preparedness

The Town of Duxbury is located northeast of the Pilgrim Nuclear Power Station. Except for a small section of beach, Duxbury is more than 5 miles from the plant. The entire Town of Duxbury is within the plume exposure pathway emergency planning zone (EPZ) (Fig. 2.1).

The issues identified for Duxbury at the public meeting on September 6, 1990, fall into four categories: (1) equipment needs, (2) status of plans and procedures, (3) schools, and (4) staffing and training.

2.5.1 Equipment Needs

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, made the following comments about Duxbury's equipment needs:

- Older equipment issued by BECO was not covered under the new equipment maintenance agreement.
- Some pagers did not have a sufficient range.
- A direct phone line from the emergency operations center (EOC) to the Massachusetts Department of Public Works (MDPW) barn was needed.
- Better antennas were needed for the staging area.
- Portable radios were needed for the schools.
- Portable radios were needed for the lifeguards.
- The Conservation Officer and the Harbormaster needed sheltering capability, protective clothing, and permanently issued dosimetry.
- Additional CDV-700 survey meters were needed for the emergency worker decontamination station.
- Public information material was needed for the transient population.

B. FINDINGS

The task force met with Duxbury officials several times at the EOC, which is part of the Duxbury fire station. The two most significant meetings were the meeting on November 6, 1990 (PT-38), and the followup meeting on February 26, 1991 (PT-119).

On November 6, 1990, the task force met with the following Duxbury officials: Tom Groux, Town Manager; Carl O'Neil, Civil Defense Director (CDD) and Chief of the Fire Department; Kathie McLaughlin, Administrative Assistant to the CDD; Enrico Capucci, Chief of Police; and Donald Kennedy, Superintendent of the Duxbury Schools. Also present were Julia Gabaldon, Massachusetts Civil Defense Agency (MCDA), as well as Barney Yetman, BECo, whom the CDD had invited. On February 26, 1991, the task force met with Mr. Groux, Chief O'Neil, and Ms. McLaughlin. Also present was Alfred Slaney, MCDA.

Maintenance Agreement

At the November 6, 1990, meeting, the CDD informed the task force that BECo had supplied some emergency equipment to the town before Mr. Varley, BECo Manager of Emergency Planning, became involved. He indicated that this older equipment, which included pagers that will be used for notification during a radiological emergency, was not covered under the maintenance agreement with BECo (copy of agreement at PT-08, p. III-34). However, all of the newer equipment (e.g., portable radios, base stations, and CB radios), was covered under the maintenance agreement. The CDD stated that he believed that all of the equipment that BECo had given to the town should be covered by the maintenance agreement.

In its October 4, 1990, response to the NRC, BECo stated (PT-08, p. III-34) that the Boston Edison Comprehensive Grant Agreement established the terms of the equipment maintenance agreements with Duxbury. According to BECo, the agreement is specifically limited to the maintenance of equipment acquired after May 18, 1988, the agreement's effective date.

The minutes of the Board of Selectmen meeting on January 28, 1991 (PT-119, Document C), indicate that the town is compiling a complete list of its emergency equipment needs. This will include an inventory of the equipment on hand, equipment that needs to be repaired or replaced, additional equipment that is needed, and a justification for the latter. The minutes record that Mr. Groux mentioned that the maintenance agreement with BECo should be changed to reflect all the equipment that needs to be repaired and maintained. They also indicate that the Selectmen will send a letter to BECo describing the equipment on hand and the new equipment that is needed to carry out the responsibilities under the implementing procedures.

In a phone conversation with the task force on April 25, 1991 (PT-123), Chief O'Neil, CDD, stated that equipment in Duxbury not covered by the maintenance agreement was being repaired using funds from the Comprehensive Grant Agreement. Chief O'Neil also supplied the task force with a copy of the list of emergency equipment not covered by the maintenance agreement.

Range of Pagers

At the November 6, 1990 meeting, the CDD stated that the pagers being used were voice (radio) pagers and had a range of 10 to 12 miles. He stated that the Selectmen who worked outside the town were beyond the range of the pagers. The CDD suggested BECo supply longer range telephone pagers to these Selectmen and to the Health Officer.

The minutes of the January 28, 1991, meeting of the Board of Selectmen record that the Selectmen protested that their pagers did not work during the January 11, 1991, event at the plant and that this was a major communications problem. They stated that they would return the pagers to BECo.

At the fact-finding meeting with BECo on February 25, 1991 (PT-70), the task force asked the BECo representative if BECo intended to supply the Town of Duxbury with extra pagers (extended range) for Selectmen who worked outside the town. The BECo representative replied that BECo would not provide these "commercial types" of pagers.

At the February 26, 1991, meeting (PT-119), the CDD stated that four longer range pagers were still needed and that the issue had been addressed during a recent (week of February 18, 1991) meeting he had with BECo. According to the CDD, BECo had indicated that the grant agreement it had with Duxbury could be used to purchase additional pagers. BECo's position, as described by the CDD, appeared to be consistent with the statements made by BECo during the February 25, 1991, meeting with the task force; that is, that BECo would neither provide nor maintain additional pagers.

Phone Line Between EOC and MDPW Barn

At the November 6, 1990, meeting, the CDD stated that a direct telephone line was needed between the EOC and the MDPW barn. Since calls between the two facilities have to go through the town switchboard, this routing of calls caused some delays during exercises.

At the February 26, 1991, meeting, the CDD confirmed that this issue had been resolved by the installation of a new telephone line. This resolution is also documented in a report entitled "Duxbury Emergency Preparedness Status as of 1/23/91" (PT-119, Document B).

Antennas for Staging Area

At the November 6, 1990, meeting, the CDD stated that communications to the transportation staging area via RACES radio were poor. He also stated that this issue might be addressed by having a Duxbury representative rather than a member of the Civil Air Patrol at the transportation staging area.

The report, "Duxbury Emergency Preparedness Status as of 1/23/91," prepared by Duxbury's Civil Defense Agency, stated that

communications had been improved at the transportation staging area at Martinson Jr. High School by the installation of new antennas and that new radios had been installed.

Radios for Schools

At the November 6, 1990, meeting, Dr. Donald Kennedy, Superintendent of the Duxbury Schools, stated that BECo had provided portable CB radios and base stations and had conducted training on the use of the equipment. Dr. Kennedy also stated that the Police Chief for Needham was satisfied with the logistical arrangements, but that he wanted a dedicated communications system for the schools. (Needham is the host school community for Duxbury.)

Portable Radios for the Lifeguards

A draft of the Conservation Department's Implementing Procedure IP-15 dated April 2, 1990, stated that lifeguards will assist with the alerting of persons at Duxbury Beach. Conservation personnel using the beach alerting instruction sheet in their beach alert kits are directed to (1) notify lifeguards of the emergency condition and (2) direct lifeguards to assist in clearing the beach.

In its October 4, 1990, response to this issue (PT-08, p. II-33), BECo acknowledged a role for the lifeguards in the Duxbury plan; that is, they will assist the conservation personnel in clearing the beach. However, BECo claimed that this was not a primary role and radios were not necessary to perform this task.

At the November 6, 1990, meeting, the CDD informed the task force that a procedure for using the lifeguards during evacuations would be written into the plans. He indicated that, once incorporated into the plans, portable radios would be needed for the lifeguards.

The minutes of the Board of Selectmen meeting of January 28, 1991, indicate that portable radios were still needed for the lifeguards at Duxbury Beach and that the lifeguards are participants under the Conservation Department's implementing procedures.

Sheltering, Protective Clothing, and Dosimetry for Harbormaster and Conservation Officer

At the November 6, 1990, meeting, the CDD indicated that the issue of dosimetry packets for the Harbormaster and Conservation Officer could be resolved by storing the packets in a more convenient place. The task force did not question town officials about sheltering or protective clothing for the Harbormaster, Conservation Officer, or any other emergency worker for the reasons explained in Section 2.5.1.C.

In a letter dated January 4, 1991, to Robert Hallisey, Director of Radiological Control Program, Massachusetts Department of Public Health (MDPH) (PT-86), the CDD stated that the Harbormaster and the Conservation Administrator were concerned that their personnel

working in remote areas of the beach and bay would need protective clothing and breathing apparatus because they would not be able to shelter if that became necessary. The CDD stated that although the Harbormaster and the Conservation Administrator understood that protective clothing might not be practical, they were more concerned about permanent contamination resulting from the inhalation of contaminated particles. The CDD asked Mr. Hallisey for help in resolving these concerns.

The minutes of the January 28, 1991, meeting of the Board of Selectmen show that the town had requested that BECO provide breathing apparatus for the Harbormaster and Conservation Officer. One of the Selectmen pointed out that the request should include "everyone" - Police Department, MDPW, etc.

CDV-700 Survey Meters for EWMDS

The report, "Duxbury Emergency Preparedness Status as of 1/23/91," prepared by Duxbury's Civil Defense Agency, stated that MCDA had supplied three additional CDV-700 survey meters for the EWMDS.

Public Information Material for Transient Population

At the November 6, 1990, meeting, the CDD stated that placards had been posted in public areas and buildings and that information on protective actions is also in the telephone book.

C. TASK FORCE ASSESSMENT

10.CFR 50.47(b)(5) (Planning Standard E in NUREG-0654) requires that "procedures have been established for notification, by the licensee of State and local response organizations and for notification of emergency personnel by all response organizations . . ." NUREG-0654, Evaluation Criterion E.2 provides that "each organization shall establish procedures for alerting, notifying, and mobilizing emergency response personnel."

10 CFR 50.47(b)(6) (Planning Standard F in NUREG-0654) requires the following: "Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public."

10 CFR 50.47(b)(8) (Planning Standard H in NUREG-0654) requires the following: "Adequate emergency facilities and equipment to support the emergency response are provided and maintained."

The task force evaluated the findings regarding emergency equipment in Duxbury against these standards.

Maintenance Agreement

The maintenance aspect of Planning Standard 10 CFR 50.47(b)(8) has been met for emergency equipment covered by the maintenance agreement with BECO, that is, equipment supplied by BECO to Duxbury since May 18, 1988. Who is responsible for maintaining emergency

equipment supplied to the town before May 18, 1988, however, is at issue. BECo stated that it is the town's responsibility. The town stated that it is BECo's responsibility. However, the town is now using funds from the Comprehensive Grant Agreement to pay for equipment repairs. Without assessing who is responsible, the maintenance aspect of the planning standard 10 CFR 50.47(b)(8) for emergency equipment supplied to the town before May 18, 1988, such as the radio pagers, is currently being met. However, this is not a long-term solution. FEMA will continue to monitor this issue.

Range of Pagers

Section II, Part E, paragraph 2.f of the Town of Duxbury Radiological Emergency Response Plan for the Pilgrim Nuclear Power Station, Rev. 7, dated December 1, 1989, states that individuals in the town's emergency response organization will be contacted using commercial telephones and told to report to the EOC, that pagers or radio systems will be used as backup means of notification, and that all key members of the Civil Defense Agency and their alternates should have pagers. Section I, Part A, paragraph 4.(a)1(a), of the plan states that the Board of Selectmen will provide overall supervision of the emergency response.

The task force found that BECo has provided radio pagers for emergency response personnel in Duxbury. It also found that three pagers assigned to the Selectmen who work outside the town apparently did not have sufficient range. A fourth longer range pager was needed for the Health Officer. In a June 12, 1991, letter submitted at the June 12, 1991, public meeting in Plymouth (Appendix F) Patricia A. Dowd, Chairman of the Duxbury Board of Selectmen, stated that the 4 longer-range pagers had been provided and that this is not an issue.

Evaluation Criterion 1 of Planning Standard F in NUREG-0654 states that a primary and a backup means of communication are necessary. Evaluation Criterion E.2 states that each organization shall establish procedures for alerting, notifying, and mobilizing emergency response personnel. This explicitly includes alerting or activating emergency personnel in each response organization. Revision 7 of the Town of Duxbury Radiological Emergency Response Plan for the Pilgrim Nuclear Power Station, dated December 1, 1989, page II-E-3, calls for pagers to be used as backup means for notifying the three Selectmen. The provisions of the plan and the regulatory guidance regarding a backup means for notifying the Selectmen and the Health Officer have been met.

Phones Lines, Antennas, School Radios, CDV-700 Survey Meters, and Public Information Material for Transient Population

The task force finds that all of these issues are resolved.

Portable Radios for the Lifeguards

Under the emergency plan, Conservation personnel are to notify the lifeguards at Duxbury Beach of the emergency condition and direct

them to assist in clearing the beach. Without radios, the task force infers that the lifeguards would be notified at the same time as the general beach population by means of prescribed messages delivered from bullhorns or vehicle-mounted loudspeakers. If the lifeguards are to function as emergency workers, they should have communications to meet the intent or the guidance in Evaluation Criteria E.2 and F.1. It would be impossible to provide substantive instructions to lifeguards using this method. Also, oral, face-to-face communications would probably not be prompt and would hinder the Conservation personnel's main function of alerting the public.

Sheltering, Protective Clothing, and Dosimetry for Harbormaster and Conservation Officer

The dosimetry issue apparently hinges on finding a suitable location to store the dosimetry packets. Whether that location is at the EOC or nearer to where the Harbormaster and Conservation Officer work is a matter which should be resolved by the Duxbury CDD.

The town has referred the issue of protective clothing (anti-contamination clothing) and breathing apparatus for the Harbormaster and Conservation Officer to the Massachusetts Department of Public Health. This is where the issue should be resolved. With regard to the issue of breathing apparatus, the task force concludes that the preferred protective action for emergency workers would be evacuation rather than having them don breathing apparatus.

2.5.2 Status of Plans and Procedures

A. STATEMENT OF ISSUE

The status of offsite plans, particularly the plans for the local communities, was a major issue of contention at the September 6, 1990, public meeting. However, the only specific issue raised at the public meeting regarding the Duxbury plans was that the schools and school committee were using a revision of the implementing procedure, IP-06 (Draft 5), that was different from the revision that the town was using (Draft 7). The task force also accepted as an issue the methods used to develop and approve plans and implementing procedures for Duxbury.

B. FINDINGS

During the November 6, 1990, meeting with the task force (PT-38), the Civil Defense Director (CDD) described the development and approval process for the town's implementing procedures (IPs) as follows:

- IPs are developed by the CDD, assisted by BECo.

- IPs are then reviewed and approved by the heads of town departments (School Superintendent, in the case of the schools).
- IPs for the schools are then reviewed and approved by the school committee.
- IPs are sent simultaneously to the Radiological Emergency Response Plan Advisory (RERP) Committee and the Board of Selectmen. (Previously, the RERP Committee had been in the direct line of approval before the Board of Selectmen. This is no longer the case.)
- IPs are approved by the Board of Selectmen and submitted to the State.

The CDD provided the task force with copies of Drafts 9 and 10 of IP-06 for the School Department (PT-38, Documents E and F).

On November 27, 1990 (PT-54), the task force visited the Duxbury EOC for the purpose of collecting the most recent version of the Duxbury plans and procedures. In the transmittal letter accompanying the submittal of the plans and procedures, the CDD indicated that "some of the latest revisions have not been reviewed by those responsible for implementing them." According to the CDD, the procedures provided on November 27, 1990, were the procedures that would be used if a real emergency occurred. He also stated that none of the procedures had been approved by the Board of Selectmen for submission to the State. Duxbury Selectmen track the status of emergency preparedness issues through a "List of Eighteen Questions" that are periodically updated by the Civil Defense Director.

C. TASK FORCE ASSESSMENT

The significance of the overall issue of the status of plans and procedures is discussed in Section 2.1 of this report. More specifically, the task force found that the town, School Department, and school committee were using the same version of IP-06 (i.e., Draft 10). During a task force interview with a concerned citizen, written comments were provided regarding school procedures (PT-52). However, the task force did not conduct a detailed review of the school plans and procedures.

FEMA has reviewed the Duxbury school plans and procedures and provided its comments to MCDA on April 17, 1991 (PT-162). On May 29, 1991, FEMA representatives met with the Duxbury CDD, the Duxbury School Superintendent, the BECo community representative and Mr. Alfred Slaney of the MCDA Area II to discuss FEMA's review (PT-201). The task force notes that, although FEMA's technical review comments were numerous, they did not reflect serious shortcomings in IP-06, which FEMA found to be comprehensive and well thought out. At the June 12, 1991, public meeting in Plymouth (Appendix F), Duxbury officials pointed out that several of FEMA's

concerns were beyond the authority and responsibility of the town to resolve.

2.5.3 Duxbury Schools

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, made the following comments about the Duxbury schools:

- The Duxbury School Committee was using Draft 5 of IP-06, while the town was using Draft 7 (addressed in Section 2.5.2).
- The lack of adequate host schools generated the following subissues:
 - State plans were still incomplete.
 - Communications problems existed.
 - The Criminal Justice Training Center (CJTC) was not acceptable as a host school because its use during an emergency would require an executive order from the Governor and because it could not handle the entire student population. Also, it is an inadequate substitute for a developed public school system.
- The Needham schools, the alternative to the CJTC, were just under a gentlemen's agreement. No letter of agreement, training, maps, or instructions for the parents existed.
- The Needham School Committee had voted to accept the school children of Duxbury, but the State had not developed letters of agreement with Needham nor had IPs been written, training been conducted, or maps been drawn.
- Needham's Chief of Police had the following concerns (a letter from Dr. Kennedy was the source of information about the Chief's concerns):
 - The schools needed a dedicated communications system.
 - He should have a major role in determining what routes will be used.
 - The safety of the citizens of Needham should not be compromised in any way.
- Parents will have to drive back into the EPZ to the Duxbury schools to determine the location of their children (i.e., the host school).
- No monitoring equipment will be available in the host schools.

- There was no place for the 75 severely handicapped students of the Pilgrim Area Collaborative.
- Host schools assigned to Duxbury (i.e., Framingham and Newton schools) were not aware that they had been designated and had not agreed to participate.
- Communications with school buses will be a problem.
- During the October 1989 exercise, 124 fifth graders and 12 staff members were at Camp Squanto in Plymouth and were not included in the protective actions.
- During the October 1989 exercise, the Duxbury school telephone lines were overloaded and personnel at the Duxbury EOC could not contact the school for 20 minutes (addressed in Section 2.5.1).
- In a poll taken, a majority of teachers did not agree to evacuate or to participate in the plans.

B. FINDINGS

Host School

As mentioned in Section 2.5.1, the task force met with Dr. Kennedy, the Superintendent of Duxbury Schools, on November 6, 1990, in the Duxbury EOC (PT-38). Dr. Kennedy stated that Draft 10 of the school procedure, IP-06, dated October 4, 1990, had been developed and would be used for training and that this latest revision of the school procedure included the following changes: updated telephone numbers, communications upgrades such as CB radios for school buses, and designation of Needham to provide host school facilities. Dr. Kennedy stated that this procedure would be used for the training of Needham school personnel scheduled for November 26, 1990, and that it was being reviewed by the Duxbury School Committee. According to Dr. Kennedy, Needham's Police Chief was satisfied with the logistical arrangements, but wanted a dedicated communications system for the schools.

Dr. Kennedy stated that Needham's decision to accept Duxbury's school children was documented in the minutes of a Needham School Committee meeting (PT-38, Document H).

In addition, there is a document entitled "Letter of Agreement: Needham High School Host Facility" (PT-160), which was signed by the Vice-Chairperson of Needham's School Committee, the Chairman of Needham's Board of Selectmen, the Director of MCDA, and the Senior Vice President-Nuclear BECo. The dates of the signatures range from November 19, 1990, to April 28, 1991.

Dr. Kennedy stated that after the training on November 26, 1990, letters would be sent to the parents of all the Duxbury school children notifying them that Needham High School was the host school for these children. This includes children from the Pilgrim

Area Collaborative (PAC) who attend PAC sessions at the Duxbury Intermediate School. He also acknowledged the value of including this information in the public information brochure.

At the February 26, 1991, meeting with the task force (PT-119), the Duxbury CDD stated that the letters to the parents of the Duxbury public school children had been sent. A map showing the directions to Needham High School was enclosed with each letter. (A sample letter is provided in PT-119, Document A.) According to the CDD, because a letter of agreement had not been signed by all of the parties, the letters to the parents had been sent prematurely. He stated that the remaining letters (e.g., those to parents of nursery school children) would not be sent until MCDA signed the letter of agreement. According to the CDD, if an emergency were to occur that day, Draft 10 of the School Department's implementing procedure (IP-06) would be used, and Needham High School would host all the children from the Duxbury schools. FEMA has reviewed Duxbury IP-06, Draft 10, and finds that the use of Needham High School has been incorporated into the procedures. However, as of the date of FEMA's review, its use had not been incorporated into pertinent Wellesley Reception Center procedures.

In its October 4, 1990, response to the NRC, BECo stated (PT-08, p. III-1) that the communications needs for the host school in Needham could not be met until Needham officials accepted the procedures for the host school. BECo stated that it assumes that the communications system for the Needham host school would be consistent with those of other host communities, that is, commercial telephones as the primary means of communication and the Radio Amateur Civil Emergency Services (RACES) radio as a backup.

Framingham and Newton Schools

In its October 4, 1990 response to the NRC, BECo stated (PT-08, p. III-39) that for a period of time during the development of initial draft procedures, potential host schools were inserted for consideration by the State. BECo stated that these schools were eventually eliminated for consideration and were never contacted.

Monitoring of School Children

At the November 6, 1990, meeting with the task force, Dr. Kennedy discussed monitoring the school children on a sampling basis before they boarded the buses in Duxbury. However, the School Department did not have the survey meters and a procedure had not been written.

The task force reviewed portions of Drafts 9 and 10 of the procedure (PT-38, Documents E and F), which describe a precautionary transfer of students to the host school in Needham at the Site Area Emergency classification level (and possibly at the Alert level) and the alternatives to follow if an evacuation is the directed response for a particular school and the buses have not departed. Basically, the buses will be sent to the Wellesley Reception Center before going to the host school.

From the discussions at the November 6, 1990, meeting, the task force also understands that if a release were to occur while the buses were in transit and could be contaminated by the plume, the buses would be notified by CB radio and diverted to the Wellesley Reception Center.

Pilgrim Area Collaborative (PAC)

At the November 6, 1990, meeting with the task force, Dr. Kennedy stated that the PAC school children were now included in the plans for the Duxbury school children and that they will be evacuated to Needham along with the other school children. According to Dr. Kennedy, the 3:1 student-to-teacher ratio for the PAC school children will not change during an emergency.

On March 5, 1991, the task force interviewed Ms. Monahan, the PAC Director (PT-134). She confirmed that there were a total of 48 PAC students in the Pilgrim EPZ communities, 29 of whom were in Duxbury Intermediate School.

Camp Squanto

At the November 6, 1990, meeting with the task force, Dr. Kennedy stated that the primary concern was communicating with the parents of children who might be on field trips at Camp Squanto. He indicated that this was mainly a training issue and that, in an emergency, the schools would contact the camp by telephone. Protective actions for the camp are addressed in IP-72 for the Town of Plymouth.

Poll of Teachers

Teachers are employees of the town. The task force did not attempt to determine their opinion on how they would respond during an emergency. In a June 12, 1991, letter submitted at the June 12, 1991, public meeting in Plymouth (Appendix F) Patricia A. Dowd, Chairman of the Duxbury Board of Selectmen, stated that a large number of teachers have already received training and that the Selectmen have no reason to believe that Duxbury teachers will not assist with evacuation if that should ever be necessary.

C. TASK FORCE ASSESSMENT

Host School

Needham High School is the host school for all students from the Town of Duxbury. The Town of Needham has agreed, the training of Duxbury and Needham school personnel has begun, and the State, Needham, and BECo have signed a letter of agreement. According to the CDD for Duxbury, if there were an accident at the Pilgrim Nuclear Power Station requiring precautionary transfer of students from the town, the students would go to Needham High School. According to the CDD, the mailing of instructions and maps to the

parents will be completed after MCDA signs the letter of agreement. This issue will also be followed and evaluated by FEMA.

The issues involving the Criminal Justice Training Center and the Governor's declaration of a State of Emergency were resolved when Needham High School was incorporated into the Duxbury School Department's implementing procedure, IP-06, Draft 10; Needham and State officials signed the letter of agreement; and Draft 10 was reviewed and approved by Duxbury's Superintendent of Schools. The State plans and procedures concerning host school facilities for the Duxbury schools need to be modified to reflect the current arrangement described in Draft 10 of IP-06.

According to Dr. Kennedy, Duxbury's Superintendent of Schools, Needham's Chief of Police is satisfied with the logistical arrangements, but still wants a dedicated communication system for the school. According to BECo, it assumes that the communications system for the Needham host school would be consistent with those of other host communities.

Monitoring of School Children

The task force finds that the concept of monitoring school children at reception centers is acceptable. This is the State's option and is not unique to Pilgrim emergency planning or to that of Massachusetts.

Camp Squanto

The task force agrees with Dr. Kennedy that the issue of telling parents the location of their children who might be on a field trip and require relocation during an accident at the Pilgrim Nuclear Power Station is a training issue. Planning for the camp is already incorporated into the implementing procedures for the Town of Plymouth.

Poll of Teachers

Town employees, such as teachers, are expected to respond to an emergency at the Pilgrim Nuclear Power Station and to follow the emergency plan. As stated in their June 12, 1991, letter, the Selectmen have no reason to believe that the Duxbury teachers will not assist with evacuation if that should ever be necessary.

Additional Issues

At the June 12, 1991, public meeting in Plymouth, the task force received (from a citizen) a letter addressed to the task force, dated June 10, 1991, from the Superintendent of Duxbury Schools (Appendix F). The letter identifies: (1) new concepts endorsed by the School Committee that are not incorporated into implementing procedures (2) concerns that the task force believes are addressed in the report; and (3) updates regarding transportation needs for school children. The transportation information will be followed up by FEMA. The issues in this letter do not alter the task force's assessment of Duxbury Schools.

2.5.4 Staffing and Training

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, made the following comments about the staffing and training of emergency workers in Duxbury:

- The minimum number of persons required to perform all the emergency functions on a 24-hour basis in Duxbury is 305. Since January 1990, 61 new emergency workers had received initial training and 90 emergency workers had received requalification training. Of the 51 EOC positions, 9 were vacant.
- Most of the Duxbury school personnel, all of the emergency workers in Needham, and the EOC staff at Wellesley were untrained.
- A new lesson plan should be developed for the Harbormaster and the Coast Guard, and training should be provided.
- Training in terminology needs to be conducted because of confusion about the use of the terms "Emergency," "State of Emergency," "Site Area Emergency," and "General Emergency."

B. FINDINGS

Staffing the Duxbury EOC

At the November 6, 1990, meeting with the task force, the CDD provided the task force with a staffing roster for the Duxbury EOC, dated November 30, 1990 (PT-38, Document I). Of 59 positions, 3 were shown as vacant: the alternate Public Information Officer, the alternate Public Information Assistant, and the alternate Shelter Officer.

Training

On the day following the November 6, 1990, meeting, the CDD provided the task force with copies of training attendance records that showed that 60 persons had been trained in 1990. At the followup meeting on February 26, 1991 (PT-119), the task force asked about School Department training. The CDD stated that 349 persons (338 school support personnel and 11 administrators) were scheduled to receive training. At this meeting, the task force examined training records which indicated that 98 of the 349 persons had received training during the previous 12 months. According to the CDD, additional training sessions for School Department personnel had been scheduled for March 18-21, 1991. According to an MCDA representative, initial training for Needham personnel took place on November 26, 1990, as planned. According to the State's Annual Letter of Certification dated January 30, 1991 (PT-93), 37.5 percent of the total training hours assigned to

the Duxbury offsite emergency response organizations in 1990 and 31 percent of the total training hours assigned to the Duxbury teachers were completed in 1990.

C. TASK FORCE ASSESSMENT

10 CFR 50.47(b)(15) (Planning Standard O in NUREG-0654) requires the following: "Radiological emergency response training is provided to those who may be called on to assist in an emergency." NUREG-0654, Evaluation Criterion 0.5 provides that "each organization shall provide for the initial and annual retraining of personnel with emergency response responsibilities. The evaluation criterion was not met in 1990. The training data gathered by the task force are hard to analyze because they apply to different time periods. The task force finds that the overall ratio of training hours received versus training hours assigned as reported in MCDA's Annual Letter of Certification for 1990 is low. Based on discussions with the Duxbury Civil Defense Director, the task force expects that the ratio will be higher in 1991. FEMA will evaluate the progress in training through the 1991 exercise and review of the 1991 Annual Letter of Certification.

The 5-percent vacancy shown in the November 30, 1990, EOC staffing roster is reasonable. The three vacancies are all in alternate positions.

2.6 Marshfield Plans and Preparedness

Marshfield's emergency operations center (EOC) is collocated with Marshfield's police station approximately 11 miles from the Pilgrim station. The EOC is relatively new; its construction was completed in January 1989. The positions of Civil Defense Director and Deputy Civil Defense Director are part time. Marshfield's Civil Defense Office also employs a part-time administrative assistant. The following key department heads had been recently appointed at the time of the task force's visit: Town Administrator, Chief of the Fire Department, Superintendent of Schools, head of the Department of Public Works, and the Harbormaster. The town is governed by a three-member Board of Selectmen, one of which is designated as Chairman. The Chairman and one other Selectman were recently elected to the board. The issues identified for Marshfield at the public meeting on September 6, 1990, fall into the following categories: (1) equipment needs, (2) status of plans and procedures, (3) Marshfield schools, (4) size of the emergency planning zone, and (5) Public Information Officer.

2.6.1 Equipment Needs

A. STATEMENT OF ISSUE

Following the October 1989 exercise, Marshfield's Civil Defense Director identified an issue regarding the pager system provided by BECo. At the public meeting on September 6, 1990, he expressed concern about equipment for the Harbormaster. Subsequently,

Marshfield officials identified several other equipment issues primarily related to EOC equipment.

B. FINDINGS

The task force discussed equipment issues with Marshfield officials during meetings on November 6 and 8, 1990 (PT-57), December 5, 1990 (PT-66), and January 30, 1991 (PT-109). Daniel McGonagle, Marshfield Civil Defense Director, and Sean Connor, Deputy Civil Defense Director, were the principal spokespersons for Marshfield regarding equipment issues. Richard Finn, a BECo senior community representative, attended the December 5, 1990, meeting. Alfred Slaney, Massachusetts Civil Defense Agency (MCDA), attended all the task force meetings with Marshfield officials.

Pagers

At the November 6, 1990, meeting, Marshfield officials told the task force that the pager system provided by BECo did not effectively meet the needs of the town. The pagers will be used for initial notification of emergency personnel and are essential for emergency response. Marshfield officials stated that the pagers had a limited range. For example, Boston, which is approximately 30 miles away and is the normal work location of many of the town's emergency responders, was out of range. Marshfield officials stated that it would be too cumbersome to carry two pagers, one provided by BECo and one provided by the town, and that BECo should provide a single pager system to meet the town's needs. They stated that several unsuccessful attempts had been made to resolve this issue.

During the meeting on January 30, 1991, Marshfield officials informed the task force that they planned to purchase a new pager system from funds provided through the BECo Comprehensive Grant Agreement account. This agreement provides for the funding of civil defense needs. In a letter dated January 8, 1991 (attached to PT-109), the Civil Defense Director told BECo of the town's intention to purchase a new pager system from these funds.

On February 4, 1991, BECo responded (PT-181) that the grant monies could be used to purchase equipment but that this could cause a shortfall in the Civil Defense Director's funding.

Radios for Harbormaster

At the public meeting on September 6, 1990, the Civil Defense Director stated that the Marshfield Harbormaster was using a borrowed VHF radio and his communications equipment was inadequate for his area of operations. In the November 6, 1990, meeting with the task force, Marshfield officials stated that the Harbormaster had requested that BECo provide a base station and two portable radios and that BECo had agreed and delivery was expected shortly. In the December 5, 1990, meeting, the Civil Defense Director stated that in addition to the base station and two portable radios, which BECo had agreed to provide, the Harbormaster also needed a public

address system, a bull horn, and a radar system. At the January 30, 1991, meeting, the Civil Defense Director restated these needs.

In a June 13, 1991, letter to the task force, the Civil Defense Director stated that two portable radios for the Harbormaster have been delivered but other equipment is still pending (Appendix F).

At the February 25, 1991, meeting with the task force, the BECo community liaison representative for Marshfield stated (PT-70, p. 58) that the base station and other equipment for the Harbormaster had been delivered in December 1990, and that BECo was not aware of any outstanding equipment needs for the Harbormaster.

EOC Telephones

At the November 6, 1990, meeting with the task force, Marshfield officials stated that the central telephone line into the EOC did not have a call-forwarding feature to the police desk sergeant, if no one was present to answer the telephone. Marshfield officials felt that it was important to provide 24-hour communications capability for the members of the public who might call the EOC, especially during non-business hours. These officials also noted that several telephones in the EOC had been out of service for an extended period. This matter was brought to BECo's attention in a letter dated November 28, 1990 (PT-66). The BECo representative attending the December 5, 1990, meeting indicated that BECo would correct this problem. In a letter to BECo dated January 8, 1991 (PT-109), Marshfield officials stated that since BECo had not met its commitment to have the call-forwarding feature incorporated into the EOC telephone system, the town intended to use funds from the grant agreement to contract directly with the local telephone company to have this feature installed.

Facsimile Machine

At the meeting on December 5, 1990, with the task force, Marshfield officials stated that a dedicated line for the facsimile machine in the EOC was needed. They stated that this machine operated on a telephone line that was intended for other use and did not work under cold and/or humid conditions. A BECo community liaison representative who was present at the December 5, 1990, meeting when this matter was discussed indicated that he would initiate action to resolve this matter. During a task force meeting with Marshfield officials on January 30, 1991, the Civil Defense Director stated that this issue was still unresolved. In a June 13, 1991, letter to the task force the Civil Defense Director stated that this issue was resolved (Appendix F).

School Radio

At the December 5, 1990, meeting with the task force, the Marshfield Civil Defense Director stated that one additional CB radio was needed for one of the schools, and that an antenna had to be obtained and installed at the transportation staging area. The BECo community liaison representative at the meeting

acknowledged the validity of these equipment needs; however, the Civil Defense Director told the task force at the meeting on January 30, 1991, that this issue was still unresolved. In a June 13, 1991, letter to the task force the Civil Defense Director stated that the antenna had been installed (Appendix F).

Miscellaneous EOC-Related Issues

At the December 5, 1990, meeting, Marshfield officials told the task force that the EOC staff needed training manuals and training on the use of EOC telephones, the WANG word processor, and the thermostat that controls building temperature. In addition, the Civil Defense Director indicated that Marshfield officials expected BECo to pave the parking area that was not paved when the EOC was constructed. At the January 30, 1991, meeting with the task force, he indicated that there was now an understanding between BECo and Marshfield officials that the parking area near the EOC would be paved. In a June 13, 1991, letter to the task force the Civil Defense Director stated that the thermostat had been repaired (Appendix F).

At the February 25, 1991, meeting with the task force, the BECo representatives indicated that they were not aware of any outstanding problems related to the EOC. The BECo representatives stated that a mechanism exists in each of the communities for local officials to bring problems to the attention of BECo through the BECo community representative assigned to each of the towns.

C. TASK FORCE ASSESSMENT

Planning Standard 10 CFR 50.47(b)(6) (Planning Standard F) requires the following: "Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public." 10.CFR 50.47(b)(5) (Planning Standard E) requires that "procedures have been established for notification, by the licensee of State and local response organizations and for notification of emergency personnel by all response organizations . . ." NUREG-0654, Evaluation Criterion E.2 provides that "each organization shall establish procedures for alerting, notifying, and mobilizing emergency response personnel."

The task force finds that the Marshfield EOC and support equipment are in general adequate for emergency response purposes. Several ancillary equipment issues remain unresolved (e.g., public address system, bull horn, and radar for the Harbormaster; CB radio for a school). The CB radio for the school is necessary to support the response effort. BECo has indicated that it intends to provide this equipment. The task force finds that the evaluation criterion E.2 regarding Marshfield equipment will be met when BECo provides the school radio. FEMA will monitor this.

2.6.2 Status of Plans and Procedures

A. STATEMENT OF ISSUE

At the public meeting on September 6, 1990, the issue of the status of the emergency plans and implementing procedures for the EPZ and reception center towns was raised. In particular, comments were made that none of the school plans or procedures had been approved

B. FINDINGS

The plans and procedures on file with MCDA at the time the task force initiated its review were the plans and procedures submitted before the October 1989 exercise. Therefore, the task force visited each of the town EOCs and met with town officials, including those from Marshfield, with the purpose of acquiring a current set of emergency plans and procedures, that is, the plans and procedures that would be used in an emergency.

The task force discussed with Marshfield officials the status of the Marshfield emergency plans and implementing procedures (IPs) and the town's process for approving the plans and IPs during meetings on November 6, 1990 (PT-57), December 5, 1990 (PT-66), and January 30, 1991 (PT-109). During the November 6, 1990, meeting, Marshfield officials described the process for developing and approving the draft plans and IPs as follows.

Draft plans and IPs originally prepared by BECo are reviewed by the town's Radiological Emergency Response Plan (RERP) Committee, which consists of town department heads, the Civil Defense Director, and two local citizens. The principal department heads include the Police Chief, the Fire Chief, the head of the Health Department, the Superintendent of Schools, and the head of the Department of Public Works.

All comments and revisions resulting from this review are given to BECo, which provides administrative support and word processing service. BECo develops the revised drafts, which it resubmits to the town. Ultimately, after all the comments of the department heads and RERP Committee are satisfactorily addressed, the IPs are considered to be "approved in concept." The IPs are then attached to updated lesson plans, which are developed by BECo and transmitted to MCDA for review and incorporation into the ongoing training program. At the meeting on November 6, 1990, Marshfield's Civil Defense Director stated that the IPs had been approved in concept, but that neither the plan nor any of the IPs had been "formally approved."

At the meeting with Marshfield officials on December 5, 1990, the task force obtained copies of the most current emergency plan and IPs, that is, draft revisions of Marshfield's emergency plan dated May 15, 1990, and the IPs that are listed in Appendix C of this report. Marshfield officials informed the task force that the term "approved" was no longer used by any of the town's department heads regarding the IPs and that approval was reserved for the Board of Selectmen. They stated that the department heads "acknowledge in

concept" the IPs and ultimately "concur" or "do not concur" in their content. Currently, neither the plan nor any of the associated IPs have been approved by the Board of Selectmen; however, the draft plan and IPs that the task force obtained were the most current and the ones that would be used in the event of an actual emergency at Pilgrim.

C. TASK FORCE ASSESSMENT

The significance of this matter is discussed in Section 2.1, "Generic Plans."

2.6.3 Marshfield Schools

A. STATEMENT OF ISSUE

At the public meeting on September 6, 1990, Marshfield officials expressed concern about the plans and procedures for protecting Marshfield school children during an emergency at Pilgrim. At the public meeting, Marshfield's Civil Defense Director stated,

...we would like to see the one school that is inside the EPZ in Marshfield stay, in terms of evacuation, inside the town of Marshfield. To send our students to Wellesley, to Needham, wherever, whenever it's decided will only cause more difficulties for us and the parents of Marshfield.

In a letter to MCDA on June 20, 1990, commenting on FEMA's draft report of the exercise (attached to PT-00), the Civil Defense Director stated,

It is believed that the Massachusetts Criminal Justice Training Center located in Needham and the Wellesley Reception Center have been identified as the host school and reception center for Marshfield. Marshfield opposes these locations due to their travel distance, and the lack of control of the school's students. We recommend, however, consideration of our proposal to establish the Furnace Brook School as our facility.

B. FINDINGS

The task force discussed the Marshfield school issue with town officials in Marshfield's EOC on November 6 and 8, 1990 (PT-57), and December 5, 1990 (PT-66). The principal spokespersons for Marshfield were Daniel McGonagle, Director, Marshfield Civil Defense, and William Sullivan, Marshfield Police Chief (the Civil Defense Director, who is part time, reports to the Police Chief in Marshfield). On January 29, 1991 (PT-108), the task force met with William J. Hurley, Superintendent of Marshfield Schools, other school officials, and Chief Sullivan in the Superintendent's office. Alfred Slaney, MCDA, also attended these meetings.

The protective actions for Marshfield school children are provided in the Town of Marshfield Implementing Procedure, IP-06, "School Department," (Draft 0, August 29, 1989). The task force obtained a copy of this document from town officials on December 5, 1990, with the understanding that it was the most current procedure and the one that would be used during an emergency at Pilgrim. Although the IP received by the task force was dated August 1989, it had been updated since the original draft with that date. The Marshfield procedure calls for the mobilization of transportation resources at the Alert stage of an emergency and a precautionary transfer to the host school at the Site Area Emergency stage. The procedure notes that the State may, at its discretion, call for a precautionary transfer at the Alert stage. The procedure states that if the buses have not left Governor Winslow School (the only school in the Town of Marshfield within the plume EPZ of Pilgrim) when a General Emergency is declared and an evacuation is ordered, the students are to be taken to the Wellesley Reception Center for monitoring and, if necessary, decontamination.

Governor Winslow School has approximately 600 students. Currently, in accordance with MCDA plans and policy and Marshfield IP-06, if an accident occurred at Pilgrim requiring precautionary transfer, the students from this school would be transferred to a host location, identified on a map at the end of the IP as the Criminal Justice Training Center (CJTC) in Needham. They would be monitored and decontaminated, if necessary, at the Wellesley Reception Center, as specified in IP-06. The CJTC and the Wellesley facility are approximately 34 and 37 miles, respectively, from Governor Winslow School, and are shown at p. 39 and p. 40 of the IP, respectively.

At the meetings with the task force, Marshfield officials stated that if a precautionary transfer of students were ordered, the students from Governor Winslow School should be transported to Furnace Brook School, which is located 4.5 miles away in the Town of Marshfield, and about 14 miles from the Pilgrim station. Marshfield officials stated that their reason for this position is that they wish to transfer students out of the EPZ to a place where they can most safely and quickly be reunited with their families. In addition, plans already exist under Marshfield's Comprehensive Emergency Management Plan for the use of Furnace Brook School as a congregate care center. This would facilitate, in their view, the use of the school as a host facility. They believe that parental control over their children would be enhanced and there would be strong parental support for this plan. Marshfield officials noted that there are two other Marshfield schools that are closer to Pilgrim than Furnace Brook School and for which there were no student transfer plans. Therefore, they felt that it was reasonable to transfer students to a local school (Furnace Brook) that is farther from Pilgrim than two other schools in Marshfield whose students will not be transferred under the State plan. MCDA had, in the past, opposed the Town of Marshfield on this issue.

At the meeting with the task force on January 29, 1991, the Superintendent and other school administration and town officials

discussed a meeting they had with MCDA on December 18, 1990, on the host school issue. After the meeting with MCDA, Marshfield officials prepared a submittal to MCDA dated January 29, 1991 (which was never sent), requesting that a draft plan (i.e., procedure) dated September 6, 1990, which calls for the transfer of Governor Winslow students to Furnace Brook School, be accepted (copy enclosed in PT-108). Marshfield officials stated that under this proposal, the Governor Winslow students would still be taken to the Wellesley Reception Center if monitoring and decontamination became necessary.

Although the request discussed above was signed by the Superintendent and other key town officials and dated January 29, 1991, it was not transmitted to MCDA. During the meeting with the task force on January 29, 1991, the Police Chief discussed a revision to the proposal that would include provisions for monitoring and decontamination to be performed at Furnace Brook School. The Superintendent and other Marshfield officials present at the meeting were receptive to this new proposal. Mr. Slaney of MCDA urged the Marshfield officials to fully consider all of the ramifications of performing monitoring and decontamination at Furnace Brook School on the basis of the State's experience in trying to find a suitable location for the third reception center. Mr. Slaney also asked whether this new option would include provisions for relocating the existing emergency worker monitoring and decontamination station from the Marshfield Fire Department to the proposed facility at Furnace Brook School. Marshfield officials indicated they would study the matter of performing monitoring and decontamination at Furnace Brook School further and discuss it with MCDA before making a formal submittal requesting the use of Furnace Brook School as a host school for Governor Winslow School.

During the meeting on January 29, 1991, Marshfield officials also indicated that they will continue to pursue their desire of having the entire Town of Marshfield included in the Pilgrim EPZ. (See Section 2.6.4.) The apparent conflict between pursuing the proposed Furnace Brook host school option and having the entire town incorporated into the EPZ was discussed. Mr. Slaney recommended that the Marshfield officials solicit the full support of Marshfield's Board of Selectmen for whatever options they ultimately pursue regarding the identification of the host school and EPZ size.

On January 31, 1991 (PT-108), the task force met with MCDA representatives in Framingham to discuss Pilgrim emergency planning issues, including the Marshfield host school issue. MCDA officials stated that they were basically opposed to the "Furnace Brook option" primarily because this was a deviation from MCDA policy as represented in the State plans for Pilgrim. MCDA officials stated that if Marshfield continues to pursue this option, it must clearly understand and accept all liabilities resulting from this deviation from State policy. Some of the specific reasons for MCDA's opposition include the following: (1) Governor Winslow students would have to be transported away from the EPZ to Wellesley for

monitoring and decontamination in the event of a radiological release, and then transported back toward the EPZ to Furnace Brook School while the EPZ population was being evacuated away from the EPZ; (2) providing clear and concise emergency information to parents regarding the status of the students would be difficult and confusing; and (3) MCDA is rigidly implementing the Federal guidance in NUREG-0654, which states that relocation centers should be at least 5 miles, and preferably 10 miles, beyond the boundaries of the 10-mile EPZ. MCDA officials stated that in their judgment and interpretation of the guidance, the location of Furnace Brook School does not meet this guidance.

On April 16, 1991, the task force discussed the status of the Marshfield host school issue in separate telephone conversations (PT-148) with Edward Fratto, MCDA, and Daniel McGonagle, Marshfield Civil Defense Director. Mr. Fratto confirmed that at a meeting on April 4, 1991, he had told Mr. McGonagle that MCDA now supported the Marshfield recommendation to use Furnace Brook School as a host school for Governor Winslow students. Mr. Fratto further stated that MCDA agreed to continue to reserve space at the CJTC to accommodate the Governor Winslow students to provide Marshfield the option of an alternative location. In addition, MCDA agreed that when the lease with CJTC terminates on July 1, 1991, it will request that space to accommodate Marshfield students be reserved in the Needham host schools that will replace CJTC. In another conversation with the task force on April 17, 1991 (PT-175), Mr. Fratto said he was aware that all related plans and procedures must be revised. However, the process would not begin until an official request in writing was received by MCDA from the Marshfield Selectmen. Mr. Fratto acknowledged that he was aware that plans and procedures were already being "informally" revised.

Mr. Fratto stated that MCDA is neutral with regard to the proposal being considered by Marshfield to relocate its emergency worker monitoring and decontamination station from Marshfield's fire station to Furnace Brook School. Mr. McGonagle stated that the Governor Winslow students will still be taken to the Wellesley Reception Center for monitoring and decontamination, if necessary, under the request currently being prepared for submittal to MCDA. Marshfield expects to formally notify MCDA of the use of Furnace Brook School as a host school after the School Superintendent, the School Committee, and the Board of Selectmen review the proposal.

On April 26, 1991 (PT-184), A. David Rodham, Director, MCDA, in a letter to Daniel McGonagle, Civil Defense Director, stated that MCDA supports the recommendation of Marshfield school and public safety officials regarding the transfer of students from Governor Winslow to Furnace Brook School.

C. TASK FORCE ASSESSMENT

MCDA's acceptance of Furnace Brook School as a host school for Marshfield schools supports the resolution of the Marshfield host-school issue. During its ongoing review of offsite emergency preparedness for Pilgrim, FEMA will verify that, when the change is official, appropriate changes have been made to the plans and

procedures reflecting the use of Furnace Brook School as a host school for the precautionary transfer of Governor Winslow students.

2.6.4 Size of Emergency Planning Zone

A. STATEMENT OF ISSUE

MCDA formally requested in separate correspondence to the NRC and FEMA, dated July 24, 1987, that the Pilgrim 10-mile EPZ be reconfigured to include the entire Towns of Carver and Marshfield (PT-66). Subsequently, several meetings and discussions were held involving MCDA, the local communities, and BECo. Marshfield officials, in response to the draft FEMA report on the exercise conducted on October 12-13, 1989, again advised MCDA, by letter dated June 20, 1990, "The Town of Marshfield feels that the entire town should be incorporated within the EPZ." More recently, Marshfield officials reiterated this desire to have the entire town included in the Pilgrim 10-mile EPZ during the meetings with the task force on November 6, 1990 (PT-57), December 5, 1990 (PT-66), January 29, 1991 (PT-108), and January 30, 1991 (PT-109).

B. FINDINGS

The germane background information relative to the size of the Marshfield portion of the Pilgrim EPZ is summarized below.

The southernmost portion of the town lies within the northern portion of the EPZ of the Pilgrim Nuclear Power Station (Fig. 2.1). According to Marshfield officials (PT-57), the Marshfield EPZ population is about 1,800 permanent residents, which may increase to approximately 2,800 persons during peak tourist seasons. The outer boundary of the Town of Marshfield is approximately 18 miles from the Pilgrim Nuclear Power Station. Marshfield officials stated that the town has a population of approximately 30,000 residents, which may increase to 65,000 persons during peak tourist seasons (PT-57).

The Marshfield EPZ is delineated by a major highway (Route 139) and is actually slightly less than 10 miles from the plant site. Marshfield officials feel that they are faced with a public perception dilemma and the concerns of their citizens. For example, Governor Winslow School is clearly within the designated EPZ, and there are plans to evacuate the student body if necessary; however, Daniel Webster Elementary School, which is located nearby but outside the EPZ, does not have an evacuation plan. Marshfield officials consider that this is an indefensible position when dealing with their constituents. Also, these concerns arise from the fact that generally the EPZ boundary for the other EPZ towns goes well beyond 10 miles and in most cases includes the entire town. In particular, the entire Town of Duxbury, which is adjacent to Marshfield, is included in the EPZ, and the EPZ boundary in Duxbury is approximately 14 miles from the site. Marshfield officials also noted that because of the loop in Route 139, there is confusion in designating Route 139 as the EPZ boundary.

During the task force meetings with the Marshfield officials on November 6, 1990, December 5, 1990, and January 29-30, 1991, both the EPZ issue and host school issue were discussed in detail. At all of these meetings, Marshfield officials reiterated their intent and desire to have the whole town included in the Pilgrim EPZ.

On January 31, 1991, the task force met with MCDA representatives to discuss various subjects, including the Marshfield EPZ issue (PT-108). In a telephone conversation on April 16, 1991 (PT-148), Edward Fratto, MCDA, indicated that the State's first priority was to resolve the issues inside the current EPZ. Once they are resolved, MCDA will then address the request for expansion of the EPZ.

C. TASK FORCE ASSESSMENT

As stated in Section 2.16.C of this report, the Commission's policy on EPZ size is unequivocal. The current Pilgrim EPZ is adequate and meets NRC regulatory requirements.

2.6.5 Public Information Officer

A. STATEMENT OF ISSUE

In comments criticizing the October 12-13, 1989, full-participation exercise, Marshfield officials stated that they were not comfortable with sending their Public Information Officer to the media center in Plymouth because of the potential increased risk.

B. FINDINGS

At the meeting on November 6, 1990 (PT-57), Marshfield officials told the task force that IP-21, dated May 3, 1990, had been revised to reflect that, at the discretion of the Board of Selectmen, the Public Information Officer (PIO) may or may not be sent to the joint information center (JIC) located in Plymouth. If the PIO is not sent to the JIC, he or she will remain at the Marshfield EOC under the direction of the Board of Selectmen and Civil Defense Director.

C. TASK FORCE ASSESSMENT

Marshfield has revised its public information procedure to provide the option not to dispatch its Public Information Officer to the joint information center in Plymouth. However, it is not clear that this has been coordinated with MCDA. This is important so that accurate procedures for the coordination of public information for Marshfield can be developed. FEMA will review those procedures and evaluate the dissemination of public information in the 1991 exercise. As a general rule, FEMA and the NRC prefer a single location for the dissemination of public information.

2.7 Gurnet-Saquish

2.7.1 Tidal Flooding of Egress Routes

Gurnet-Saquish is a narrow beach area located at the end of the Duxbury Beach peninsula in the Town of Plymouth (but physically connected to the Town of Duxbury) between 4 and 5 miles north of the Pilgrim plant (Fig. 2.2). Saquish Neck is a barrier spit extending in a westward arc from the foot of Gurnet Point.

A. STATEMENT OF ISSUE

Under certain tidal conditions, the egress routes from the Saquish Neck portion of the beach become flooded and this could delay evacuation. The representative of the Gurnet-Saquish Association stated that extensive photographic evidence and numerous onsite visits "indicate there is no vehicular access during lunar tides for a period of two and a half to three hours twice a day for five to seven days per month."

That tidal flooding on Saquish Neck occurs is well known. The issues are the frequency of occurrence of the flooding and the length of time the egress routes are impassable. The task force addressed this issue by attempting to quantify, by direct physical observation and by analytical means, the frequency of occurrence of tidal flooding on Saquish Neck and the duration of flooding as a function of the depth to which the egress routes are flooded. The task force then assessed the emergency planning implications of the tidal flooding on Saquish Neck.

B. FINDINGS

The task force met with representatives of the Gurnet-Saquish Association and toured the Gurnet-Saquish area on October 5, 1990 (PT-22). Albert R. Cavanagh of the association's Emergency Planning Committee and James Sayce, President of the Association, were the principal sources of information. The Gurnet-Saquish Deputy Civil Defense Directors, Roger Babson and Pat Cavanagh, also provided information. On October 6 and 7, 1990, the task force videotaped and took photographs of the monthly "lunar" high tide on Saquish Neck. It took additional measurements and photographs on November 4, 1990 (PT-114), during the next monthly high tide on Saquish Neck. These observations established that extensive flooding occurs on Saquish Neck during certain monthly high tides and that the flooding is a complicated issue with flooding occurring in three distinct areas shown in Figure 2.3 as points A, B, and C.

The three areas that flood are (1) at a low point on the Saquish Neck access road at the foot of Gurnet Point (point A); (2) along an extensive stretch of the road bordering the marsh on the northern (Duxbury Bay) side of the neck, referred to as the back road (point B); and (3) at a narrow curving portion of the beach on the southern (Plymouth Bay) side of the neck (point C), where the beach becomes constricted between the surf on one side and a

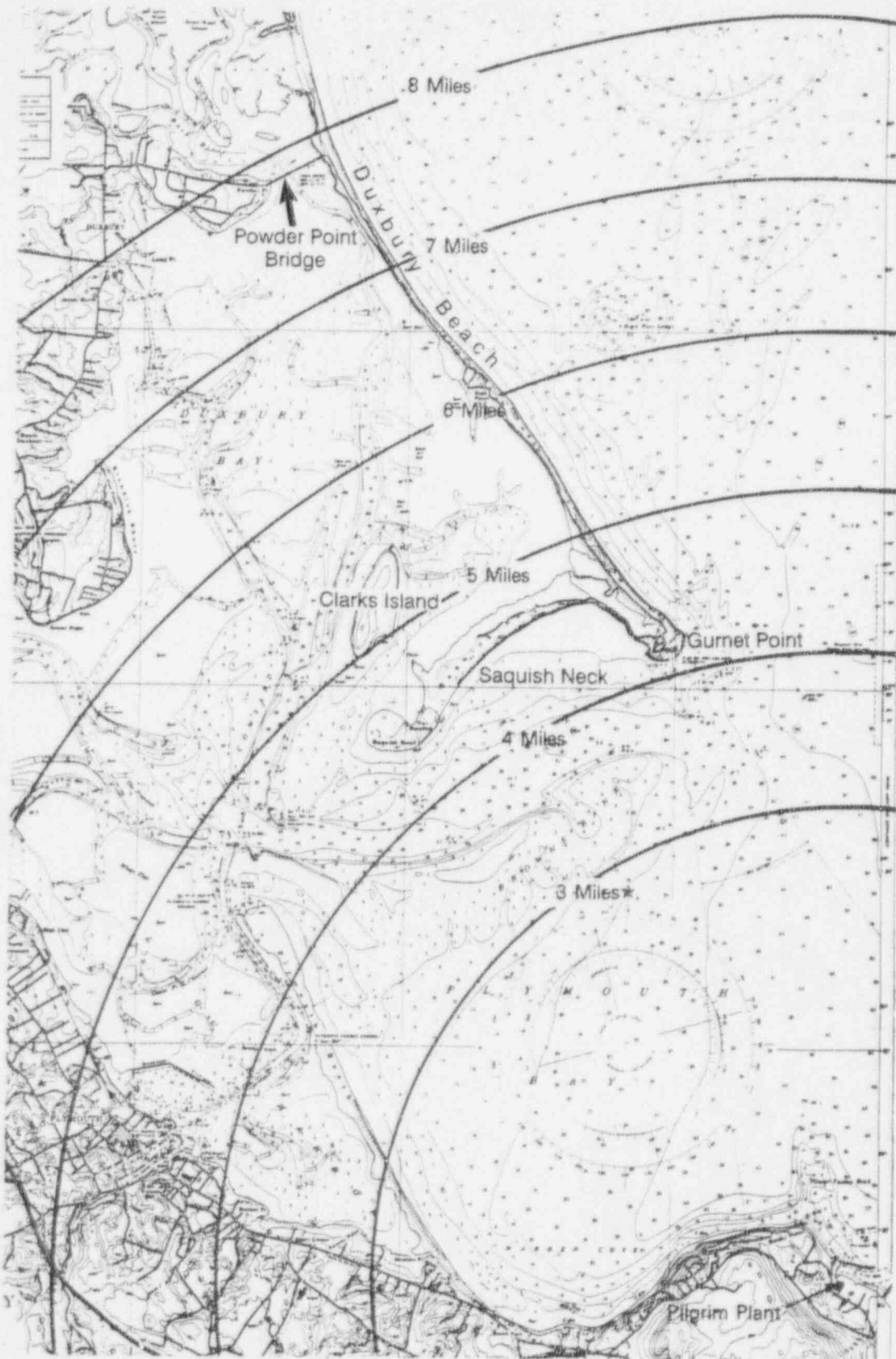


Figure 2.2 Gurnet Point, Saquish Neck, and Duxbury Beach

heavy-duty erosion control fence on the other. (This fence is made of telephone-pole-type pilings.) Flooding at points A and B occurs through the marsh from the northern side, while flooding at point C occurs from the southern side. The task force visits confirmed that the tidal flooding during the monthly high tides is confined to Saquish Neck and that persons leaving Gurnet Point and Duxbury Beach are not affected by this flooding.

In its October 4, 1990, response to the NRC, BECo stated (PT-08, p. II-49) that the access roads between Saquish Neck and Gurnet Point are flooded when high tide occurs during a full moon. According to BECo, this flooding makes the roads impassable for approximately 2 hours during that high tide. BECo stated (PT-08, p. II-84) that it estimates that the road is flooded for several days per month, two high tides per day, and that the flood peaks for approximately 2 hours per tide. (It is not clear what flooded area BECo is referring to.)

BECo has offered to construct a road across the dunes to provide an evacuation route that would not be subject to flooding (PT-08, p. II-83). However, as indicated at the task force meeting with BECo on February 25, 1991 (PT-70), the Gurnet-Saquish Association did not accept this proposal because the residents were concerned that the environmentally sensitive beach dunes might erode.

To assist the task force in its evaluation of the tidal flooding issue, an oceanographic expert performed a study to quantify the high water elevations resulting from combined astronomical ("lunar") and storm tides on Saquish Neck. Since regular tidal measurements are not made on Gurnet-Saquish, long-term measured water elevation data for the Boston Harbor station of the National Ocean Service were analyzed to obtain, on a monthly basis, the frequency and duration of high water elevations that exceed selected values. In addition, the task force contracted for an engineering survey on Saquish Neck to establish the topographical elevations of the three critical areas of flooding described above. The task force then compared the topographical elevations of the three areas with the tidal elevation data. The results of this analysis are discussed below.

General Tide Information (and Variations in High Tides)

Astronomical tides are caused by forces at the earth's surface resulting from the combined effects of gravity and centrifugal forces in the earth-moon-sun system. Spring tides occur semimonthly, at new and full moons, when the earth, moon, and sun are aligned to produce forces that are all acting in the same direction. Once each month, when the moon is closest to the earth (perigee), the tide-generating forces are higher than usual, thus producing above-average ranges in the tides. When perigee coincides with a new or full moon, the resulting spring tides are greater-than-average spring tides. Although less a factor than the moon, enhanced tidal ranges are also produced when the earth is closest to the sun (perihelion).

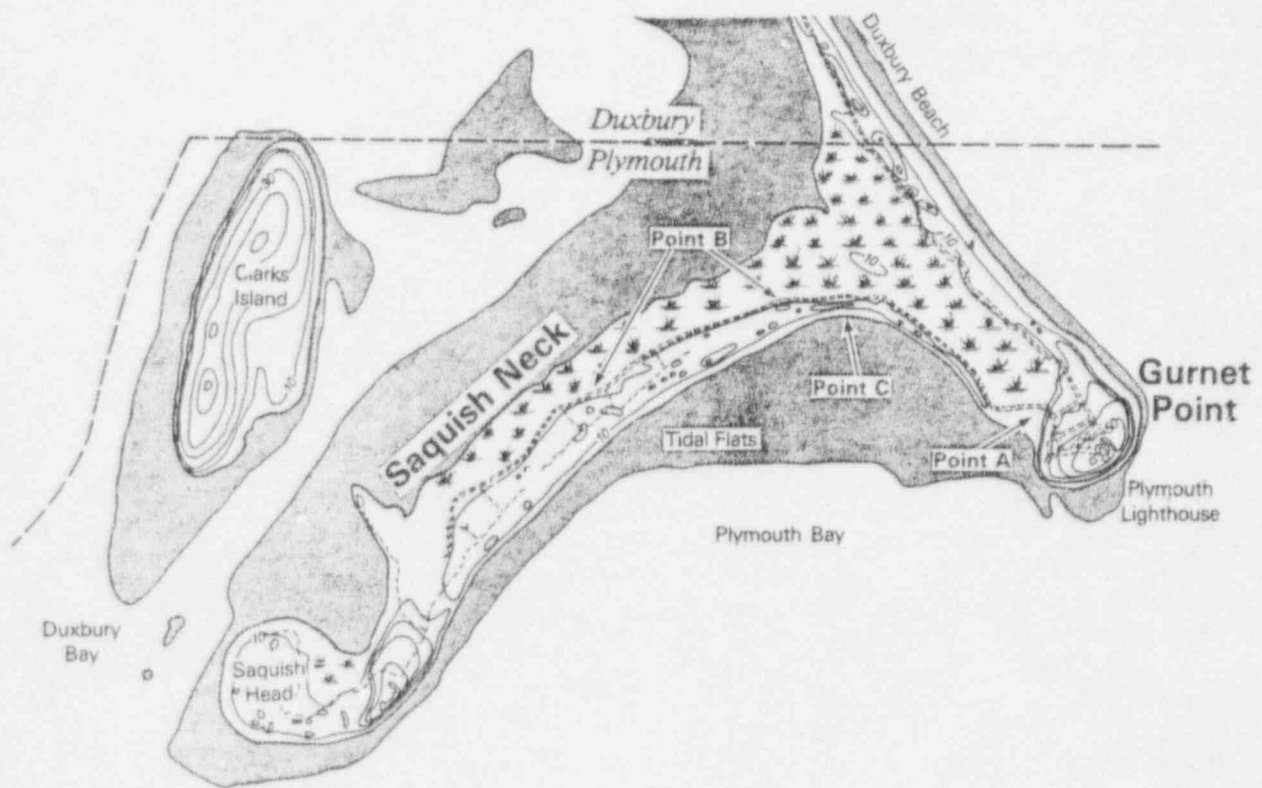


Figure 2.3 Tidal flooding points on Saquish Neck

The tides on Saguish Neck are semidiurnal; that is, two high waters and two low waters occur each tidal day. However, because of the changing angular distance of the moon above or below the equator and other factors, variations in the heights of the two daily high tides occur, a condition known as diurnal inequality.

The task force analyzed the tide tables for the area. The monthly high tides predicted for 1991 for Boston,* the local reference station, are shown in Table 2.1, and the daily variation in the monthly high tides is shown in Table 2.2. Table 2.1 shows that the predicted monthly high tide varies by more than a foot, from 11.1 to 12.2 feet, over the year. Table 2.2 shows that the daily variations in the two predicted daily high tides that occur at the monthly high tide range (i.e. the diurnal inequality) from 0.5 to 1.9 feet with an average variation of 1.4 feet.

Meteorological conditions known as storm surges caused by continuous strong flow of winds either on shore or off shore can superimpose their effects on the astronomical tides to cause either heightened or diminished tides, respectively. Strong high-pressure and deep low-pressure systems may also affect the tides. The effects of meteorological conditions are not included in the tide prediction tables. Therefore, tide prediction tables alone cannot be used to accurately describe flooding conditions.

Task Force Observations

On October 6, and 7, 1990, the task force observed the monthly high tides on Saguish Neck. The high tides at Boston were predicted to be 11.8 feet at 12:57 p.m. on October 6 and 11.8 feet at 1:44 p.m. on October 7. Data subsequently obtained from the National Ocean Service show that the actual high water elevations (i.e., high tides) measured at Boston were 11.5 feet at 1:00 p.m. on October 6, and 11.2 feet at 1:36 p.m. on October 7 (PT-131). On this visit the task force took photographs and a videotape of the tide's rise and fall on Saguish Neck, and one person took approximate measurements of the depth by wading through the flooded areas with a pole marked at 1-foot intervals. The weather on both days was mostly sunny with mild temperatures and moderate southwesterly winds.

*"Tide Tables 1991, High and Low Water Predictions, East Coast of North and South America," U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service, 1990.

*High water is the maximum height reached by a rising tide. The height may be due solely to the periodic tidal forces or it may have superimposed upon it the effects of prevailing meteorological conditions.

Table 2.1 Highest monthly high tides for Boston*

Month	Height, ft	Month	Height, ft
Jan.	12.1	July	12.1
Feb.	11.4	Aug.	11.9
Mar.	11.1	Sept.	11.4
Apr.	11.6	Oct.	11.4
May	12.0	Nov.	11.8
June	12.2	Dec.	12.0

*Boston is the reference station closest to Gurnet-Saguish.

Source: 1991 Tide Tables, National Oceanic and Atmospheric Administration, National Ocean Service.

Table 2.2 Diurnal inequality of high tides at time of highest monthly high tides for Boston

Date	Highest daily tide		Second daily high tide		Difference in height, ft
	Time	Height, ft	Time	Height, ft	
Jan. 1	11:01	12.1	23:44	10.3	1.8
Feb. 1	12:33	11.4	00:16	10.6	0.8
Mar. 20	01:29	11.1	14:03	9.9	1.2
Apr. 17	00:21	11.6	13:00	10.2	1.4
May 16	00:00	12.0	12:44	10.3	1.7
June 13	23:44	12.2	11:33	10.3	1.9
July 12	23:30	12.1	11:17	10.3	1.8
Aug. 10	23:15	11.9	10:59	10.6	1.3
Sept. 8	22:59	11.4	10:37	10.9	0.5
Oct. 26	12:41	11.4	00:32	10.0	1.4
Nov. 24	12:24	11.8	00:15	10.1	1.7
Dec. 22	11:16	12.0	23:58	10.2	1.8

Source: 1991 Tide Tables, National Oceanic and Atmospheric Administration, National Ocean Service.

The task force found that the road at point A, the low point on the access road onto Saquish Neck where it connects with Gurnet Point, had been improved during the past year. The task force was informed that some of the residents acting on their own had filled in the road with gravel to improve accessibility to Saquish Neck during tidal flooding. Consequently, the impact of tidal flooding in this area appeared to have been reduced. The task force observed that tidal flooding still occurred at point A and that, while it did not appear to be as extensive as previously reported, the task force could not determine the effect of this road improvement on the flooding because of the limited number of observations. At 2:08 p.m. on October 7, 1990, approximately 30 minutes after high tide, the task force observed a water depth of about 2 inches in the center of the road at point A and 4 inches toward the sides of the road. Representatives of the Gurnet-Saquish Association also showed the task force a bypass route around this flooding area. This route is a narrow, relatively steep and rocky road that makes a sharp turn as it goes up Gurnet Point. In its present state, it appeared that the bypass road would be difficult to traverse by low-clearance vehicles.

On October 6, 1990, the task force observed that tidal flooding began to occur at about 12:20 p.m. on the back road that borders the marsh on the northern side of the Neck at the areas indicated as point B. The tide reached its peak at about 1:05 p.m. to 1:10 p.m. and then began to recede at about the same rate as it rose (Fig. 2.4). The maximum depth measured by wading through the water was about 15 inches. The flooded area on the back road at that time was extensive, more than a mile in length. This was determined by driving through the flooded area at slow speed in the civil defense four-wheel-drive vehicle, which has a high clearance. The task force estimated that the average depth of flooding on the back road was about 1 foot but this varied because of ridges and potholes in the road. Although the civil defense four-wheel-drive vehicle was able to go through the flooded area at slow speed with little difficulty (other than salt water wetting its undercarriage), it appeared that a low-clearance vehicle would not be able to get through this area.

On October 7, 1990, the task force observed the tide at the constricted point on the beach access route, point C. The beach on Saquish Neck, which is used as a road, is wide and sandy in the middle, but toward the eastern end, it narrows in a long curving stretch between the surf on one side and a sturdy erosion control fence on the other. The task force took measurements and photographs at the narrowest point in this area. On this day the measuring pole was set at a point 12 feet from the fence, a distance selected to be representative of the area through which vehicles would pass. (On the next visit, a point 9 feet from the fence was selected as being more representative.)

The task force observed that the tide began to rise at the measurement point 12 feet from the fence at about 1:00 p.m. and reached a maximum depth of about 5 inches at about 1:50 p.m. before it receded (Fig. 2.5). The high water did not reach the erosion

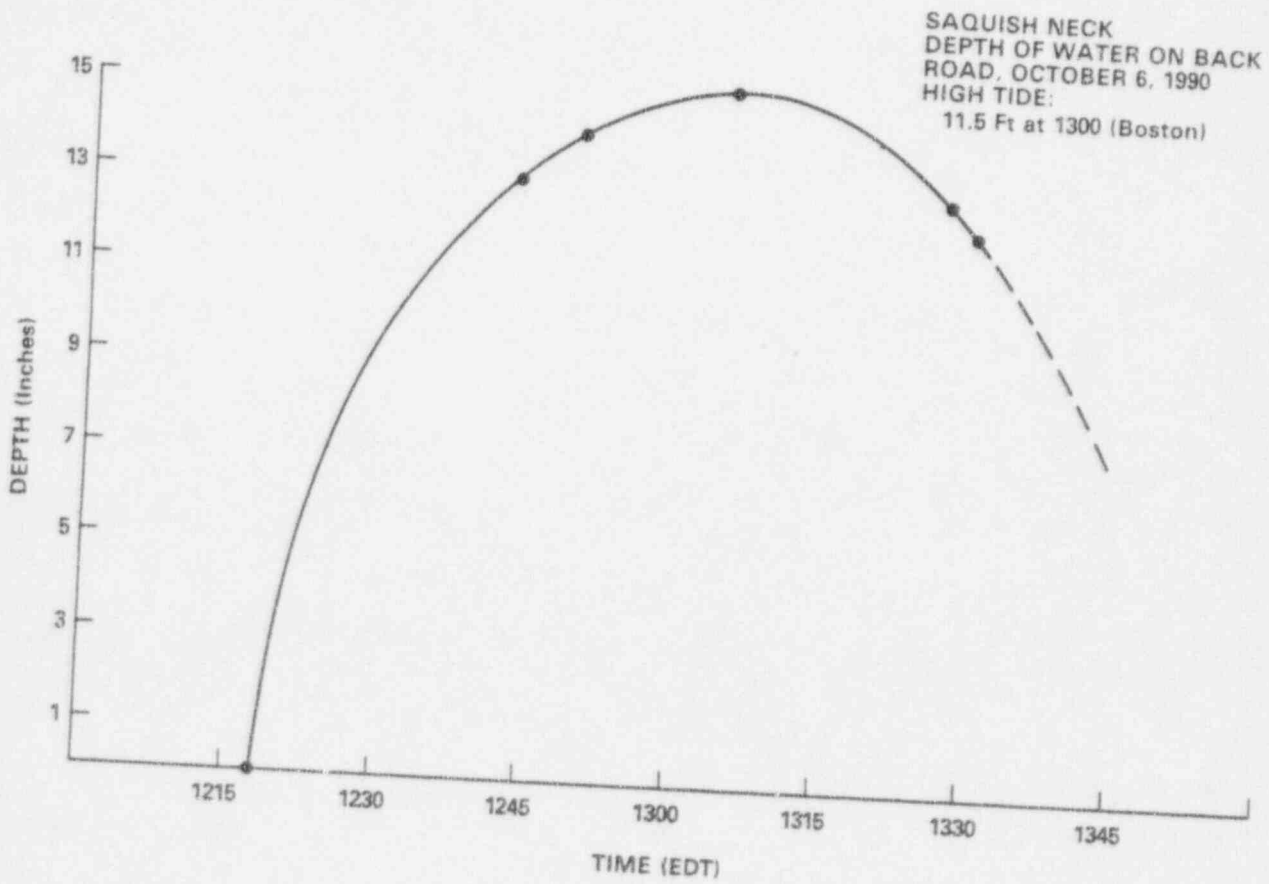


Figure 2.4 Saquish neck depth of water on back road, October 6, 1990

SAQUISH NECK
DEPTH OF WATER AT CONSTRICTED
POINT ON BEACH ROAD AT
12 Ft FROM FENCE,
OCTOBER 7, 1990
11.5 Ft at 1336 (Boston)
(Range Due to Wavelets)

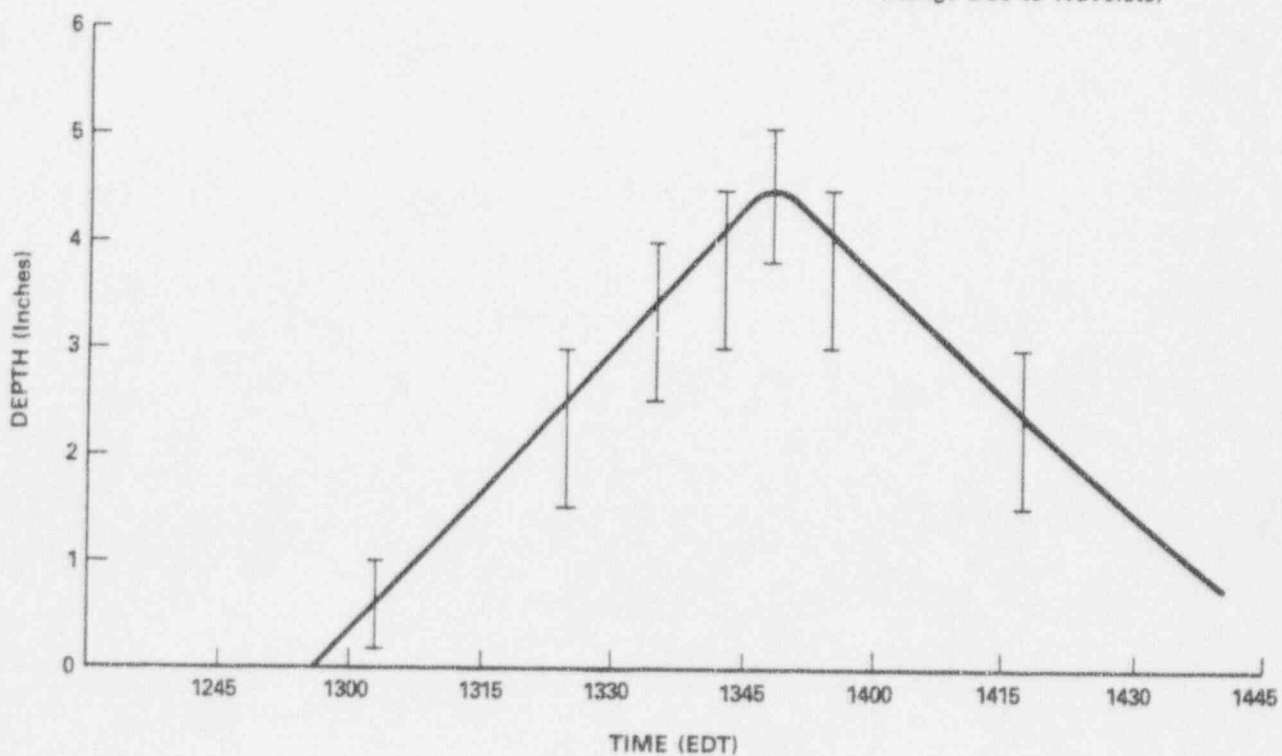


Figure 2.5 Sagquish Neck depth of water at constricted point on beach road at 12 feet from fence, October 7, 1990

control fence during the high-tide cycle. The surf line came to within about 4 feet from the fence at its closest point of approach (Fig. 2.6). The task force saw four-wheel-drive vehicles occasionally driving through this area during the observation period even at peak high tide. Some of the vehicles passing near high tide were splashed because the outer wheels were in the surf. The task force found that during the high tide on Saguish Neck on this day, the beach access route remained passable for four-wheel-drive vehicles.

The task force returned to Saguish Neck on November 4, 1990, to observe the next monthly high tide (PT-114). The high tide was predicted to be 12.2 feet at 11:32 a.m. (at Boston) on November 4, only 0.1 foot (1.2 inches) less than the highest predicted tide for 1990, 12.3 feet. The actual high water elevation at Boston on November 4, 1990, based on data obtained from the National Ocean Service, was 12.5 feet at 11:30 a.m. The sky was overcast, the temperatures were mild, and light to moderate winds were blowing from the south. Because the tidal flooding situation at the low point on the access road (point A) appeared to have been somewhat alleviated by the road work done by the residents (and because of the presence of the potential bypass), the task force focused its observations on the back road (point B) and the constricted beach area (point C). It took measurements using a metal yardstick anchored in a vertical position at the selected measurement points. It also took some photographs of the flooding.

At point B (the back road), flooding began at about 10:10 a.m., reached a maximum depth of 25.0 inches at 11:35 a.m. at the measurement point, and receded to 2.5 inches at 1:35 p.m. The rise and fall were steady with no wave action. The measurements taken at point B are shown in Figure 2.7. One vehicle, a four-wheel-drive Chevrolet pickup truck, passed the measurement point at 12:20 p.m. This was the only vehicle the task force saw passing the measurement point on the back road during the observation period.

On that same day the task force took measurements at point C on the beach road at the constricted point, at a point 9 feet from the erosion control fence, a distance deemed more representative of where vehicles would pass on the basis of previous observation. The water rose from about 6 inches at 10:25 a.m. to a maximum of about 18 inches at 11:35 a.m. at the measurement point; the depth varied from about 15 to 22 inches in wavelets (Fig. 2.8). The surf reached the erosion control fence at 11:00 a.m. and washed through the fence line for a distance of about 25 yards until about 12:15 p.m. when it receded from the fence. Traffic on the beach was relatively light on this mild November day. Several vehicles turned back or waited for the tide to recede during the high-tide cycle. One vehicle (a GMC Sierra) passed the measurement point at 10:53 a.m. and another (a Ford F250 with oversized tires) at 12:01 p.m. By 12:45 p.m., the depth at the measurement point was less than 1 inch.

SAQUISH NECK
DISTANCE FROM SURF LINE TO
EROSION CONTROL FENCE AT
CONSTRICTED POINT ON BEACH
ROAD, OCTOBER 7, 1990
HIGH TIDE:
11.2 Ft at 1336 (Boston)

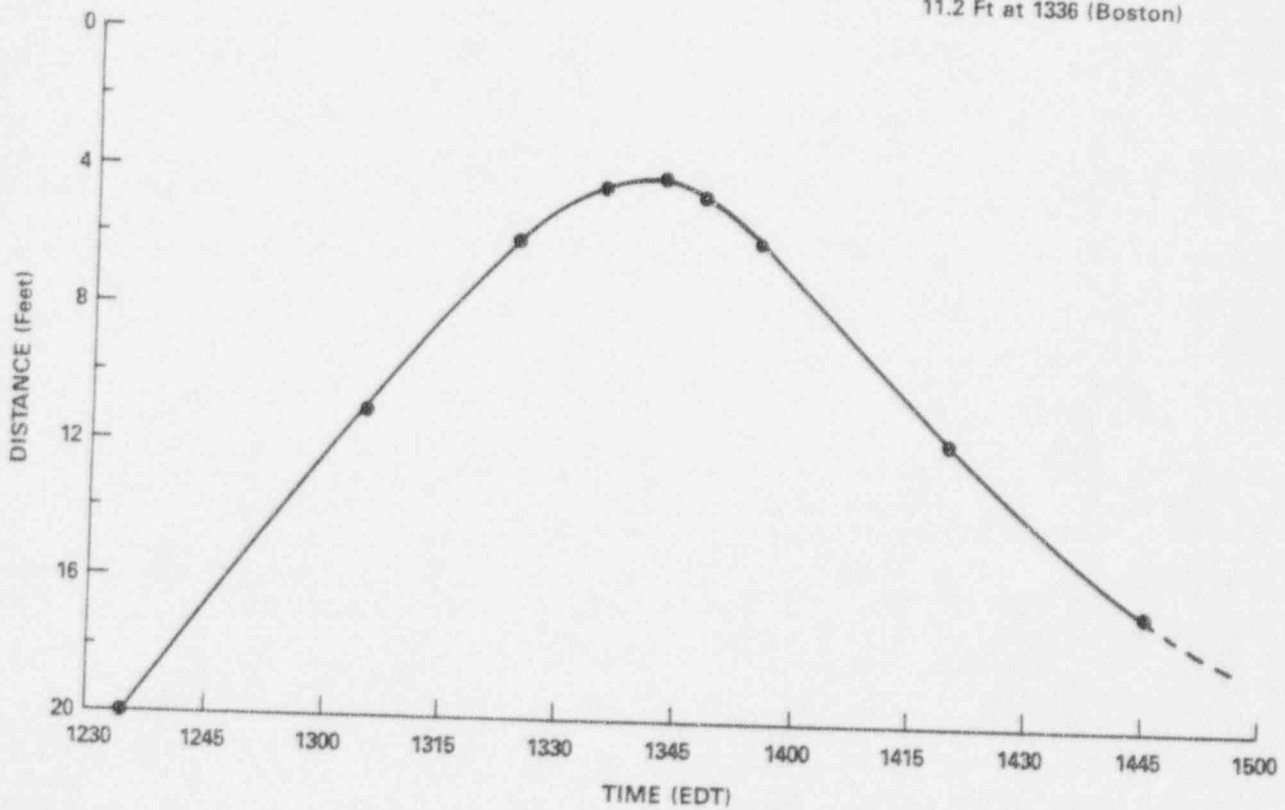


Figure 2.6 Saquish Neck distance from surf line to erosion control fence at constricted point on beach road, October 7, 1990

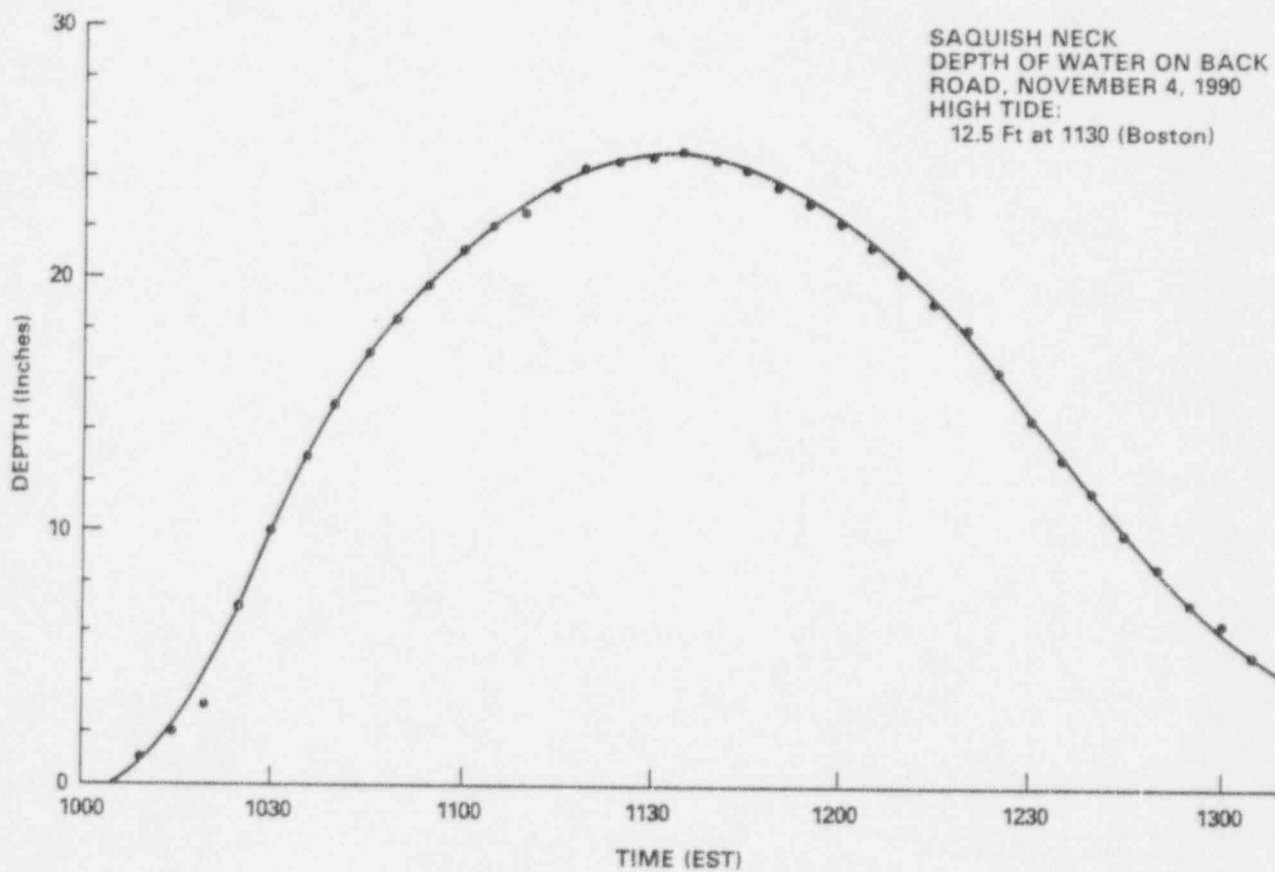


Figure 2.7 Saquish Neck depth of water on back road, November 4, 1990

SAQUISH NECK
DEPTH OF WATER AT CONSTRICTED
POINT ON BEACH ROAD AT
9 Ft FROM FENCE,
NOVEMBER 4, 1990
HIGH TIDE:
12.5 Ft at 1130 (Boston)
(Range Due to Wavelets)

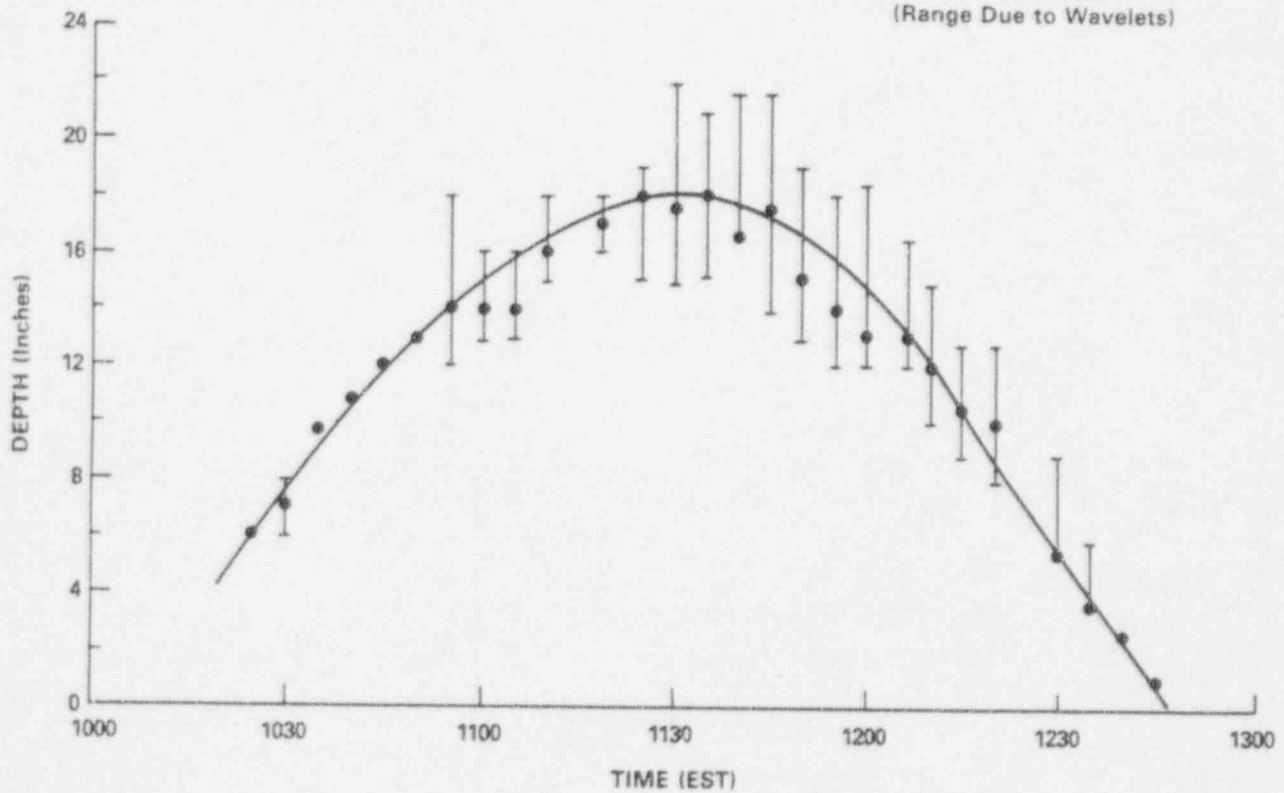


Figure 2.8 Saquish Neck depth of water at constricted point on beach road at 9 feet from fence, November 4, 1990

On February 26, 1991 (PT-92), the task force met with David L. Quaid, a private citizen, who maintains a residence on Gurnet Point and is a professional photographer. Mr. Quaid supplied photographs that showed flooding of the egress routes on Saguish Neck.

Analysis of Tidal Data

An oceanographic expert performed a study for the task force to quantify the high water elevations resulting from combined astronomical and storm tides (PT-75). A long-term and locally representative set of water level measurements was required to evaluate the high water elevations on Saguish Neck. Because only very limited tidal data (about 3 months) were found for Gurnet Point and Plymouth Harbor, data for two long-term tidal stations bracketing Saguish Neck, Boston Harbor to the north and Sandwich to the south, were obtained from the National Ocean Service (NOS) of the National Oceanic and Atmospheric Administration (NOAA). Data from the two stations were analyzed, and the analysis showed that the distributions of high water are very similar for the two sites. Either site could have been used for analytical purposes. The task force and contractor decided to use the Boston Harbor data because the data were available for a longer period (19 years versus 8 years) and had fewer data gaps. Boston Harbor is also a primary tidal prediction station for NOS, and its correlation with the local topographic datum is well established. NOS provided 19 years (1960-1979) of hourly water elevation data for Boston Harbor, which were processed by the contractor to obtain the following information on a monthly basis at 0.1-foot intervals beginning at a tidal elevation of 9.0 feet. (This elevation was selected to encompass the elevations that cause flooding at Saguish Neck):

- the total number of times the water level equaled or exceeded a given elevation (cumulative frequency and percent)
- the total number of hours the water level remained at or above a particular elevation (cumulative frequency and percent)
- the average duration per occurrence of each high water elevation (hours)
- the average monthly duration of these elevations (hours)

Two tasks had to be performed to use the water elevation frequency and duration analysis for Boston Harbor at Saguish Neck. The first task was to establish the correlation between the observed tidal heights at the two locations, since there is seldom a one-to-one transformation because of factors such as differences in local bathymetric (topography of the sea bottom) effects. The second task was to establish the connection between these water elevations, which are based on a tidal datum of mean lower low

water (MLLW),* and the topographical elevations on Saguish Neck, which are based on the National Geodetic Vertical Datum (NGVD) of 1929.**

The contractor, using MLLW as the datum and a standard NOS technique, calculated a correlation factor of 0.96 to convert the Boston Harbor water elevation to the Gurnet Point water elevation. The contractor later determined that the Plymouth Harbor water elevations would be more representative of the tidal conditions on Saguish Neck than relatively open Gurnet Point. The correlation factor between Boston Harbor and Plymouth Harbor was calculated to be 0.99.

The use of a calculated correlation factor (0.99), however, tended to underestimate the tidal elevation (the sum of the measured depth of flooding and the surveyed elevation at a given location) observed by the task force on Saguish Neck. Therefore, the task force developed correlation factors based on its actual measurements as follows: 1.01 times the Boston Harbor water elevations at point A, 1.02 at point B, and 1.12 at point C. The contractor agreed that using actual measurements to obtain correlation factors was an appropriate approach. The correlation factors developed by the task force in the analytical study are more conservative because they increase the predicted frequency of occurrence and duration of tidal flooding on Saguish Neck. The marked difference between the correlation factor for point C and the correlation factors for the other two points may be due to such factors as the sloping beach area, wave action created by local winds, or the limited number of observations.

The historical water elevation measurements made at Boston Harbor can be correlated to the topographical elevations on Saguish Neck using the Boston Harbor/Saguish Neck water elevation correlation factor and the NGVD-MLLW relationship for Saguish Neck. The contractor determined the NGVD-MLLW relationship for Saguish Neck to be 4.7 feet; that is, NGVD is 4.7 feet above MLLW.

Topographical elevations on Saguish Neck at points A, B, and C were determined in an engineering survey conducted for the task force during February 1991 (PT-139). This survey established that the elevation of the access road at the low point on Saguish Neck at the foot of Gurnet Point (point A) is 5.9 feet above the NGVD, or 10.6 feet above the MLLW datum. Along the back road (point B), the survey established that the elevation of the road varies from 5.4 feet to about 7.5 feet above NGVD. Since a vehicle would be

*MLLW is the average of the lower low water height for each tidal day observed over a specified period. Only the lower low water of each pair of low waters is included in the mean.

**NGVD of 1929 is a fixed reference level adopted as a standard geodetic datum for elevations determined by leveling. NGVD is related to mean sea level, but the relationship is not constant from one location to another.

affected by the deepest water it had to traverse, that is, the lowest point on the road, 5.4 feet above NGVD or 10.1 feet above MLLW was selected for analysis of the back road (the lower the land elevation, the deeper the water). The beach road at the narrow constricted point (point C) is more complicated because the beach slopes in this area. The survey showed that the lowest land elevation along the base of the erosion control fence in this area is 8.0 feet above NGVD. Moving away from the fence towards the water, it slopes to 6.4 feet above NGVD at a distance of about 30 feet. Based on the observation on October 7, 1990, that the high tide came to within 4 feet of the fence, the task force chose that point as the reference elevation for analysis. This point was determined to be 7.8 feet above NGVD (12.5 feet above MLLW). The elevation levels for the tidal flooding points are summarized in Table 2.3.

The results of the task force's analytical study are presented in Tables 2.4, 2.5, and 2.6 for each of the tidal flooding points (A, B, and C). The tables provide, on a monthly basis, for depths of 6 inches and 12 inches above the reference elevation levels, the following: (1) the number of occurrences in 19 years, (2) the average number of occurrences per month, (3) the average duration per occurrence in hours, and (4) the average total monthly duration in hours.

For point A, the low point on the egress route at the foot of Gurnet Point, the data show that the high water reached or exceeded a depth of 6 inches for an average total duration of about 10 hours a month, and a depth of 12 inches about 4 hours a month. The data indicate a slight increase in the total monthly duration in the winter months, but the increase does not appear to be significant. The data also show that a water depth of 6 inches on the road was reached or exceeded about six times a month and a depth of 12 inches was reached or exceeded about three times a month. The data also show that the average length of time the water level was 6 inches deep or deeper per occurrence of flooding varied from 1.4 to 1.8 hours, and the average length of time the water level was 12 inches deep or deeper per occurrence varied from 1.2 to 1.7 hours.

For point B, the lowest point on the back road bordering the marsh on the northern side of Saguish Neck, the data show that the high water reached or exceeded a depth of 6 inches for a total duration of about 26 hours per month and a depth of 12 inches about 12 hours a month. The data also show that the water depth of 6 inches on the road was reached or exceeded about 14 times a month, and a water depth of 12 inches was reached or exceeded about 7 times a month. The data also show that the average length of time the water level was 6 inches deep or deeper per occurrence of flooding varied from 1.8 to 2.0 hours, and the average length of time the water level was 12 inches deep or deeper per occurrence varied from 1.5 to 1.8 hours.

Table 2.3 Saquish Neck reference data at tidal flooding points

	Point A	Point B	Point C
Survey elevation, ft above NGVD	5.9	5.4	7.8
MLLW, ft above (NGVD + 4.7)	10.6	10.1	12.5
Water elevation correlation factor, Boston to Saquish Neck	1.01	1.02	1.12

Note: NGVD = National Geodetic Vertical Datum.
MLLW = mean lower low water.

Table 2.4 Analysis of tidal flooding on Saquish Neck on egress route at foot of Gurnet Point (point A)

Month	No. of occurrences		Avg. no. of occurrences		Avg. duration per occurrence		Avg. monthly duration	
	<u>in 19 years</u>		<u>per month</u>		<u>(hr)</u>		<u>(hr)</u>	
	<u>6"</u>	<u>12"</u>	<u>6"</u>	<u>12"</u>	<u>6"</u>	<u>12"</u>	<u>6"</u>	<u>12"</u>
Jan.	110	61	5.8	3.2	1.7	1.5	10.1	4.9
Feb.	111	52	5.8	2.7	1.8	1.7	10.5	4.7
Mar.	119	52	6.3	2.7	1.6	1.5	10.2	4.2
Apr.	118	47	6.2	2.5	1.6	1.5	10.1	3.6
May	118	53	6.2	2.8	1.7	1.4	10.4	3.9
June	121	55	6.4	2.9	1.8	1.5	11.3	4.3
July	105	52	5.5	2.7	1.7	1.3	9.3	3.5
Aug.	112	33	5.9	1.7	1.4	1.2	8.3	2.2
Sept.	116	30	6.1	1.6	1.4	1.2	8.5	2.0
Oct.	104	42	5.5	2.2	1.7	1.6	9.3	3.4
Nov.	133	65	7.0	3.4	1.8	1.6	12.5	5.4
Dec.	136	67	7.2	3.5	1.8	1.7	12.5	5.8

Table 2.5 Analysis of tidal flooding on Saquish Neck on back road egress route (point B)

Month	No. of occurrences		Avg. no. of occurrences		Avg. duration per occurrence		Avg. monthly duration	
	in 19 years		per month		(hr)		(hr)	
	6"	12"	6"	12"	6"	12"	6"	12"
Jan.	259	137	13.6	7.2	1.9	1.7	25.7	12.5
Feb.	264	128	13.9	6.7	1.9	1.8	26.3	12.3
Mar.	271	135	14.3	7.1	1.9	1.7	26.6	11.8
Apr.	253	136	13.3	7.2	1.9	1.7	25.4	12.0
May	262	137	13.8	7.2	1.8	1.7	25.2	12.2
June	266	130	14.0	6.8	1.9	1.8	26.2	12.2
July	275	126	14.5	6.6	1.8	1.7	26.7	11.5
Aug.	282	133	14.8	7.0	1.8	1.5	26.3	10.5
Sept.	275	141	14.5	7.4	1.8	1.5	25.6	11.2
Oct.	269	126	14.2	6.6	1.8	1.7	25.5	11.3
Nov.	277	151	14.6	7.9	1.9	1.8	27.8	14.0
Dec.	282	153	14.8	8.1	2.0	1.8	29.1	14.5

Table 2.6 Analysis of tidal flooding on Saquish Neck at beach constricted point (point C)

Month	No. of occurrences		Avg. no. of occurrences		Avg. duration per occurrence		Avg. monthly duration	
	in 19 years		per month		(hr)		(hr)	
	6"	12"	6"	12"	6"	12"	6"	12"
Jan.	47	24	2.5	1.3	1.6	1.3	4.1	1.6
Feb.	47	19	2.5	1.0	1.6	1.7	4.1	1.7
Mar.	41	12	2.2	0.6	1.5	1.8	3.3	1.1
Apr.	37	12	1.9	0.6	1.5	1.5	2.8	1.0
May	42	4	2.2	0.2	1.4	1.5	3.1	0.3
June	51	9	2.7	0.5	1.4	1.2	3.8	0.6
July	40	6	2.1	0.3	1.3	1.0	2.7	0.3
Aug.	22	1	1.2	0.1	1.2	1.0	1.4	0.1
Sept.	18	1	0.9	0.1	1.1	1.0	1.1	0.1
Oct.	37	10	1.9	0.5	1.6	1.3	3.1	0.7
Nov.	54	23	2.8	1.2	1.6	1.3	4.5	1.6
Dec.	55	18	2.9	0.9	1.6	1.3	4.7	1.2

For point C, the beach constricted point, the data show that the high water reached or exceeded a depth 6 inches above the reference level of 12.5 feet above MLLW for a total duration of about 4 hours a month and a depth of 12 inches about 1 hour a month on average. The data also show that the water depth of 6 inches above the reference height was reached or exceeded about twice a month and a water depth of 12 inches above the reference height was reached or exceeded about less than once a month. The data also show that the average length of time the water depth was 6 inches or more above the reference level varied from 1.1 to 1.6 hours, and the average length of time the water depth was 12 inches or more above the reference elevation varied from 1.0 to 1.8 hours. The effect of wave action at point C was not included in the analysis.

C. TASK FORCE ASSESSMENT

The representative of the Gurnet-Saquish Association indicated that the egress routes on Saquish Neck are impassable 25 to 42 hours a month. BECO estimated that the egress routes are flooded, that is, are impassable, about 12 to 20 hours a month. Whether an egress route is impassable depends on several factors such as the type of vehicle (high clearance or low clearance), the driver's skill and knowledge of local conditions, and the urgency of the situation. The task force assumed that vehicle egress will be adversely affected when water depth reaches or exceeds 6 inches; most four-wheel-drive vehicles, in an emergency, should be able to negotiate a 6-inch depth of water. The task force analysis indicates that tidal flooding on Saquish Neck could adversely affect vehicle egress on the average about 10 hours a month at point A, the low point on the road below Gurnet Point; about 27 hours a month at point B on the back road; and about 4 hours a month at point C on the beach egress route.

The task force data indicate that tidal flooding, when it occurs at depths that adversely affect vehicle egress, lasts for about 1.1 to 2 hours on the average. There are certain weather conditions which result in episodes of tidal flooding which last longer than these average estimates. An examination of the tide tables for the area suggests that flooding at the monthly high tide levels may not occur twice a day but rather only once a day for most months in the year because of the diurnal inequality in the tides. The numbers of monthly occurrences of high water shown in Tables 2.4, 2.5, and 2.6 are the total number of monthly occurrences on average, whether they occurred once or twice a day.

Tidal flooding on Saquish Neck, if it occurs when an evacuation is ordered as a protective measure, can delay evacuation. This is similar to delays that may occur as a result of natural phenomena such as snow or ice storms, fog, or hurricanes. Although tidal flooding at Saquish Neck may be more predictable than other natural phenomena, it also retains an element of unpredictability because of the effect of weather on the tides that may either increase or

decrease the tidal flooding.* The task force notes that NRC's emergency planning regulations do not specify a minimum time by which an evacuation must be completed for the EPZs around nuclear power plants. The NRC and FEMA believe that emergency plans that meet the planning standards and guidance criteria of NUREG-0654 are flexible enough to accommodate possible delays in evacuation that may result because of natural phenomena; however, the actual amount of flexibility is difficult to establish and cannot be quantified. The NRC and FEMA require that the emergency plans and procedures include practical and feasible measures to account for expected natural conditions. For Saquish Neck, these include provisions to evacuate the area at the Alert stage of an emergency, the development of a specific implementing procedure for the area (Plymouth IP-15), warning sirens with loudspeakers, and radio communications with Plymouth's emergency response organization. In addition, there are efforts under way for coordination with the Town of Duxbury for assistance during an emergency. The task force concludes that the provisions in the current emergency plans provide acceptable flexibility for the evacuation of Gurnet-Saquish.

2.7.2 Beach Population

A. STATEMENT OF ISSUE

The issue of excessively low population figures for the Gurnet-Saquish area was raised at the public meeting on September 6, 1990. Emergency planning for the Duxbury Beach population was also identified as an issue.

B. FINDINGS

The task force discussed the population in the Gurnet-Saquish area with representatives of the Gurnet-Saquish Association (GSA) during visits to the area on October 5-7, 1990 (PT-22). It discussed the population at Duxbury Beach on January 18, 1991 (PT-67), with Joe Grady, a representative of the Duxbury Conservation Department, the organization responsible for managing the town's portion of Duxbury Beach, and on January 29, 1991 (PT-67), with John Leonard, a representative of Duxbury Beach Reservation, Inc., the organization that owns Duxbury Beach. The task force also attended a coordination meeting on January 22, 1991 (PT-116), among representatives of the Town of Duxbury, the Town of Plymouth, the Gurnet-Saquish Association, and BECo, in which the population of Gurnet-Saquish was discussed. On February 26, 1991 (PT-92), the task force met with David L. Quaid and viewed photographs taken by Mr. Quaid, including aerial photographs showing vehicles and people

*At the June 12, 1991, public meeting a representative of Gurnet-Saquish Association brought up the issue of vehicles becoming stuck in the soft sand during an evacuation. The task force did not evaluate this because it was not aware of the issue before June 4, 1991. Based on our limited understanding of this issue and our own trips to Gurnet-Saquish, the soft-sand issue does not alter the task force's overall assessment of the egress issue.

on the Saquish Neck and Duxbury Beaches. The task force obtained a printout listing the residential structures on Gurnet-Saquish from the Plymouth Assessor's office on January 30, 1991 (PT-150). (Gurnet Point and Saquish Neck, although connected physically to Duxbury Beach, are in the Town of Plymouth).

Gurnet-Saquish

Gurnet Point and Saquish Neck are privately owned areas and entry is limited to residents, family, and approved visitors and guests. There is a security checkpoint at the entrance to Gurnet-Saquish that is staffed on summer weekends by paid gatewatch personnel who are appointed as special police by Plymouth. Only four-wheel-drive vehicles are permitted on Gurnet-Saquish. The printout from the Plymouth Assessor's office lists 49 residences on Gurnet Point and 152 residences on Saquish Neck. During the October 5-7, 1990, visit, Gurnet-Saquish Association representatives stated that the population estimates discussed earlier with the NRC (and documented in NRC Meeting Report No. 50-293/89-03, dated February 23, 1989) were still considered valid, namely, 2,000 to 4,000 persons for most summer weekends with perhaps up to 5,000 on holiday weekends. At the January 22, 1991, planning coordination meeting for Gurnet-Saquish, the Gurnet-Saquish Association representatives stated that the number of people on Gurnet-Saquish could be 3,000 to 5,000 on summer weekends.

It was mentioned during discussions that the gatewatch security personnel kept records; however, the task force could not obtain these records to see if they could be used to determine the number of people and vehicles on Gurnet-Saquish. The task force did review a gatewatch incident log for 1989 (PT-149) submitted to the NRC by Mr. Quaid, which included the following entry for July 3, "Several patrols taken. Tide prevents patrol after 1 a.m. Fireworks more of a problem than bonfires. Crowd estimate on all beaches at 3,500."

The task force also reviewed a set of aerial photographs taken by Mr. Quaid on Saquish Neck on July 3, 1988, a day he characterized as being very cold. Although the photographs showed vehicles and people on the beach (see Figure 2.9) as well as boats anchored off shore, it was not possible, from these photographs, for the task force to quantify the total number of people on Gurnet-Saquish.

Gurnet-Saquish Association representatives told the task force that nine residents on Gurnet Point and two residents on Saquish Neck are year-round residents. Two of these year-round residents, one on Gurnet Point and one on Saquish Neck, have been appointed Plymouth Deputy Civil Defense Directors. The Gurnet-Saquish Association representatives (and Mr. Quaid) indicated that overnight camping is not permitted on the Gurnet-Saquish beaches.

In its October 4, 1990, response to the NRC, BECo stated (PT-08, p. II-86) that emergency planning for the Gurnet-Saquish area is based on the October 26, 1987, Pilgrim EPZ Public Beach Population Analysis (PT-156). The population estimates in this analysis for



Figure 2.9 Aerial photograph of Saguish Neck taken on July 3, 1988

the Gurnet-Saguish area were based on aerial photographs and a count of the number of persons on the beaches on July 5, 1987. According to the report, the aerial photographs showed 654 persons on Gurnet-Saguish Beach on a warm sunny day.

At the meeting with the task force on February 25, 1991 (PT-70), BECo stated that it continued to support a population figure of 654 for Gurnet-Saguish, and that because of lack of documentation to substantiate the higher estimates of 3,000 to 5,000 people, did not feel it was appropriate to use the higher figures as a basis for planning.

Duxbury Beach

The task force was informed during meetings with local officials and citizens that Duxbury Beach is owned by the Duxbury Beach Reservation, Inc., a private, nonprofit organization, which leases most of the beach to the Town of Duxbury on an annual basis. This leased property extends from the resident parking lot at the eastern end of the Powder Point Bridge south to the Gurnet-Saguish gate (see Figure 2.2). The leased portion of Duxbury Beach is managed by the Duxbury Conservation Department. A concessionaire operates Duxbury Beach Park, at the northern end of Duxbury Beach, for the Duxbury Beach Reservation, Inc. Duxbury Beach Park includes the bathhouse and is open to the general public. Access to Duxbury Beach Park is from the north via Gurnet Road (not to be confused with Gurnet Point) through the Town of Marshfield. Vehicular access between Duxbury Beach Park and the leased portion of Duxbury Beach is normally blocked but can be opened in an emergency.

Apparently, records are not kept of the actual number of people at either Duxbury Beach Park or the leased portion of Duxbury Beach. On July 5, 1987 (PT-156), BECo did an aerial count of the people on the beach in which a total of 4,583 persons were observed on Duxbury Beach. Mr. Quaid provided the task force a series of aerial photographs of Duxbury Beach taken on July 3, 1988, which showed people and vehicles on Duxbury Beach (PT-92). In his testimony before the NRC on December 9, 1988, Mr. Quaid estimated the population on Duxbury Beach to be 8,000 (with an additional 3,500 to 4,000 on Gurnet-Saguish).

A method for estimating the population on Duxbury Beach was suggested by Mr. Grady of the Duxbury Conservation Department. It is to count the number of parking spaces and the number of four-wheel-drive vehicles allowed on the beach, then multiply these by an assumed vehicle occupancy factor. (The task force does not endorse any particular method of estimating the population or any particular vehicle occupancy factor.) According to Mr. Grady, the resident parking lot at the eastern end of Powder Point Bridge holds a maximum of 404 cars, and a maximum of 500 four-wheel-drive vehicles are allowed on Duxbury Beach. There is also parking for approximately 100 vehicles in an uncontrolled parking lot at the western end of the bridge. According to Mr. Leonard of Duxbury Beach Reservation, there are 1,400 parking spaces in Duxbury Beach

Park (the reservation acquires its income only by charging a parking fee). This results in a total of approximately 2,400 vehicles in parking lots or on the beach at maximum capacity.

If the evacuation time estimate (ETE) assumption of 2.54 persons per vehicle is used, the resulting population estimate is about 6,100. If an average of 3 persons per vehicle is assumed, it would equate to about 7,200 persons. Mr. Grady stated that parking for Duxbury Beach reached full capacity about seven times last year (1990). July 4 is considered to be the peak day on Duxbury Beach.

The Duxbury Conservation Department maintains a checkpoint at the eastern end of Powder Point Bridge. A beach lot permit, which is available to Duxbury residents only, is required to use the resident beach lot, and an over-sand permit for four-wheel-drive vehicles, which is available to residents and nonresidents, is required to gain access to the beach. A maximum of 500 four-wheel-drive vehicles are allowed on the beach. This regulation is strictly enforced by the Conservation Department. Four-wheel-drive vehicles headed for Gurnet-Saguish are allowed through the Conservation Department checkpoint and are not included in the 500 four-wheel-drive vehicles permitted on Duxbury Beach.

Duxbury Beach is posted with regulations that prohibit overnight camping. The larger resident beach lot (north) closes at sunset, while the smaller beach lot (south) closes at 11:30 p.m. Four-wheel-drive vehicles must be off the beach by 11:30 p.m. Duxbury Beach Park normally closes at 8:00 p.m. According to Mr. Leonard of the Duxbury Beach Reservation, it closes earlier during inclement weather. (Some overnight fishing may be permitted on the beach.)

There is one year-round resident on Duxbury Beach at High Pines, which is about halfway to Gurnet Point. Three summer homes are located at the northern end of Duxbury Beach Park on property owned by the reservation and leased to the homeowners.

C. TASK FORCE ASSESSMENT

The determination of population on Gurnet-Saguish is complicated because of the large number of transients who visit the area and the lack of reliable data. The Gurnet-Saguish Association estimates that the area's population varies from 3,000 to 5,000 persons on summer weekends. BECo estimates that a representative population for Gurnet-Saguish is 654 persons based on a single aerial count taken on July 5, 1987. The variation in the population estimates for Duxbury Beach between the local residents and BECo is not as great. The task force, in part because its inquiry was conducted in the winter, did not perform an independent assessment of the population on Gurnet-Saguish and Duxbury Beach.

Procedures are in place for notifying the public in the Gurnet-Saguish and Duxbury Beach areas in the event of an emergency. The beaches are closed and beachgoers are told to leave at the Alert stage. The local emergency planning officials are familiar with

the unique topographical characteristics of the area and when maximum beach capacity occurs. They are also aware of the various peak population estimates for Gurnet-Saquish. Thus, local officials should be able to provide effective assistance to the public in the event of an emergency.

The population estimate for the Gurnet-Saquish area provided by the Gurnet-Saquish Association differs markedly from that used by BECO in the Pilgrim ETE study. BECO should perform a sensitivity analysis to determine if the higher Gurnet-Saquish Association estimate and the higher Duxbury Beach estimates have a significant effect on the ETE. FEMA and the NRC will use this information to decide if the different estimates of population need to be reconciled.

2.7.3 Adequacy of Arrangements and Equipment for Emergency Response

A. STATEMENT OF ISSUE

At the public meeting on September 6, 1990, concerns were expressed regarding the adequacy of the arrangements and equipment for emergency response on Gurnet-Saquish. The representative of the Gurnet-Saquish Association stated that the association had conditionally approved the draft plan for the Gurnet-Saquish area. However, the Gurnet-Saquish Association representative stated,

We cannot stress strongly enough that we believe this plan to be seriously flawed and in fact is nearly unworkable until such time as the emergency egress road is seriously upgraded and arrangements are made with the Town of Duxbury to interface with Gurnet-Saquish Association emergency personnel.

The Gurnet-Saquish Association representative indicated that although preliminary draft plans call for interface with Duxbury emergency personnel, "these plans were rejected and tentative agreement denied by Duxbury." In addition, the Gurnet-Saquish Association representative stated that a bare minimum of communications equipment had been provided by BECO and the effectiveness of this equipment will not be known until a full-scale exercise has taken place.

B. FINDINGS

On January 22, 1991 (PT-116), a member of the task force attended a meeting on the coordination of emergency planning for Gurnet-Saquish held in the Duxbury emergency operations center (EOC). Participants in the meeting included four Gurnet-Saquish Association representatives, the Duxbury and Plymouth Civil Defense Directors and Harbormasters, a representative of the Duxbury Conservation Department, and the BECO community representatives for Duxbury and Plymouth. A representative of the Massachusetts Civil Defense Agency also attended the meeting. The purpose of the meeting was to coordinate planning activities among Duxbury,

Plymouth, and the Gurnet-Saquish Association to ensure that adequate plans and resources are in place to handle the persons evacuating through Duxbury from Gurnet-Saquish. A significant part of the meeting was spent in discussing the past history of the Gurnet-Saquish coordination issue and the frustration of the representatives of the Gurnet-Saquish Association over the lack of progress. The key issue was the need for Duxbury to plan for the possible evacuation of the potentially large number of residents and visitors from Gurnet-Saquish once those persons reached the Gurnet-Saquish gate, that is, the boundary of the Town of Duxbury. The Gurnet-Saquish Association representatives stated that the number of people on Gurnet-Saquish could be from 3,000 to 5,000 on certain occasions.

The Gurnet-Saquish Association representatives stated that the association had given conceptual approval to its implementing procedure (Plymouth IP-15) and that they believed they had a workable plan to get the people from Gurnet-Saquish to the gate. However, they had no assurance that there would be any assistance for the evacuees from Gurnet-Saquish after they came to the gate. Depending on the tide conditions, the Gurnet-Saquish Association representatives indicated that a large number of the 3,000 to 5,000 people evacuating the area could be on foot if an evacuation was ordered at the time of peak tidal flooding of the egress routes. The Gurnet-Saquish Association representatives indicated that they have continued to plan for a worst-case scenario, an evacuation during high tide conditions using the present egress routes.

The current Duxbury plans do not take into consideration the fact that a large number of transportation-dependent persons could be at the Gurnet-Saquish gate. The current Duxbury plans have provisions for buses to pick up transportation-dependent persons at the western end of the Powder Point Bridge, but the Gurnet-Saquish Association considered this location to be too far to expect families from Gurnet-Saquish to walk. The meeting participants discussed the need to arrange for transportation resources to be available at the Gurnet-Saquish gate. The Duxbury Civil Defense Director reassured the Gurnet-Saquish Association representatives that Duxbury accepts responsibility for the evacuees from Gurnet-Saquish as they travel through Duxbury. The Civil Defense Director stated (and it appeared to be the consensus) that significant progress had been made in the meeting but further effort was required on the part of the planners from Duxbury, Plymouth, the Gurnet-Saquish Association, and BECo to develop specific coordination plans for Gurnet-Saquish. In a telephone call on May 6, 1991 (PT-178), the Duxbury Civil Defense Director stated that no additional coordination meetings had been held to date because of the need to hold town budget meetings, but further coordination meetings were planned.

C. TASK FORCE ASSESSMENT

The task force finds that some progress has been made in resolving the coordination issue between the Gurnet-Saquish Association and Duxbury. The Duxbury Civil Defense Director has acknowledged that

Duxbury accepts its responsibility to provide assistance to the evacuees from Gurnet-Saguish in an emergency. Further coordination meetings are necessary to develop specific provisions for this assistance from Duxbury. FEMA will evaluate the adequacy of the changes to the plans and procedures to reflect this assistance.

The Plymouth plans and procedures for Gurnet-Saguish include provisions for alerting and notifying Gurnet-Saguish residents and visitors of an emergency at Pilgrim. The plans call for the area to be closed at the Alert stage of an emergency. BECo has provided the necessary communications equipment. MCDA should ensure that coordination between the Towns of Duxbury and Plymouth and the Gurnet-Saguish Association continue. In addition, MCDA should assure that the communications equipment is tested on a regular basis and that training is provided on the Gurnet-Saguish Association procedure.

2.7.4 Clarks Island

A. STATEMENT OF ISSUE

At the September 6, 1990, public meeting, and at the October 30, 1990, congressional hearing in Plymouth (PT-136), the Plymouth Civil Defense Director stated that there was an egress issue for Clarks Island. Unlike Saguish Neck, which is affected at high tide, Clarks Island is affected at low tide.

B. FINDINGS

Clarks Island is located in the Town of Plymouth about 5 miles north-northwest of the Pilgrim plant (Fig. 2.1). The Plymouth Assessor's office gave the task force a printout of the properties on Clarks Island that listed eight residences (PT-150). On October 5, 1990 (PT-22), the task force was taken on a boat tour around the island by the Duxbury Harbormaster accompanied by the Duxbury Civil Defense Director. Since the boat tour was taken only about 2 hours after high tide, it was not possible to judge how accessible the island was at low tide. On October 7, 1990 (PT-22), beginning about 1/2 hour after low tide (measured in Boston at -0.5 foot MLLW at 7:30 a.m.), a member of the task force waded into the channel between the closest point on Saguish Neck and Clarks Island. About midway in the channel, the water depth was about chest deep on an adult of medium height. The exposed tidal flats and the bottom in this area were firm. People on Clarks Island and Saguish Neck were observed walking on the tidal flats at the water's edge. Several small power and sail boats, about 16 to 20 feet in length, were observed, some moored a little off shore, others beached on the exposed tidal flats.

The Duxbury Harbormaster, in a telephone conversation on May 21, 1991, stated that access to Clarks Island at low tide conditions is very difficult.

Provisions for alerting and notifying the residents of Clarks Island are included in both the Plymouth and Duxbury emergency plans. The plans call for Clarks Island to be closed at the Alert stage and for the Plymouth Harbormaster to coordinate with the Duxbury Harbormaster to ensure that the Clarks Island population is advised of the closing or other protective action. Since Clarks Island is in the portion of EPZ Subarea 12 assigned to Duxbury, the Duxbury Harbormaster is responsible for establishing contact with the residents of Clarks Island by VHF radio, CB radio, or telephone to notify them of the emergency (Duxbury IP-11, Draft 6, April 5, 1990). If these means fail, the Duxbury Harbormaster is to dispatch a boat to notify the residents by using the public address system. (The nautical chart for the area - NOAA 13253 - shows a relatively deep channel approaching the northeast side of the island.) In addition, two tone alert radios have been provided to the residents on Clarks Island.

C. TASK FORCE ASSESSMENT

A delay in evacuating at Clarks Island could occur if an evacuation is ordered during low tide conditions. The amount of delay that could occur is difficult to quantify. On the basis of its observations and experience in evaluating the tidal conditions at Saguish Neck, the task force estimates that egress from Clarks Island could be affected by low tide conditions for about 1½ to 2 hours. The effect of naturally occurring phenomena on emergency planning is discussed in Section 2.7.1. As noted there, the NRC and FEMA require that the emergency plans and procedures include practical and feasible measures to account for expected natural conditions. For Clarks Island, these include provisions to evacuate the area at the Alert stage of an emergency and coordination between the Plymouth and Duxbury emergency response organizations to alert and notify the residents.

Local emergency response officials are familiar with the low tide situation at Clarks Island. Depending on the severity of the emergency (e.g., whether a release has occurred, wind direction, etc.) when an evacuation is ordered, these officials will determine the required assistance to the residents of Clarks Island including ad hoc measures if necessary.

The task force concludes that the provisions in the current emergency plans provide acceptable measures for accounting for the low tide situation at Clarks Island.

2.8 Evacuation Time Estimates

10 CFR Part 50, Appendix E, Section IV requires that evacuation time estimates (ETEs) be included in the emergency plans. ETEs are used to identify potential bottlenecks during the planning process so that effective traffic controls can be included in the plans. ETEs may also be used by decision makers during an actual emergency to help the consideration of the timing of protective actions based on road conditions, time of day, and seasonal variation in

population. The requirement to provide ETEs in the emergency plans is not a requirement to meet some predetermined evacuation times.

A. STATEMENT OF ISSUE

At the September 6, 1990, public meeting, commenters identified the following issues:

- Route 44 and Route 3 are already so congested that the additional traffic during an evacuation will make leaving the emergency planning zone (EPZ) impossible.
- Breakdowns of vehicles in addition to the large volume of traffic during an evacuation will make roads impassable.
- Traffic management personnel will have difficulty reaching their assigned locations.

B. FINDINGS

Traffic Congestion

According to Dr. Thomas Urbanik,* traffic congestion is an indication that the number of vehicles whose drivers want to use the highway exceeds the capacity at some point. Those moving slowly in stop-and-go traffic are experiencing the condition known as "breakdown flow." Breakdown flow is the condition that exists while vehicles wait to pass through the most limiting portion of the roadway system or the "bottleneck." Standard procedures for identifying the locations of bottlenecks and the associated breakdown flow during an evacuation were used for the Pilgrim ETE study. These bottlenecks might occur at some of the same locations along Route 44 and Route 3 as those on a busy Friday afternoon or a busy holiday weekend. Bottlenecks are also likely to occur at locations other than those normally experienced in the Pilgrim area. Despite extensive congestion, the ETE study provides a realistic estimate of the time required to evacuate the Pilgrim EPZ.

Vehicle Breakdowns

According to Dr. Urbanik, vehicle breakdowns are relatively rare. For developing incident management programs, an incident rate of 200 incidents per million vehicle-miles is a recommended planning number. On a typical freeway, only 4 percent of the breakdowns

*Thomas Urbanik, II, Ph.D., P.E., is the NRC's technical consultant for evaluating ETEs and has evaluated ETEs for the NRC and FEMA for nuclear power plants in the United States. He has also provided the analysis entitled "Technical Review of Pilgrim Station Evacuation Time Estimates and Traffic Management Plan Update" (Rev.2), April 15, 1991, in Appendix D to this task force report.

occur in traffic lanes, and 71 percent of these require assistance. Most vehicles would be able to move off the road under their own power or with the assistance of other evacuees. In addition, the emergency plans provide for removing impediments from the roadway.

Traffic Management Personnel

According to Dr. Urbanik, evacuees will not be randomly moving about the emergency planning zone, but toward a limited number of points including their homes, schools, and ultimately destinations outside the emergency planning zone. On the other hand, traffic management personnel will generally be moving in the direction opposite to evacuees and should not be subject to the delays that may be experienced by evacuees. The deployment of traffic management personnel is usually prioritized so that they are assigned in the most effective manner to deal with those locations that are most likely to be congested.

C. TASK FORCE ASSESSMENT

On the basis of "Technical Review of Pilgrim Station Evacuation Time Estimates and Traffic Management Plan Update," in Appendix D, the task force concludes that the Pilgrim station ETE meets the standards of NUREG-0654. The task force concludes that the ETE issues identified above are adequately addressed. However, in Section 2.7.2.C the task force recommends that BECo conduct a sensitivity analysis using different values for the beach population at Gurnet-Saquish and Duxbury.

2.9 Public Notification System

In the event of an accident at the Pilgrim Nuclear Power Station, offsite agencies responsible for protecting public health and safety are required to alert the public and inform them of any protective measures they need to take. Fixed sirens are used as the primary public alerting mechanism. The members of the public when alerted are expected to tune their radios to local Emergency Broadcast System (EBS) stations for further information and instructions. Offsite planners include in their plans provisions for EBS messages to be broadcast from radio stations volunteering to perform this public service. The EBS is tested periodically to ensure its reliability.

2.9.1 Siren System

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, identified the following issues:

- Sirens could not be heard in many locations in the Town of Duxbury after the 1989 exercise.

- FEMA identified modifications to the siren activation system that were needed; these modifications were being considered by the Massachusetts Civil Defense Agency (MCDA).

B. FINDINGS

State Activation of the Siren System

The FEMA post-exercise assessment for the October 12-13, 1989, Pilgrim exercise (PT-11, p.26), stated that "in addition to the town's capability to activate sirens, it is recommended that the State should also have this capability." The task force understands that BECo (PT-08, p.6) is providing equipment and software modifications that will enable the State Police at Middleborough to activate the sirens in the emergency planning zone (EPZ) in case the local jurisdiction is unable to activate their system (PT-198). BECo stated that it was evaluating proposals to do this work, which is scheduled for completion in 1991. In addition, included in the Middleborough State Police Headquarters system will be an automatic feedback system. This capability will eliminate the need for personnel to physically go to the siren pole for siren verification. The automatic feedback system will allow each siren to be monitored for activation without physically being near the siren. When the system modification is installed and plans and procedures modified accordingly, FEMA will evaluate the updated system.

Siren Coverage

The task force understands through FEMA that there are 17 sirens in the Town of Duxbury (an additional siren is being installed, which will make a total of 18 in Duxbury) and a total of 100 sirens (12 additional sirens are planned for installation) in the entire system.

A FEMA contractor is evaluating the public alert and notification system for the Pilgrim Nuclear Power Station. The contractor conducted a quality assurance verification review, based on the June 1985 alert and notification system design report, and evaluated the acoustical design scheme consisting of 94 existing sirens installed around Pilgrim. In conjunction with this review and after a suitable period of operability testing, FEMA conducted a public telephone survey on September 29, 1986, to assess the acoustical effectiveness of the system. The time for conducting the survey was chosen in coordination with Commonwealth of Massachusetts and local officials and BECo. The FEMA survey was conducted using a sample of residents of the EPZ randomly selected and representative of the population distribution in the EPZ. Standard statistical sampling techniques were used in conducting the survey so that sufficient interviews were completed to provide survey results with 5 percent precision at a 95 percent confidence level. At the time of the 1986 telephone survey, 94 sirens were installed. On the basis of the telephone survey, 88 percent of the respondents reported that they were alerted by the system. Since the telephone survey, additional sirens have been added to

the system for a current total of 100 sirens. The installation of the 12 additional sirens noted above will enhance the current system of 100 sirens.

C. TASK FORCE ASSESSMENT

NUREG-0654, Evaluation Criterion E.6 requires the following,

Each organization shall establish administrative and physical means, and the time required for notifying and providing prompt instructions to the public within the plume exposure pathway Emergency Planning Zone... It shall be the licensee's responsibility to demonstrate that such means exist, regardless of who implements this requirement. It shall be the responsibility of the State and local governments to activate such a system.

On the basis of the quality assurance verification review of the physical features of the alert and notification system as depicted in the BECo June 1985 Design Report, FEMA's technical assistance contractor concluded that the design and implementation of the physical features of the system conformed sufficiently to the acceptance criteria in FEMA REP-10 or Evaluation Criterion E.6 of NUREG-0654 to support a finding that the system was adequate. A public telephone survey conducted after activation of the system showed that the system was adequate for alerting the public. The results of the telephone survey (88 percent of the respondents directly alerted) at Pilgrim were well above the minimum direct alerting level, established by FEMA, that must be achieved by a primary alerting system. Since that survey, additional sirens have been added to the system and more enhancements are planned.

The contractor's technical review report includes an evaluation not only of the acoustical (physical) features of the alerting system but the administrative means used to activate and operate that system. Features of EBS activation are also included. The report will be finalized after FEMA incorporates data on the siren enhancements mentioned above; evaluates the modifications, which will include centralized State activation of the system and the other modifications to the system that were made after the 1989 exercise; and completes a review against the other FEMA REP-10 evaluation criteria and planning revisions related to the alert and notification system.

2.9.2 Emergency Broadcast System

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, identified the following issues regarding the EBS:

- In the 1989 exercise, FEMA found that messages to the public via the EBS were incomplete.

- EBS local radio stations did not have (Pilgrim-specific) general information on emergency preparedness.
- EBS local stations found the EBS communications chain unreliable and untimely.

B. FINDINGS

In the 1989 exercise, an EBS message on precautionary school transfer was incomplete and did not include the host schools for the Towns of Duxbury and Marshfield. The resolution of the host school issues is discussed in Sections 2.5 and 2.6. The task force discussed the remaining two issues with Diane Brown-Couture of MCDA. Ms. Brown-Couture gave the task force a copy of the Massachusetts Emergency Broadcast System, Operation Plan, dated May 1988 (attached to PT-76). In a telephone conference call with the task force on April 12, 1991 (PT-142), Ms. Brown-Couture explained the EBS and the procedure for activating it. She stated that to activate the EBS, MCDA places a call to both WBMX (formerly WROR), the State's lead station, and WPLM, the lead station for the southeast Massachusetts operational area. The primary means of communication between MCDA and these stations are the commercial telephone link and telefax; the backup means are radios. When activated, WBMX signals a two-tone message to the operational areas affected. The primary relay station in the affected operational area is a 24-hour station that monitors WBMX. The EBS primary relay station in the Plymouth operational area is WPLM, which is a powerful station that covers all but a very small area in the Pilgrim plume EPZ. Ms. Brown-Couture indicated that she had discussed emergency planning items for the Pilgrim Nuclear Power Station with WPLM's general manager, Jane Day, in late 1989. She stated that Ms. Day had raised no major issues, except the need for a backup emergency power generator for the station in case regular power was lost. Ms. Brown-Couture further stated that there are no requirements that local stations be aware of any Pilgrim-specific emergency provisions, since the radio station's job during an emergency at Pilgrim would generally be no different from that during other emergencies, except for the content of messages.

In the telephone conference call on April 12, 1991, with the task force, MCDA, Jack Campbell (owner of WPLM), and Bill Odell (chief operator) (PT-142), Mr. Campbell and Mr. Odell stated that their station had adequate coverage and staff and that general information on emergency preparedness pertinent to the station's EBS activation commitment was not lacking. They also stated that the station had not experienced any problems with its communications chain. Tests are conducted weekly, and evaluations by closed-circuit tests are performed two or three times a year. Mr. Odell stated that other smaller stations in the area had not notified the station of any problems with regard to their ability to broadcast emergency messages; he was certain that if there was a problem, he would have heard about it. Mr. Odell indicated there was no radio communications backup with MCDA. Mr. Odell further stated that about a year ago, BECo had supplied WPLM with an

emergency power supply to be used as a backup power source if power was lost at the station.

During the task force telephone conference call on April 12, 1991, with Ms. Brown-Couture and Larry Bruce, chief engineer of WBMX (PT-142), to discuss EBS issues, Mr. Bruce told the task force that the radio link between MCDA and the radio station was receiving interference. This interference was caused by WATD, a Plymouth local station, which 2 to 3 months before began broadcasting a program for the Massachusetts Commission for the Blind on the MCDA frequency of 161.76 MHz. He stated that because this frequency was not reserved, MCDA needed to correct this problem. The radio link Mr. Bruce was referring to is the backup means by which MCDA contacts the radio station to activate the EBS. The primary means is commercial telephone or telefax. Mr. Bruce stated that as far as he could remember, his station had never received any telefax messages, and he gave Ms. Brown-Couture a telefax number to be used in the future.

Mr. Bruce stated that he was not aware of any problems with the timeliness of emergency broadcasts of messages. He expressed concern, however, about the reliability of these messages because the State does not have any process for authenticating them. If there was such a process, he and his station were unaware of it. Ms. Brown-Couture offered to meet with Mr. Bruce to further explore these issues and ways to resolve them. In a letter dated May 9, 1991, Royce Sawyer, MCDA Communications Officer, informed Mr. Bruce of the State's authentication system for EBS broadcasts, including the codes and the State officials authorized to activate the Massachusetts EBS (PT-214). In a letter dated May 10, 1991, Mr. Sawyer informed the Co-Chairman of the Massachusetts EBS (Mr. Rowe) of the information on the authentication system that was transmitted to WBMX, all Common Program Control System-1 stations, and key radio stations around nuclear power plants (PT-215).

During a task force telephone conference call on April 16, 1991 (PT-143), Edward Perry, president of WATD, stated that his radio station had been assigned as an EBS station for the last 13 years. He expressed two concerns: (1) WPLM, the lead station in southeast Massachusetts, is located inside the EPZ and might need to be evacuated during an emergency at Pilgrim, and (2) the EBS is not a fail-safe system and too many things can go wrong. The EBS relies on a 25-year old technology and its failure could be undetected for some time. According to Mr. Perry, the weekly tests are not adequate. He suggested that a dedicated data line be established between the station and either MCDA or BECo, so a timely and reliable means of communication is guaranteed. He said that his station had been invited to the annual media orientation programs and that he had attended them; however, he did not consider them to be "training." He stated that training programs for the major EBS stations should be provided in order to ensure effective and timely dissemination of emergency messages.

C. TASK FORCE ASSESSMENT

Evaluation Criterion E.5 of NUREG-0654 states that "State and local government organizations shall establish a system for disseminating to the public appropriate information contained in initial and followup messages received from the licensee including the appropriate notification to appropriate broadcast media, e.g., the Emergency Broadcast System (EBS)." Guidance Criterion E.6 of NUREG-0654 states that "each organization... establish administrative and physical means, and the time required for notifying and providing prompt instructions to the public within the plume EPZ." It further states that "it is the licensee's responsibility to demonstrate that such means exist, regardless of who implements this requirement." It continues, "It shall be the responsibility of the State and local governments to activate such a system." 10 CFR 50.47 (b)(6) (Planning Standard F of NUREG-0654) requires "provisions for prompt communications among principal response organizations...and to the public." It further defines this provision to be a 24-hour notification system that, at a minimum, consists of a telephone link and alternate, with 24-hour staffing of communication links that initiate emergency response actions. Furthermore, periodic testing of the entire emergency communications system is also required. The acceptance criteria in Appendix 3 of NUREG-0654 require prompt notification over radio and TV at the time of the alerting signal. The plans are required to include evidence of such capability via agreement or laws. NUREG-0654 states that the station management at the originating primary relay station and/or the common program control station should authenticate the validity of all requests to activate the system.

In its interviews with EBS station officials, the task force found that EBS stations do not need to have additional Pilgrim-specific emergency information to broadcast an EBS message effectively.

The EBS should be able to function notwithstanding adverse environmental conditions, such as floods and power outages. In this regard, the task force found that WBMX (the State's primary station), WPLM (the primary station for the southeast Massachusetts operational area), and WATD were all equipped with backup power generators.

In regard to the reliability of EBS communications, the task force found that the authentication process is adequate based on the recent correspondence from MCDA to WBMX and to the Co-Chairman of the Massachusetts EBS.

The hardware communication links between MCDA and the primary EBS stations also need to be addressed. The interference on the radio backup link between MCDA and WBMX reduces the reliability of these links to some extent. The absence of a two-way radio backup communication link between MCDA and WPLM also needs to be addressed.

FEMA will evaluate the adequacy and timeliness of EBS messages during the 1991 exercise and will monitor the State's efforts to

address the issue concerning the backup communication with the EBS station.

2.10 Exercise

An exercise of the onsite and offsite emergency preparedness plans for the Pilgrim Nuclear Power Station was conducted on October 12-13, 1989; another exercise will be conducted in December 1991. FEMA's report on the exercise entitled "Final Exercise Assessment, Joint State and Local Radiological Emergency Response Exercise for the Pilgrim Nuclear Power Plant, Plymouth, Massachusetts, October 12-13, 1989," dated August 27, 1990 (PT-11), was available in draft form before the September 6, 1990, meeting. Many shortcomings identified by FEMA in the report surfaced in the record of the September 6, 1990, meeting, either in direct testimony or as enclosures to the transcript.

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, made the following comments about the 1989 exercise:

- This was not a full-participation exercise because State and local plans were not approved and in place.
- The exercise could not satisfy the requirements for a full-participation exercise because the integrated capability to respond to an accident at the Pilgrim plant did not exist.

B. FINDINGS

By letter dated August 31, 1990 (PT-11), FEMA reported to the NRC the results of its evaluation of the October 12-13, 1989, full-participation exercise of the offsite radiological emergency response plans for the Pilgrim Nuclear Power Station as follows:

- Two deficiencies were identified.
- Forty-three areas requiring corrective action (ARCAs) were identified and must be corrected before the 1991 exercise.
- Corrective actions in regard to the two deficiencies were demonstrated during the May 25, 1990, remedial exercise.
- An additional ARCA was identified during the May 25, 1990, remedial exercise.

C. TASK FORCE ASSESSMENT

The two agencies, FEMA and the NRC, and the task force are satisfied that the 1989 exercise was a full-participation exercise. Deficiencies found by FEMA were corrected in a remedial exercise. FEMA will evaluate the State and local governments' efforts to demonstrate correction of the 44 areas requiring corrective action during the exercise scheduled for December 1991.

By definition, ARCAs are demonstrated and observed inadequacies in performance, and although their correction is required, they are not considered, by themselves, to adversely impact public health and safety. The process set up by FEMA requires demonstration of corrective actions in an exercise. Generally, the task force did not attempt to evaluate the resolution of ARCAs identified in the 1989 exercise because they were not deemed to adversely impact public health and safety and an exercise is required to evaluate them. FEMA will evaluate the correction of ARCAs from the 1989 exercise in the 1991 exercise evaluation report. (Some exercise issues are addressed in other sections of this report. The status of plans and procedures is also discussed in other sections of this report.)

2.11 Reception Centers

Three reception centers are specified in the offsite emergency plans for the Pilgrim Nuclear Power Station. In the event of a severe accident at Pilgrim, members of the public within the plume exposure pathway emergency planning zone (EPZ) (Fig. 2.1) would be directed to one of the three reception centers for registration, monitoring, and, if necessary, decontamination. Some evacuees would then be sent or transported to congregate care centers for food and shelter.

Directions to the reception centers are generally included in the public information brochures distributed by BECo and would be part of Emergency Broadcast System messages, if necessary. For planning purposes, the NRC and FEMA assume that 20 percent of the EPZ population would actually go to reception centers following an accident (PT-17). The planned capabilities of the reception center should be adequate to monitor (for contamination) evacuees arriving within a 12-hour period.

The three reception centers for the Pilgrim station are located in Massachusetts in the Towns of Wellesley and Bridgewater and the City of Taunton. Each reception center has an associated emergency operations center (EOC). These reception community EOCs should not be confused with the EOCs specified in offsite emergency plans that are located in the towns within the plume exposure pathway EPZ - Plymouth, Duxbury, Carver, Marshfield, and Kingston. Personnel in the EOCs associated with the reception centers in Massachusetts focus primarily on activation and operation of the reception centers, on coordination with hospitals and the congregate care centers, and on traffic control in the reception communities. Many of the comments and the supporting material presented at the September 6, 1990, public meeting in Plymouth, Massachusetts, addressed the status of reception centers and their associated EOCs either before the Commission's December 1988 decision to restart the Pilgrim nuclear plant or before the October 1989 exercise. The conditions involving reception centers have been continually evolving since 1988. For example, many commenters had presented itemized lists of equipment for the EOCs or reception centers that was lacking or was out of service. The task force found that much

of the equipment and many facilities had been put into service since the issue was originally identified. Nevertheless, the task force encouraged local officials to present their views on outstanding equipment or facility needs.

Generally, the issues pertaining to the reception centers can be divided into two broad categories: (1) facilities and equipment and (2) staffing. The following sections address these two broad issues for each reception center and its associated EOC.

2.11.1 Wellesley Reception Center and EOC

The Wellesley Reception Center and its associated EOC are collocated at the Massachusetts Department of Public Works (MDPW) facility in Wellesley, Massachusetts, approximately 45 road miles from the Pilgrim Nuclear Power Station. Current plans call for the Wellesley Reception Center to receive evacuees from the Towns of Duxbury and Marshfield, as well as Saquish Neck, Gurnet Point, and Clarks Island.

2.11.1.1 Facilities and Equipment

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, noted that when the NRC authorized restart of the Pilgrim Nuclear Power Station in December 1988, the lack of a northern reception center was a major deficiency because the Wellesley site was simply a garage with no operational capability. Commenters also made the following comments about the Wellesley Reception Center.

The Wellesley facility

- lacked an EOC
- lacked communications equipment
- lacked an emergency response infrastructure to demonstrate direction and control activities
- lacked demonstrable communications links between the EOC and field locations such as
 - the transportation staging area
 - overflow parking lots
 - host schools
 - congregate care centers
- had only decontamination trailers, even though they are considered as backup facilities
- had an ineffective hand-wiping system for decontaminating automobiles

- had only two portal (walk-through) monitors on the premises, an insufficient number to monitor 20 percent of evacuees from Duxbury and Marshfield within 12 hours
- lacked sanitary facilities and decontamination equipment for handicapped persons, as of July 20, 1990
- lacked seating for handicapped or frail persons

Some of the comments were identified as consequences of not having an EOC at the time of the October 1989 exercise.

B. FINDINGS

The task force toured the Wellesley MDPW facility on November 7, 1990, and discussed its status with Frederick W. Iarrobino, Reception Center Manager; Stephen A. Black, Town of Wellesley Civil Defense Director (CDD); and Julia Gabaldon of the Massachusetts Civil Defense Agency (MCDA) (PT-79).

Emergency Operations Center

During the tour, the task force observed and photographed the EOC and the reception center. The EOC appeared to be operational. Mr. Iarrobino stated that the radio equipment had been checked by personnel on his staff and was operational. He stated that the renovation of the EOC was not completed to his satisfaction and gave the task force a list of items he considered necessary before the EOC could be said to be ready. He stated that BECo had agreed to provide an alternative exit from the EOC; to replace ceiling tiles; and to provide a generator to power the EOC, reception center, and the monitoring and decontamination areas.

Mr. Iarrobino stated that an occupancy permit had not been issued for the EOC and that he would not allow training of MDPW staff until a permit was issued. A Building Permit - Certificate of Occupancy (PT-83) was issued on February 6, 1991, for the EOC.

In response to questions raised by the task force during a meeting on February 25, 1991 (PT-70), BECo provided the following update on the outstanding equipment issues for the Wellesley EOC and Reception Center:

- Maps showing routes to the CCCs had been provided.
- Decontamination sinks were routed to the building outlet that would drain to the bladder.
- Alternate egress (another door) for the EOC had been provided.
- A generator for an alternate power supply was being provided.
- Ceiling tiles that dissolve in water had been installed.

- Communications between the EOC and the reception center had been provided.
- A printer had been provided for the computer in the EOC.

During a telephone conversation with the task force on February 27, 1991 (PT-73), Mr. Iarrobino confirmed that the information on equipment status that BECo had provided to the task force at the February 25, 1991, meeting was correct. He stated that the generator was being hooked up and the telephone lines between the EOC and the reception center were being installed.

Decontamination of Vehicles

During the tour on November 7, 1990, Ms. Gabaldon stated that the Massachusetts Department of Public Health had approved the use of dry decontamination methods for vehicles. Parking for clean vehicles will be provided across the street from the reception center at the parking areas of a business firm, and a letter of agreement for the use of this parking space exists.

Portal Monitors for Evacuees

Regarding monitoring of evacuees and the number of portal monitors, the NRC and FEMA do not yet have a standard for portal monitors. For the limited purposes of this report, the task force assumed an interim time factor of 10 seconds for one evacuee monitored for the Eberline PPM-1 portal monitor used at the reception centers for the Pilgrim Nuclear Power Station. (It should be clearly understood that this is not a task force endorsement of this instrument or this time factor.) The task force understands that a subcommittee of the Federal Radiological Preparedness Coordinating Committee will develop a performance standard for portal monitors.

The Wellesley Reception Center has two portal monitors. A third portal monitor was to be added by BECo by May 31, 1991 (PT-189). According to BECo in its June 6, 1991, letter commenting on the May 28, 1991, draft of this report, the third portal monitor has been installed (Appendix F).

Accommodation of the Handicapped

During the November 7, 1990, tour, the task force found that the reception center had access and egress for handicapped individuals. Both the women's and men's restrooms were equipped for the handicapped and were functional. According to Mr. Iarrobino, some of the chairs in the ready room would be used to seat the handicapped or others needing seating while they waited to be monitored. In his view, there were sufficient chairs at the Wellesley facility for this purpose.

Handicapped persons would be monitored with hand-held instruments but would not have direct access to the showers. The emergency

procedures call for handicapped individuals to be transported to a hospital for decontamination.

Letters of Agreement

A letter of agreement entitled "Grant of License and Permission To Enter Upon and To Use Property" (PT-79, Document N) exists between BECo, the Massachusetts Department of Public Works, and the Massachusetts Division of Capital Planning and Operations regarding the Wellesley Reception Center. A letter dated December 18, 1989 (PT-79, Document O), from the Chancellor, Archdiocese of Boston, to Robert Boulay, MCDA, granted permission to use the parking area at Saint Bartholomew Church in Needham as a transportation staging area. A letter dated August 31, 1989 (PT-79, Document Q), to BECo from a business firm near the Wellesley facility granted permission to use the firm's parking area for evacuees. MCDA gave the task force a copy of a list (PT-74) of mass care facilities on American Red Cross stationery indicating that the facilities would be able to provide sleeping accommodations for 5,059 persons. MCDA is attempting to achieve a congregate care capacity of 11,230 or 40 percent of the peak population (28,073 according to MCDA) assigned to the Wellesley Reception Center. According to MCDA, many of the congregate care facilities are designated under local comprehensive emergency management (CEM) plans as shelters and are named in town umbrella agreements (all of them old) with the Red Cross. MCDA stated that updated letters of agreement were needed for all facilities and will first be sought with a few very large, privately owned facilities on the list that are not currently part of local CEM plans. According to MCDA (PT-74), town officials who coordinate the use of each facility on the Red Cross list were aware that they might be used for congregate care during a peacetime radiological emergency. The task force did not interview these officials to verify this information. It will be evaluated by FEMA in the 1991 exercise.

C. TASK FORCE ASSESSMENT

There was no reception center for people evacuating to the north of the Pilgrim station at the time of the Commission's restart decision in December 1988, and there was no EOC at the Wellesley Reception Center at the time of the exercise in October 1989. However, at present, these facilities exist and are functionally equipped as far as can be determined. They will be evaluated in the December 1991 exercise.

However, the task force believes that one additional portal monitor is necessary at the Wellesley Reception Center because the potential to lose 50 percent of the monitoring capability if one monitor malfunctions is not acceptable. The task force notes that each of the other two reception centers has three portal monitors. BECo has agreed to supply an additional portal monitor for the Wellesley Reception Center.

As a guideline to evaluate what constitutes sufficient accommodations for the handicapped, the task force used FEMA

Guidance Memorandum 24, "Radiological Emergency Preparedness for Handicapped Persons," April 1984. The State's plan to handle the decontamination of handicapped individuals by sending them to a nearby hospital is adequate. The reception center is accessible to the handicapped. Toilet facilities that can be used by handicapped persons are operational. Seating for the handicapped and others who might require seating appears to be sufficient.

The practice of holding decontamination waste water is a Commonwealth of Massachusetts requirement and not a requirement of the NRC or FEMA. No letters of agreement exist with regard to the congregate care centers. This item is being pursued by MCDA and will be evaluated by FFMA in the 1991 exercise. However, the facilities covered by the CEM agreements can accommodate approximately 10 percent of the estimated number of evacuees expected to go to the north (in the direction of the Wellesley Reception Center). This is within the acceptable capacity range described in FEMA guidance (PT-152). In addition, FEMA and the NRC do not require letters of agreement between the State and the Red Cross relating to their support services in a radiological emergency.

2.11.1.2 Staffing

A. STATEMENT OF ISSUE

Attendees at the September 6, 1990, public meeting expressed concern that the Massachusetts National Guard, which is responsible for monitoring evacuees at the Wellesley Reception Center, will not arrive for 6 to 12 hours following notification of an emergency. Thus, it will not be able to monitor evacuees within 12 hours as specified in NUREG-0654.

B. FINDINGS

The task force interviewed Colonel David W. Gavigan, Assistant Adjutant General of the Massachusetts National Guard, at the Wellesley EOC on November 7, 1990 (PT-79). Colonel Gavigan explained that during a radiological emergency at the Pilgrim site, the National Guard would be assigned to the State EOC in Framingham, the MCDA Area II EOC in Bridgewater, and the Wellesley Reception Center (RC). The number of National Guard personnel assigned to the Wellesley RC was 50 per shift for 2 shifts. Colonel Gavigan could not give an exact estimate of the time it would take for National Guard personnel to arrive at the Wellesley RC. He did state that for a best case, 4 to 6 hours would be required and for a worst case, 8 to 12 hours might be required. The best case would be at night when most guard members are home. The worst case would be during the day when most guard members are at work or in school.

According to Colonel Gavigan, the current plan is to deploy units as a whole, although deployment of partial units could be considered. He indicated that deployment of partial units would depend on the number of noncommissioned officers available and

would be on an ad hoc basis. The task force asked Colonel Gavigan about the possibility of using full-time guard personnel as first responders, followed by deployment of complete units. He believed that this option was impractical because full-time personnel will have other duties during the activation phase and, further, they are not trained for monitoring and decontamination duties. Mr. Iarrobino, who was also present for the discussion, added that the MDPW staff is also not trained to perform monitoring and decontamination and further, would not perform such duties.

At a meeting on January 31, 1991, with the task force (PT-168), MCDA representatives stated that the response times provided by Colonel Gavigan were the best estimates available. In a letter dated February 20, 1991, to Major General Wagner, Massachusetts National Guard, John L. Lovering, Acting Director MCDA, essentially questioned these estimates (PT-84).

On March 7, 1991, the task force sent a letter (PT-82) to Colonel Gavigan enclosing BECo's latest estimates (letter to NRC dated February 21, 1991) of the arrival times of the National Guard and requesting confirmation of those estimates.

In a letter dated March 18, 1991 (PT-104), Colonel Gavigan stated in reply:

It is the policy of the Massachusetts National Guard to have units prepared to employ the maximum number of personnel to assist civil authorities during a domestic emergency. We do not replace civil authority command, jurisdiction, or responsibilities.

During an emergency situation many factors impact on units and individuals. Due to the many situations that occur in a crisis we cannot predict or guarantee the number of personnel that will be available by a particular time.

Personnel may be ready to deploy in the first hour, however, those personnel may not be trained for the mission. The unit that received the training for the mission could possibly be at an out-of-State training site, and not available immediately. We are citizen soldiers and our units normally deploy in 4 to 8 hours.

In a letter dated April 7, 1991, to A. David Rodham, the new Director of MCDA (PT-128), Colonel Gavigan further clarified the proper role of the National Guard by making the following statements:

- "We are not first responders."
- "We deploy as units, under our command and control elements."
- "It is impossible for us to arrive in a short period of time."

"We should only be considered as a backup force to other first responders."

The task force reviewed the current procedure for the National Guard response at the Wellesley Reception Center (IP-05, Draft 4, dated December 19, 1990). IP-05 directs the National Guard personnel to report to the local armory for equipment when notified by the National Guard State Area Command (STARC). The earliest mobilization would be at the Alert stage and after a declaration of a State of Emergency by the Governor. The National Guard personnel are then to proceed to the Wellesley MDPW facility as units, when ordered to do so. IP-05 lists the following assignments as the "minimum staff required" for one shift:

STARC headquarters EOC liaison	1
EOC radio operator	1
Monitoring/decontamination station coordinator	1
Dosimetry coordinator	1
Dosimetry collector	1
Personnel monitoring/decontamination group leader	1
Vehicle monitoring/decontamination group leader	1
Portal operator	4
Initial monitor	2
Personnel recorder	3
Personnel decontamination assistant	4*
Secondary monitor	4*
Runners	6
Vehicle monitor	12
Vehicle recorder	4
Vehicle decontamination assistant	4
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*Two male/two female.

The local offsite plans for the areas around Pilgrim Nuclear Power Station call for personnel staffing the reception community EOCs to notify the reception center managers to prepare the reception centers at the Alert stage and to activate the reception centers at the Site Area Emergency stage. According to the State plan (PT-157), the Massachusetts Civil Defense Agency (MCDA)/Office of Emergency Preparedness shall consider advising the Governor to declare a State of Emergency at the Alert stage and at the Site Area Emergency stage, if not done at the Alert stage. However, the first indication of an emergency, either on site or off site, could be at the General Emergency stage (the highest emergency classification) without previous declarations at lower levels.

The FEMA Region I Regional Director, the Director of MCDA, and representatives from BECo met on May 16, 1991. The Director of MCDA provided a revised procedure for the Wellesley Reception Center (IP-27), dated May 15, 1991 (PT-191). The procedure contained a revised staffing chart representing the inclusion of an "Initial Response Monitoring and Decontamination Station

Organization" of approximately 32 persons to perform the initial phases of monitoring and decontamination at Wellesley. The persons are a combination of staff from the Massachusetts Department of Public Works, MCDA, and BECo. BECo and MCDA agree that 32 persons are sufficient to staff this station until the trained Massachusetts National Guard monitoring and decontamination station personnel arrive. Training records were also submitted for a training session that took place on May 14, 1991. Another session took place on May 16, 1991, and training records reflecting this were received by the task force on May 17, 1991 (PT-190).

C. TASK FORCE ASSESSMENT

The standard for monitoring the public can be found in NUREG-0654 under Planning Standard J, "Protective Response," Evaluation Criterion J.12, which states:

Each organization shall describe the means for registering and monitoring of evacuees at relocation centers in host areas. The personnel and equipment available should be capable of monitoring within about a 12-hour period all residents and transients in the plume exposure EPZ arriving at relocation centers.

The evaluation criterion does not address decontamination; however, State or local governments are expected to provide for decontamination of the public evacuating the EPZ either at the reception center or elsewhere.

The evaluation criterion also does not address when "about a 12-hour period" begins. FEMA and the NRC consider the period to begin when the first evacuees arrive at the reception center. For planning purposes, FEMA and the NRC expect that the first evacuees would arrive at the reception center within about 2 hours of a decision to activate the center.

As stated by Colonel Gavigan in his April 7, 1991, letter to Mr. Rodham, the National Guard personnel are not first responders and it would be impossible for them to arrive in a short period of time. Because the National Guard would not arrive at the Wellesley Reception Center for 4 to 8 hours after notification, the 12-hour monitoring evaluation criterion (J.12) and the protective measures planning standard [10 CFR 50.47(b)(10)] would not have been met. This is significant because persons arriving at the Wellesley Reception Center, commencing within about 2 hours of an order to evacuate, would not be able to be monitored (and, if necessary, decontaminated). However, as described above, the new procedure (IP-27) provides for an initial staff for monitoring and decontamination positions until the National Guard arrives. Therefore, the 12-hour criterion can be met.

2.11.2 Bridgewater Reception Center and EOC

The Bridgewater Reception Center is located in Kelly Gymnasium at the Bridgewater State College, Bridgewater, Massachusetts,

approximately 30 road miles from the Pilgrim Nuclear Power Station. The associated EOC is located in the basement of the Bridgewater Town Hall, which is less than a mile from the reception center. Current plans call for the reception center to receive evacuees from Carver, Kingston, and part of Plymouth.

2.11.2.1 Facilities and Equipment

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, made the following comments:

Bridgewater EOC

- Additional pagers were needed for off-duty police officers.
- Additional portable radios were needed for school crossing guards.
- The EOC relied on a tri-town radio repeater that needed to be replaced (Bridgewater's share is \$3,000.00).
- Traffic control signs provided by BECo were incorrect.

Bridgewater Reception Center

- The center lacked a change of clothing for children.
- The center lacked double-layer paper masks for respiratory protection.
- The center was an old gymnasium.
- Portal monitors were stored elsewhere in the town.
- Toilet and shower accommodations were stored in boxes.
- A portable decontamination unit was not connected to the plumbing.
- The center was too far away for Kingston residents to be monitored within the 12-hour period.

B. FINDINGS

The task force met with Bridgewater town officials and the Reception Center Manager on November 8, 1990, and toured the Bridgewater Reception Center (PT-51). The persons interviewed were Frank Maher, Executive Secretary of the Town Board of Selectmen and Emergency Management Officer (EMO); Gerald Pinault, Assistant EMO; James Cumming, Reception Center Manager, Bridgewater State College; and Fortunato Garcia, Chief of Campus Police, Bridgewater State College. Joseph McDonough, a BECo community representative, was present at the invitation of town officials. The task force

returned to the EOC and reception center for a followup meeting and tour on February 26, 1991 (PT-120). It interviewed all of the town and college officials present at the first meeting with the exception of Chief Garcia. Albert Samano, a BECo consultant, and Joseph McDonough were also present at the second meeting.

Emergency Operations Center

On November 8, 1990, the task force observed and photographed the EOC and the reception center. The EOC appeared to be operational. At this time, Mr. Maher discussed in more detail the equipment issues that he had identified at the September 6, 1990, public meeting as follows:

- Fire Department personnel could not communicate with each other because of the way BECo had upgraded the Fire Department's communications system. Because of computer interference with ambulance radios, the radios could only be used when the 911 computer was shut down.
- Eight additional portable radios were needed for school crossing guards.
- Replacement of the town repeater was a low priority.
- Traffic control signs had to be corrected.
- New telephone pagers were needed for the following individuals (because the existing radio pagers had insufficient range):
 - 46 EOC staff members (shift)
 - 25 Police Department members
 - 28 Fire Department members

At the February 25, 1991, meeting (PT-70), BECo responded to task force questions as follows:

- Computer interference with ambulance radios - This issue was close to being resolved.
- Portable radios for school crossing guards - There is no planning basis; therefore, BECo will not provide the radios.
- Antenna for tri-town repeater - The repeater is not used solely for radiological response; therefore, BECo will not provide the antenna.
- Range of pagers for EOC staff, Selectmen, firefighters, and off-duty police, - BECo will not provide additional pagers.

During the followup meeting with Bridgewater officials on February 26, 1991 (PT-120), Mr. Maher indicated that the Fire Department's communications problem was at a crisis. On the previous weekend, members of the Board of Selectmen had ridden in ambulances and had experienced first hand the communications problems. The

interference between the computer paid for by BECo and the solid-state communications system supplied by BECo blocked ambulance transmissions for the town, which was a safety issue for the town. The town Board of Selectmen had authorized Mr. Maher to inform NRC and BECo officials that as of noon, February 26, 1991, the Fire Department would not participate in the radiological emergency preparedness program until the communications problem was solved. The solid-state communications system was to be disconnected at noon that day and communications were being routed through the Bridgewater Prison communications system as an interim measure. Mr. Maher produced a copy of a letter he had sent to Mr. Varley, BECo, on January 15, 1991 (PT-120, Document B), in which he requested that BECo remove all equipment that it had installed in the Bridgewater Fire Department and that it restore the system to its original state. Mr. Maher repeated that request and stated that he intended to upgrade the system with or without BECo's help.

In response to task force questions, Mr. Maher stressed that nonparticipation in emergency planning and preparedness applied only to the Fire Department. He indicated that the Fire Department would take the necessary actions to protect the public health and safety if an actual radiological emergency were to occur. The Digital Notification Network (a dedicated ringdown system used for radiological emergencies, discussed in Section 2.18.3) would only be disconnected if it was contributing to the ambulance communication problem.

BECo representatives attempted to assure Mr. Maher that the computer problem was being addressed. They indicated that BECo would pay for a new computer that would not interfere with the solid-state communications equipment. The only delaying factor was obtaining a computer that would accept the existing 911 system software (PT-120).

During a followup telephone call with the task force on April 2, 1991 (PT-121), Gerald Pinault, Assistant Emergency Management Officer, stated that the communications equipment at the Fire Department had not been disconnected. Instead, the 911 computer was turned off when it was necessary to communicate with the ambulance crews. Mr. Pinault stated that negotiations to acquire a new computer were proceeding. He also stated that the traffic signs had been corrected.

Bridgewater Reception Center

The task force toured and photographed the reception center at Bridgewater State College on November 8, 1990. The main gymnasium, which will be used for monitoring evacuees, is large and well lit. A smaller gymnasium, which will be used for registration, is also fairly large and well lit. The portal monitors were stored in a small locked room near the main gymnasium that has electrical service to charge the monitor batteries.

Handicapped persons have access to the main gymnasium by a means of a mechanical wheelchair lift up a flight of stairs. This is

also the only route into or out of the gymnasium for those persons who need a wheelchair. Handicapped persons would not be permitted to exit via this entry route because of the possibility of cross-contamination. The showers, which will be used for decontamination, were functional. However, they are not accessible to the handicapped. Mr. Cumming, Reception Center Manager, indicated that the emergency plan calls for handicapped persons to be decontaminated at designated hospitals. He informed the task force that there were no toilet facilities for the handicapped, but that BECo planned to convert the existing men's and women's bathrooms so that a single stall in each bathroom would be accessible to the handicapped.

During this first tour the bladder and bladder connections were not on site. Also, maps showing the CCCs could not be found. (Mr. Cumming was not present when the task force was looking for the maps.) Mr. Garcia, who was interviewed during this tour, stated that 12 rechargeable flashlights were needed for campus police for traffic control if the evacuation was conducted at night. He also stated that he needed four more portable radios in addition to the nine already supplied by BECo. He believes that each campus police officer should have a radio because of maintenance and accountability problems that occurred when radios were shared.

At the February 25, 1991, meeting with the task force (PT-70), BECo stated the following regarding the equipment issues for the reception center:

- Maps showing the CCCs were in place, and more maps had been added.
- Bladder and bladder connections had been installed, training on their use was conducted in December 1990, and an additional bladder had been provided.
- Twelve rechargeable flashlights had been ordered and were to be delivered by the end of March 1991.
- Because the four portable radios will not be used for radiological response, BECo will not provide them.

Mr. Cumming provided the task force with a letter of agreement for the reception center entitled "Grant of License and Permission To Enter Upon and To Use Property," dated September 6, 1989 (PT-51, Document D), which was endorsed by college and BECo officials and approved by MCDA and Commonwealth Division of Capital Planning and Operations officials.

During the February 26, 1991, followup tour (PT-120), the task force observed that handicapped persons would have to go down nine steps when leaving the gymnasium. The BECo representative stated that wheelchairs could be carried down those steps by the reception center medical evaluators. A toilet and sink that were accessible to handicapped persons had been installed in the men's and women's locker rooms. However, partitions had not yet been installed; this

was to occur during the March 1991 school break. The task force also observed that bladders and bladder connections and some maps showing the CCCs were stored on site. According to the BECo representative, an additional supply of the maps was to be delivered soon. Mr. Cumming stated that the 12 flashlights had been ordered and were to be delivered by March 29, 1991. He also indicated that BECo had agreed to supply the four additional portable radios for campus police at a February 20, 1991, meeting with college officials. According to MCDA, (PT-200) the Bridgewater Reception Center procedures will be revised to provide two persons physically able and properly trained to lift outgoing wheelchairs down the nine steps necessary to leave the building.

C. TASK FORCE ASSESSMENT

Emergency Operations Center

The most critical equipment issue for the Bridgewater EOC is the communications between the Pilgrim plant and the Bridgewater Fire Department, which has the 24-hour responsibility for notifying key personnel to activate the reception center. The problem of interference between the emergency 911 communications system computer and the ambulance radios has lingered without being resolved. The task force understands that this problem is being addressed by BECo. In the interim, the communications link between the plant and the Fire Department and the EOC, the Digital Notification Network, is still connected.

The task force notes that the traffic signs have been corrected. It is not clear that the school crossing guards in a reception community require portable radios because they are not under immediate threat of contamination by a plume of radioactive material.

Bridgewater Reception Center

• Change of Clothing

The issue of a change of clothing for school children at the reception center was presented at the September 6, 1990, public meeting. (The task force believes that the comment referred to regular clothes as opposed to the paper gowns that are provided to persons whose clothing is contaminated.) Under the current plans, children would only be transported to the reception center if they needed monitoring; that is, if there was a concern that they might have been contaminated. Otherwise, they would be transported directly to host schools in or near the reception communities to be reunited with their parents or guardians. They would also be transported to the host schools following monitoring and, if necessary, decontamination. Except for paper gowns and booties, there are no changes of clothing (in the traditional sense) at either the reception center or the host schools. There is no requirement to have a change of clothing at the reception centers or the host schools in the context of comfort or hygiene.

- Paper Masks

Neither the NRC nor FEMA requires paper masks or other respiratory protection for emergency workers or members of the public within the plume EPZ. Evacuation is virtually always the protective action that is preferred to sheltering if there is a significant threat that radioactive particulates could be inhaled. There is even less of a chance that inhalation of radioactive particulates would pose a significant threat for the reception communities because they are farther from the plant than the plume EPZ communities. NUREG-0654, Evaluation Criterion J.10.h, provides that reception centers be located at least 15 miles from the plant. However, if there was an inhalation hazard, the persons in the reception community and reception center should be evacuated, the preferred protective action, rather than provided with respiratory protection.

- Gymnasium, Portal Monitors, and Shower Drains

The portal monitors are stored on site. The existing locker room showers will be used for decontamination, and the drains are connected to outlets that can be connected to bladders, which are now stored on site. (During the first tour on November 8, 1990, neither the bladder fittings nor the bladders were on site.) The practice of holding decontamination waste water is a Commonwealth of Massachusetts requirement and not a requirement of the NRC or FEMA. The current gymnasium complex is adequate as a reception center.

- Access for the Handicapped

Persons who use a wheelchair can enter the gymnasium through a lift arrangement, but they may not be able to leave unassisted because of the nine steps mentioned previously. (They cannot leave the way they came in because of the possibility of cross-contamination.) The egress provisions for the handicapped at the Bridgewater Reception Center will be provided by MCDA (PT-200).

- Distance From Kingston

The distance between Bridgewater and Kingston should not be an issue. The 12-hour period referred to in NUREG-0654 and stated in Section 2.11.1.2.C will begin when the first evacuees arrive at the reception center.

- Emergency Pagers

Implementing procedures (IP-04) for the Town of Bridgewater Fire Department (Draft 6, dated June 15, 1990) states that the Fire Dispatcher performs an "all-call" page of the Emergency Response Organization Pager System using the pager identification list (26 names). BECo has provided radio pagers for emergency response personnel in Bridgewater.

Evaluation Criterion 1 of Planning Standard F in NUREG-0654 states that a primary and a backup means of communication are necessary. Evaluation Criterion E.2 states that each organization shall establish procedures for alerting, notifying and mobilizing emergency response personnel. This explicitly includes alerting or activating emergency personnel in each response organization. According to IP-04, the pagers are a primary means of notifying and mobilizing emergency response personnel in the Town of Bridgewater. According to the town officials, because the pagers do not have sufficient range, the provisions of the plan and regulatory guidance regarding a primary means for notifying and mobilizing emergency response personnel are not met.

Additional Issue

At a June 4, 1991, meeting with the task force, Bridgewater officials questioned the capacity of the Bridgewater/Rayhnam High School as a host school/congregate care center. On June 11, 1991, the task force called Mr. O'Donohue, the school superintendent, who stated that the estimated capacity for evacuees was 2,700 individuals not counting the cafeteria. FEMA will review the host school arrangements for Bridgewater (PT-217).

2.11.2.2 Staffing

A. STATEMENT OF ISSUE

At the September 6, 1990, public meeting, Mr. Maher indicated that additional groups or personnel to augment Bridgewater Fire Department personnel in performing the monitoring and decontamination functions at the reception center had to be identified.

B. FINDINGS

On November 8, 1990, the team met with town officials and the Reception Center Manager as discussed in Section 2.11.2.1.B.

Monitoring and Decontamination

Shortfall in Staffing

Under the current plans, firefighters have the responsibility of monitoring and decontaminating evacuees and their vehicles at the reception center. At the November 8, 1990, meeting, Mr. Maher informed the task force that there was a major shortfall in staffing for this function. He stated that there were only 28 local Bridgewater firefighters, that 7 must be at the fire station at all times, and that 18 will perform other duties during a radiological emergency. Mr. Maher noted that 72 persons (36 x 2 shifts) were needed for monitoring and decontamination duties.

Mr. Maher provided the task force with two letters dated September 28, 1989, and August 27, 1990, to MCDA, in which the town requested additional persons to fill the monitoring and decontamination

positions (PT-51, Document B). Mr. Maher also provided MCDA's responses in two letters dated October 3, 1989, and August 31, 1990 (PT-51, Document B). In these two letters, MCDA made three proposals to resolve the shortfall in the monitoring and decontamination positions:

- The Massachusetts Civil Defense Act appears to be a legal mandate requiring Bridgewater employees to participate in drills and exercises and to respond during an actual incident at Pilgrim Nuclear Power Station (1st and 2nd letters).
- Commonwealth's Executive Order No. 221, "Fire Mobilization Districts," contains provisions that allow Bridgewater to augment its existing firefighting forces through the mobilization of personnel and equipment from other communities (2nd letter).
- Massachusetts General Law 639, Section 11(a), authorizes the Bridgewater Selectmen to appoint, train, and equip volunteers to support the local defense program (2nd letter).

At the November 8, 1990, meeting, Mr. Maher indicated that on the basis of discussions with the town's Fire Department officials, he believed the Commonwealth's proposal would not work.

- Solution to Staffing Problem

During the February 26, 1991, followup meeting (PT-120), Mr. Cumming informed the task force that on February 20, 1991, Bridgewater State College officials had agreed to recruit 60 volunteers from its staff to perform the monitoring and decontamination duties. Mr. Cumming stated that he had already received responses to a request for volunteers that had been published the previous day. According to BECO representatives and Mr. Cumming, the oral agreement would be backed by a letter of agreement and new procedures. The BECO representatives stated that the previous figure of 36 monitoring and decontamination personnel per shift was incorrect and that the correct figure was 30 per shift.

This solution of the staffing issue was described by Roger Provost, Chairman of the Bridgewater Board of Selectmen, in a letter dated March 26, 1991, to A. David Rodham, Director, MCDA (PT-118). Mr. Provost stated that the town will assign four firefighters to act as team leaders in support of the Bridgewater State College staff who will monitor and decontaminate personnel and vehicles. Mr. Provost applauded the efforts of Mr. Rodham and the Bridgewater State College to bring this longstanding problem to a favorable conclusion. In a telephone conversation with the task force on April 2, 1991 (PT-121), Gerald Pinault, Civil Defense Director, Bridgewater, stated that 35 volunteers from Bridgewater State College had received training in monitoring and decontamination procedures.

• Letter of Agreement

In a letter dated April 1, 1991, to A. David Rodham (PT-132), Joseph Chiccarelli, Vice President - Administration and Finance for Bridgewater State College, agreed to have the college staff perform monitoring and decontamination duties at the Bridgewater Reception Center. This letter confirmed the information provided by Mr. Pinault; that is, Bridgewater State College had identified and was training a first shift. Mr. Chiccarelli also stated that the college was identifying and training a second shift.

Setup and Operation

At the November 8, 1990, meeting, Mr. Cumming informed the task force that he had taken over the position of Reception Center Manager on July 1, 1990, and that the college had an agreement with BECO to supply 32 persons to set up and operate the reception center but that, as of the time of his arrival, no one on the college staff had been approached to fill these positions. (This should not be confused with the previously mentioned shortfall in monitoring and decontamination positions, which originally were to be filled by firefighters according to the procedures.) Mr. Cumming stated that he had obtained volunteers to staff the reception center (other than the monitoring and decontamination positions) and that their introductory training was scheduled for December 2, 1990. A followup call (PT-121) to Mr. Cumming from the task force revealed that the introductory training had taken place and that training on the actual reception center procedures had taken place on January 7, 1991.

C. TASK FORCE ASSESSMENT

Monitoring and Decontamination

The issue of adequate staffing for the monitoring and decontamination of evacuees and their vehicles at the Bridgewater Reception Center was first documented in the September 28, 1989, letter from the town to MCDA (PT-51, Document B). The letter stated that the firefighters were trained and would respond in a real radiological emergency but would not participate in exercises.

Apparently, the first unequivocal documentation of the actual inability of the firefighters to respond in meaningful numbers to fill the monitoring and decontamination positions at the reception center was the August 27, 1990, letter from the town to MCDA (PT-51, Document B). This letter identified a shortfall of 36 persons. This issue was also mentioned at the September 6, 1990, public meeting.

The shortfall in monitoring and decontamination positions increased to 72 persons on the basis of Mr. Maher's (the town's Emergency Management Officer) belief that two shifts were necessary. Although there is no specific standard requiring two shifts for monitoring and decontamination personnel, prudent planning would dictate the identification and training of more persons than are

necessary to staff one shift. This protects against shortfalls due to illness or absences. There is a general expectation on the part of planners at the Federal level that after 12 hours, supplemental monitoring resources will be available from outside the affected area. The task force finds Mr. Maher's position of staffing two shifts to be a prudent one. The exact number of personnel necessary per shift was unclear to the task force from an examination of the Bridgewater implementing procedures. In addition, the procedures need to be modified to reflect staffing of the reception center by the college. FEMA will monitor the resolution of these issues as part of its ongoing plan review. There also needs to be a demonstration of the capability of the reception center in a drill or exercise.

Setup and Operation

According to Mr. Cumming, when he began the job as Reception Center Manager in July 1990, none of the college staff had been approached to fill the positions (32 persons to set up and operate the reception center) identified in the agreement between the college and BECo. At the February 25, 1991, meeting, BECo stated that 7 persons had been trained for these duties at the reception center before July 1990 and that about 40 persons had been trained to date. FEMA's assessment (PT-11) of the October 12-13, 1989, exercise at Pilgrim Nuclear Power Station indicates that the reception center was not activated or exercised in the traditional sense. Rather, the equipment was displayed, and the staff members present described their procedures.

All of these facts point to the conclusion that for some substantial period of time before the substantive training of volunteers on procedures in January 1991, the reception center was understaffed and probably could not have been set up and operated. The aforementioned shortfall in monitoring and decontamination positions compounded this problem. At present both staffing problems appear to be resolved.

2.11.3 Taunton Reception Center and EOC

The current Taunton Reception Center is located at Taunton High School in Taunton, Massachusetts, approximately 30 road miles west of the Pilgrim Nuclear Power Station. The previous reception center for this area was Taunton State Hospital. Current plans call for the Taunton Reception Center to receive evacuees from the southern areas of the 10-mile plume EPZ in Plymouth. The EOC associated with the Taunton Reception Center is located in the basement of Taunton City Hall.

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, made the following comments about the reception center:

- Previous testimony presented by BECo to the NRC regarding the readiness of the Taunton Reception Center was untrue.

- The building had not been cleaned until January 28 and 29, 1989.
- Although the building was found to be too old to house the mentally ill, it could be used as a reception center.
- Since the portal monitors had not arrived until January 10, 1989, and had not been properly positioned or tied into the electrical system, how could anybody testify in October or December 1988 that the center was ready.
- As of February 7, 1989, the portable decontamination unit was not connected to plumbing.

B. FINDINGS

On November 8, 1990, the task force met with Robert Spearin, Civil Defense Director (CDD) for Taunton, at the Taunton EOC to discuss the status of the Taunton Reception Center (PT-50). Also present at the meeting were Mark Force, BECo's emergency planner whom the CDD had invited, and Julia Gabaldon, Massachusetts Civil Defense Agency. Following the meeting at the EOC, the task force toured the Taunton Reception Center at Taunton High School. Kenneth Avilla, Reception Center Manager, conducted the tour at the reception center.

Emergency Operations Center

Although no issues pertaining to the Taunton EOC were raised at the September 6, 1990, public meeting, the task force observed and photographed the EOC and discussed the status of the Taunton procedures with the CDD. The EOC appeared to be fully operational. At a meeting on January 14, 1991 (PT-102), Mr. Spearin stated that all of the procedures that were in place had been sent to the State. At that meeting, he gave the task force a set of plans and procedures.

Taunton Reception Center

The task force toured and photographed the Taunton Reception Center located at the Taunton High School. During the tour, Mr. Spearin told the task force that, before June 1989, the reception center was located at Taunton State Hospital. He stated that although Taunton Mall was still being used as the staging area, steps were being taken to relocate this staging area to Hartshorn's Longmeadow Road, near the high school. Mr. Spearin indicated that this change had to be approved by Taunton's Park and Recreation Department, since a playground and a ballpark are located near that area. In a letter dated January 9, 1991, Ronald F. Arieta, Director of the Park and Recreation Department, granted permission for use of the Hartshorn Complex as a staging area (PT-202). When this change is incorporated into the Taunton implementing procedures (IP-17) FEMA will review it.

During the tour of the reception center, Mr. Avilla told the task force that the main gymnasium of the high school would be used for monitoring purposes. The main gymnasium is located on the ground floor and is accessible to the handicapped. The men's and women's showers, which are located adjacent to the main gymnasium, were fully operational. Mr. Avilla stated that, during an emergency, sewage from the gymnasium would be pumped into a bladder.

• Accommodations for the Handicapped

The showers for decontamination and adjacent toilets on the same floor as the main gymnasium were not accessible to the handicapped. According to Ms. Gabaldon, handicapped persons would be decontaminated at an area hospital. The whirlpool room, which is adjacent to the main gymnasium, would be used as an assembly area for handicapped persons after they were monitored.

Evacuees will be registered in the women's gymnasium, which is located on the floor above the main gymnasium. Two toilets for handicapped persons (one for men and one for women) are located on this level and are accessible by elevator.

Ms. Gabaldon stated that mentally ill individuals living in Massachusetts Department of Mental Health group homes in Plymouth would be taken to Taunton State Hospital as a host facility. If there is a release they will be taken to a reception center to be monitored. According to Ms. Gabaldon, this is the regular procedure for all emergencies under the Massachusetts Department of Mental Health emergency evacuation plan.

• Monitors

The task force observed that two separate rooms were being used to store supplies for the reception center, including three portal monitors stored in one room. The portal monitors and other equipment for the reception center were stored haphazardly. The portal monitors were covered with dust and were not attached to an electrical source.

• Bladder and Fitting

Another storage area could be reached by going through two sets of locked doors. This area contained large gym and stage equipment. Although the metal fitting for the bladder was supposed to be stored in this room, it could not be located. The supplies in this room were also stored haphazardly. The task force noted that the supplies included maps showing the routes from the reception center to the various congregate care centers. The task force was informed that the emergency equipment and supplies had not been inventoried.

During the tour of the reception center, the task force was shown a 15,000-gallon bladder that was stored in a wooden box in a locked, fenced "cage" adjacent to the outlet pipe that is located near the gymnasium. The cage protects the Y-valve that would be

used to divert sewage to the outlet pipe. The wooden box was open to the elements, providing minimal protection for the bladder.

- Setup Time

Mr. Avilla stated that he and his alternate could set up the facility in about 20 minutes and that both he and the alternate lived nearby. According to Mr. Avilla, the reception center could be activated in about 1 hour.

- Communication

The task force asked Mr. Avilla about the communications capabilities between the reception center and the EOC. Mr. Avilla stated that radios (RACES) were used to communicate with the EOC, but that there had been some discussions with BECo regarding the possibility of obtaining a cellular telephone.

- Training

Mr. Spearin stated that all the members of the radiation monitoring team were trained and that a minimum number of 20 persons was needed to monitor and decontaminate evacuees and their vehicles.

At the June 12, 1991, public meeting in Plymouth, Alba Thompson, representing the Board of Selectmen of Plymouth, raised the issue of training for the Taunton fire department (Appendix F). On June 13, 1991, the task force visited the Taunton Civil Defense Director to check the status of training for the fire department. While the Civil Defense Director acknowledged that he had not been able to schedule the 1991 retraining for the fire department, he believed that the retraining would be completed before the 1991 exercise (PT-218).

Followup

On March 27, 1991, the task force contacted Mr. Spearin by telephone to obtain the current status of several issues (PT-169). During that telephone conversation, Mr. Spearin confirmed that at the time of the task force's visit on November 8, 1990, the metal fitting for the bladder was not on the premises. According to Mr. Spearin, BECo had provided the metal fitting in December 1990 as well as training on the use of the equipment. Mr. Spearin stated that BECo had built a storage shed for the bladder to protect it from the elements. The task force asked Mr. Spearin about the possible acquisition of the cellular telephone. He stated that the details were being made final and thought that he would receive the cellular telephone.

Keith Cwiekowski, Alternate Reception Center Manager, was contacted by the task force by telephone on March 28, 1991, to determine whether any changes had been made to the storage areas (PT-170). Mr. Cwiekowski stated that he and Mr. Avilla considered the storage area containing the portal monitors as the primary storage area. He stated that the storage area was conveniently located

(approximately 50 feet from where the items would be used) and that the maps for the congregate care centers were kept in the upstairs storage area because that was where they would be needed. Mr. Cwiekowski said that an inventory had not been conducted for some time (since approximately October 1989), but that the portal monitors had been serviced about 3 months ago. He said that the monitors were not connected to power at the present time. (The task force notes that the monitors have internal rechargeable batteries for emergency power.)

C. TASK FORCE ASSESSMENT

The practice of holding decontamination waste water is a Commonwealth of Massachusetts requirement, not a FEMA or NRC requirement.

The task force did not attempt to determine the historical readiness of the previous reception center (Taunton State Hospital) because Taunton High School was designated as the present reception center. Instead, the task force focused on the ability of the present reception center to fulfill its intended function.

On the basis of its inspection of the reception center (Taunton High School) and the information supplied by the Taunton representatives, notwithstanding the condition of the storage areas, the task force concluded that the reception center was capable of fulfilling its intended function. It also found that the Taunton Reception Center was accessible to users of wheelchairs.

2.12 Persons With Special Needs

In the event of an accident at Pilgrim Nuclear Power Station, the State and town agencies within the emergency planning zone (EPZ) are responsible for protecting the health and safety of their citizenry by making protective action decisions and by notifying the public at risk about the implementation of those decisions. To implement protective measures, agencies recognize that most persons are able to comply with mandated protective actions on their own. However, some persons are able to comply only with assistance (persons with special needs). Those classified as having special needs include individuals with either temporary or permanent disabilities that would interfere with or prevent them from complying with a protective measure. School and day care children are not included in this category. In this section, persons confined to institutions are also addressed.

The issues discussed in the following sections are: (1) identification of persons with special needs and (2) assistance planned for persons with special needs.

2.12.1 Identifying Persons With Special Needs Within the Pilgrim Plume EPZ

A. STATEMENT OF ISSUE

Most comments on special needs made at the public meeting on September 6, 1990, centered on the lack of an adequate list of persons with special needs in the plume EPZ. The commenters noted that an adequate and current list did not exist that included transportation-dependent persons; latch-key children; retarded, hearing-impaired, blind, disabled, and frail elderly persons; persons with language barriers or low comprehension skills; and day care children. Some State and town officials acknowledged that although efforts were under way to identify the special needs population, much work needed to be done.

One commenter asserted that the special needs population within the plume EPZ was underestimated in order to fit the Pilgrim evacuation time estimates. The commenter pointed out that for planning purposes, the special needs population should be based on a U.S. Bureau of the Census survey document entitled "U.S. Disability, Functional Limitation and Health Insurance Coverage" (PT-126). According to the commenter, the survey indicates 18.2 percent of the population has disabilities and functional limitations. Also according to this commenter, when this estimate is extrapolated to the current Massachusetts population, the figure should be raised to 20 percent of the population in 1990.

B. FINDINGS

The task force met with State and town officials on October 30 through November 2, 1990 (PT-46), to discuss the issues raised at the September 6, 1990, public meeting. In those meetings with town officials, the task force gathered the data shown in Table 2.7 on the estimates of persons with special needs who had been identified to date.

Old Lists

During the meetings on October 30 through November 2, 1990, the task force learned that, in the past, the towns' special needs lists were viewed as incomplete. No systematic procedures were used to keep these lists current. State and town planners relied on the mail-in cards included with the public information brochures distributed annually to develop and update their special needs lists. In at least one town, Kingston, additional information was provided by word of mouth. Officials believed there were more persons with special needs than those whose names appeared on their lists and so were skeptical of ever having a current and accurate list of all these persons. Their skepticism partly stemmed from their belief that the status of persons with special needs is an ever-changing one and that, in some cases, changes are seasonal and significant. Additionally, several persons interviewed believed that there is a general reluctance on the part of persons with

disabilities to identify themselves for security reasons (PT-48, PT-165).

Table 2.7 EPZ resident population and number of persons with special needs based on data obtained from town officials in November 1990

Town	EPZ resident population* (approximate)	Special needs persons identified
Carver	6,600	150-160
Plymouth	45,000-46,000	587
Kingston	8,000	123
Marshfield	1,680-2,400	5
Duxbury	15,000	44
Total estimate	76,280-78,000	909-919 (1.2%)

*These data were based on information provided by town officials and are considered approximate numbers.

Chadwick, Martin and Bailey Study

On November 9, 1989, the Massachusetts Civil Defense Agency (MCDA), the Massachusetts Office of Handicapped Affairs (MOHA), and BECO issued a report entitled "Study on Special Needs for Planning Resources in the Pilgrim EPZ" (PT-46, Attachment 114). This study was funded by BECO for the Commonwealth of Massachusetts and was prepared by Chadwick, Martin and Bailey Consultants of Boston, Massachusetts. The study was used by planners to estimate the transportation and other resources needed to support the special needs population. The study provided an estimate of the number of individuals in the EPZ who would require special assistance in carrying out protective actions during a radiological emergency at Pilgrim. By design, the study did not include an estimate of the persons with special needs in institutions, such as hospitals or nursing homes, or in other organized settings such as schools. For the purpose of the study, persons with special needs were defined as those who would require outside assistance in taking the following protective actions that might be required in an emergency:

- (1) receiving notification of an emergency and understanding the instructions by public health officials
- (2) being able to shelter-in-place
- (3) traveling to and staying overnight in a mass care shelter.

The task force's summary of the findings of this study is given in Table 2.8.

According to the authors, the study had weaknesses. It was conducted by telephone but without a telecommunications device for the deaf. Such surveys also cannot reach the transient population or persons without telephones.

Notwithstanding criticism of the study by some, State agencies (MCDA and MOHA) with planning responsibility for persons with special needs accepted the results (PT-48).

This survey primarily quantified the number of persons with special needs in the EPZ who live alone or who are frequently home alone and could not perform certain tasks related to emergency preparedness by themselves. By design, no names or addresses were gathered during the survey. As noted in Table 2.8, in this study the number of persons with special needs may have been overestimated because they may have been counted more than once when they had more than one need.

Enhanced Self-Identification Program

An enhanced self-identification program (SIP) survey conducted by MCDA with BECO support was initiated in 1990 and was under way when the task force report was prepared. The primary purpose of the survey was to identify by name and address persons with special needs and their specific needs. A private contractor is conducting this survey using a questionnaire mailed to every household and P.O. box in the EPZ. Households needing special assistance during an emergency were asked to identify themselves on the form provided and return the form in a self-addressed prestamped envelope to their respective town civil defense agencies. This type of survey is being conducted for the first time, and the task force understands that MCDA will seek support to repeat this type of survey every 4 or 5 years to keep the information up to date. In the intervening years, MCDA plans to continue using the mail-in cards distributed annually with public information brochures (PT-48).

When this task force report was prepared, the towns had received the results of the questionnaires returned but had not yet analyzed them largely because of verification calls the towns had to make. There was some criticism of this survey, especially the omission of residents with language barriers and of latch-key children (PT-165). MOHA registered its objection to the portion of the questionnaire that asked for the identification of volunteers (see Section 2.12.2).

During its field activities, the task force learned that several EPZ ZIP codes comprising approximately 4,000 P.O. box numbers were inadvertently left out of the mailings. The task force understands that BECO and the contractor are correcting these omissions.

Table 2.8 Summary of study by Chadwick, Martin and Bailey Consultants

Town	EPZ resident population*	Special needs persons*	Type of need
Carver	5,225	31	Notification Assistance**
		28	Shelter Preparation Assistance
		93	Evacuation Preparation Assistance
		40	Transportation
Plymouth	38,836	711	Notification Assistance**
		344	Shelter Preparation Assistance
		1,347	Evacuation Preparation Assistance
		462	Transportation
Kingston	7,209	98	Notification Assistance**
		98	Shelter Preparation Assistance
		254	Evacuation Preparation Assistance
		99	Transportation
Marshfield	1,784	14	Notification Assistance**
		13	Shelter Preparation Assistance
		40	Evacuation Preparation Assistance
		17	Transportation
Duxbury	13,248	113	Notification Assistance**
		55	Shelter Preparation Assistance
		550	Evacuation Preparation Assistance
		188	Transportation
Total estimate	66,302	4,595*** (7%)	

*Chadwick, Martin and Bailey study, Appendix A, Tables 2,5,7,8, and 9.

**Includes both number of households with someone at home with a severe hearing loss and number of persons who need notification assistance for disability reasons other than hearing loss.

***According to the Chadwick, Martin and Bailey study, this figure is an overestimate of the number of persons with special needs because they were counted more than once when they had more than one need.

According to MCDA (PT-200) the Towns of Kingston, Carver, and Marshfield have completed the incorporation of the enhanced SIP survey responses into their special needs lists. Plymouth is still verifying the responses and should be finished by July 1, 1991.

The details of the needs of the special needs population are being individually screened, and people are being trained to meet these needs. According to MCDA, training will be completed by September 1, 1991, and maintenance procedures pertaining to special needs are now being reviewed.

The Duxbury CDD informed FEMA on May 29, 1991, that Duxbury had completed verifying the written responses to the survey (PT-201). At the June 12, 1991, public meeting, Alba Thompson, representing the Plymouth Board of Selectmen, stated that Plymouth would not be able to meet the July 1, 1991 deadline.

As discussed at the meetings with the task force on November 13-16, 1990, Administrative Procedure AP-05, "Special Needs Program Maintenance" (Draft-06), dated September 1990 is a document intended to assist the town civil defense agencies in their emergency preparedness planning by outlining the responsibilities with regard to persons with special needs, maintenance of the special needs list, ensuring availability of resources for those persons, and issuing telecommunication devices for the deaf as needed. Attachment 1 to draft AP-05 directs BECo, MCDA, and town civil defense agencies to stage a multimedia campaign to reach the noninstitutionalized special needs population. Town and BECo planners pointed out that AP-05 is under review in all EPZ towns.

In interviews with the task force (PT-48), MCDA officials indicated that latch-key children are not generally considered persons with special needs. Although Duxbury officials agreed that latch-key children do not belong in the special needs group, these children remain a concern to them (PT-117). The general preparedness section (Section 6) of the 1991 public information calendar advises parents to "make sure that all members of your family, especially children who may be home alone, know what to do in case of an emergency."

C. TASK FORCE ASSESSMENT

NUREG-0654, Evaluation Criterion J.10.d, states that the plan shall include "means for protecting those persons whose mobility may be impaired because of institutional or other confinement." FEMA Guidance Memorandum GM-24, "Radiological Emergency Preparedness for Handicapped Persons," dated April 5, 1984, supplements the existing guidance in NUREG-0654 and provides guidance on four planning and preparedness factors that should be a part of any State and local plans. These factors are

- (1) identification of handicapped population
- (2) public education and information
- (3) notification methods and procedures
- (4) protective response

GM-24 addresses persons with disabilities by grouping them according to the following three types of impairments:

(1) sensory impairments

- deaf and hearing-impaired persons
- blind and visually impaired persons

(2) movement impairments

- persons with a loss of normal mobility ranging from a person who uses crutches to the quadriplegic who requires a wheelchair and special vehicle for movement in an emergency
- frail elderly persons
- persons on life-support systems

(3) mental or emotional impairments

- retarded persons
- emotionally disabled persons
- senile persons
- persons with extreme alcohol or drug abuse problems

GM-24 also gives guidelines for planning organizations, including a means to systematically identify individuals with special needs. Planning organizations should also identify individuals and organizations capable of assisting and the type of assistance required. The accuracy of the data should be validated. Finally this data base should be integrated with the planning process and reflected in the plans and procedures.

In 1989, the Chadwick, Martin and Bailey study was conducted to estimate the number of persons with special needs within the plume EPZ by town. Before this study, some interested individuals had suggested the application of national census surveys to determine the number of persons with special needs within the plume EPZ. However, the task force notes that the categories identified in the census survey, which was a diagnostic determination, likely included people who might be able to take protective actions without assistance. The Chadwick, Martin and Bailey study was specifically designed to identify those who would need help in taking protective actions by focusing on the functional characteristics of the person's need, a better basis for emergency preparedness resource planning than the census surveys.

The enhanced self-identification program, coupled with the provision in the plan calling for persons with special needs to contact their town's emergency operations center should they need assistance during an emergency, is sufficient to adequately identify persons with special needs as called for in the Federal

guidance in NUREG-0654 and FEMA GM-24. The mail-in card system is an accepted practice.

The latch-key children remain an issue for some town planners. The State's position that children home alone can be considered part of the general population appears reasonable. Page 24 of the 1991 public information calendars advises the public to "make sure all members of your family, especially children who may be home alone, know what to do in case of emergency."

2.12.2 Assistance for Persons With Special Needs

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, expressed concern about the offsite agencies' capability to provide assistance to persons with special needs. Concerns were voiced about the use of the so-called "buddy system" to assist persons with special needs at their homes. This system basically relies on neighbors helping neighbors. The local agencies would match a person with special needs with a neighborhood volunteer and rely on the latter to provide the assistance needed by the person with special needs. Commenters, furthermore, were concerned about lack of accessibility for wheelchairs at reception centers and other facilities and lack of transportation resources for the handicapped. (This issue is addressed in Section 2.11, "Reception Centers.")

B. FINDINGS

The findings of the Chadwick, Martin and Bailey study were used by State, town, and BECo planners to plan for resources required to assist the special needs population in the plume EPZ. The types of assistance considered by State and town officials for persons with special needs fall into three categories: (1) personnel, (2) transportation, and (3) facilities and equipment.

Personnel

The State and town officials have determined (PT-46, PT-48) that they will have to augment their emergency response staff by recruiting volunteers to assist the special needs population. The enhanced SIP survey is being used to identify such persons.

The decision of State and town officials to enlist volunteers for this purpose is contingent on the volunteers becoming a part of the response organization and receiving the necessary training.

There are also questions concerning whether volunteers should be a formal part of the civil defense organization. MOHA has strongly objected to the use of volunteers to assist the persons with special needs during a "man-made" (i.e. nuclear) accident (PT-48). It believes that professional care should be contracted for this purpose instead.

Except for MOHA, State and town officials favor the use of volunteers to assist persons with special needs as long as they are trained and properly identified (PT-46, PT-48).

As noted in Section 2.12.1.B. the details of the needs of the special needs population are being individually screened, and people are being trained to meet these needs (PT-200). According to MCDA, training will be completed by September 1, 1991.

Transportation

The task force reviewed and evaluated the methodologies used by State and BECo planners to estimate transportation needs. It also examined the specific concerns raised by some commenters and attempted to identify the source of any discrepancies in the number of transportation resources available.

The task force evaluated the July 1990 transportation matrix developed by BECo and the summary assessment developed by State planners (PT-117, Attachments 5 and 10). It then compared the transportation matrix with the findings of the Chadwick, Martin and Bailey study. Table 2.9 summarizes the results.

Table 2.9 Transportation resources assigned to persons with special needs

Town	Number of special needs persons needing resources*			Number of resources assigned**		
	Car/van	Lift van	Ambulance	Bus	Lift van	Ambulance
Duxbury	117	17	6	3	3	3
Carver	24	3	3	1	1	2
Plymouth	289	64	16	7	11	8
Marshfield	13	1	0	1	1	0
Kingston	52	14	6	2	3	3

*The Chadwick, Martin and Bailey study showed the number of households with someone who could not walk to a pickup site.

**The BECo transportation matrix (July 1990) was used for this information with the following assumptions:

- Bus capacity: 45 persons/bus
- Lift van capacity: 6 persons/lift van
- Ambulance capacity: 2 persons/ambulance

Facilities and Equipment

According to State planners, the plans call for certain hospitals, all located outside the EPZ, to receive nursing home residents and to provide monitoring and decontamination services for them (PT-117, Attachment 25, and PT-134). These residents may be transported directly from the nursing home to a hospital outside the EPZ. In addition, mobility-impaired individuals who are found to be contaminated at reception centers may also be directed to a

hospital to be decontaminated. Eleven hospitals have entered into agreements with the Massachusetts Department of Public Health (MDPH) to provide certain services for evacuees from the plume EPZ (PT-117, Attachment 25). The task force interviewed the officials of three of these hospitals (PT-134): Framingham Union Hospital, Brockton Hospital, and Goddard Hospital. Only the officials of Brockton Hospital did not agree with the State's interpretation of its letter of agreement. These officials stated their facility could not handle more than one contaminated patient without considerable additions to its plans, equipment, and training.

Several nursing homes plan to evacuate their residents to a host nursing home facility. The task force could not identify monitoring provisions at the host facilities, nor could it identify plans to send these nursing home residents elsewhere for monitoring and decontamination (PT-134). At a meeting on May 16, 1991, MCDA committed to provide monitoring and decontamination capabilities at the host sites. It separately committed to revise procedures for the host sites (PT-200).

Jordan Hospital

During meetings on January 7-11, 1991 (PT-117), the task force learned that Jordan Hospital would need outside assistance if evacuation was called for during two of its three shifts. This outside assistance would be in the form of personnel helping prepare patients for evacuation. According to MCDA (PT-200), the most recent Jordan Hospital draft emergency procedures call for offshift personnel to be called back for increased staffing during an emergency. MCDA also noted that arriving ambulance crews are fully capable of transporting patients directly from their hospital rooms to the ambulance, even though the non-emergency procedure usually provides for pickup from the exit station.

Plymouth House of Corrections

During the meeting on January 8, 1991 (PT-117), the task force learned that arrangements had not been made to transport inmates and staff at the Plymouth County House of Corrections to the designated host facility at the Bridgewater Massachusetts Correctional Institute (MCI). During the meeting on January 31, 1991 (PT-133), MCDA officials stated that although BECo had recently provided a partial shipment of instruments and supplies for use at MCI to monitor arriving inmates and staff, there were no specific plans and procedures. Also, the monitoring and decontamination staff had not been identified or trained for this function.

On May 16, 1991, FEMA Region I Regional Director met with A. David Rodham, Director of MCDA, and representatives of BECo to discuss unresolved emergency preparedness issues. During this meeting, FEMA received a letter dated May 10, 1991 (PT-186), from the Acting General Manager for the Massachusetts Bay Transportation Authority (MBTA). The letter informed the Director of MCDA that MBTA

acknowledges its responsibility to provide transportation to the inmates of the Plymouth House of Corrections, committing that "in the event of [an] incident/accident at the Pilgrim Nuclear Power Station, the MBTA, operating under Executive Order No. 144, will transport the inmate population from the Plymouth House of Correction to MCI-Bridgewater and return them at the appropriate times." The letter also stated that MBTA agreed with the specific details in the MCDA letter of April 4, 1991, letter requesting 16 buses and drivers for the inmates at the Plymouth County facility. MCDA anticipates that this will be resolved by July 1, 1991, including training. MCDA representatives confirmed at the meeting that monitoring and decontamination training for Health Services staff at MCI-Bridgewater will be conducted in June 1991. Also in June, MCDA will identify any additional equipment that is still required (PT-208).

PAC

The needs of the Pilgrim Area Collaborative (PAC) children have been addressed in school plans. (see Section 2.5.3, "Duxbury Schools.") A Pilgrim Area Collaborative procedure (no IP number, dated January 21, 1991, draft 3) including procedures for the PAC Director and staff, is now being reviewed by the PAC Director and relevant Town officials (PT-219).

C. TASK FORCE ASSESSMENT

Persons with special needs can be divided into two groups, those living at home and those living in institutions.

Special Needs Population at Home

- Personnel

MCDA has committed that the details of the needs of the at-home special needs population are being individually screened, and the people are being trained to meet these needs.

- Transportation

The task force concluded that adequate transportation resources had been identified for persons with special needs on the basis of the Chadwick, Martin and Bailey study and the old lists. The adequacy of identification and the timeliness of the mobilization of transportation resources are assessed in detail in Section 2.13.

Special Needs Population at Institutions

Persons confined to institutions within the EPZ are adequately defined and their needs adequately assessed by town planners. The task force with its limited resources could not evaluate the adequacy of plans for the special needs population confined to every institution. However, the task force has received documentation from MCDA that monitoring equipment and staff will be provided at host nursing homes and that procedures will be

revised to address these functions at the host sites (PT-200, PT-208). Pending the completion of these procedures, the issue is considered resolved.

- Personnel

Jordan Hospital - Special needs planning for Jordan Hospital is adequate.

- Transportation

Plymouth House of Corrections - Transportation of prisoners has been resolved with the acceptance by MBTA of responsibility for this function. Although a host facility has been identified at the Bridgewater MCI and some monitoring and decontamination equipment has been delivered, procedures must be developed, and the staff must be identified and trained.

- Decontamination - Pending development of procedures and completion of training the monitoring and decontamination issues at MCI in Bridgewater are resolved.

- Facilities and Equipment

Hospitals - Understandings of commitments regarding the support that hospitals would provide are inconsistent. Hospitals, assigned by State and town planners to receive nursing home residents or other group home residents, need to reaffirm their understanding of the commitments in their letters of agreement.

2.13 Transportation

In the event of a radiological emergency at Pilgrim Nuclear Power Station, the responsible State and town agencies could implement, as a protective measure, a partial or total evacuation of the population located within the emergency planning zone (EPZ). State officials would make the decision to evacuate in accordance with the State's Radiological Emergency Response Plan (RERP). In addition, the RERP provides for precautionary evacuation of school and day care children under certain circumstances. Such a precautionary evacuation could be made at the Alert or Site Area Emergency classification level and before evacuation of the general population.

Emergency planning should ensure that sufficient transportation vehicles and drivers are available, that they are adequately coordinated, and that they can respond to transport the affected population to designated locations outside the EPZ.

*In the implementing procedures, the term "precautionary transfer" is used to indicate precautionary evacuation of school and day care children.

The planning process for transportation addresses many elements including the identification and characterization of the population that could require transportation provided by the State or town, the identification and assignment of transportation resources, the development of letters of agreement with transportation providers, the development of adequate plans and procedures for evacuation and transportation, and the training of persons responsible for implementing the plans and procedures.

In this section the following elements are discussed: (1) identification of transportation needs, (2) letters of agreement, and (3) identification of transportation resources.

2.13.1 Identification of Transportation Needs

A. STATEMENT OF ISSUE

Several of the concerns voiced at the September 6, 1990, public meeting related to the number of transportation vehicles that would be needed for an evacuation. Copies of many of the transportation planning documents, including versions of the transportation matrix that had been evaluated independently by concerned citizens, were interpreted in many different ways. As a result, the public's concerns expressed at the meeting reflected varying understanding regarding the numbers of vehicles needed for an evacuation. Commenters were particularly concerned about the number of buses needed for a precautionary evacuation of the schools and day care centers and the total number of buses needed to evacuate the entire EPZ.

B. FINDINGS

To determine transportation needs, the task force used as a starting point, the July 1990 informal revision of the offsite EPZ transportation matrix compiled by BECo (PT-117, Attachment 5). During a meeting on January 29, 1991 (PT-133), BECo explained the development of the matrix to the task force and clarified the entries that were illegible or ambiguous. Although some populations, needs, and transportation assignments had changed since the July 1990 matrix was issued, BECo stated that it was the most current planning basis for transportation needs. According to BECo, this matrix reflected figures for the 1989-90 school year. The matrix identifies the populations and transportation needs for each school, day care center, nursing home, camp, and hospital in each town. It also contains the estimated transportation needs for the special needs population, the evacuation routes, and the pickup points for each town. The matrix also identifies the predesignated transportation providers for each need. Although not directly involved in compiling the matrix, the Massachusetts Civil Defense Agency (MCDA) has reviewed it, worked with BECo to determine if it was adequate, and agreed that it is the currently effective planning basis for transportation needs (PT-117, Attachment 10).

At the meeting on January 29, 1991, the task force discussed with BECo representatives the methods used to determine transportation-

dependent populations. In the case of facilities (schools, day care centers, nursing homes, etc.), the BECo planning group either visited or called the responsible representatives of the facilities to obtain the maximum number of enrolled persons or the maximum number of occupants. In the case of schools, BECo contacted the representatives during each school year.

The task force found that the BECo planning group could not produce documentation of these visits or calls in regard to dates, persons contacted, and information received. In some cases, new information was merely written in pencil on the transportation matrix and few records were maintained for traceability. The BECo representatives stated that the problem will be remedied through the use of an assessment worksheet that BECo had recently developed.

For precautionary evacuations of schools and day care centers, buses and other vehicles would be preassigned to individual facilities to ensure that the children would all be evacuated at the same time. BECo assumed that each bus would seat 45 high school students or adults, or 65 children; that vans would seat 12 persons; that lift vans would carry a maximum of six persons in wheelchairs; and that ambulances would have capacity for two individuals (PT-103).

With regard to transportation capacity factors, the task force found in reviewing town school procedures (IP-06) that towns assumed buses would seat 44 high school students or adults, or 66 children. One transportation provider (JUDCO) told the task force that its lift vans could accommodate three wheelchairs (PT-134). As noted in Table 2.10, the task force was also unable to determine the precise configuration and capacity of committed ambulances from available records. (Advanced life support and basic life support ambulances have different capacities.)

Except for the number of persons with special needs in each town (see Section 2.12), neither MCDA officials, town officials, nor concerned citizens disagreed with the number of students, staff, occupants, or other transportation-dependent persons represented in the July 1990 BECo transportation matrix. Therefore, the task force used this matrix as the best available planning information on transportation-dependent populations. (The task force identified as an issue more appropriately examined by FEMA, the comparison of estimates of resource needs in town procedures and those in the BECo matrix.)

The task force independently calculated the minimum number of vehicles that would be needed to transport the population of each school and day care center and other transportation-dependent groups identified in the July 1990 transportation matrix. The matrix included a correction for the Governor Edward Winslow School in Marshfield; BECo had determined that 12 rather than 13 buses would be needed for the 611 students and 26 staff members. Also, the matrix showed that 2 vans were assigned to transport the 80 residents of South Shore Industries from Plymouth. This error was

Table 2.10 Transportation providers - active letters of agreement and vehicles committed

Provider	LOA data sheet date	Buses*	Vans*	Lift vans*	Ambulances*
Alves-Ruggerio Ambulance	09/06/90	0/0	0/0	8/4	10/6
American Eagle	11/16/89	4/11	0/0	0/0	0/0
Barnstable	11/16/89	4/4	0/0	0/0	0/0
H & L Bloom	11/21/89	0/70	0/3	0/3	0/0
Boston Ambulance ^a	11/13/89	0/0	0/0	0/0	0/2
Brewster Ambulance	11/13/89	0/0	0/0	0/5	6/10
Brockton Area Transit ^b	11/07/89	7/25	5/6	10/20	0/0
Canning	11/16/89	9/9	0/0	0/0	0/0
Care Ambulance	09/04/90	0/0	0/0	0/0	1/1
Chaulk Ambulance ^{c,d}	09/10/90	1/0	0/0	5/5	7/7
A. L. Crowell Co. ^e	11/15/89	25/16	3/2	0/0	0/0
Fallon Service	07/02/90	0/0	0/0	13/0	16/8
Foxborough ^{b,d}	09/11/90	10/10	2/2	2/2	0/0
Fox Bus Lines ^{**f}	11/08/89	9/9	0/0	0/0	0/0
GATRA	11/21/89	0/15	0/0	0/4	0/0
Judco ^d	08/27/90	0/0	0/0	7/7	0/0
Joseph Ingle	11/08/89	8/12	0/0	0/0	0/0
Medeiros ^b	11/16/89	85/97	0/0	4/6	0/0
M. S. Merritt	11/08/89	20/15	0/0	0/0	0/0
Norfolk-Bristol Ambulance ^d	06/12/90	1/0	2/2	31/34	34/34
C. A. Phillips ^g	08/31/90	12/12	0/0	0/0	0/0
Plymouth & Brockton ^h	11/15/89	0/15	0/0	0/0	0/0
Reliable Bus	11/16/89	10/10	4/4	1/1	0/0
Rockland Motors ^{**}	11/08/89	0/0	0/0	0/0	0/0
Donald J. Rogers ^{**}	11/08/89	3/4	0/0	0/0	0/0
Ryder	01/06/89	200/200	40/40	0/0	0/0
South Shore	11/08/89	10/4	1/0	0/0	0/0
Stavis Ambulance ^d	11/13/89	0/0	0/0	6/4	5/4
Superior Medical Transport	11/08/89	0/0	0/0	3/4	0/0
Swansea Ambulance	11/15/89	0/0	0/0	0/0	1/1
Townbrook (Brook) ^{**i}	11/15/89	0/0	0/0	0/0	0/0
Transportation Network ^d	11/08/89	0/0	0/0	15/15	3/3
Tremblay Bus Co. ^j	11/15/89	85/120	43/43	6/6	0/0
Warrenton	11/15/89	15/0	0/0	0/0	0/0
Total		518/658	100/102	111/120	83/76 ^k

*Number of vehicles with drivers available during operating hours/number available during off hours.

**The numbers indicated are the maximum available throughout the year.

Table 2.10 (Continued)

Notes on Active Letters of Agreement:

Through discussions with BECo representatives (PT-133), which were attended by MCDA, the task force found the following:

- a Boston Ambulance: Although the letter of agreement (LOA) was signed by the secretary, MCDA confirmed that it was valid.
- b Brockton Area Transit, Foxborough public schools (buses only), and Medeiros: The resources were expressed in the LOA noncumulatively.
- c Chaulk Ambulance: The vehicles listed under "vans" were specified in the LOA and confirmed to be wheelchair lift vans.
- d Chaulk Ambulance, Foxborough public schools (vans and lift vans only), Judco, Norfolk-Bristol Ambulance, Stavis Ambulance, and Transportation Network: The resources were expressed in the LOA cumulatively.
- e A. L. Crowell Co.: The resources listed in the LOA were denoted as a percentage of the total resources. The resultant commitment was that described in BECo's letter to FEMA dated October 22, 1990 (Item F-0010) (PT-176). The task force verified this commitment with the provider (PT-134).
- f Fox Bus Lines: This provider is also referred to as Foxtours.
- g C. A. Phillips: The LOA was a "reverse" LOA; that is, the commitments were specified in a letter from Marshfield public schools to Mr. Phillips.
- h Plymouth & Brockton: This provider committed buses to respond within 1 hour as follows: 5:00 a.m.-9:00 a.m. 0 bus; 9:00 a.m.-4:00 p.m. 15 buses; 4:00 p.m.-8:00 p.m. 0 bus; 8:00 p.m.-1:00 a.m. 60 buses; 1:00 a.m.-5:00 a.m. 68 buses.
- i Townbrook: This provider has 30 buses available during school hours during the school year. There is a discrepancy between the BECo matrix and Area II procedures about where these buses are assigned. In addition, Area II appears to have assigned more than the maximum number of available vehicles to various locations.
- j Tremblay Bus Co.: The LOA stated that 20 buses and drivers would be available with a mobilization time of 1 hour during operating hours. However, a note on the LOA data sheet indicated that the 20 buses would be available from between 7:00 a.m. to 9:00 a.m. and from 2:00 p.m. to 4:00 p.m. The note also stated that 85 buses would be available from 9:00 a.m. to 2:00 p.m. All referenced resources would be able to mobilize within 1 hour during operating hours. The overall commitment as understood by the task force is that during operating hours (7:00 a.m. to 4:00 p.m.), 85 buses would be able to mobilize within, at most, 3 hours.
- k Although Plymouth procedures specify a need for 20 advanced life support (ALS) ambulances, the letters of agreement and accompanying data sheets do not clearly indicate how many of the committed ambulances are ALS or basic life support vehicles.

corrected by assigning two buses instead of two vans. Notwithstanding the issue of ambulance types discussed in a note following Table 2.10, the vehicles assigned to pick up persons with special needs in each town met or exceeded the Chadwick, Martin and Bailey estimates, which are discussed in detail in Sections 2.12.1 and 2.12.2 of this report.

C. TASK FORCE ASSESSMENT

The task force found that the needs determination of 361* buses shown in the matrix for the evacuation of schools, including those to be provided by the schools themselves (see Table 2.11), either met or exceeded the number of buses that would be needed on the basis of the enrollment figures also shown in the matrix, and exceeded the number estimated by MCDA (PT-117, Attachment 10). The task force found the estimate of 501* buses for EPZ evacuation to be a reasonable estimate of the number that would be needed to transport the transportation-dependent population.

The task force notes that the number of vehicles shown in the BECO transportation matrix is based on a complete evacuation of the EPZ when schools are in session. If there is a partial evacuation of the EPZ or if schools are not in session, fewer buses will be needed. Further, the task force notes that the number of vehicles shown in the matrix is based on a one-wave evacuation. The procedures provide for redeployment of buses (if necessary) after they reach the host school or reception center.

2.13.2 Adequacy of Letters of Agreement

A. STATEMENT OF ISSUE

Commenters at the September 6, 1990, public meeting voiced concern about the adequacy of the letters of agreement that were in effect with transportation providers for the Pilgrim EPZ. Concerned individuals had evaluated copies of many of the transportation letters of agreement maintained by MCDA. As a result, questions were raised about the information in the letters regarding (1) the number of vehicles committed, (2) the number of drivers available and their commitment to respond, (3) vehicle mobilization times, and (4) availability of vehicles during certain times of the day. The subject of the numbers of vehicles and drivers and mobilization times is addressed in Section 2.13.3.

*The task force's calculations of the actual vehicles needed and vehicles assigned changed with each provider reassignment and matrix correction. As a result, several of the numbers appearing in the July 1990 matrix were outdated at the time of the task force's field work. Consequently, the numbers were updated using more recent information (PT-133, PT-134, PT-117, PT-171, PT-155).

Table 2.11 Providers of own transportation

Town and provider of own transportation	Matrix	Area II transportation group implementing procedure IP-04
Carver		
Benjamin Ellis School	1 bus	1 bus
Governor John Carver School	22 buses	20 buses
Hilltop Rest Home	1 bus	n.s.
Betty's Place Nursing Home	1 van	n.s.
Duxbury		
Westbrook Group Home	1 van	*
Kingston		
Sacred Heart schools**	12 buses	14 buses
Camp Mishannock	6 buses	6 buses
Plymouth		
South Shore Head Start	3 buses***	1 bus
Step by Step****	1 van	n.s.
Baird Center	*	1 bus
Pinewoods Camp	*	*
Youth Advocacy Division Camp	1 bus	1 van

*In certain cases, where it was indicated that a facility would not require any vehicle resources from outside sources, it was not known how many vehicles would be provided by the facility for its own use.

**Outside resources have been assigned to augment the buses to be provided by the Sacred Heart schools.

***This number is given in BECo's April 1, 1991, letter to the NRC, Attachment 1, Item g (PT-127).

****Facility is closed according to BECo's letter to FEMA dated October 22, 1990 (Item F-0004).

Note: n.s. denotes not specified.

B. FINDINGS

The task force reviewed the letters of agreement and discussed the data in the letters with cognizant representatives of BECo and MCDA, a sample of transportation providers, and concerned citizens (PT-133, PT-134, PT-52).

BECo's offsite planning group and MCDA jointly identify the transportation providers. Although the agreement was considered to remain in effect indefinitely, some data sheets were revised or renewed annually. The letters of agreement were generally standard, unsigned transmittal letters from

transportation providers to MCDA stating the general agreement under which the resources committed by each provider would be made available for evacuation of the Pilgrim EPZ. The letters also described (1) provisions for the training of drivers employed by the provider and (2) the estimated mobilization time (defined as the approximate time between the provider's receipt of a request to mobilize and the time most vehicles and drivers would be ready to provide assistance).

Attached to the letters of agreement were dated transportation resource data sheets that specified (1) the types of resources being committed (vehicles and drivers), (2) the number expected to be available during operating hours and off hours (and in four cases off season) (3) the estimated mobilization time (from 30 minutes to 3 hours), and (4) the names and telephone numbers of persons to contact during an emergency. The data sheets were signed by each provider's representative whose title was given.

Some letters were slightly different from those described above. Some were signed by a company representative and sent on company letterhead stationery. One was a reverse LOA; that is, it was from the Marshfield public schools to transportation provider C. A. Phillips, who was to provide 12 buses with drivers for the Governor Edward Winslow School.

In many cases, discrepancies existed between the transmittal letters, which contained the general terms of the agreement, and the data sheets attached to the letters, which contained the details of the resources committed. Specifically, the dates of the transmittal letters often did not correspond to the dates on the data sheets and data sheets were not identified by date in the transmittal letters. Because some letters of agreement included more than one data sheet, none of which were referenced in the letters, it was difficult to understand all the commitments made on the basis of the letters alone.

Two of the letters of agreement were signed by a representative of the provider without any indication of this person's position or title. One was signed by a company secretary. However, MCDA representatives stated that these letters of agreement were valid (PT-133).

Data sheets attached to the letters of agreement did not all present information on resources in the same way. For example, available resources with different mobilization times were expressed cumulatively in some letters and noncumulatively in others. One data sheet did not itemize resources by mobilization time, but instead expressed commitments in terms of percentages of resources available within a certain time.

MCDA could not provide to the task force or local Civil Defense Directors several letters of agreement signed during the second half of 1990, purportedly because copies had not been placed in a central master file of letters of agreement. BECo provided these letters, which were then verified by MCDA (PT-88, PT-90). Also, copies of letters of agreement that were no longer in effect had not been deleted from MCDA's active files. At a meeting on May 16, 1991, MCDA provided draft procedures (PT-193, 194, and 195) to FEMA that address maintenance of letters of agreement.

The task force met with representatives of three transportation providers who would provide a large portion of the resources to be used to evacuate schools (PT-134). For the most part the providers had been assigned to evacuate schools that they normally serve. The task force reviewed the letters of agreement with the transportation providers, who confirmed that, at a minimum, the resources specified in the letters would be made available during an emergency. One provider who was to provide more than half the buses for school evacuation stated that, if necessary, more than 400 more buses than the number committed to in the letter of agreement could be brought in from other areas near the EPZ that are served by the same company. (It is unlikely, however, that the drivers of these buses would be trained or equipped to perform as emergency workers.) The representatives stated that the number of drivers needed to meet the commitments in the letters of agreement had been trained and they believed that all these drivers would respond.

C. TASK FORCE ASSESSMENT

NUREG-0654, Evaluation Criterion A.3, states,

Each emergency plan shall include written agreements referring to the concept of operations developed between Federal, State, and local agencies, and other support organizations having an emergency response role within the EPZ. The agreements shall identify the emergency measures to be provided and the mutually acceptable criteria for their implementation, and specify the arrangements for exchange of information.

The task force found that the transportation letters of agreement were executed with all transportation providers (except those facilities providing their own transportation) and as a group were adequate to meet the guidance of NUREG-0654. Some letters of agreement were not clear, concise, or consistent. It was unclear whether some letters were signed by someone authorized to commit resources for the provider. Maintenance of the letters of agreement by MCDA was inadequate. When this report was prepared, BECo and MCDA were renewing the letters of agreement using a new

format that they expected would ensure uniformity and clarity of commitments. The task force did not review the new LOA format. However, MCDA has provided draft procedures to FEMA that address the maintenance of letters of agreement. Contingent upon implementation of such procedures, this aspect of the maintenance of transportation arrangements is resolved. FEMA will monitor the implementation of this procedure.

2.13.3 Identified Transportation Resources

A. STATEMENT OF ISSUE

During the public meeting on September 6, 1990, several persons voiced their concerns about the adequacy of the transportation resources identified for evacuating transportation-dependent populations within the EPZ. Many of the concerns centered on the number of vehicles committed in the transportation letters of agreement and whether the number would meet identified needs. Related to these concerns were questions of whether the number of buses for a precautionary evacuation of the schools was adequate, whether enough drivers were assigned, and whether the drivers could be relied on to perform their assigned duties during an emergency. During its reviews, the task force also identified an issue involving an inconsistency between Area II procedures and town school procedures concerning what transportation providers should do if they are not contacted in an emergency.

B. FINDINGS

Availability of Drivers and Their Commitment To Respond

In meetings with the task force on January 7-11, 1991 (PT-117), MCDA representatives described the annual training that assigned drivers employed by the transportation providers undergo. They stated that, to their knowledge, the drivers had been asked during the training whether they would carry out their assigned tasks during an emergency, and in all but a few cases the responses were affirmative. The exceptions stated that the needs of their own families would take priority.

One provider (Plymouth & Brockton) noted on its LOA that it had no commitment, oral or written, from any drivers that they would respond in an emergency. This provider's committed buses had been assigned to a transportation staging area. In task force discussions with a sample of the providers assigned to schools and day care centers (PT-134), the company representatives indicated that the letters of agreement accurately reflected the commitments of the companies to provide drivers. The representatives described the means by which drivers would be notified. None of the representatives believed there would be difficulties in mobilizing the number of drivers committed. They further stated that they expected their drivers, when contacted, to respond as planned.

Planning for Facilities Providing Their Own Transportation

The task force found that a number of schools, day care centers, camps, and nursing homes had agreed to provide their own transportation in an evacuation. These facilities are given in Table 2.11. According to MCDA representatives (PT-117, PT-134), the drivers that would be used are generally part of the staff of the facility providing its own transportation.

Federal guidance regarding use of a formal documented agreement, such as a LOA, to secure transportation resources in response to an emergency is directed to support organizations only (NUREG-0654, Evaluation Criterion A.3). The institutions providing their own transportation are not in this category and do not need to execute letters of agreement.

Resources Under Commitment

The task force compared the identified transportation needs, excluding those of the facilities providing their own transportation, with the total resources committed by providers who had signed letters of agreement to determine whether the available resources would be sufficient. The task force performed this analysis for buses, vans, lift vans and ambulances and for operating hours, non-operating hours, and periods of seasonal availability, but without considering the resources committed in new letters of agreement being pursued by BECo and MCDA at the time the task force was concluding its field work. For this analysis, the task force used the needs identified in the July 1990 matrix.

The task force compiled a list of the active letters of agreement in effect when it was performing its field work (Table 2.10). This list includes the number of vehicles and drivers committed in the letters of agreement as understood by the task force.

The task force compiled Table 2.10 on the basis of data from separate sets of letters of agreement that both BECo and MCDA had provided. After comparing the two sets, it was apparent that each set contained letters of agreement that were not in the other set (see also Section 2.13.2.B). On the basis of numerous discussions with MCDA and BECo, the task force resolved the differences between the two sets, clarified other ambiguities resulting from inconsistencies in the way the letters of agreement had been drawn up, and arrived at a consolidated set of letters of agreement. Many specific details on the task force's resolution of the questions related to the letters of agreement are given in the notes following Table 2.10.

Resource Assignments

During the meeting with the task force on February 25, 1991 (PT-70), BECo confirmed that it had used the matrix as well as other information to upgrade the implementing procedures (IPs) on transportation. It acknowledged, however, that vehicle assignments in the towns' transportation IPs differed from those in the Area

II transportation group IP. It stated that the differences reflect administrative delays in sequentially revising IPs using the most up-to-date figures. BECo described the efforts to better administer changes through the various IPs.

As noted earlier, the task force did not address discrepancies between vehicle assignments in town procedures and the Area II transportation group IP.

The task force compared the assignments of transportation resources in the July 1990 matrix with those in the most recent, effective Area II transportation group IP (IP-04, Draft 3, dated January 31, 1991). The resource assignments in each are summarized in Table 2.12. This comparison showed numerous differences between the two documents. The table also shows each provider's resources expected to be available for each of the transportation staging areas (TSAs). These resource numbers are from an EPZ TSA transportation worksheet obtained from BECo (PT-155). BECo representatives explained that the worksheet was a planning document not intended to be a precise accounting of provider resources assigned to each TSA. It was, however, the only data available to the task force on TSA resource assignments.

The task force also compared individual provider resource assignments as shown in both the July 1990 BECo matrix and the January 1991 Area II IP-04 with resource commitments made in the provider's LOA. In some cases, it appeared that resources had been assigned either to facilities or TSAs that were in excess of the number committed by the assigned provider as noted in Table 2.12.

The task force found that in some cases, BECo had reassigned providers for certain facilities without making a corresponding change in the Area II transportation group IP. During a telephone conference call on April 4, 1991, between the task force and BECo and MCDA representatives (PT-171), BECo stated it was initiating a change to the Area II transportation group IP, IP-04, Draft 3, dated January 31, 1991, to reflect the following reassignments and corrections:

- A.L. Crowell will provide buses for Indian Brook School.
- Tremblay Bus Co. will provide buses for Plymouth North High School.
- Ryder will provide buses for South Elementary School.
- Ryder will provide buses for Plymouth Carver Intermediate School.
- Judco will provide lift vans for the following schools - Kingston Elementary, Indian Brook, South Elementary, Mt. Pleasant, Nathaniel Morton, and Plymouth Carver Intermediate.
- A. L. Crowell will provide buses for Manomet School.

• Three buses (instead of the 33 indicated by mistake in the implementing procedure) will be used for persons with special needs in Duxbury.

According to BECo, the reassignments included changing the provider's route maps in order to effect the change in assignment. MCDA officials familiar with the Area II transportation group IP were unaware of the reassignments. The differences could result in instructions to transportation providers from Area II that conflict with the locations shown on the route maps provided to them by BECo.

In general, the procedures call for Area II to contact the transportation provider. The Area II Transportation Officer will relay a request from the towns for a certain number of buses based on the specific need that day. Absent this information from the towns (e.g., in a fast-breaking accident), Area II will use pre-assigned numbers contained in IP-04, which differ, substantially in some cases, from the needed resources identified in the BECO matrix. The task force notes that the town plans also contain pre-assigned numbers. These numbers are not necessarily the same as those contained in the Area II procedure.

At a meeting on May 16, 1991, the MCDA provided draft procedures (PT-193, 194, and 195) to FEMA that address maintenance of letters of agreement and coordination of transportation procedure revisions.

Transportation Response Time

The task force noted the concerns of local citizens regarding the time that would be needed to deploy assigned vehicles during an evacuation. Time elements that the task force examined to determine if a timely evacuation could be carried out were (1) the estimated mobilization times (EMTs) for the transportation providers, (2) the travel times from the locations of the providers to the designated pickup points, and (3) the time required for town and Area II Transportation Officers to staff their response locations, assess needs, and notify transportation providers.

In evaluating the response time of committed vehicles, the task force used the EMTs in the letters of agreement as the only available figures closely connected to expected vehicle response time. The EMTs were defined in the letters of agreement as the approximate time between the provider's receipt of a request to mobilize and the time when most vehicles and drivers would be ready to provide assistance.

Table 2.12 Transportation provider assignments

Provider and assignments	Matrix	Area II transportation group implementing procedure			Lift vans	Ambulances
		IP-04	Buses	Vans		
Alves-Ruggerio Ambulance Martinson Jr. High transportation staging area (TSA)					8/4	10/6
American Eagle Gov. Carver TSA				4/11		
Barnstable Day Care Centers:						
Busy Bee	X	X	1			
Kinder Kollege	X	X	1			
Tiny Town	X	X	1			
Kinder Haus	X	X	<u>1</u>			
			4			
H & L Bloom Unassigned						
Boston Ambulance Martinson Jr. High TSA						0/2
Brewster Ambulance Gov. Carver TSA Jordan Hospital		X			0/5	4/10 15*
Brockton Area Transit Sagamore/Scusset TSA			7/25	5/6	10/25	
Canning Unassigned						
Care Ambulance Unassigned						
Chaulk Ambulance Gov. Carver TSA Silverlake High TSA					5/5	5/5 2/2

See footnotes at end of table.

Table 2.12 (continued)

Provider and assignments	Matrix	Area II IP-04	Buses	Vans	Lift vans	Ambu- lances
A. L. Crowell						
Indian Brook School	X	Ryder**	12			
Mt. Pleasant School	Town- brook**	X	<2>		<1>	
South Elementary ^a	X	Ryder**	13			
Camps:						
Wind in the Pines	X		17			
Wind in the Pines		X	<13>			
Youth Advisory	Self**	X		<1>		
Fallon Service						
Silverlake High TSA						8/8
Martinson Jr. High TSA					13/0	8/8
Foxborough						
Martinson Jr. High TSA			10/10	2/2	2/2	
Fox Bus Lines						
Silverlake High TSA			15/9			
GATRA						
Unassigned						
Judco						
Sagamore/Scusset TSA					2/7	
Plymouth South High	X				1	
Alden Upper/Lower	X	X			1	
Duxbury High	X	X			1	
Duxbury Intermediate	X				1	
Duxbury Intermediate		X			<2>	
Kingston Elementary	X				1	
Indian Brook ^b					1	
South Elementary ^b					1	
Mt. Pleasant School ^b					1	
Nathaniel Morton School ^b					1	
Plymouth Carver Intermediate ^b					1	
Joseph Ingle						
Silverlake High TSA			8/12			

See footnotes at end of table.

Table 2.12 (continued)

Provider and assignments	Matrix	Area II IP-04	Buses	Vans	Lift vans	Ambu- lances
Medeiros						
Gov. Carver TSA			25/37			
Sagamore/Scusset TSA			30/30			
Martinson Jr. High TSA			<u>30/30</u>		4/6	
			85/97			
M.S. Merritt						
Day Care Centers:						
Captain Pal	X	X	1			
Cranberry Crossing	X	X	2			
Kids Count	X	X	1			
Pilgrim Manor	X	X	1			
Kidsport	X	X	1			
Pinewood	X	X	1			
Cooperative	X		3			
Cooperative		X	<2>			
Methodist	X	X	1			
Plymouth Discovery	X	X	2			
Seven Hills	X	X	1			
Jack & Jill	***	X	1			
Happy Day	***	X	<u>1</u>			
			16			
Camp:						
Camp Clear	X	X	2			
Norfolk-Bristol						
Ambulance						
Gov. Carver TSA						12/12
Sagamore/Scusset TSA			1/0	2/2	34/34	22/22
C. A. Phillips						
Gov. Edward Winslow	X*	X	12			
Plymouth & Brockton						
Sagamore/Scusset TSA			0/15			
Reliable Bus						
Sagamore/Scusset TSA			10/10	4/4	1/1	
Rockland Motors						
Silverlake High TSA			5/0			
Martinson Jr. High TSA			6/0			
Donald J. Rogers						
Martinson Jr. High TSA			3/6			

See footnotes at end of table.

Table 2.12 (continued)

Provider and assignments	Matrix	Area II IP-04	Buses	Vans	Lift vans	Ambulances
Ryder						
Sagamore/Scusset TSA			16/200	37/40		
Alden Upper/Lower	X		12			
Alden Upper/Lower		X	<13>			
Duxbury High	X	X	22			
Duxbury Intermediate	X		13	2		
Duxbury Intermediate		X	<14>			
Kingston Elementary	X	X	14		<1>	
Silverlake High	X		25			
Silverlake High		X	<22>			
Sacred Heart Jr/Sr High	X		11			
Sacred Heart Jr/Sr High		X	<15>			
Chandler Elementary	X	X	10			
Manomet Elementary	X		7			
Manomet Elementary		n.s.	<8>			
Indian Brook School	Crowell**	X	<13>		<1>	
Federal Furnace	X	X	10			
Cold Spring School	X		5			
Cold Spring School		X	<6>			
Plymouth North High	Tremblay**	X	<29>			
Hedge School	X		6			
Hedge School		X	<5>			
South Elementary ^b	Crowell**	X	<14>		<1>	
One Thirty Court	X	X	1			
New Testament School	X	Tremblay**	2			
Plymouth Carver Intermediate	X	Townbrook**	34			
Day Care Centers:						
Bayberry	X	X	1			
First Parrish	X	X	1			
Good Shepherd	X	X	1			
Learn in Play	X	X	1			
Munchkin	X	X	4			
Pied Piper	X	X	1			
St. John's	X	X	1			
Growth Unlimited	X	X	1			
Zion Christian	X	X	1			
Plymouth Bay	X			1		
Plymouth Bay		X	<1>			
			200/200	40		
Camps:						
Blairhaven	X	X	1			
Camp Wing	X	X	10			
St. Margarets	X	X	5			
Camp Norse	X		13			

See footnotes at end of table.

Table 2.12 (continued)

Provider and assignments	Matrix	Area II IP-04	Buses	Vans	Lift vans	Ambu- lances
Ryder (continued)						
Camp Norse		X	<2>			
Camp Child	X		11			
Camp Child		X	<8>			
Camp Bournedale	X		5			
Camp Bournedale		X	<4>			
Camp Clark	X		10			
Camp Clark		X	<8>			
Camp Dennen	X		9			
Camp Dennen		X	<7>			
South Shore Unassigned						
Stavis Ambulance						
Silverlake High TSA					4/2	3/2
Martinson Jr. High TSA					2/2	2/2
Superior Medical Transport						
Silverlake High TSA					3/4	
Swansea Ambulance						
Sagamore/Scusset TSA						1/1
Townbrook (Brook)						
Mt. Pleasant School	X	Crowell**	2			
Nathaniel Morton	X		14			
Nathaniel Morton		X	<14>		<1>	
Oak Street School	X	X	2			
Plymouth Carver Intermediate	Ryder**	X	<35>		<1>	
West Elementary	X	X	<u>11</u> 29			
Transportation Network						
Gov. Carver TSA					5/5	2/2
Martinson Jr. High TSA					10/10	1/1
Tremblay Bus Co.						
Sagamore/Scusset TSA			13/122	41/43	4/6	
Carver High	X		6		1	
Carver High		X	<18>**			
Gov. John Carver School	X				1	

See footnotes at end of table.

Table 2.12 (continued)

Provider and assignments	Matrix	Area II IP-04	Buses	Vans	Lift vans	Ambu- lances
Tremblay Bus Co. (continued)						
Plymouth North High	X	Ryder**	27			
Plymouth South High	X		40			
Plymouth South High		X	<38>		<1>	
New Testament School	Ryder**	X	<2>			
			86/122	41/43	6/6	
Camps:						
Cachelot Scout Res.	X		7			
Cachelot Scout Res.		X	<5>			
Camp Squanto	X	X	12			
Camp Massasoit	X		10			
Camp Massasoit		X	<8>			
Warrenton						
Carver High School	X		15			
Carver High School		X	<18>**			

*BECO informed the task force that Jordan Hospital has a separate agreement with Brewster Ambulance to provide 15 or more ambulances in addition to the 15 committed to in the Brewster letter of agreement.

**Wherever discrepancies were noted between the matrix and Area II transportation group implementing procedure relative to providing assignments, the conflicting provider is listed under the column heading "Matrix" or "Area II transportation group implementing procedure" ("Area II IP-04").

***See BECo's April 1, 1991, letter to the NRC, Attachment 1, Item f (PT-127).

+See Section 2.13.1.B.

++Total buses to be provided by Tremblay Bus Co. and Warrenton. Specific number to be provided by each provider was not given.

aThe provider for South Elementary was changed to Ryder in the matrix as determined during the task force conference call with MCDA and BECo on April 4, 1991 (PT-171).

bThe provider for these lift vans was changed to Judco as determined during the task force conference call with MCDA and BECo on April 4, 1991 (PT-171).

Notes:

X The number of resources specified applies to either or both documents.

n.s. Resource provider was not specified (Manomet Elementary).

< > Inconsistency in vehicle numbers exists between matrix and implementing procedures.

Transportation staging area (TSA) assignments were obtained from a TSA transportation worksheet dated September 1990 provided by
Table 2.12 (continued)

Notes (continued):

BECO (PT-155). Assignments do not include vehicles to be provided by institutions themselves, as agreed to by certain institutions.

Where a total appears, the total is that in the matrix.

For purposes of noting conflicting resources in the table, the provider and assignments are listed twice.

The task force noted the following overassignments in the table:

Brockton Area Transit	According to the letter of agreement (LOA), only 20 lift vans are available but 25 lift vans are assigned off hours.
A. L. Crowell	According to the LOA, no lift vans are available, however, a lift van is assigned to Mt. Pleasant School by Area II.
Fallon Service	According to the LOA, only 8 ambulances are available during off hours. According to the TSA transportation worksheet, 16 are assigned to 2 TSAs.
Fox Bus Lines	According to the LOA, only 9 buses are available at all times during operating hours. According to the TSA transportation worksheet, 15 are assigned to a TSA.
Judco	According to the LOA, 7 lift vans have been committed. As noted in the telephone conference call on April 4, 1991 (PT-171), as many as 12 appear to have been assigned.
Norfolk-Bristol Ambulance	According to the LOA, only 31 lift vans are available during operating hours. According to the TSA transportation worksheet, 34 are assigned to Sagamore/Scusset TSA.
Rockland Motors	According to the LOA, no buses are available throughout the year. According to the TSA transportation worksheet, 11 are assigned to 2 TSAs.
Rogers	According to the LOA, only 4 buses are available throughout the year. According to the TSA transportation worksheet, 6 are assigned to the Martinson Junior High School TSA.
Ryder	According to the LOA, no lift vans are available. As stated during the April 4, 1991,

conference call, Judco will provide the 3 lift vans noted in the TSA transportation worksheet as coming from Ryder.

According to the LOA, no lift vans are available. According to the Area II transportation group implementing procedure, 1 lift van is assigned to each of 2 schools.

Townbrook

According to the LOA, 30 buses are available. According to IP-04, Attachment 5, 62 are assigned.

Tremblay

According to the LOA, only 120 buses are available off hours. According to the matrix, 122 are assigned.

According to the LOA, 85 buses are available during operating hours. According to the matrix, 86 are assigned.

During its interviews with transportation providers (PT-134), the task force learned that the providers' understanding of their mobilization times varied greatly. Some considered the time to be the elapsed time from when they were notified to the time when vehicles arrived at their assigned destinations. Others considered it the elapsed time from when they were notified to the time when the vehicles would be ready to go to the assigned destinations. As a result, the travel times of the vehicles were or were not included in the EMTs in the letters of agreement. Because the definitions of EMTs in the letters of agreement were vague, the providers' understanding of the EMTs that they were committing to meet was inconsistent. According to the Pilgrim station evacuation time estimate (ETE) study, the average time assumed for mobilizing transportation resources is 2 hours. The task force found, however, that the EMTs for some resources specified in the letters of agreement would be 2 to 3 hours. The providers who had committed some resources with EMTs of more than 2 hours and the effect of the EMTs on available resources are shown in Table 2.13 and Table 2.14, respectively. The task force found that some EMTs were inconsistent with the study and with a 2-hour mobilization time.

Another variable that could affect transportation response time is the distance that must be driven to arrive at the pickup points.

Transportation Officers [Massachusetts National Guard (MNG)]

Finally, a key element of the response time would be the time required by the towns and MCDA Area II Transportation Officers (Massachusetts National Guard Personnel) to report to their respective emergency operations centers (EOCs), assess needs, and notify providers to deploy their vehicles once the decision had been made to evacuate. The task force determined that the response time of the Transportation Officers assigned to the Area II EOC could be insufficient to implement a timely evacuation. It appeared that inadequate staffing of the MCDA Area II EOC would delay the activation of transportation resources. This was due primarily to the use of MNG to contact transportation providers. However, on April 12, 1991 (PT-122), Ronald Varley of BECo wrote to A. David Rodham, Director of MCDA, to confirm that BECo would "make personnel available to staff the Area II EOC on an interim, compensatory basis. Such personnel would work under the direction of responsible MCDA professionals. [BECo's] intention is to identify and train a sufficient number of personnel to staff 2 shifts at the [Area II] EOC."

On April 25, 1991 (PT-153), Mr. Varley informed Mr. Rodham that training of BECo staff who will provide first shift staffing support to MCDA Area II EOC took place on April 19 and April 24, 1991. Copies of training rosters were also provided. According to the letter, it is BECo's understanding that MCDA is pursuing the identification of individuals for permanent staffing of these positions and that the need for BECo volunteers is on an interim basis and it is not anticipated that they will be needed for more

Table 2.13 Transportation providers committing vehicles with mobilization times greater than 2 hours in relation to total vehicles committed

Provider	Resource > 2 hour mobilization time
Brockton Area Transit	17 of 25 off-hour buses 2 of 6 off-hour vans 5 of 10 operating-hour lift vans 15 of 25 off-hour lift vans
Care Ambulance	1 of 1 operating- and off-hour ambulance
Chaulk Ambulance	3 of 5 operating-hour lift vans 5 of 5 off-hour lift vans 2 of 7 operating- and off-hour ambulances
Foxborough	3 of 10 operating- and off-hour buses
Fox Bus Lines	14 of 14 off-hour buses
Judco	5 of 7 off-hour lift vans
Medeiros	65 of 85 operating-hour buses 4 of 4 operating-hour lift vans
Norfolk-Bristol Ambulance	4 of 31 operating-hour lift vans
Reliable Bus	10 of 10 operating-hour buses 4 of 4 operating-hour vans 1 of 1 operating-hour lift van
Tremblay Bus	65 of 85 operating-hour buses

Table 2.14 Effect of estimated mobilization time (EMT) on available resources

Vehicle	No. of vehicle/drivers available	
	EMT ≤ 2 hours	EMT ≤ 3 hours
Buses		
Operating hours	375	518
Off hours	624	658
Vans		
Operating hours	96	100
Off hours	100	102
Liftvans		
Operating hours	94	111
Off hours	97	120
Ambulances		
Operating hours	80	83
Off hours	73	76

than a 4- to 6-month period. In the letter BECo also stated that MCDA is to schedule a follow-on practical session for these persons at the Area II EOC, so that they may have first-hand experience with that facility and become familiar with the Area II staff.

C. TASK FORCE ASSESSMENT

NUREG-0654 states that "each State and local organization shall establish a capability for implementing protective measures" (including evacuation) and that the plans for implementing the protective measures shall include, among other things, "means of relocation for the population evacuated from the EPZ." The task force found that State officials, a sampling of transportation providers, and BECo were confident that trained, designated drivers would respond as directed in an emergency evacuation. It found no reason to challenge this assumption.

There is no requirement for a 2-hour mobilization time, and the task force finds that an EMT of 3 hours for some transportation resources is reasonable.

The task force's evaluation of the transportation issues was difficult due in part to the ever-changing status of the plans, procedures, commitments, and people involved. Indeed, several rapid changes occurred during the time the task force was performing its review.

Adequacy of Total Transportation Resources Under Commitment

The task force concluded that the total number of buses, vans, lift vans, ambulances, and drivers that would be needed to evacuate the identified transportation-dependent populations would be available from among those committed in letters of agreement. The task force also found that the total number of buses, vans, lift vans, and drivers needed for a precautionary evacuation of the schools and day care centers located within the Pilgrim EPZ had been identified in sufficient numbers. The above conclusion is true for both operating hours and non-operating hours of the transportation providers. The task force notes that the providers in the letters of agreement are from the general area, which is consistent with normal practice.

The finding of adequacy with regard to the total number of vehicles needed for an evacuation was made in spite of the fact that the task force noted differences between the numbers of vehicles needed as reflected in the matrix and those reflected in the Area II transportation group implementing procedure (IP).

The task force found aspects of transportation planning that were in need of improvement. Examples include the maintenance, consistency, and content of transportation letters of agreement; the documentation of resource needs for planning; and the control of transportation implementing procedure changes and provider reassignments.

Adequacy of Assignments

The task force concluded that adequate transportation vehicles were available and could respond after being notified in a reasonably short time to evacuate the identified transportation-dependent population from the Pilgrim EPZ. Although adequate transportation resources have been identified and committed, further review by FEMA will be needed to ensure that all resource assignments are adequate.

Changes to the following documents need to be made at the same time:

- Area II transportation group IP
- Providers route maps
- Town transportation IPs

Resource assignments must remain within the bounds of the IOA commitments.

The draft maintenance procedures recently submitted by MCDA are designed to address these issues. The task force concludes that this issue will be resolved when these procedures are implemented. FEMA will review these procedures.

The task force concluded that another aspect of transportation planning had to be corrected in order to ensure that a prompt evacuation could be performed if necessary. Namely, the response time for the Transportation Officers staffing the Area II emergency operations center had to be shortened so they could promptly assess transportation needs and notify providers.

Because of delays associated with its response time, the National Guard was not suitable to fill the Area II Transportation Officer positions. However, it appears that this aspect of the overall transportation resources issue has been satisfactorily addressed by the temporary assignment and the training of staff from BFCo to replace MNG personnel. FEMA will monitor the incorporation of these changes into the procedure and evaluate them in the 1991 exercise.

2.14 Public Information

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, made the following comments about public information material:

- The public information brochure was not released until August 1989, about 8 to 9 months after power ascension began. Moreover, nearly all the information in the brochure was inaccurate.
- The brochure states that the nuclear power plant cannot explode like a nuclear bomb, but it does not discuss hydrogen

explosions, steam explosions, and high-pressure melt ejections.

- The brochure does not address the man-made isotopes produced by fission: cesium-137, strontium-90, krypton-85; that is, it does not give their half-lives or their effects on the human body.

B. FINDINGS

FEMA reviewed a draft of the 1991 public information pamphlet for transients, the public information insert page for the telephone books, and a draft of the 1991 public information calendar and send its comments to the Massachusetts Civil Defense Agency (MCDA) in a letter dated September 7, 1990 (PT-12). The 1991 calendar contains a section, "Facts About Radiation," which includes the statement that it is impossible for a nuclear power plant to explode like a nuclear bomb. This statement is not uncommon in public information material. The other types of explosions mentioned at the September 6, 1990, public meeting (hydrogen detonations, steam explosions, and high-pressure melt ejections) could occur in the reactor containment and could cause a release of radioactivity, but they would not be of the same magnitude or have the same consequences as the detonation of a nuclear bomb.

In a meeting on January 9, 1991, with the task force (PT-117), Dickinson Mailhouse representatives stated that a 1991 public information brochure in the form of a calendar had been mailed to residents of the plume exposure pathway emergency planning zone. In a followup telephone call on January 16, 1991 (PT-117), these representatives stated that calendars had not been sent to nearly 4,000 P.O. box numbers. BECO representatives stated that Dickinson Mailhouse was planning to correct the problem by mailing the calendars within a week (PT-117, calendar and Attachment 15). During a followup trip to MCDA Area II (PT-133), the task force confirmed that the calendars had been sent.

C. TASK FORCE ASSESSMENT

10 CFR 50.47(b)(7) (Planning Standard G of NUREG-0654) requires the following:

Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

Evaluation Criterion 1 of Planning Standard G of NUREG-0654 provides the following guidance:

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

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

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

The purpose of public information material is to provide information to the public before an accident that it can use to protect itself from the consequences of an accident. The task force did not review the public information calendar for overall adequacy, since FEMA had done so. Comments on the draft calendar are reflected in the FEMA review dated September 7, 1990. In the final calendar, BECo addressed all the comments either by correcting inconsistencies, clarifying unclear passages, or removing sections (such as a section identifying host schools) where information was not final. Because of lead-time requirements, an error in the telephone book inserts was not corrected.

Regarding the issue about identifying specific radionuclides, public information material should not describe in detail specific accident scenarios or identify specific radionuclides that may be released in an accident. However, a general discussion about the effects of radiation is an appropriate topic. The section, "Facts About Radiation," contains the statement, "In large doses, radiation may cause observable health problems such as flu-like symptoms or may increase the chance of health problems later in life." However, flu-like symptoms are the prodrome or symptoms of the onset of the acute radiation syndrome. Accordingly, without further elaboration, this discussion of health effects is incomplete.

On balance, the task force concludes that the 1991 calendar meets the basic requirements of Planning Standard G and the guidance of Evaluation Criterion 1. FEMA will continue to review the public information materials annually.

2.15 Shelter

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, made the following comments about the plans for sheltering:

- The shelter study overestimated the area available within the structures designated as shelters, for example, Percy Walker Pool.
- No realistic dose-reduction study had been performed for the shelters in Duxbury.
- Public shelters for the beach population were lacking.
- Many shelters were wood-framed homes that had minimal dose-reduction features.

B. FINDINGS

The towns within the 10-mile emergency planning zone (EPZ) have planned for the option of sheltering the population including the beach population and other transient summer populations. Town plans contain procedures that acknowledge the possibility of the receipt of a sheltering recommendation from the State and provide for the implementation of such a recommendation by, among other things, the activation of mass public shelters for transients. If a sheltering recommendation is issued, transients will generally be directed to mass public shelter facilities. Each plan also contains sections on sheltering similar to the following:

Sheltering may be the appropriate protective action for the rapid passage of a plume or when weather and/or road conditions indicate that sheltering would be safer than evacuation. Most year-round homes and buildings in the 10-mile EPZ could provide sufficient protection and shelter against direct and inhalation exposure. If sheltering is the protective action selected, the public will be instructed to do the following:

- (1) Remain indoors with ventilation systems turned off and doors and windows closed.
- (2) Continue to monitor local radio/television stations for further emergency broadcast system (EBS) instructions/information.
- (3) If traveling in a vehicle, close windows, vents and air circulation systems and proceed out of the EPZ or seek more permanent shelter.

In a fast-breaking incident, if a situation develops so rapidly that the utility recommends immediate protective actions, the State Police Troop Commander (or designee) has been granted the authority

by the Massachusetts Civil Defense Agency/Office of Emergency Preparedness, to coordinate and direct siren sounding in the towns and to authorize activation of the Emergency Broadcast System to disseminate instructions to the public.

The State plans do not contain specific procedures to guide officials who must decide whether sheltering or evacuation is the protective action recommendation. However, generic shelter factors for various types of structures are found in Table 2.5 of the September 1990 Massachusetts RERP.

C. TASK FORCE ASSESSMENT

NUREG-0654 states that the shelter dose reduction factor should be included in the basis for the selection of protective actions (NUREG-0654, Evaluation Criterion J.10.m). This does not mean each and every building must be analyzed to determine its individual shelter factor. The generic shelter factors mentioned in Footnote 2 of NUREG-0654, Evaluation Criterion J.10.m, are found in Table 2.5 of the Massachusetts RERP. These shelter factors depend primarily on the type of construction of the buildings.

In addition, specific procedures must be included in the State plans to guide officials who decide whether sheltering or evacuation is the protective action recommendation (PAR); FEMA will evaluate their implementation in the next regularly scheduled biennial exercise. Concerning the rationale for the selection of PARs, FEMA stated in a 1988 letter to the Secretary of the Massachusetts Office of Public Safety,

Generally, the closer an area is to the point of release of radiation, the greater the potential dose savings that can be achieved by early evacuation. By implementation of the immediate evacuation strategy, dose reductions greater than those to be derived from a "shelter first-evacuate later" concept can be obtained by movement of the population relatively short distances, even in the unlikely case in which the plume track and the evacuation routes coincide.

Thus, the most appropriate protective action (PA) for areas within about 2 miles of the plant in severe core melt accident sequences is immediate evacuation. This PA includes the permanent and transient population. For areas farther from the plant, the choice between sheltering and evacuation is not as clear-cut as for areas closer to the plants.

In the event of an emergency at the Pilgrim station, the NRC would respond in accordance with its Incident Response Plan (NUREG-0728) to monitor BECo's emergency response activities and to provide an independent assessment of any protective action recommendations.

*See also NRC discussion of this matter in its response to a petition for rulemaking (55 FR 5609, February 16, 1990.)

The policy stated by FEMA in its 1988 letter is consistent with NRC's guidance for its emergency response staff. The policy will also be reflected in any future NRC guidance to licensees that supplants Information Notice 83-28: Criterion for Protective Action Recommendations for General Emergencies.

The task force did not visit or evaluate the adequacy of mass public shelters for the transients. Both FEMA and the NRC have concluded that it is better to evacuate transients from the EPZ than to move them to mass public shelters within the EPZ.

FEMA and the NRC will work with BECo and the State to incorporate procedures in the offsite plans for the Pilgrim Nuclear Power Station, in accordance with the above-mentioned guidance on protective actions. FEMA will evaluate their implementation in the 1991 exercise.

2.16 Emergency Planning Zone

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, made the following comments about the size of the plume exposure pathway emergency planning zone (EPZ):

- The EPZ for Plymouth Nuclear Power Station is 10 miles, while that in Sweden is 25 to 50 miles.
- Cape Cod is within the 50-mile ingestion pathway EPZ, but it should be within the plume exposure pathway EPZ because of dangerously unique conditions that exist; for example, there are only two access roads.
- Provincetown should be in the EPZ because the prevailing wind to Provincetown is from Plymouth, and it is only about 20 or 25 miles due east.
- The Town of Marshfield believes that the entire town should be incorporated within the plume exposure pathway EPZ.
- Whatever the bases for the 10-mile plume exposure pathway EPZ, new research would easily support reducing the zone to 1 mile.

B. FINDINGS

The plume exposure pathway EPZ for the Pilgrim Nuclear Power Station is an irregular circle 10 miles in radius centered at the plant. The exact boundaries of the EPZ follow town lines or roadways.

C. TASK FORCE ASSESSMENT

EPZs are the designated areas for which planning is recommended to ensure that prompt and effective actions can be taken to protect the public in the event of an accident (NUREG-0396, "Planning Basis

for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants," dated December 1978). NRC's regulation in 10 CFR 50.54(s)(1) requires that "the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius." The controversy regarding the size of the EPZ at the Pilgrim Nuclear Power Station has been limited to the appropriateness of the size of the 10-mile-radius plume exposure pathway EPZ.

NRC licensees, State and local governments, and petitioners for rulemaking have often questioned the exact size and configuration of the plume exposure pathway EPZ. The Commission answered these questions in a policy statement (Long Island Lighting Company, Shoreham Nuclear Power Station, Unit 1, CLI-89-12,26 NRC 383, 384, 385) as follows:

Implicit in the concept of "adequate protective measures" is the fact that emergency planning will not eliminate, in every conceivable accident, the possibility of serious harm to the public. Emergency planning can, however, be expected to reduce any public harm in the event of a serious but highly unlikely accident. Given these circumstances, it is entirely reasonable and appropriate for the Commission to hold that the rule precludes adjustments on safety grounds to the size of an EPZ that is "about 10 miles in radius." In the Commission's view, the proper interpretation of the rule would call for adjustment to the exact size of the EPZ on the basis of such straightforward administrative considerations as avoiding EPZ boundaries that run through the middle of schools or hospitals, or that arbitrarily carve out small portions of governmental jurisdictions. The goal is merely planning simplicity and avoidance of ambiguity as to the location of the boundaries.

The task force finds that the plume exposure pathway EPZ for the Pilgrim Nuclear Power Station meets the requirements of 10 CFR 50.54(s)(1).

2.17 Potassium Iodide

A. STATEMENT OF ISSUE

One commenter at the public meeting on September 6, 1990, expressed concern about the lack of distribution of potassium iodide (KI) to residents and schools. Furthermore, this commenter claimed that responsible officials were too concerned about image to distribute KI to residents. Another commenter stated that KI was not stored at the Bridgewater State College, and that no one had obtained parents' permission to administer KI to their children if necessary. Another commenter noted that KI was stockpiled locally and public health education on KI was not being provided. One commenter suggested that KI should be sold over the counter,

particularly to the residents of Cape Cod, who may have to evacuate. Another commenter stated that KI stored at an emergency operations center (EOC) should be moved to nursing homes and procedures should be revised to reflect this.

B. FINDINGS

On January 9, 1991 (PT-117), the task force met with officials from the Massachusetts Department of Public Health (MDPH) and examined the State policy on the use of KI. MDPH's one-page document, "State Policy on the Use of Potassium Iodide (KI) as a Thyroid Blocking Agent During Incidents at Nuclear Power Plants," dated January 25, 1982 (PT-117, Attachment 26), gives the rationale for the State policy. This policy, which was developed by MDPH, states,

It is the decision of the Radiation Control Program of MDPH that KI not be stockpiled for distribution during a nuclear power plant incident nor will administration of KI be recommended for the general population. At the discretion of the Commissioner of Public Health KI will be recommended for use by emergency personnel only in extraordinary circumstances. In this case the utilities will provide the KI to be used by emergency workers.

Nine reasons are given in this document to support this policy.

The KI inventory in the Pilgrim plume emergency planning zone (EPZ) is given in Massachusetts Civil Defense Agency (MCDA) Area II Implementing Procedure IP-03.

With regard to persons in institutions, Plymouth's Civil Defense Director stated the following (PT-144):

- Jordan Hospital has been provided with its own KI stockpile.
- The Plymouth House of Corrections was provided with its own KI stockpile about 2 years ago.
- According to current plans, three nursing homes will receive their supplies from the Plymouth EOC, when needed. However, it is expected that the KI stockpile will be transferred to the nursing homes as soon as their dosimetry coordinator is properly trained.

As for the maintenance of an adequate supply of KI, MDPH stated that MCDA replenishes the supplies annually when instruments are calibrated and thermoluminescent dosimeters are exchanged under the guidance of the MDPH Radiation Safety Officer (PT-117).

C. TASK FORCE ASSESSMENT

Evaluation Criterion J.10.e for Planning Standard J in NUREG-0654 provides the following guidance: "Provisions [exists] for the use of radioprotective drugs, particularly for emergency workers and

institutionalized persons within the plume exposure EPZ whose immediate evacuation maybe impossible or very difficult, including quantities, storage, and means of distribution."

Evaluation Criterion J.10.f for the same planning standard provides the following guidance: "State and local organizations' plans should include the method by which decisions by the State Health Department for administering radioprotective drugs to the general population are made during an emergency and the predetermined conditions under which such drugs may be used by offsite emergency workers."

The State policy is that KI will not be stockpiled for distribution nor will administration of KI be recommended for the general population. State and town planners, in accordance with this policy, do not stockpile KI for distribution to the general population. The State policy does not address the administration of KI to persons confined to institutions who may not be evacuated during severe reactor accidents. The offsite emergency plans, however, do have provisions regarding KI for nursing homes. KI stockpiles have been provided to Jordan Hospital and the Plymouth County House of Corrections. The task force concludes that Evaluation Criteria J.10.e. and J.10.f, the standards in NUREG-0654 regarding the provision of KI to emergency workers and persons confined to institutions, have been met.

2.18 Miscellaneous Issues

2.18.1 Direct Torus Vent System

Following the accident at Three Mile Island in 1979 and as a result of extensive research by the NRC and the industry on the risks to public health and safety posed by the potential for severe accidents, the Commission issued its Severe Accident Policy Statement on August 8, 1985. In that policy statement, the Commission concluded that existing plants pose no undue risks to public health and safety and that there was no immediate basis for any regulatory action to impose additional requirements for these plants. However, the Commission was convinced that reasonable steps can be taken to reduce the chances of severe accidents and to enhance the capability of the plants to mitigate the consequences of such accidents should they occur. On the basis of extensive NRC and industry experience with the evaluation of severe-accident risks using probabilistic risk assessment methodology, the NRC staff concluded that improving the performance of containments could provide significant additional safety at a reasonable cost.

In June 1986, the NRC staff proposed to the industry a five-element program for improving the performance of Mark I containments. The elements of this program included improved containment hydrogen control, sprays, venting, control of molten core debris, and emergency procedures and training.

As a result of the staff's proposals to the industry, BECo proposed to investigate the installation of a hardened vent path (direct torus vent) at the Pilgrim Nuclear Power Station as part of its containment and safety enhancements program. Following these studies, BECo installed the direct torus vent modification at the Pilgrim plant during its seventh refueling outage, which extended from 1986 to 1988. The modification was made voluntarily and under the provisions of 10 CFR 50.59, which permits licensees to make planned modifications without prior NRC approval, as long as the proposed modifications do not degrade the licensing basis of the facility. The NRC staff inspected BECo's modification and found that its design and supporting analysis in accordance with 10 CFR 50.59 were acceptable and no prior NRC approval had been required.

The staff continued its evaluations to determine if the five-element Containment Performance Improvement Program should be required on a generic basis. As a result of those evaluations, the staff, on January 23, 1989, proposed to the Commission (SECY 89-17) five specific improvements for those plants that have Mark I containments. They were (1) an improved hardened vent capability, (2) an improved reactor pressure vessel depressurization system, (3) an alternative water supply system to the reactor vessel and drywell sprays, (4) extension of the emergency procedures and training, and (5) accelerated staff actions to implement the station blackout rule.

On July 11, 1989, the Commission responded to the staff's proposals and directed the staff to

- (1) approve the immediate installation of a hardened vent by any Mark I licensee who chooses to do so under 10 CFR 50.59
- (2) initiate a plant-specific backfit analysis for each of the Mark I plants to evaluate the efficacy of requiring the installation of hardened vents at such plants
- (3) for any plant that installs a venting system, ensure that appropriate operational and emergency procedures and training are in place
- (4) expedite the implementation of the station blackout rule for Mark I plants
- (5) forward to each Mark I licensee information on the other containment performance improvements the staff had identified for consideration during implementation of the individual plant examination program.

On September 1, 1989, the staff issued Generic Letter 89-16, "Installation of a Hardened Wetwell Vent." In that letter, the staff outlined its position on closure of the severe-accident issues regarding Mark I containments and forwarded the Commission's directives on the Mark I containment performance improvements. The staff indicated that all the affected plants have or will have in place emergency procedures consistent with the emergency procedure

guidelines developed by the industry and approved by the NRC. The guidelines direct the operators to vent the containment from the wetwell air space when containment pressure approaches a pressure limit. The existing wetwell vent paths at Mark I plants contain standby gas treatment systems, which are not capable of withstanding pressures approaching containment pressure limits and will fail during venting at such pressures, releasing the primary coolant steam into the containment. Released steam would contaminate the containment and could damage safety equipment, resulting in potential damage to the reactor core. Therefore, in Generic Letter 89-16, the staff proposed that it would be prudent for the licensees to make modifications to harden the vent paths voluntarily and to ensure a high degree of successful recovery from and/or mitigation of the consequences of severe accidents. The staff requested that the licensees make the vent path modification on a voluntary basis using the Commission's regulations 10 CFR 50.59 as was done by BECo at its Pilgrim plant.

As a result of the staff recommendations in Generic Letter 89-16 and subsequent communications with the licensees of Mark I containment plants, all the Mark I licensees either have made a commitment to harden the vent path or have an acceptable vent path. As stated earlier in SECY 89-17, the NRC staff has determined that hardening the MARK I containment vent path would provide a significant additional safety benefit. Furthermore, the implementation of the modifications to harden the Pilgrim plant vent path did not change the licensing basis of the plant and did not require prior NRC approval. Therefore, the modifications made by BECo are viewed as proactive, provide additional improvement in the safety of the Pilgrim plant, and are consistent with subsequent generic action taken by all the licensees under the guidance of the staff and the Commission.

At the public meeting on September 6, 1990, commenters expressed concern about the direct torus vent system (DTVS) (shown in Figure 2.10). Their comments centered on (1) the lack of an adequate real-time environmental monitoring capability around the plant when the DTVS is activated, (2) integration of the DTVS into applicable emergency plans and procedures, (3) the possible violation of regulations by the NRC by allowing the DTVS to become operational without its approval, (4) the possibility of an unfiltered radioactive release to the environment, and (5) a rupture disk pressure setpoint that is too low.

2.18.1.1 Environmental Monitoring Capability

A. STATEMENT OF ISSUE

Commenters at the public meeting on September 6, 1990, expressed concern about the lack of an adequate real-time environmental monitoring capability around the Pilgrim station following an accident. These comments were primarily made in the context of accident scenarios during which the containment atmosphere would be vented to the atmosphere using the DTVS.

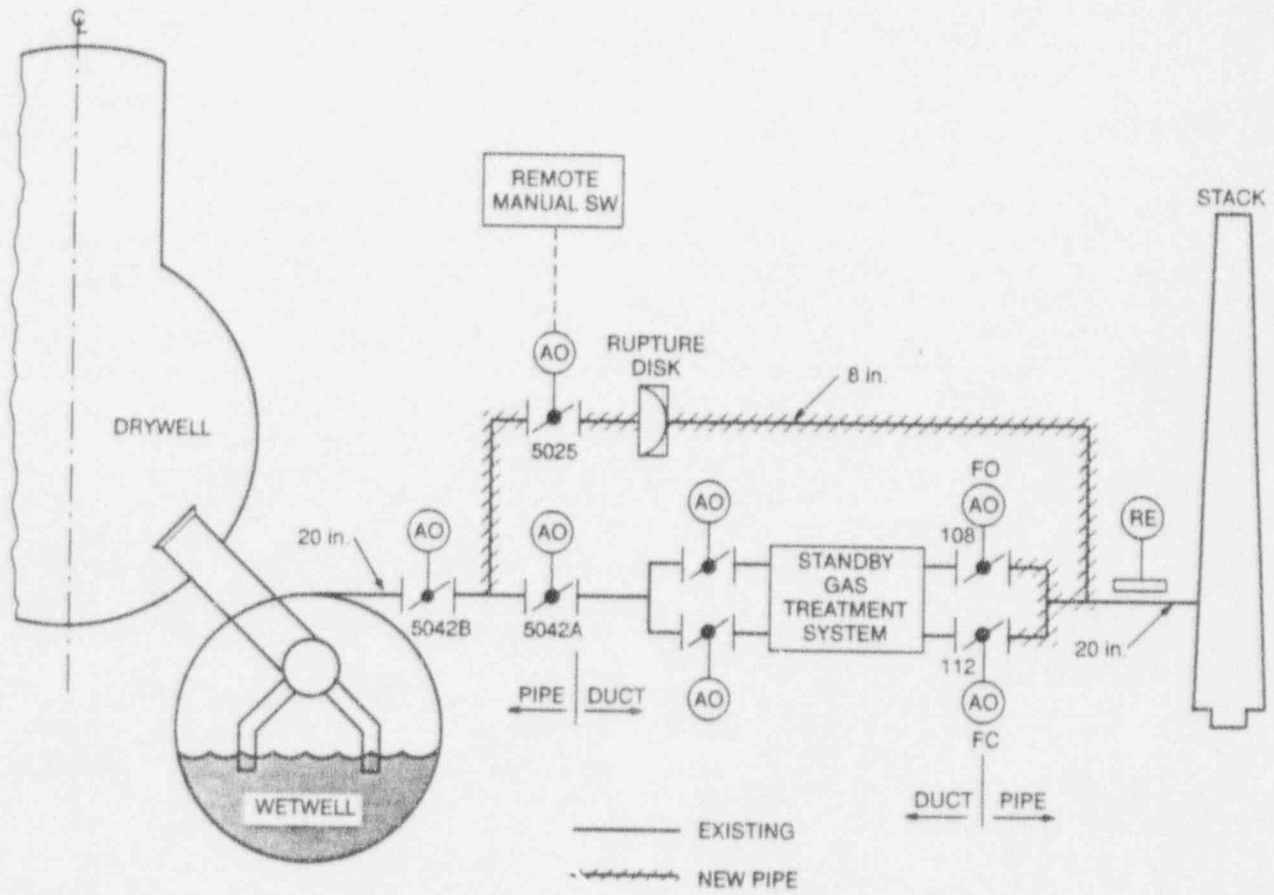


Figure 2.10 Direct torus vent system

B. FINDINGS

The Massachusetts Department of Public Health (MDPH) is installing a system (real-time offsite monitoring system) that consists of gamma radiation detectors located at 14 different locations in a 1/2-mile ring around the Pilgrim station (PT-101). These online detectors will continuously transmit radiation levels by telephone line to a centralized data logger and computer at the Office of Radiation Control Program. According to MDPH, this system is expected to be operational by May 1991. All problems with the system's operation, if any, will then be solved within another 30 days.

During an emergency, BECo will provide three offsite monitoring teams to monitor radioactivity in the environment. MDPH also has provisions for field teams to monitor the environment.

C. TASK FORCE ASSESSMENT

NRC Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants To Assess Plant and Environs Conditions During and Following an Accident," Rev. 3, published in May 1983, deleted fixed-station area monitors from the table of variables of the guide. Even though fixed offsite monitors are no longer endorsed by the NRC, MDPH is installing a real-time offsite monitoring system. This system in conjunction with the use of field teams by BECo and the State is intended to meet NUREG-0654, Planning Standard H, which states that adequate emergency facilities and equipment to support the emergency response be provided and maintained.

FEMA has identified problems in the associated MDPH procedures for field teams and sent its evaluation to the State on April 18, 1991. FEMA will continue to work with the State to resolve these problems in the coming months, in preparation for the December 1991 exercise.

2.18.1.2 Integration of DTVS Into Emergency Plans and Procedures

A. STATEMENT OF ISSUE

Commenters at the meeting on September 6, 1990, raised concerns about the inadequate integration of the DTVS into emergency operating procedures, emergency classification procedures, and containment venting procedures.

B. FINDINGS

The task force reviewed the following BECo procedures: Emergency Operating Procedure EOP-03, "Primary Containment Control"; Emergency Plan Implementing Procedure EP-IP-100, "Emergency Classification," and Procedure 5.4.6, "Primary Containment Venting and Purging Under Emergency Conditions."

The entry conditions for EOP-03 are any of the following:

<u>Parameter</u>	<u>Condition</u>
Drywell temperature	Above 152 °F
Torus water temperature	Above 80 °F
Torus water level	Above 130 inches or Below 127 inches
Drywell pressure	Above 2.5 psig
Primary containment hydrogen concentration	Above 4 percent

According to EOP-03 (see Figure 2.11), the operator is directed to vent the primary containment (per Procedure 5.4.6) and bypass necessary interlocks (per Procedure 5.3.21) under the following conditions:

- (1) Before the torus pressure reaches the primary containment pressure limit (PCPL), which is shown in Figure 3.8 of EOP-03 as torus pressure (psig) as a function of torus water level (inches). The figure shows the PCPL to be about 56 psig for torus water levels up to 150 inches and dropping to about 48 psig and leveling off at this pressure for torus water levels in excess of about 300 inches.
- (2) When drywell or torus hydrogen and oxygen concentrations reach 6 percent and 5 percent or higher, respectively, or when those concentrations cannot be determined to be below those levels.

According to Procedure 5.4.6, Rev. 22, the primary containment is vented using the standby gas treatment system (SGTS). This procedure specifies that it may only be used when specifically directed by EOP-3.

A caution note in Procedure 5.4.6 states that actions specified in the procedure may require venting the primary containment irrespective of the offsite radioactivity release rate. The caution note goes on to state that the plant manager should be notified and his permission received before these actions are carried out. Table 5.4.6-1, "Primary Containment Vent and Purge," in the procedure indicates which operator actions must be performed on the basis of containment hydrogen and oxygen concentrations and torus water level. For example, if the primary containment pressure is below 2.5 psig, containment venting takes place using the filtered SGTS path. When containment pressure is at or above 2.5 psig, venting continues through the SGTS until it is determined that additional venting capacity is required and primary containment pressure is equal to or greater than 30 psig. Procedure 5.4.6 then directs that the torus be vented using the DTVS (bypassing the SGTS). The DTVS operation at a pressure below 30 psig is precluded both administratively (key links, adherence to procedures, etc.) and mechanically by the existence of a rupture disc in the DTVS vent path with a pressure setpoint of 30 psig.

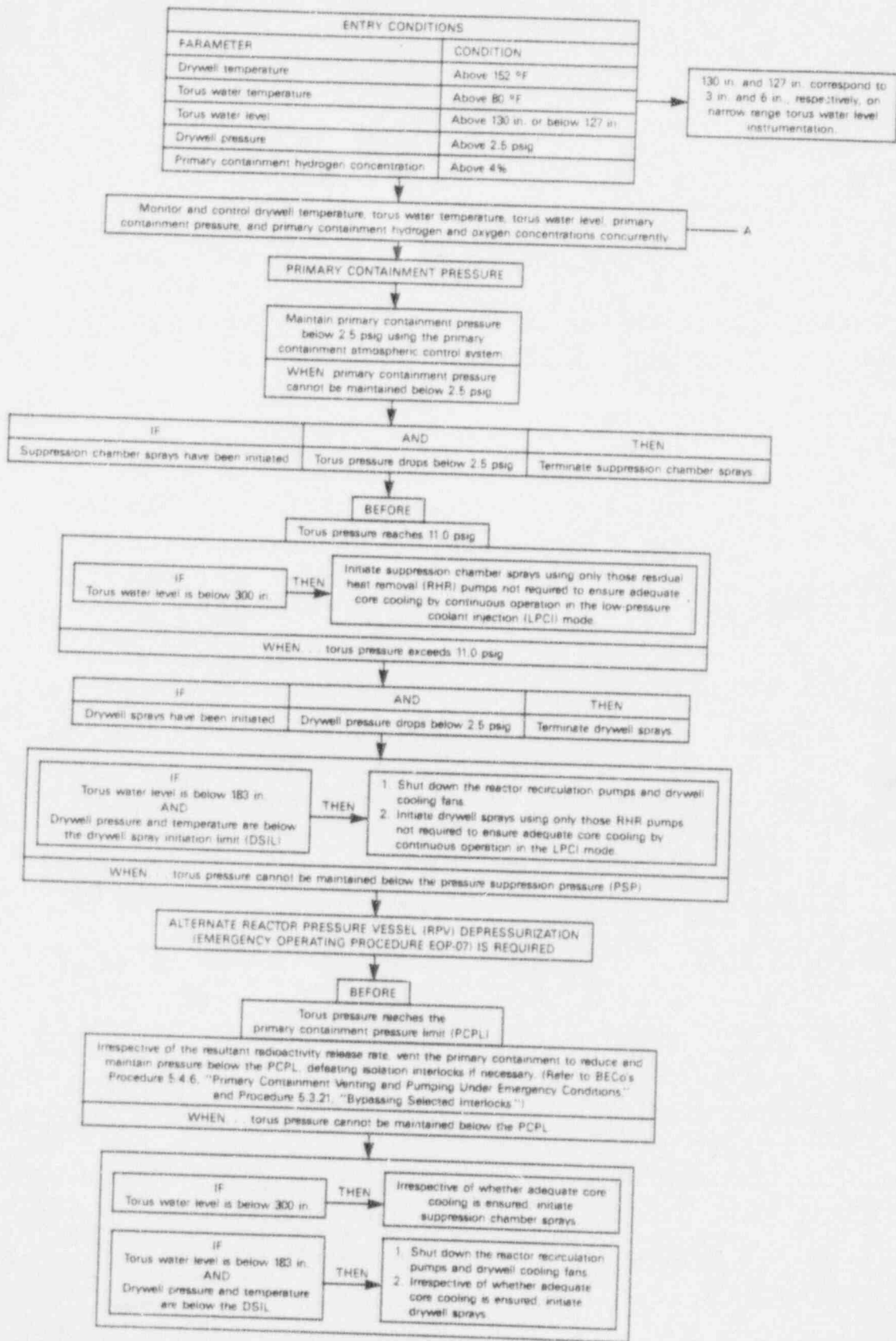


Figure 2.11 EOP-3 flow chart showing conditions requiring containment venting

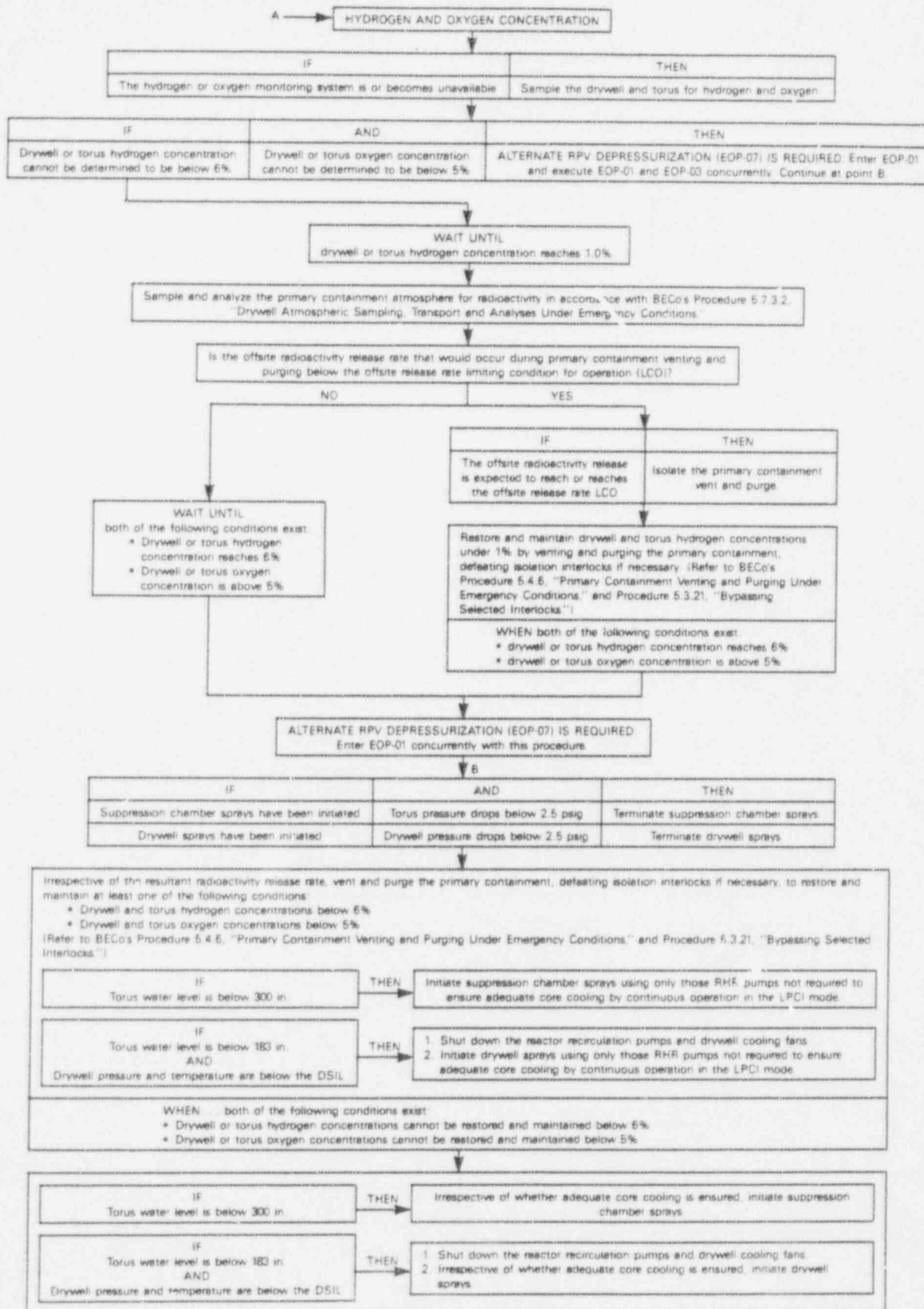


Figure 2.11 (continued)

Section 3.4, "Primary Containment Pressure," and Section 3.5, "Primary Containment Hydrogen and Oxygen Concentration," of EP-IP-100, Rev. 1, identify the emergency action levels (EALs) for the Alert, Site Area Emergency, and General Emergency levels of emergency classification. No EALs are described for an Unusual Event. These EALs are given in Table 2.15.

Table 2.15 Emergency action levels (EALs)

Emergency classification	Primary containment pressure EALs	Primary containment hydrogen and oxygen concentration EALs
General Emergency	Torus pressure approaching the primary containment pressure limit (before initiation of containment venting)	1. Drywell or torus hydrogen concentration is $\geq 6\%$ and Drywell or torus oxygen concentration is $\geq 5\%$ or 2. Drywell or torus hydrogen concentration cannot be determined to be $< 6\%$ and Drywell or torus oxygen concentration cannot be determined to be $< 5\%$
Site Area Emergency	Torus pressure cannot be maintained below the pressure suppression pressure (except during testing such as integrated leak rate test)	Drywell or torus hydrogen concentration is $> 1\%$ and Drywell or torus oxygen concentration is $> 4\%$
Alert	Primary containment pressure cannot be maintained below 2.5 psig (except during testing)	Drywell or torus hydrogen concentration is $> 1\%$
Unusual Event	None	None

EOP-03, Rev. 0, directs the operator to vent the primary containment to reduce and maintain pressure below the PCPL using Procedure 5.4.6. The PCPL is defined to be the lesser of either of the following:

- (1) the pressure capability of the containment (62 psig)

- (2) the maximum pressure at which vent valves capable of rejecting all decay heat can be opened and closed (56 psig)
- (3) the maximum containment pressure at which reactor pressure vessel safety/relief valves can be opened and will remain open

If containment pressure is rising, the operator is directed to vent the primary containment, irrespective of offsite radioactivity release rate, after the pressure suppression pressure is exceeded but before the PCPL is reached. This action is taken to ensure primary containment integrity and to prevent core damage that might be caused by the inability to vent the reactor pressure vessel and to permit injection of water to cool the core. This warrants declaration of a General Emergency according to EP-IP-100. The declaration is based on conditions that existed before the initiation of venting.

According to the Boiling Water Reactor Owners Group (BWROG) emergency procedure guidelines, measurable levels of hydrogen could appear in the primary coolant from the following sources and subsequently be released into the primary containment:

- (1) high temperature reaction of metal with water to produce hydrogen gas and metal oxide
- (2) radiolysis of water by radiation to produce hydrogen and oxygen
- (3) feedwater injection of hydrogen to control reactor water chemistry

The minimum hydrogen and oxygen concentrations required to support a deflagration are 6 percent and 5 percent, respectively. Combustion of hydrogen in the deflagration concentration range creates a traveling flume front, heating the containment atmosphere and causing a rapid increase in primary containment pressure. A deflagration, according to the BWROG emergency procedure guidelines, may result in a peak primary containment pressure high enough to rupture the drywell-to-torus boundary, thus defeating the pressure suppression function of the containment. Should a deflagration occur, the BWROG emergency procedure guidelines indicate that loss of the suppression pool must be assumed with a consequent complete and unrecoverable loss of adequate core cooling and a release of substantial amounts of radioactivity to the environment. The operators are, therefore, directed to vent and purge the primary containment, irrespective of offsite radioactivity release rates, when containment hydrogen and oxygen concentrations exceed deflagration levels. Under these conditions, according to EP-IP-100, the declaration of a General Emergency is warranted. However, EP-IP-100 does not specify, as it does for primary containment pressure, that the declaration of a General Emergency be based on concentration levels before the initiation of venting. In that regard, the task force notes that Sections

3.5.1.4 and 3.5.2.4 of EP-IP-100 lack the parenthetical statement that appears in Section 3.4.1.4, namely, "prior to initiation of containment venting."

Under conditions where significant hydrogen and oxygen concentrations in the containment are probable but their concentrations in the drywell or torus cannot be determined by any means, it must be assumed that concentrations in excess of those required to support deflagration are indeed present.

Under these conditions, EOP-03 directs the operator to vent and purge the primary containment irrespective of the resultant radioactivity release rate. Again EP-IP-100 does not specify that declaration of a General Emergency be based on conditions that existed before the initiation of venting. According to EP-IP-100, the above conditions meet the EAL for the declaration of a General Emergency. BECo has indicated (PT-70, p. 178) to the task force that under these conditions, the declaration of a General Emergency will be made before containment venting is initiated. Neither EOP-03 nor Procedure 5.4.6, however, provide any indication of such a requirement. BECo stated (PT-70, p. 180) that since those persons for whom EOP-03 and Procedure 5.4.6 are written are not the same persons who are responsible for emergency classification, any cross reference from Procedure 5.4.6 to the emergency classification procedure (EP-IP-100) would only clutter their procedures further and might be counterproductive. BECo stated (PT-70, pp. 180-181) that after carefully considering this issue, it deliberately removed any additional text from EOP-03 in order to focus operator attention on actions necessary to manage the emergency. Instead, BECo has provided an operator's aid that will help the control room staff to be cognizant of events that trigger a change in emergency classification. The task force received copies of two pages of BECo's draft "EOP-EAL Operator Aid" pertaining to the use of the DTVS.

C. TASK FORCE ASSESSMENT

After reviewing the BECo procedures, the task force is not certain that the declaration of an emergency and notification of offsite authorities would always precede activation of the DTVS. The task force understands BECo's intent with regard to keeping EOP-03 clear of any unnecessary statements that might distract the operators from actions for which they are responsible. However, lacking additional documentation, the task force concludes that the existing emergency operating and associated DTVS procedures may not result in the proper emergency classification and offsite notifications preceding the activation of the DTVS. The task force considers it important that BECo develop and implement appropriate controls (e.g., procedural or administrative) for its staff responsible for emergency classifications. These controls should be explicit and enable BECo to declare the appropriate emergency classification and notify offsite agencies before the activation of the DTVS.

As noted earlier, Section 3.4.1.4 of EP-IP-100 contains a cautionary statement regarding containment pressure, namely "prior to the initiation of containment venting." It does not appear in Sections 3.5.1.4 and 3.5.2.4 of EP-IP-100 regarding hydrogen and oxygen concentrations.

Other Issues

Regarding the issue of possible violation of regulations by the NRC, neither the NRC nor BECo violated regulations as a result of the installation of a hardened vent at Pilgrim Nuclear Power Station. The DTVS was installed at Pilgrim in accordance with NRC regulation 10 CFR 50.59. The NRC staff inspected the design of the system installed by BECo at Pilgrim and reviewed the analysis performed by BECo pursuant to 10 CFR 50.59 demonstrating that the installation of the DTVS did not require prior NRC approval. The staff found the installed system and the associated BECo analysis acceptable.

Regarding the issue of possibility of an unfiltered radioactive release to the environment, as a mitigation measure, a reliable wetwell vent provides assurance of pressure relief through the suppression pool, which provides a significant scrubbing of fission products. It is estimated that the scrubbing effect would filter out at least 90 percent of the non-noble gas fission products before they are discharged through the plant stack.

Regarding the issue of rupture disk pressure setpoint, a 30-psi rupture disk is installed in the DTVS venting line downstream of the outboard isolation valve. Pilgrim Procedure 5.4.6, "Primary Containment Venting and Purging Under Emergency Conditions," allows the use of the DTVS at pressures equal to or greater than 30 psi. The operating range, above 30 psi and below the primary containment pressure limit, allows for venting flexibility to ensure venting under optimal meteorological conditions. Venting is not required for design-basis accidents at pressures up to 28 psi.

2.18.2 Recovery and Reentry

A. STATEMENT OF ISSUE

One commenter at the September 6, 1990, public meeting stated that participants in the October 1989 exercise felt that recovery and reentry plans were weak and inadequate.

B. FINDINGS

The task force reviewed FEMA's final exercise assessment of the Pilgrim October 12-13, 1989, exercise and found that the two objectives for recovery and reentry had been met (PT-11, pp. 82-83). One area requiring corrective action concerned the designation of restricted areas in an Emergency Broadcast System message.

C. TASK FORCE ASSESSMENT

Planning Standard M in NUREG-0654 [10 CFR 50.47(b)(13)] requires the following, "General plans for recovery and reentry are developed." Each EPZ town plan describes the recovery, reentry, and return process, including conditions for shifting from emergency-phase to recovery-phase operations, a recovery/return committee, likely recovery operations, and conditions and procedures for reentry and return of members of the public. Thus, general plans exist. General plans are all that are required because during this phase other resources, including Federal resources, will be available to assist in implementing recovery and reentry.

2.18.3 Communications

A. STATEMENT OF ISSUE

One commenter at the public meeting on September 6, 1990, stated that the communications system was faulty in his view. This commenter indicated that a communications system based on begging and borrowing various radio equipment was subject to failure. The commenter recommended the installation of a private line telephone network.

B. FINDINGS

The task force reviewed the Massachusetts Radiological Emergency Response Plan to identify the communications systems relied on during Pilgrim emergencies. The systems identified in the plan are the following:

- BECONS: The Boston Edison Community Offsite Notification System (BECONS) is a radio network that links the State Police Troop D headquarters, State and area emergency operations centers (EOCs), emergency operations facility and towns' 24-hour dispatch points, and EOCs. It is a controlled-access radio network serving as BECO's backup notification system. The State and towns, however, use BECONS as a primary communications system for emergency information, such as the State protective action directives, and for siren coordination.
- DNN: The Boston Edison Digital Notification Network (DNN) is a dedicated (ringdown) party line telephone network designed for providing initial notification to the State and local EOCs and 24-hour warning points during an emergency at Pilgrim station. The DNN is also used to provide BECO's followup information. This network consists of telephone links as well as dedicated facsimile equipment for written confirmation of information. Notification over this network simultaneously reaches Massachusetts Civil Defense Agency headquarters and Area II office, State Police Troop D, local EOCs or 24-hour warning points, and reception community EOCs or 24-hour warning points.

Commercial telephone lines serve as backup for the dedicated ringdown telephone and BECONS. For facilities without these systems, commercial telephones function as the primary systems.

In addition to the above, some of the other communications systems identified in the plan are: National Warning System, State Police Radio Network, Radio Amateur Civil Emergency Service, Civil Defense National Radio System, Civil Defense National Voice System, Civil Defense National Teletype System, and Massachusetts National Guard's mobile communication capabilities.

C. TASK FORCE ASSESSMENT

Planning Standard 10 CFR 50.47(b)(6) requires the following: "Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public." NUREG-0654, Evaluation Criteria F.1. and F.1.e state that "each organization shall establish reliable primary and backup means of communications for licensees, local, and State response organizations [and...] provision for alerting or activating emergency personnel in each response organization."

NUREG-0654, Evaluation Criterion E.2 states that "each organization shall establish procedures for alerting, notifying, and mobilizing emergency response personnel."

The communications systems supporting emergency preparedness for Pilgrim are redundant and diverse to ensure reliability. The current system appears to satisfy the criteria for reliable primary and backup communication. Issues involving pagers used for notifying emergency response personnel are treated in Sections of this report on individual towns. Appropriate FEMA, State, and town officials are expected to routinely evaluate communications systems during emergency preparedness exercises.

APPENDIX A

LIST OF DOCUMENTS RECEIVED BY TASK FORCE

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LIST OF DOCUMENTS RECEIVED BY TASK FORCE

- PT-00 U.S. Nuclear Regulatory Commission, "Pilgrim Nuclear Power Plant," Proceedings of the Matter of Pilgrim Nuclear Power Plant, September 6, 1990.
- PT-01 James M. Taylor, U.S. Nuclear Regulatory Commission, Memorandum for Chairman Carr et al., U.S. Nuclear Regulatory Commission, September 12, 1990.
- PT-02 James M. Taylor, U.S. Nuclear Regulatory Commission, Memorandum for Commissioners Rogers et al., U.S. Nuclear Regulatory Commission, September 24, 1990.
- PT-03 James M. Taylor, U.S. Nuclear Regulatory Commission, Memorandum to Chairman Carr et al., U.S. Nuclear Regulatory Commission, September 24, 1990.
- PT-04 Malcolm R. Knapp, U.S. Nuclear Regulatory Commission, Letter to Claire A. Morin, Citizen, Hanover, Massachusetts, September 28, 1990.
- PT-05 James M. Taylor, U.S. Nuclear Regulatory Commission, Letter to Bruce Arons, Chairman, Board of Selectmen, Plymouth, Massachusetts, October 2, 1990.
- PT-06 U.S. Nuclear Regulatory Commission, "NRC Establishes Special Task Force To Review Emergency Planning Issues at Pilgrim Plant," No. 90-134, October 3, 1990.
- PT-07 Team No. 2, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, September 20, 1991 (Portal Monitors and Special Needs).
- PT-08 Ralph G. Bird, Senior Vice President-Nuclear, Boston Edison Company, "Boston Edison Response to NRC Request for Information on Offsite Emergency Planning for Pilgrim," October 4, 1990.
- PT-09 James M. Taylor, Executive Director for Operations, U.S. Nuclear Regulatory Commission, Memorandum for Chairman Carr et al., October 4, 1990.
- PT-10 Thomas J. Groux, Town Manager, Duxbury, Massachusetts, Letter to Robert A. Erickson, U.S. Nuclear Regulatory Commission, October 4, 1990.

- PT-11 Federal Emergency Management Agency, "Final Exercise Assessment, Joint State and Local Radiological Emergency Response Exercise for the Pilgrim Nuclear Power Plant, Plymouth, Massachusetts, October 12-13, 1989," August 27, 1990.
- PT-12 John C. Dolan, Chief, Technological Hazards Branch, Division of Natural and Technological Hazards, Federal Emergency Management Agency, Letter to Robert J. Boulay, Director, Massachusetts Civil Defense Agency and Office of Emergency Preparedness, September 7, 1990.
- PT-13 Steven A. Varga, U.S. Nuclear Regulatory Commission, Letter to Ralph G. Bird, Senior Vice President-Nuclear, Boston Edison Company, September 14, 1990.
- PT-14 U.S. Nuclear Regulatory Commission, "Pilgrim Emergency Preparedness Lessons-Learned Task Force Report," October 1, 1990.
- PT-15 Ralph G. Bird, Senior Vice President-Nuclear, Boston Edison Company, Errata sheet for October 4, 1990, Boston Edison Company Response to U.S. Nuclear Regulatory Commission Request for Information on Offsite Emergency Planning for Pilgrim, November 29, 1990.
- PT-16 Jane A. Fleming, Citizen, Duxbury, Massachusetts, Letter to James M. Taylor, Executive Director for Operations, U.S. Nuclear Regulatory Commission, October 9, 1990.
- PT-17 Richard W. Krimm, Assistant Associate Director, State and Local Programs and Support, Federal Emergency Management Agency, Memorandum for Division Chiefs, Federal Emergency Management Agency Regional Offices, December 24, 1985.
- PT-18 Boston Edison Company, "Boston Edison Company Evaluation of U.S. Nuclear Regulatory Commission OIG Report 90N-02," October 17, 1990.
- PT-19 Kenneth M. Carr, U.S. Nuclear Regulatory Commission, Letter to William R. Griffin, Executive Secretary, Town of Plymouth, Massachusetts, October 18, 1990.
- PT-20 Kenneth M. Carr, U.S. Nuclear Regulatory Commission, Letter to Bruce Arons, Chairman, Board of Selectmen, Plymouth, Massachusetts, October 18, 1990.
- PT-21 Jon R. Johnson, U.S. Nuclear Regulatory Commission, Letter to Edward Kuznarowis, Citizen, Duxbury, Massachusetts, October 23, 1990.
- PT-22 Falk Kantor, U.S. Nuclear Regulatory Commission, Trip Report - Gurnet-Saquish Beach Observations, October 24, 1990.

- PT-23 Robert J. Boulay, Director, Massachusetts Civil Defense Agency, Memorandum for Charles V. Barry, Secretary, Executive Office of Public Safety, October 26, 1990.
- PT-24 Kenneth M. Carr, U.S. Nuclear Regulatory Commission, Letter to Morris K. Udall, Chairman, Committee on Interior and Insular Affairs, U.S. House of Representatives, October 26, 1990.
- PT-25 Ronald A. Varley, Manager, Emergency Preparedness, Boston Edison Company, Letter to Robert Boulay, Director, Massachusetts Civil Defense Agency, October 30, 1990.
- PT-26 James M. Taylor, U.S. Nuclear Regulatory Commission, Memorandum for Robert A. Erickson, U.S. Nuclear Regulatory Commission, November 7, 1990.
- PT-27 Stephen G. Burns, U.S. Nuclear Regulatory Commission, Memorandum for Robert A. Erickson, U.S. Nuclear Regulatory Commission, November 8, 1990.
- PT-28 Robert A. Erickson, U.S. Nuclear Regulatory Commission, Memorandum for James M. Taylor, U.S. Nuclear Regulatory Commission, November 20, 1990.
- PT-29 Carl D. O'Neil, Chief, Fire Department, Duxbury, Massachusetts, Letter to U.S. Nuclear Regulatory Commission, November 27, 1990.
- PT-30 J. Douglas Hadfield, Director, Office of Emergency Preparedness and Civil Defense, Plymouth, Massachusetts, Note to U.S. Nuclear Regulatory Commission, November 26, 1990.
- PT-31 Stephen G. Burns, U.S. Nuclear Regulatory Commission, Memorandum for Robert A. Erickson, U.S. Nuclear Regulatory Commission, November 21, 1990.
- PT-32 Ralph G. Bird, Senior Vice President-Nuclear, Boston Edison Company, Letter to William R. Griffin, Executive Secretary, Town of Plymouth, Massachusetts, November 16, 1990.
- PT-33 Ralph G. Bird, Senior Vice President-Nuclear, Boston Edison Company, Letter to Peter H. Kostmayer, Chairman, Committee on Interior and Insular Affairs, Subcommittee on Oversight and Investigations, U.S. House of Representatives, November 29, 1990.
- PT-34 Ron Markovich, Boston Edison Company, Response to Task Force Request for Boston Edison Company Views on Administrative Status of Emergency Preparedness Plans and Procedures, December 3, 1990.

- PT-35 Carl D. O'Neil, Chief, Fire Department, Duxbury, Massachusetts, Memorandum for Falk Kantor, U.S. Nuclear Regulatory Commission, November 30, 1990.
- PT-36 Helen M. Copello, Office of Emergency Preparedness and Civil Defense, Carver, Massachusetts, Note to U.S. Nuclear Regulatory Commission, December 5, 1990.
- PT-37 Sean M. Connor, Deputy Director, Civil Defense, Marshfield, Massachusetts, Letter to Gerald Overstreet, U.S. Nuclear Regulatory Commission, transmitting Radiological Emergency Response Plans, December 5, 1990.
- PT-38 Team No. 2, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 6, 1990 (Duxbury Emergency Operations Center).
- PT-39 Charles W. Hehl, U.S. Nuclear Regulatory Commission, Memorandum for Frank Congel, U.S. Nuclear Regulatory Commission, December 10, 1990.
- PT-40 Bruce Arons, Chairman, Board of Selectmen, Plymouth, Massachusetts, Letter to Senator John Kerry, November 6, 1990.
- PT-41 Robert A. Erickson, U.S. Nuclear Regulatory Commission, Letter to Roger Provost, Chairman, Board of Selectmen, Plymouth, Massachusetts, transmitting task force implementing procedures, December 11, 1990.
- PT-42 John F. Rogge, U.S. Nuclear Regulatory Commission, Letter to Jane A. Fleming, Citizen, Duxbury, Massachusetts, November 29, 1990.
- PT-43 Jane A. Fleming, Citizen, Duxbury, Massachusetts, Letter to James M. Taylor, U.S. Nuclear Regulatory Commission, January 6, 1991.
- PT-44 Jane A. Fleming, Citizen, Duxbury, Massachusetts, Letter to Edward M. Podolak, Jr., U.S. Nuclear Regulatory Commission, December 23, 1990.
- PT-45 LeMoine J. Cunningham, U.S. Nuclear Regulatory Commission, Note to Robert A. Erickson, U.S. Nuclear Regulatory Commission, January 4, 1991.
- PT-46 Team No. 3, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, October 30 - November 2, 1990 (Special Needs).
- PT-47 Thomas E. Murley, U.S. Nuclear Regulatory Commission, Letter to Jane A. Fleming, Citizen, Duxbury, Massachusetts, January 25, 1991.

- PT-48 Team No. 3, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 13-16, 1990 (Special Needs).
- PT-49 James M. Taylor, U.S. Nuclear Regulatory Commission, SECY-91-022, January 29, 1991.
- PT-50 Team No. 2, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 8, 1990 (Taunton Emergency Operations Center).
- PT-51 Team No. 2, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 8, 1990 (Bridgewater Emergency Operations Center).
- PT-52 U.S. Nuclear Regulatory Commission, Transcript of Pilgrim Task Force Meeting With Citizens From the Town of Duxbury, Massachusetts, January 30, 1990.
- PT-53 George W. Davis, Senior Vice President-Nuclear, Boston Edison Company, Letter to U.S. Nuclear Regulatory Commission on Status of Boston Edison Commitments From Boston Edison Company Letter No. 90.119, February 1, 1991.
- PT-54 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 26-27, 1990 (Plymouth and Duxbury Plans and Procedures).
- PT-55 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, December 5 and 6, 1990 (Carver Plans and Procedures).
- PT-56 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 6 and 7, 1990 (Plymouth Plans and Plymouth Schools).
- PT-57 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 6 and 8, 1990 (Marshfield Plans and Marshfield Schools).
- PT-58 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 8, 1990 (Carver Plans and Implementing Procedures).
- PT-59 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 8 and 9, 1990 (Plymouth, Marshfield, Carver, and Gurnet-Saquish).
- PT-60 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Note to Pilgrim Task Force, March 14, 1991.
- PT-61 Thomas J. Barchi, U.S. Nuclear Regulatory Commission, Memorandum for Chairman Carr, Commissioner Rogers, et al., February 6, 1991.

- PT-62 Ronald B. Eaton, U.S. Nuclear Regulatory Commission, Memorandum for Susan F. Shankman, U.S. Nuclear Regulatory Commission, February 11, 1991.
- PT-63 Town of Needham, Massachusetts, Letter of Agreement With the Commonwealth of Massachusetts, undated.
- PT-64 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 17, 1991 (Carver Plans and Procedures).
- PT-65 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, December 7, 1990 (Kingston Plans and Procedures).
- PT-66 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, December 5, 1990 (Marshfield Plans and Procedures).
- PT-67 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 18 and 29, 1991 (Duxbury Beach Population).
- PT-68 George W. Davis, Senior Vice President-Nuclear, Boston Edison Company, Analysis of Mobilization Times of the Massachusetts National Guard, February 21, 1991.
- PT-69 Dennis H. Kwiatkowski, Assistant Associate Director, Office of Natural and Technological Hazards, Federal Emergency Management Agency, Letter to Frank J. Congel, U.S. Nuclear Regulatory Commission, February 22, 1991.
- PT-70 U.S. Nuclear Regulatory Commission, Transcript of U.S. Nuclear Regulatory Commission Task Force and Boston Edison Company Meeting To Gather Information on Status of Offsite Emergency Plan at Pilgrim (Public Meeting), February 25, 1991.
- PT-71 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, Plymouth, Massachusetts, January 17, 1991 (Plymouth Schools).
- PT-72 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, February 1, 1991 (Kingston Plans and Procedures).
- PT-73 Edward M. Podolak, Jr., U.S. Nuclear Regulatory Commission, Record of Conversation With Frederick W. Iarrobino, Massachusetts Department of Public Works, February 27, 1991.
- PT-74 Edward M. Podolak, Jr., U.S. Nuclear Regulatory Commission, Record of Conversation With Julia Gabaldon, Massachusetts Civil Defense Agency, March 5, 1991.

- PT-75 Evans-Hamilton, Inc., "The Frequency and Duration of the High Water Elevations at Saguish Neck, Plymouth Harbor, Massachusetts," February 28, 1991.
- PT-76 John L. Lovering, Acting Director, Massachusetts Civil Defense Agency and Office of Emergency Preparedness, Letter to Falk Kantor, U.S. Nuclear Regulatory Commission, February 22, 1991.
- PT-77 Mary C. Ott, Co-Chairman, Board of Selectmen, Duxbury, Massachusetts, Letter to Robert A. Erickson, U.S. Nuclear Regulatory Commission, February 27, 1991.
- PT-78* U.S. Nuclear Regulatory Commission, Transcript of Hearing on Issues Surrounding the Evacuation Preparedness Planning at the Pilgrim Nuclear Power Plant, October 30, 1990.
- PT-79 Team No. 2, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 7, 1990, and February 7, 1991 (Wellesley Reception Center).
- PT-80 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation With Jim Gleich, Massachusetts Office of Handicapped Affairs, March 7, 1991.
- PT-81 Robert A. Erickson, U.S. Nuclear Regulatory Commission, Record of Conversation With Jane A. Fleming, Citizen, Duxbury, Massachusetts, March 7, 1991.
- PT-82 Edward M. Podolak, Jr., U.S. Nuclear Regulatory Commission, Letter to Colonel David W. Gavigan, Massachusetts National Guard, March 7, 1991.
- PT-83 Town of Wellesley, Massachusetts, Building Permit - Certificate of Occupancy for 93 Worcester St., February 6, 1991.
- PT-84 John L. Lovering, Acting Director, Massachusetts Civil Defense Agency and Office of Emergency Preparedness, Letter to Major General Wagner, Massachusetts National Guard, February 20, 1991.
- PT-85 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation With Karen Sullivan, Boston Edison Company, March 11, 1991.
- PT-86 Carl D. O'Neil, Chief, Fire Department, Letter to Robert Hallisey, Director, Duxbury, Massachusetts, Radiological Control Program, Massachusetts Department of Public Health, January 4, 1991.

*Not publicly available.

- PT-87 Carl D. O'Neil, Civil Defense Director, Duxbury, Massachusetts, Letter to John L. Lovering, Massachusetts Civil Defense Agency, January 4, 1991.
- PT-88 Alfred Slaney, Regional Planner, Massachusetts Civil Defense Agency, Memorandum for Civil Defense Directors, Pilgrim Emergency Preparedness Zone, March 7, 1991.
- PT-89 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation With Jane A. Fleming, Citizen, Duxbury, Massachusetts, March 12, 1991.
- PT-90 Letters of Agreement From Transportation Providers to Robert J. Boulay, Director, Massachusetts Civil Defense Agency.
- PT-91 Ron Markovich, Boston Edison Company, Note to Falk Kantor, U.S. Nuclear Regulatory Commission, listing status of community plans and implementing procedures, December 7, 1990.
- PT-92 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, February 26, 1991 (Gurnet-Saquish and Duxbury Beach).
- PT-93 Massachusetts Civil Defense Agency, Letter of Certification for Pilgrim Nuclear Power Station transmitted to Richard Strome, Federal Emergency Management Agency, January 30, 1991.
- PT-94 Boston Edison Company, Facsimile to U.S. Nuclear Regulatory Commission, Transportation Worksheet, February 15, 1991.
- PT-95 Boston Edison Company, Facsimile to U.S. Nuclear Regulatory Commission, March 12, 1991.
- PT-96 Stephen M. Borth, Technological Hazards Program Specialist, Federal Emergency Management Agency, Letter to Norman Goodman, Brockton Hospital, Brockton, Massachusetts, March 7, 1991.
- PT-97 Ronald B. Eaton, U.S. Nuclear Regulatory Commission, Memorandum for Susan F. Shankman, U.S. Nuclear Regulatory Commission, with enclosures documenting meeting between NRC task force and BECo on the status of offsite emergency planning for Pilgrim Nuclear Power Station, March 7, 1991.
- PT-98 Edward M. Podolak, Jr., U.S. Nuclear Regulatory Commission, Letter to Robert Hallisey, Director of Radiation Control Program, Massachusetts Department of Public Health, March 14, 1991.

- PT-99 Gunther Engineering, Inc., Boston, Massachusetts, Invoice for survey of elevations on access road from Gurnet Point to Saquish Head in Plymouth, Massachusetts, March 6, 1991.
- PT-100 Robert A. Erickson, U.S. Nuclear Regulatory Commission, Letter to Mary C. Ott, Co-Chairman, Citizens Urging Responsible Energy, March 19, 1991.
- PT-101 Robert Hallisey, Director, Radiological Control Program, Massachusetts Department of Public Health, Facsimile to Aby Mohseni, U.S. Nuclear Regulatory Commission, March 19, 1991.
- PT-102 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 14, 1991 (Taunton, Massachusetts).
- PT-103 Karen Sullivan, Boston Edison Company, Facsimile to Aby Mohseni, U.S. Nuclear Regulatory Commission, March 21, 1991.
- PT-104 David W. Gavigan, Colonel, GS, Assistant Adjutant General, The Adjutant General's Office, Massachusetts National Guard, Letter to Edward M. Podolak, Jr., U.S. Nuclear Regulatory Commission, March 18, 1991.
- PT-105 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 15, 1991 (Bridgewater, Massachusetts).
- PT-106 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 15, 1991 (Carver Massachusetts).
- PT-107 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 16, 1991 (Followup Meeting With Carver Officials).
- PT-108 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 29, 1991 (Marshfield, Massachusetts), and January 31, 1991, (Massachusetts Civil Defense Agency)
- PT-109 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 30, 1991 (Marshfield Plans).
- PT-110 Samuel J. Chilk, Secretary, U.S. Nuclear Regulatory Commission, Memorandum for Chairman Carr, Commissioner Rogers, Commissioner Curtiss, and Commissioner Remick, U.S. Nuclear Regulatory Commission, March 20, 1991.

- PT-111 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, February 1, 1991 (Bridgewater, Massachusetts).
- PT-112 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, February 26, 1991 (Kingston, Massachusetts).
- PT-113 Samuel J. Chilk, Secretary, U.S. Nuclear Regulatory Commission, Memorandum for James M. Taylor, U.S. Nuclear Regulatory Commission, March 25, 1991.
- PT-114 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 4, 1990 (Gurnet-Saguish, Massachusetts).
- PT-115 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, November 9, 1990 (Gurnet-Saguish).
- PT-116 Team No. 1, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 22, 1991 (Planning for Gurnet-Saguish).
- PT-117 Team No. 3, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 7-11, 1991 (Transportation, Potassium Iodide, and Special Needs).
- PT-118 Roger Provost, Chairman, Board of Selectmen, Bridgewater, Massachusetts, Letter to A. David Rodham, Director, Massachusetts Civil Defense Agency, Office of Emergency Preparedness, March 26, 1991.
- PT-119 Team No. 2, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, February 26, 1991 (Duxbury, Massachusetts).
- PT-120 Team No. 2, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, February 26, 1991 (Bridgewater, Massachusetts).
- PT-121 Edward M. Podolak, Jr., U.S. Nuclear Regulatory Commission, Record of Conversation With Gerald Pinault, Civil Defense Director, Bridgewater, Massachusetts, April 2, 1991.
- PT-122 Ronald A. Varley, Manager, Emergency Preparedness, Boston Edison Company, Letter to A. David Rodham, Director, Massachusetts Civil Defense Agency, Office of Emergency Preparedness, April 12, 1991.
- PT-123 Edward M. Podolak, Jr., U.S. Nuclear Regulatory Commission, Record of Conversation With Carl O'Neil, Civil Defense Director, Duxbury, Massachusetts, April 25, 1991.

- PT-124 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation With Alfred Slaney, Regional Planner, Massachusetts Civil Defense Agency; Thomas Rodger, Massachusetts Civil Defense Agency; Karen Sullivan, Boston Edison Company; and Al Samano, Boston Edison Company, April 4, 1991.
- PT-125 Craig Conklin, U.S. Nuclear Regulatory Commission, Facsimile to Edward M. Podolak, Jr., U.S. Nuclear Regulatory Commission, Staff Analysis of "Disability, Functional Limitation and Health Insurance Coverage: 1984/85," September 14, 1990.
- PT-126 Bureau of the Census, U.S. Department of Commerce, "Disability, Functional Limitation and Health Insurance Coverage: 1984/85," Household Economic Studies, Series P-70, No. 8, December 1986.
- PT-127 Ronald A. Varley, Manager, Emergency Preparedness, Boston Edison Company, Facsimile to Robert A. Erickson, U.S. Nuclear Regulatory Commission, "BECo Review of Transcript of 2/25/91 Public Meeting," April 2, 1991.
- PT-128 David W. Gavigan, Colonel, GS, Assistant Adjutant General, The Adjutant General's Office, Massachusetts National Guard, Letter to A. David Rodham, Director, Massachusetts Civil Defense Agency, Office of Emergency Preparedness, April 7, 1991.
- PT-129 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation With Tom Matthews, Massachusetts Department of Public Health, and J. Douglas Hadfield, Director, Office of Emergency Preparedness and Civil Defense, Plymouth, Massachusetts, April 8, 1991.
- PT-130 William R. Griffin, Executive Secretary, Town of Plymouth, Massachusetts, Letter to Ralph G. Bird, Senior Vice President-Nuclear, Boston Edison Company, October 4, 1990.
- PT-131 Dale Deitemyer, National Oceanic and Atmospheric Administration, Facsimile to Falk Kantor, U.S. Nuclear Regulatory Commission, April 2, 1991.
- PT-132 Joseph Chiccarelli, Vice President, Administration and Finance, Bridgewater State College, Massachusetts, Letter to A. David Rodham, Director, Massachusetts Civil Defense Agency, Office of Emergency Preparedness, April 1, 1991.
- PT-133 Team No. 3, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 28-31, 1991 (Meetings With BECo Offsite Planning Group, Jane Fleming, Mary Lampert, and Massachusetts Civil Defense Agency).

- PT-134 Team No. 3, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, March 5-6, 1991 (Transportation, Hospitals, and Special Needs).
- PT-135 Ron Markovich, Boston Edison Company, Facsimile to Falk Kantor, U.S. Nuclear Regulatory Commission, April 18, 1991.
- PT-136 Dennis K. Rathbun, U.S. Nuclear Regulatory Commission, Memorandum for Chairman Carr et al., U.S. Nuclear Regulatory Commission, October 31, 1990.
- PT-137 Fowler, Fitzgerald, and Caldwell, Boston University, and Fink, University of Maine, "Coastal Processes and Hazards of the Plymouth County Shoreline: Brant Rock, Marshfield to Manomet Point, Plymouth."
- PT-138 Thomas Urbanik, Texas Transportation Institute, Texas A&M University System, Transport Operations Program, Facsimile to Falk Kantor, U.S. Nuclear Regulatory Commission, April 15, 1991.
- PT-139 Gunther Engineering Inc., Boston, Massachusetts, Report of Survey Elevations, Saquish Neck, March 6, 1991.
- PT-140 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation With David Dixon, Plymouth Nuclear Matters Committee, Massachusetts, April 18, 1991.
- PT-141 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation With Alfred Slaney, Regional Planner, Massachusetts Civil Defense Agency, April 8, 1991.
- PT-142 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation With Diane Brown-Couture, Massachusetts Civil Defense Agency, Larry Bruce, Chief Engineer, Radio Station WBMX, and Jack Campbell and Bill Odell, Radio Station WPLM, April 12, 1991.
- PT-143 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation With Diane Brown-Couture, Massachusetts Civil Defense Agency, and Edward Perry, President, Radio Station WATD, April 16, 1991.
- PT-144 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation With J. Douglas Hadfield, Director, Office of Emergency Preparedness and Civil Defense, Plymouth, Massachusetts, April 8, 1991.
- PT-145 Letters of Agreement - Transportation Providers, received by the U.S. Nuclear Regulatory Commission via the Massachusetts Civil Defense Agency, February 20, 1991.

- PT-146 Donald M. Muirhead, Jr., Co-Chairman, Citizens Urging Responsible Energy, Duxbury, Massachusetts, Letter to Robert A. Erickson, U.S. Nuclear Regulatory Commission, April 12, 1991.
- PT-147 Robert A. Erickson, U.S. Nuclear Regulatory Commission, Note to Frank J. Congel, U.S. Nuclear Regulatory Commission, April 10, 1991.
- PT-148 Falk Kantor, U.S. Nuclear Regulatory Commission, Record of Conversation With Edward Fratto, Massachusetts Civil Defense Agency, and Daniel McGonagle, Marshfield Civil Defense Director, (in separate conversations), April 16, 1991.
- PT-149 Falk Kantor, U.S. Nuclear Regulatory Commission, Note to Pilgrim Task Force Docket File (Docketing Gurnet-Saquish Gatewatch Report), April 24, 1991.
- PT-150 Falk Kantor, U.S. Nuclear Regulatory Commission, Note to Pilgrim Task Force Docket File (Docketing a Property Listing for Gurnet, Saquish, and Clarks Island), April 26, 1991.
- PT-151 Stephen G. Burns, U.S. Nuclear Regulatory Commission, Memorandum for Robert A. Erickson, U.S. Nuclear Regulatory Commission, April 24, 1991.
- PT-152 Richard W. Krimm, Federal Emergency Management Agency, Memorandum for Frank Finch, Federal Emergency Management Agency, May 17, 1985.
- PT-153 Ronald A. Varley, Manager, Emergency Preparedness, Boston Edison Company, Letter to A. David Rodham, Director, Massachusetts Civil Defense Agency, April 25, 1991.
- PT-154 A. David Rodham, Director, Massachusetts Civil Defense Agency, Letter to Ronald A. Varley, Manager, Emergency Preparedness, Boston Edison Company, April 17, 1991.
- PT-155 Boston Edison Company, Facsimile to Aby Mohseni, U.S. Nuclear Regulatory Commission, April 1991.
- PT-156 R. G. Bird, Boston Edison Company, Letter for Peter Agnes, Jr., Commonwealth of Massachusetts, October 26, 1987, (Pilgrim EPZ Public Beach Population Analysis), October 26, 1987.
- PT-157 Robert J. Boulay, Director, Massachusetts Civil Defense Agency, Letter to John C. Dolan, Federal Emergency Management Agency, September 17, 1990.

- PT-158 John C. Dolan, Federal Emergency Management Agency, Letter to Bruce Arons, Chairman, Board of Selectmen, Plymouth, Massachusetts, March 20, 1991.
- PT-159 J.H. Keller, Fellow Scientist, Special Programs, Idaho National Engineering Laboratory, Letter to Margaret Lawless, Office of Technological Hazards, Federal Emergency Management Agency, April 8, 1991.
- PT-160 Town of Needham, Massachusetts, Letter of Agreement: Needham High School Host Facility, December 18, 1990.
- PT-161 John C. Dolan, Federal Emergency Management Agency, Letter to A. David Rodman, Director, Massachusetts Civil Defense Agency, April 9, 1991.
- PT-162 John C. Dolan, Federal Emergency Management Agency, Letter to A. David Rodham, Director, Massachusetts Civil Defense Agency, April 17, 1991.
- PT-163 Letters of Agreement - Transportation Providers, received by the U. S. Nuclear Regulatory Commission via Boston Edison Company, January 29, 1991.
- PT-164 Letters of Agreement - Transportation Providers, received by the U.S. Nuclear Regulatory Commission via the Massachusetts Civil Defense Agency, February 20, 1991.
- PT-165 Anne Waitkus-Arnold, Chairwoman, The Disabled Persons' Advisory Group on Nuclear Evacuation, Plymouth, Massachusetts, Letter to Aby Mohseni, U.S. Nuclear Regulatory Commission, December 3, 1991.
- PT-166 Stephen Borth, Federal Emergency Management Agency, Facsimile to Aby Mohseni, U.S. Nuclear Regulatory Commission, May 6, 1991.
- PT-167 Jack Dolan, Federal Emergency Management Agency, Letter to Robert M. Hallisey, Director, State Laboratory Institute, Jamaica Plain, Massachusetts, April 18, 1991.
- PT-168 Team No. 2, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, January 31, 1991 (Duxbury, Schools, Reception Centers, and Bridgewater).
- PT-169 Gail M. Good, U.S. Nuclear Regulatory Commission, Record of Conversation With Robert Spearin, Civil Defense Director, Taunton, Massachusetts, March 27, 1991.
- PT-170 Gail M. Good, U.S. Nuclear Regulatory Commission, Record of Conversation With Keith Cwiekowski, Alternate Reception Center Manager, March 28, 1991.

- PT-171 D. Blair Spitzberg, U.S. Nuclear Regulatory Commission, Record of Conversation With Boston Edison Company and Massachusetts Civil Defense Agency Representatives, April 4, 1991.
- PT-172 Bob Trojanowski, U.S. Nuclear Regulatory Commission, Record of Conversation With Frederick Woodworth, Kingston Civil Defense Department, April 16, 1991.
- PT-173 Bob Trojanowski, U.S. Nuclear Regulatory Commission, Record of Conversation With Evalyn Fisher and Ed Hartnett, Boston Edison Company, April 22, 1991.
- PT-174 Robert A. Erickson, U.S. Nuclear Regulatory Commission, Letter to Donald M. Muirhead, Jr., and Mary C. Ott, Co-Chairmen, Citizens Urging Responsible Energy, Duxbury, Massachusetts, May 7, 1991.
- PT-175 Stephen Borth, Federal Emergency Management Agency, Memorandum for John Dolan, Federal Emergency Management Agency, reporting on conversation with Ed Fratto, MCDA, April 17, 1991.
- PT-176 D. Blair Spitzberg, U.S. Nuclear Regulatory Commission, Facsimile to Aby Mohseni, U.S. Nuclear Regulatory Commission, May 9, 1991.
- PT-177 Falk Kantor, U.S. Nuclear Regulatory Commission, Record of Conversation With J. Douglas Hadfield, Civil Defense Director, Plymouth, Massachusetts, May 8, 1991.
- PT-178 Falk Kantor, U.S. Nuclear Regulatory Commission and Laura Deskins, Federal Emergency Management Agency, Record of Conversation With Carl O'Neil, Civil Defense Director, Duxbury, Massachusetts, May 6, 1991.
- PT-179 Ronald A. Varley, Manager, Emergency Preparedness, Boston Edison Company, letter to A. David Rodham, Director, Massachusetts Civil Defense Agency, May 13, 1991.
- PT-180 Aby Mohseni, U.S. Nuclear Regulatory Commission, Record of Conversation with Jane Fleming, Citizen, Duxbury, Massachusetts, May 15, 1991.
- PT-181 Ronald A. Varley, Manager, Emergency Preparedness, Boston Edison Company, Letter to Daniel McGonagle, Director, Marshfield Civil Defense, February 4, 1991.
- PT-182 Daniel McGonagle, Director, Marshfield Civil Defense, Letter to William Hurley, Superintendent, Marshfield Public Schools, April 7, 1991.

- PT-183 Daniel McGonagle, Director, Marshfield Civil Defense, Letter to Edward Fratto, Massachusetts Civil Defense Agency, March 31, 1991.
- PT-184 A. David Rodham, Director, Massachusetts Civil Defense Agency, Letter to Dan McGonagle, Director, Marshfield Civil Defense, April 26, 1991.
- PT-185 Town of Kingston, "Administrative Procedure in Support of the Town of Kingston Emergency Preparedness Program," Kingston, Massachusetts, April 1, 1991.
- PT-186 James E. Rooney, Acting General Manager, Massachusetts Bay Transportation Authority, Letter to A. David Rodham, Director, Massachusetts Defense Agency, May 10, 1991.
- PT-187 Ed Fratto, Internal Memorandum to Doug Forbes, May 15, 1991.
- PT-188 Ronald A. Varley, Manager, Emergency Preparedness Department, Boston Edison Company, letter to Dr. Tinsley, President, Bridgewater State College, February 28, 1990.
- PT-189 Steve Hook, BECo Office Memorandum to Ronald A. Varley, Manager, Emergency Preparedness Department Boston Edison Company, May 17, 1991.
- PT-190 Wellesley Reception Center, Monitoring/Decontamination Personnel Training Agenda, May 14, 1991.
- PT-191 Wellesley Reception Center, Implementing Procedure for an Emergency at the Pilgrim Nuclear Power Station (IP-27), May 15, 1991.
- PT-192 Steve Borth, Federal Emergency Management Agency, Memorandum for Jack Dolan, Federal Emergency Management Agency, May 16, 1991.
- PT-193 Administrative Procedure in Support of the Commonwealth of Massachusetts, MCDA, Framingham, Transportation Resources (AP-08), February 20, 1991.
- PT-194 Administrative Procedure in Support of the Commonwealth of Massachusetts, MCDA Area II, Transportation Resources (AP-08), April 2, 1991.
- PT-194 Administrative Procedure in Support of the Commonwealth of Massachusetts, Town of Kingston, Transportation Resources (AP-08), April 3, 1991.
- PT-195 A. David Rodham, Director, Massachusetts Civil Defense Agency, Letter to Thomas Glynn, General Manager, Massachusetts Bay Transportation Authority, April 4, 1991.

- PT-197 Implementing Procedure for an Emergency at the Pilgrim Nuclear Power Station, Town of Bridgewater, Monitoring and Decontamination (IP-22), April 3, 1991.
- PT-198 Michelle Buteau, Environmental and Energy Services Co., Inc., Memorandum for Megs Hepler, Federal Emergency Management Agency, May 17, 1991.
- PT-199 A. David Rodham, Director, Massachusetts Civil Defense Agency, Memorandum for Richard H. Strome, Regional Director, FEMA Region I May 17, 1991.
- PT-200 A. David Rodham, Director, Massachusetts Civil Defense Agency, Memorandum for Richard H. Strome, Regional Director, FEMA Region I May 17, 1991.
- PT-201 Stephen Borth, U.S. Nuclear Regulatory Commission, Memorandum for Jack Dolan, Federal Emergency Management Agency, June 3, 1991.
- PT-202 Ronald F. Arieta, Director of Park and Recreation, City of Taunton, Massachusetts, Letter to Robert Spearin, Director Department of Civil Defense, Taunton, Massachusetts, January 9, 1991.
- PT-203 William P. Ferioli, Chief of Police, Bridgewater, Massachusetts, Letter to William E. Warner, Chief, Middleboro Police Department, Middleboro, Massachusetts, May 20, 1988.
- PT-204 William P. Ferioli, Chief of Police, Bridgewater, Massachusetts, Letter to Ervin G. Lothrop, Chief, West Bridgewater Police Department, West Bridgewater, Massachusetts, May 20, 1988.
- PT-205 John L. Silva, Chief of Police, East Bridgewater, Massachusetts, Letter to Board of Selectmen, Bridgewater, Massachusetts, April 8, 1991.
- PT-206 U.S. Nuclear Regulatory Commission, "NRC Special Task Force Issues Draft Report on Pilgrim Emergency Planning, Sets Public Meeting," No. 91-54, May 28, 1991.
- PT-207 Massachusetts Civil Defense Agency and Boston Edison Company, Pilgrim Emergency Planning Zone Training Status Report, May 1991.
- PT-208 Stephen Borth, U.S. Nuclear Regulatory Commission, Memorandum for Jack Dolan, Federal Emergency Management Agency, May 16, 1991.
- PT-209 Douglan J. Evans, Manager, Evans - Hamilton, Inc., Rockville, Maryland, letter to Falk Kantor, U.S. Nuclear Regulatory Commission, May 30, 1991.

- PT-210 Jane A. Fleming, Citizen, Duxbury, Massachusetts, Facsimile to Aby. Mohseni, U.S. Nuclear Regulatory Commission, May 30, 1991 (Bus Transportation Issues).
- PT-211 Robert A. Erickson, U.S. Nuclear Regulatory Commission, Letter to The Honorable Robert L. Hedlund, Commonwealth of Massachusetts, May 24, 1991.
- PT-212 Robert A. Erickson, U.S. Nuclear Regulatory Commission, Letter to Carolyn Morwick, Chairman, Board of Selectmen, Bridgewater, Massachusetts, May 23, 1991.
- PT-213 Ronald A. Varley, Boston Edison Company, Letter to Robert Hallisey, Massachusetts Department of Public Health, Boston, Massachusetts, May 21, 1991.
- PT-214 Royce Sawyer, Massachusetts Civil Defense Agency, Letter to Larry Bruce, Chief Engineer, WBMX, Boston, Massachusetts, May 9, 1991.
- PT-215 Royce Sawyer, Massachusetts Civil Defense Agency, Letter to Douglas J. Rowe, Esq., Co-chairman, Massachusetts EBS, Marlboro, Massachusetts, May 10, 1991.
- PT-216 Laura J. Deskins, Federal Emergency Management Agency, Memorandum for the Pilgrim Task Force, June 6, 1991.
- PT-217 Margaret Lawless, Federal Emergency Management Agency, Record of Conversation with Mr. O'Donohue, Superintendent of Schools, Bridgewater-Raynham School District, June 16, 1991.
- PT-218 Team No. 2, Pilgrim Task Force, U.S. Nuclear Regulatory Commission, Trip Report, June 13, 1991 (Bridgewater/Taunton Reception Centers)
- PT-219 Implementing Procedure for an Emergency at the Pilgrim Nuclear Power Station, Town of Plymouth, South Shore Head Start (IP-56), July 5, 1990.

APPENDIX B

EXCERPTS FROM COMMENTS AT PUBLIC MEETING
ON SEPTEMBER 6, 1990, AND FROM OTHER DOCUMENTS

APPENDIX B

EXCERPTS FROM COMMENTS AT PUBLIC MEETING
ON SEPTEMBER 6, 1990, AND FROM OTHER DOCUMENTS

This appendix lists, by subject area, issues contained in a computer database. Subject areas were assigned to teams for investigation as indicated below. The issues were excerpted from a transcript of the September 6, 1990, public meeting in Plymouth, Massachusetts, and from written material that was submitted for the meeting. Each record in the database is identified by

- subject code
- last name of the person submitting the information
- document location

For information presented orally, the document location is a transcript page and lines. For written information the document location is a reference to an enclosure that can be found by referring to the list of enclosures below. A more complete description of the enclosures can be found in the listing under subject code "I" (Identification of Commenters).

TEAM AND CODE IDENTIFIER LIST

<u>TEAM NO.</u>	<u>CODE</u>	<u>SUBJECT AREA</u>
1	SG	Saquish-Gurnet
1	Pp	Plymouth Plans (Plymouth Schools)
1	Pm	Marshfield Plans (Marshfield Schools)
1	Pc	Carver Plans
2	ETE	Evacuation Time Estimates
2	EX	Exercise
2	Pd	Duxbury Plans and Schools
2	W	Wellesley
2	BT	Bridgewater and Taunton Reception Centers
2	SH	Shelter
2	EPZ	Size of Emergency Planning Zone
3	SI	Public Notification System
3	SN	Special Needs
3	TR	Transportation and Letters of Agreement
3	Pk	Kingston Plans
3	PI	Public Information
3	KI	Potassium Iodide
3	OE	Odds and Ends
	I	Identification of Commenters

LIST OF ENCLOSURES

<u>ENCLOSURE</u>	<u>LAST NAME</u>	<u>ENCLOSURE CONTENTS</u>	<u>DATE</u>
E1.1	FLEMING	OVERVIEW REPORT (WELLESLEY)	07/20/90
E1.2	VETRA	WELLESLEY TOUR	07/26/90
E1.3	FORBES	WELLESLEY (INTERIM REPORT)	07/27/90
E1.4	FLEMING	ANALYSIS OF BUS AVAILABILITY	
E1.5	KENNEDY	SUP. OF SCHOOLS (DUXBURY)	05/07/90
E1.6	FLEMING	CHRONOLOGY OF 10/12/89 DRILL	
E1.7	FLEMING	MEMO TO BLOUGH (NRC)	02/25/90
E1.8	FLEMING	REALITY VS. CONCEPT (BUSES)	
E1.9	FLEMING	COMMENTS ON PI BROCHURE	
E1.10	FLEMING	REMEDIAL EXERCISE	
E2.1	DIXON	PILGRIM DIRECT TORUS VENT	02/27/90
E2.2	ELASSASSER	RESPONSE TO FLEMING	11/13/90
E2.3	FLEMING	APPOINTMENT TO DUXBURY RERPC	06/11/90
E3.1	LAMPERT	STATEMENT OF NUC. AFFAIRS COM.	
E4.1	THOMPSON	TESTIMONY	09/06/90
E4.2	THOMPSON	LETTER TO KERRY ET.AL.	08/08/90
E4.3	THOMPSON	LETTER TO ZECH	02/07/89
E4.4	THOMPSON	LETTER TO CARR	08/10/90
E4.5	THOMPSON	MEMO TO SELECTMEN (1991 EX.)	08/28/90
E5.1	KATZENSTEIN	STATEMENT (1 MILE EPZ)	08/25/90
E6.1	SAUNDERS	STATEMENT	09/06/90
E7.1	VOGLER	MEMO TO MARTIN (NRC)	09/06/90
E7.2	VOGLER	DUXBURY EP STATUS	09/05/90
E7.3	GROUX	DUXBURY EXERCISE CRITIQUE	06/22/90
E7.4	KENNEDY	STATEMENT ON EXERCISE	10/23/89
E7.5	VOGLER	RERP QUESTIONS (18)	06/22/90
E8.1	GROUX	BALANCE OF TOWN RESP. TO FEMA (FLEMING REPEATS)	06/22/90
E9.1	THOMPSON	STATEMENT OF & LETTERS (REPEAT OF E4.1-E4.4)	09/06/90
E10.1	BOULAY	REPORT ON 1989 EXERCISE	07/16/90
E10.1	BOULAY	TRANSMITTAL MEMO TO STROME	03/07/90
E10.2	MAHR	BRIDGEWATER EXERCISE CRITIQUE	06/04/90
E10.3	MAZZILLI	CARVER EXERCISE CRITIQUE	06/22/90
E10.4	VANTANGOLI	KINGSTON EXERCISE CRITIQUE	06/21/90
E10.5	MCGONAGLE	MARSHFIELD EXERCISE CRITIQUE	06/20/90
E10.6	GRIFFIN	PLYMOUTH EXERCISE CRITIQUE	
E10.7	SPEARIN	TAUNTON EXERCISE CRITIQUE	06/21/90
E10.8	BOULAY	WELLESLEY EXTENT OF PLAY	10/06/90
E10.9	MEISTER	EXERCISE CRITIQUE	06/19/90
E10.10	MEISTER	EXERCISE CRITIQUE	05/29/90
E10.11	RODGER	AREA II EXERCISE CRITIQUE	06/19/90
E10.12	RODGER	AREA II EXERCISE CRITIQUE	02/15/90
E10.13	HALLISEY	RAD. COUNT EXERCISE CRITIQUE	07/03/90
E10.14	VARLEY	BECO EXERCISE CRITIQUE	07/19/90
E11.1	KARGNRORIS	LETTER FROM CITIZEN	
E12.1	COLE	LETTER FROM CITIZEN	08/30/90

As of today, September 6, 1990, the Saguish-Gurnet residents and the daily beach population have nothing in place for either evacuation nor sheltering. the evacuation busses, if there were any -- there won't be enough busses for that either -- would pick up transient and transportation dependent population coming off the bridge on the mainland side of the country's longest wooden bridge.
(Tr. 106, li.24-25, Tr.107, li.1-5) SG FLEMING

Arrangements and equipment for evacuation of the Saguish-Gurnet area are yet to be made final.
(Tr.19, li.6-7) SG BOULAY

Saguish point planning;
(Tr, 57, li.12) SG DIXON

The plan for evacuating the Saguish-Gurnet population, and daily beach users, requires everyone without a car to walk -- and it's several miles from Saguish -- down the unprotected beach to and then over the longest wooden bridge in the country. At the Duxbury end of the bridge, they then wait for evacuation busses [see section 2, above] that may never arrive.
(E3.1) SG LAMPERT

The egress issue for Saguish-Gurnet area and Clark's Island are still issues that must be addressed...This is an issue that would trap possibly as many as 4000 people on a peninsula that they couldn't get off for a number of hours in an emergency situation.
(Tr.53, li.23-24; Tr.54 li.2-5) SG HADFIELD

I do have a serious concern about the draft in the fact that it does not mention Saguish/Gurnet procedures. Bob Poole of FEMA went to the Saguish/Gurnet area and reviewed their procedures during the pre-exercise drill in September and told the Association they would receive a written critique of their plans in the evaluation of the October exercise.
(E10.6) SG HADFIELD

A four-wheel drive vehicle and communications equipment to carry out alerts -- in response, BECO has made a one-time donation of a very used Chevy Suburban for the Town of Plymouth. The vehicle has been assigned to the Gurnet-Saguish Association and is currently parked at Gurnet Point. A bare minimum of communications equipment has been provided by BECO. The efficiency of this equipment will not be known until a full scale exercise has taken place.
(Tr.64, li.9-16) SG CAVANAUGH

We requested that coordination of our plan be made with Duxbury emergency personnel rather than with Plymouth, as we are physically attached to Duxbury and evacuation would be through the Town of Duxbury. In response, preliminary draft plans call for interface with Duxbury emergency personnel. These plans were rejected and tentative agreement denied by Duxbury.
(Tr.64, li.17-23) SG CAVANAUGH

We requested that the emergency access road be upgraded. In response, BECO submitted one totally unacceptable plan which called for routing traffic over very sensitive dune areas. The question of access remains the single most important unresolved issue in the opinion of both the resident population and Plymouth Civil Defense Director Doug Hadfield. Extensive photographic evidence by both David Quaid and BECO in the form of aerial photos as well as numerous on-site visits by BECO, state civil defense planners, local authorities and the Gurnet-Saguish Association representatives very clearly indicate there is no vehicular access during lunar tides for a period of two and a half to three hours twice a day for five to seven days per month. This covers the entire area southwest of Gurnet Point to the end of Western Point. This is the most heavily occupied area of the beach.
(Tr.64, li.24-25, Tr.65, li. 1-16) SG CAVANAUGH

The Gurnet-Saguish Association has given conditional approval to the draft plan for our area. We cannot stress strongly enough that we believe this plan to be seriously flawed and in fact is nearly unworkable until such time as the emergency egress road is seriously upgraded and arrangements are made with the Town of Duxbury to interface with Gurnet-Saguish Association emergency personnel.
(Tr.65, li.17-24) SG CAVANAUGH

Most importantly, the misinformation upon which many reports and recommendations were based was unbelievable, particularly the Lazarus-Hogan memo of November 1, 1988. These include excessively low population figures, the actual number of days and time per day that egress is impossible, as well as consideration of the dispersal of vehicles once they have reached the Duxbury Bridge area. Both David Quaid and I have brought these discrepancies to official attention many, many, many times with no clear response. We have offered specific recommendations to alleviate the situation with the road with minimal environmental impact. To date, the recommendations have been totally ignored.
(Tr.66 li. 4-17) SG CAVANAUGH

We have equipment needs and we have been told by Boston Edison it does not mean to continue to assist us under NUREG 0654 in two of those categories. That particular letter has already been forwarded to FEMA and to the state.
(Tr.50, li.20-24) Pp THOMPSON

Please be advised that the Plymouth Board of Selectmen has voted not take part in the NRC drill in 1991 unless we have some positive response to our needs and unless we feel you are being honest with us... Please be advised -- and I am stating it again -- the Town of Plymouth will not participate in the required drill of 1991 unless it has positive response to its continuing needs that it discovered from the drill of October 1989. To go into still another without those needs and without those weaknesses that were revealed ameliorated would make no sense whatsoever. We're not going to take another test to validate somebody's bureaucratic work.
(Tr.51, li.22-25, Tr.52, li.6-13) Pp THOMPSON

During the October '89 exercise, we found other shortfalls in our planning and equipment needs. The planning issues are being addressed even as we speak. But the equipment issues are not. (Tr.54, li.23-25, Tr.55, li.1)

Pp HADFIELD

One of the main issues we found is the fact that not only was the emergency operations center of the Civil Defense in the subarea 3 which was according to the scenario had to be evacuated, not only was that in that area, but so is the central fire station which has all the alarm systems for the entire town in it, central police station, which there is only one police station, and town hall. All in the same subarea. This is a town that was built on the idea of a central location for government. It's still that way and it will remain that way. But, we have to address the issue of what happens when we have to evacuate the central police station and a central fire station. It's an issue that is not a dead issue, even though we've been told by Boston Edison that we can't get any permanent fixture and we cannot get a communications van that would be mobile that we could move to another situation. They don't feel -- maybe rightly so -- but still, they don't feel that that is a requirement of the NUREG 0654.

(Tr.55, li.1-20)

Pp HADFIELD

The Civil Defense Director, Executive Secretary, and I met with Mr. Ron Varley... last Friday, August 24, 1990. The purpose was to discover Boston Edison Company's position on civil defense needs revealed by the NRC graded drill of October 1989. Those needs were covered in the recent memo to Massachusetts Civil Defense Director Boulay which the Board approved on August 21, 1990. They are a. Radios for schools b. b. Communications for Plymouth Beach c. Alternative communications center for police and fire. Only is the case of the radios is there a positive response from Boston Edison Company which maintains that the delay in radio delivery was caused by the School Department. [Radios are not yet in place.] I recommend that we contact Boston Edison Company, the State, the Federal Emergency Management Agency, and Nuclear Regulatory Commission by letter to establish our needs once more. Further I recommend that we indicate we shall play no part in the August 21, 1991, NRC scheduled drill unless our needs are considered and positive solutions are found.

(E4.5)

Pp THOMPSON

The evacuation of both the Police Station and Central Fire Station would leave both with no phone service and limited alarm and radio contact.

(E10.6)

Pp HADFIELD

Retraining, however, is a real serious need and we must get at that.
(Tr.50, li.18-19) Pp THOMPSON

Rumor control & PIO responsibilities are understaffed and do not have the proper phone equipment to function adequately.
(E10.6) Pp HADFIELD

Staffing is a concern not only with volunteer staff, but with Town employees as well.
(E10.6) Pp HADFIELD

concerns about the planning for NCI Plymouth, the county prison farm.
(Tr.57, li.25, Tr.58, li.1) Pp DIXON

KI was not stored at Jordan Hospital, arrangements will be made with Jordan Hospital, assuming their concurrence, to store KI at their facility.
(E10.6) Pp HADFIELD

School Dept. is already heavily tasked notifying their own buildings and will not take on this additional responsibilities (private schools, day care) at this time there are no additional personnel available to assume these duties.
(E10.6) Pp HADFIELD

The town of Plymouth plans and procedures should reflect advising MCDA Area II/MCDA Headquarters offices of the independent activation of sirens of Clark's Island and Saguish-Gurnet. This local information could be vital in directing, coordinating and controlling future state emergency activities.
(E10.12) Pp RODGER

As of today, we still do not have an approved plan for (Plymouth) school children. Over 8100 school children -- the future of this nation, the future of this town -- over 1100 staff are without an approved plan. In fact, no town in the EPZ has an approved school plan. That I learned today. The school committees still have a few problems that need to be addressed before they will consider any kind of approval. Radio equipment and transportation providers' availability are the most prominent.
(Tr.53, li.14-22) Pp HADFIELD

We currently still do not have an approved implementing procedure for our eight schools (Plymouth). They are widespread, 8000 students and over 1000 staff.
(Tr.50, li.13-15) Pp THOMPSON

As stated in the past, Marshfield is not comfortable with increasing the risk of their P.I.O. representative by sending him/her to the Plymouth Media Center, a more potentially dangerous area.

(E10.5)

Pm MCGONAGLE

Secondly, in terms of communications, I think one particular area that we would request that FEMA and Boston Edison address and that is the area of our harbor master's program. Our harbor master is currently working with a borrowed VHF radio from the fire department and for the size of operation that he patrols and the difficulties in inclement weather, we definitely foresee that we will have a problem. We would ask your help in dealing with that problem.

(Tr.86, li.9-17)

Pm MCDONALD

The current format of the message forms contain alot of important information, however, it is not easy to determine the importance of priority messages. We woul, therefore, recommend the format be altered so as to allow an easy recognition of priority message.

(10.5)

Pm MCGONAGLE

The request for Marshfield is that -- and again, because of what we know as the work force that we have our ability to deal with an emergency, we would like to see the one school that is inside the EPZ in Marshfield stay in terms of evacuation, inside the town of Marshfield. To send our students to Wellesley, to Needham, wherever, whenever it's decided will only cause more difficulties for us and the parents of Marshfield.

(Tr.87, li.6-13)

Pm MCDONALD

It is believed that the Mass. Criminal Justice Training Center located in Needham and the Wellesly Reception Center have been identified as the host school and reception center for Marshfield. Marshfield opposes these locations due to their travel distance, and the lack of control of the school's students. We recommend, however, consideration of our proposal to establish the Furnace Brook School as our facility.

(E10.5)

Pm MCGONAGLE

Having no host school identified by name and location, in the plan, caused confusion for parents, the School Department, as well as key Department Heads in the Town of Marshfield.

(10.5)

Pm MCGONAGLE

Marshfield attempted to contact Area II for confirmation of an evacuation directive for subarea 10, however, we were unsuccessful. We then in turn contacted the Media Center for confirmation of this issue. This was more confusing. We believe this type of confusion and this time consuming process could be avoided by the restructuring of the Emergency Telephone Directory. The current directory may be more helpful if it was easier to determine which agency and or staff person should be contacted.

(E10.5)

Pm MCGONAGLE

Boston Edison Company (BECO) has provided the town of Marshfield with pagers and a pager system. This serves the purpose of initial notification, which is essential for the emergency response process. These pagers failed to meet the needs of our community and are unacceptable for effective communications. Several attempts have been made to resolve this issue but to date have been unsuccessful.
(E10.5)

Pm MCGONAGLE

Our biggest problem at this time is voluntary personnel, especially for the emergency workers monitoring the decontamination station, which is a joint venture with the Town of Plymouth at the Plymouth Airport. We at this time have not been able to secure enough personnel from our town to cover this portion of the plan but are continuously trying.

(Tr.67, li.23-25, Tr. 68, li.1-4)

Pc CAPPELLO

Objective 15: Use of KI - the Fire Chief instructed his workers to take KI even though the State message regarding KI did not pertain to Carver. We will comment on this segment of ARCAs when we have had a chance to review the log.

(E10.3)

Pc MAZZILLI

Objective 19: TSA confusion: Agree - There was confusion at the Carver Transportation Staging Area (TSA) regarding whether a participating bus was for the school or assigned to the TSA for the general public. Corrective Action: The town is in the process of identifying a more suitable site for the location of the Transportation Staging Area.

(10.3)

Pc MAZZILLI

Carver/Plymouth EWMS was given high marks by the evaluators. I feel you should understand that it was the Plymouth Fire Department that set up and ran this facility as Carver has not yet supplied the people they need. Plymouth could run this facility by itself. Carver could not do this. This is still an outstanding issue and must be resolved between Plymouth and Carver.

(E10.6)

Pc HADFIELD

traffic studies -- anyone who has travelled on Route 44 knows that very well;

(Tr. 57, li.14-15)

ETE DIXON

But one thing I haven't heard today at all is the fact that there are these shelters and there are these reception centers and there are all these problems and the inadequacies -- but nobody has mentioned that there is no way out. And if that plant were running right now and it melted down, you would not be able to get out either because you'd have to go down Route 44. And at 2:00 on a Tuesday afternoon, you can't get down Route 44. You can't get down Route 3 on a Friday afternoon. The fact is there's a whole lot of denial going on with these evacuation plans because there is no way out. It's that simple.

(Tr.147, li.9-19)

ETE CRYSON

Road Capacity - Summary of Prior Information - The traffic capacity of the Duxbury roads is conservatively estimated to be an average of 1297 vehicles per hour. April 12, 1990 RERP Committee Comment - Issue closed

(E7.5)

ETE VOGLER

Dear Ms. Miller,

Emergency preparedness for an evacuation response away from the Pilgrim Plant can be no better than the road that most vehicles will travel over. Present RT44 from Plymouth West to Taunton where the emergency center is located, greatly reduces even the best of plans any agency or company could pre-arrange.

Environmental considerations to the wet lands has in the past stymied all efforts to complete the last 7 miles of relocated RT44. Does the environmental priority still exist? Have they given you any assurance construction of this road will begin?

(12.1)

ETE COLE

Voluntary Evacuation - During the evacuation of the beach and schools what will happen to other residents? Will there be congestion during evacuation? Summary of Prior Information - The Evacuation Time Estimate (ETE) did not consider voluntary evacuation. The ETE estimates approximately 25% of the population evacuates voluntarily. Issue closed.

(E7.5)

ETE VOGLER

Roads are already beyond capacity under normal conditions. In an emergency with added volume and breakdowns they will be impassable.

(E1.9)

ETE FLEMING

Evacuation routes - Roads are not capable of handling volume of traffic.

(E1.9)

ETE FLEMING

Evacuation plans call for evacuation of schools and beaches at the Alert stage. This will alert local residents, therefore roads will be hopelessly clogged before traffic management support groups arrive.

(E1.9)

ETE FLEMING

Evacuation routes should have alternative in case Plume is travelling in that direction - this is not provided.

(E1.9)

ETE FLEMING

Evacuation of Duxbury Beach, the Gurnet and Saquish - over a wooden bridge ??

(E1.9)

ETE FLEMING

Because the EPZ is subject to constantly changing coastal wind directions (see wind study conducted by Drs. Spengler and Keller), the only realistic approach is evacuation of entire zone.

(E1.7)

ETE FLEMING

Traffic management etc., is handled by State Police and support group- they will not be called out until Gov. calls for state of emergency.

(E1.9)

ETE FLEMING

I will focus on the deficiencies with respect to the RERP and the exercise which took place on October 12 and 13, 1989.

(Tr.116, li.18-20)

EX MUIRHEAD

On October 6, 1989 CURE wrote to Massachusetts Secretary of Public Safety Charles Barry, putting the state on notice that the upcoming graded exercise of the RERP for the Pilgrim Nuclear Power Plant would not constitute a full participation exercise within the meaning of 44 CFR 350.9.

(Tr.116, li.21-25)

EX MUIRHEAD

Section 4(f) of Appendix E to 10 CFR Part 50 specifies that "a full participation exercise shall test the major observable portions of off-site emergency plans." This standard mandates that the state and local plans be in place before the test takes place. The NRC has recently confirmed that a full participation exercise may be conducted only after the state and local plans have been approved and are in place.

(Tr.117, li.25, Tr. 118, li.1-2)

EX MUIRHEAD

The record at that time demonstrated that the exercise scheduled for October 12, 1989 could not satisfy the requirements for a full participation exercise because the integrated capability to respond to an accident at the Pilgrim plant did not exist.

(Tr. 117, li.25, Tr. 118, li.1-2)

EX MUIRHEAD

In addition, numerous observable portions of the plan had not been implemented and therefore were not available for testing. Government documents establish that the October exercise did not satisfy FEMA and NRC regulations.

(Tr.118, li.18-22)

EX MUIRHEAD

Additional copy machine will be provided to news center.

(E10.14)

EX VARLEY

Three typewriters are available for use among all offsite PIOs [see inventory]; provision of one additional typewriter is planned.
(E10.14) EX VARLEY

EP media kits were available, information in media although not immediately displayed. [See inventory]; procedures have been revised to ensure immediate display of offsite media kits.
(E10.14) EX VARLEY

Refresher training will be provided for Morton Hospital Staff, with emphasis on completing logs and tracking information.
(E10.14) EX VARLEY

Area II Civil Defense at Bridgewater misread or misunderstood the Duxbury Implementation Procedure. More practice, and more explicit instructions will solve this deficiency.
(E7.4) EX KENNEDY

Annual training of EMS crews will emphasize proper procedure to prevent contamination.
(E10.14) EX VARLEY

Annual training of EMS crews will emphasize that decontaminations of the patient should be performed prior to arrival to the hospital.
(E10.14) EX VARLEY

Annual training of MS-1 hospital will emphasize the need to tape floor coverings.
(E10.14) EX VARLEY

American Red Cross Rep. did not perform a shift change (Taunton). The alternate scheduled to participate in the exercise was called to duty for an actual disaster. This will be demonstrated at the next exercise (see attached EOC Staff List for names of designated primary and alternate). ARCA
(E10.7) EX SPEARIN

It appears that items described in subject report regarding the EOC and operational areas were corrected during the Remedial Exercise.
(E10.9) EX MEISTER

The News Release by the State PIO did include information on the reception center for Duxbury and Marshfield schools based on the Executive Order. This cleared up the "to be developed" language in the EBS message and was corrected before the EBS message was released from the Media.
(E10.9) EX MEISTER

Therefore, at the Media Center, hard copy was available as to the reception center for Duxbury and Marshfield schools; the information was discussed during the press conferences and it was stated that the information would also be posted at the schools.
(E10.9)

EX MEISTER

Hard copy of the EBS messages was available in the State PIO room. It was given to the person running the single copy machine who was 30 minutes to an hour behind making copies. Obviously, more than one copy machine is necessary and it should be faster than the one used. In addition, as soon as EBS messages were received, the towns and the utility were immediately informed as to the contents.
(E10.9)

EX MEISTER

...the Town of Duxbury challenges the NRC to explain why it is continuing to bypass FEMA in reviewing and assessing off-site emergency planning.
(Tr.70, li.2-4)

Pd VOGLER

It is because of this past record by the NRC that the Town of Duxbury chooses not to report to the NRC concerning off-site planning. We believe the public safety of our residents will be better served by asking the NRC to withdraw from further off-site planning assessment and allowing Public Law 96-295 to operate as it was intended. There needs to be a check and balance between the role of the NRC as a licensing and regulatory authority and FEMA as an emergency planning authority in order to provide for the public safety and in order to build public confidence in these matters.
(Tr.76, li.13-23)

Pd VOGLER

However, we have identified the areas of weaknesses and communicated that information to FEMA and to our state civil defense agency in a very comprehensive report in June of 1990. This is the proper procedure for developing off-site emergency plans. We are attaching a copy of the status report that was sent to FEMA on June 22, 1990 plus an update of Duxbury's emergency preparedness status as of September 5, 1990. But I would therefore respectfully refer the NRC to the Massachusetts Civil Defense Agency and to FEMA for any future status reports on Duxbury's off-site emergency planning.
(Tr.77, li.10-21)

Pd VOGLER

MCDA acknowledges that state plans for Duxbury school children remain incomplete and are awaiting final action by the town of Duxbury.
(E1.2)

Pd FLEMING

I'm very concerned with the status of all the towns in terms of the school plans... And to hear tonight that none of the schools have an approved plan is absolutely appalling.
(Tr.86, li.19-24)

Pd MCDONALD

A lack of evacuation plans for public and private schools and day care centers.
(Tr.120, li.13-14)

Pd MUIRHEAD

the school plan issues;
(Tr.57, li.10)

Pd DIXON

Training of emergency workers...To add to my list of the untrained personnel, number one, the majority of the Duxbury school personnel; number two, the entire emergency worker personnel for the Town of Needham,...three, the EOC staff for the Wellesley reception center has not yet been trained.
(Tr.109, li.13-21)

Pd FLEMING

Staffing and Training Based on analysis the minimum number of people required to perform all emergency functions, including both Town and private organizations, on a 24 hour basis is estimated to be 305 emergency personnel. Training goal is to train all Town employees that may be involved in emergency functions. Since January, 1990 61 new emergency workers have received initial training and 90 emergency workers have received requalification training. The requalification training program is presently in progress to provide additional training. Nine of the 51 EOC positions are presently vacant, replacements are being sought.
(E7.2)

Pd VOGLER

Training needs to be conducted involving the use of the word "emergency" as in "state of emergency" declared by the Governor and "declaration of emergency" as declared by the local Selectman. In the exercise, these two terms were sometimes confused with "Site Area Emergency" and "General Emergency".
(E7.4)

Pd KENNEDY

Training - What is the status of training of our (Duxbury) personnel in procedures and training with equipment? April 12, 1990 Committee Comment - Item closed except for Nursing Home and School Department training which is low. Attempt to obtain better attendance during this years training.
(E7.5)

Pd VOGLER

Harbormaster and Coast Guard IP's should be reviewed, and changes made if necessary. Then a new lesson plan should be developed and training provided.
(E7.3)

Pd GROUX

Lack of sufficient designated host school capacity to shelter school children from EPZ. A draft executive order is attached which empowers use of public facilities for this purpose under an actual emergency. However, no appropriate plans and procedures exist at present.

(Tr.119, li.23-25; Tr.120, li.1-2) Pd MUIRHEAD

The proposed use of a Governor's executive order to commandeer public facilities in the event of an emergency does not satisfy the requirements of Federal regulations because the facilities have not been identified and therefore cannot be tested. Moreover, in Mr. Boulay's October 6, 1989 memorandum, he acknowledges that "any adhoc action taken by the executive order is counter to the public safety policy of the Commonwealth."

(Tr.121, li.5-12) Pd MUIRHEAD

Determine range of pagers. Proper use of pagers must be emphasized.

(E7.3) Pd GROUX

Need direct phone line from EOC to DPW barn.

(E7.3) Pd GROUX

Need better antennas at staging area and improve set up at staging area.

(E7.3) Pd GROUX

Police Communications Communications Officer was not aware that Conservation Officer was in the field. Conservation procedure should notify Police Communications officer of their activities.

(E7.3) Pd GROUX

Permanently issue dosimetry packets to both groups, provided satisfactory storage is available. If proper storage can't be accomplished, the procedure should remain as it is.

(E7.3) Pd GROUX

Absolutely we need the portable radios which we have been promised by Boston Edison. Further, the School Superintendent telephone in the ECC needs to have two or three programmed numbers.

(E7.4) Pd KENNEDY

Resources and Equipment the EOC is fully operational. The Civil Defense annual grant amount has been replenished, as per the agreement with Boston Edison. Issues that are being or need to be addressed: Re-evaluate paging capabilities. Improve communication between EOC and DPW. 3. Concern with the State's ability to provide adequate resources, both equipment and personnel, in a timely fashion. Require additional CDV-700's for EWMDS. Questionability of shelf life of KI. Portables needed for Life Guards at Duxbury Beach. Older equipment issued previously by Boston Edison is not covered under the new equipment maintenance agreement.

(E7.2) Pd VOGLER

Conservation Officer and Harbormaster request sheltering capability and protective clothing. Possibility of providing sheltering capability and protective clothing is being investigated.
(E7.3) Pd GROUX

Decontamination Station needs additional equipment. Will supply 4 CDV-700's paper bath towels and pans to the decontamination station.
(E7.3) Pd GROUX

Future exercises should demonstrate the capability to stage busses at the Alert Level.
(E7.3) Pd GROUX

Additional personnel for rumor control will be made available.
(E7.3) Pd GROUX

an alternate for the Beach conservation Officer will be appointed.
(E7.3) Pd GROUX

There is inherent in a simulation, some built-in "raggedness". A very careful attention to detail in using the terms "simulate/demonstrate" will make future simulations smoother.
(E7.4) Pd KENNEDY

State Communication Problems - What about the lack of communication with the State? What is the State doing to assure Town of adequate commitment of personnel resources by the State? April 12, 1990 RERP Committee Comment - Open until Remedial Exercise conducted and deficiency cleared.
(E7.5) Pd VOGLER

Public Information Material for Transients - How do transient people from out of town know where to go? (Relative to above) April 12, 1990 RERP Committee Comment - Included in Number 15, close issue.
(E7.5) Pd VOGLER

About 4 1/2 years ago I helped one of Duxbury's concerned citizens follow correct procedure to ask our Selectmen about evacuation plans in case of a nuclear accident at Pilgrim. I now look back and find that despite the intervening years, dedicated work by many concerned citizens and committees, the questions she was asking have still not been answered satisfactorily, and there is no adequate evacuation plan in place. It is hard not to be discouraged and alarmed.
(E6.1) Pd SAUNDERS

So I want to know what you're going to do and I want another public hearing to see whether you are on a new track to regain credibility which you sorely have lacked.
(Tr.133, li.4-6)

Pd LAMPERT

IP Revisions - How come the schools and the school committee only have the fifth IP when we are on the seventh IP? April 12, 1990 RERP Committee Comment - Issue will be closed when index developed.
(E7.5)

Pd VOGLER

The August 1990 report of FEMA, I understand, noted that there were communication problems with host schools...It's because there aren't any host schools... There is at best a gentleman's agreement in place between Duxbury and Needham.
(Tr.81, li.18-20)

Pd LAMPERT

Host schools. As Mr. Lampart has already said, a gentleman's agreement is the most accurate description of the current status of host schools. Superintendents of Schools Drs. Kennedy and Tirrell, from Duxbury and Needham have personally agreed to use the Needham schools as host schools for Duxbury's children.
(Tr.104, li.20-25)

Pd FLEMING

For example, it was pointed out that FEMA mentioned they had a communications problem in Duxbury with the host schools. It took someone here to point out the problem was we didn't have a host school.

(Tr.132, li.3-6)

Pd LAMPERT

Host schools assigned to Duxbury - Framingham and Newton - Not aware they were designated. Not agreed to participate. No provision for radiation monitoring or decontamination. No provision for radiation monitoring or decontamination.
(E1.9)

Pd FLEMING

School Department Radios: What is the status of the School Department's portable radios being provided by Boston Edison? Issue will be closed when CB radios are provided to schools.
(E7.5)

Pd VOGLER

Bus Communications - What is being done to keep communication with the bus drivers once buses leave Duxbury? April 12, 1990 RERP Committee Comment - Issue will be closed once host school identified.
(E7.5)

Pd VOGLER

The current status of host schools for Duxbury is only a "Gentleman's Agreement." Superintendents of Schools Kennedy of Duxbury and Tirrell of Needham have personally agreed on the use of Needham Schools as Host Schools for Duxbury's children. However, neither the state nor anyone else has drawn any letter of agreement. No IPs have been written for Needham nor redrafted for Duxbury. There has been no training of Needham personnel. No maps have been drawn. No instructions have been written, or signs printed. Further, although the Town of Duxbury has insisted, and promised Needham, that Duxbury children will be monitored before they enter Needham's schools, there is no monitoring equipment in

place. Again, this offers nothing approaching "reasonable assurance" to the parents of Duxbury that our children will be protected in case of a radiological accident at Pilgrim.

(E3.1)

Pd LAMPERT

The October 6 memo from State Civil Defense indicated that the Criminal Justice Training Center [not a public school] in Needham, [plus an executive order from the Governor seizing schools in the vicinity of the Wellesley Reception Center] was the substitute. There is a major problem with this "solution": It is an inadequate substitute for a developed relationship with a public school system. The procedure rests in part upon the assurance of a known destination [with telephone numbers, the principal's name, and a map whose route has been driven to determine accuracy.] Anything less will maximize parents driving to school to pick up their own and neighbor's children, thereby clogging school driveways and creating additional hazardous conditions for children and other pedestrians. In time this flaw can be corrected. Secretary of Public Safety Charles Barry has agreed that Duxbury officials [in conjunction with MCDA and Boston Edison] can develop the host school relationship for Duxbury which already exists in the Taunton/Bridgewater reception Center areas.

(E7.4)

Pd KENNEDY

The Town of Needham School Committee has voted to accept the children of Duxbury. But again we find that the state has failed to do their job. The state has not drawn nor issued letters of agreement with the town of Needham. No IPs have been written for Needham nor redrafted for the Town of Duxbury. There has been no training of the Needham personnel. No maps have been drawn, no instructions have been written, no signs have been printed.

(Tr.105, li.1-8)

Pd FLEMING

You indicated that the Needham Police Chief has three concerns: a) that a dedicated communications system be developed (this can be addressed during the planning); b) that he play a major role in determining what routes will be used (this is a central issue to be addressed in our planning); and c) that the safety of the citizens of Needham not be compromised in any way (a reasonable point).

(E1.5)

Pd KENNEDY

There are approximately 2,800 students in the Duxbury schools. On any given day, perhaps 10% would be absent and it is reasonable to predict that high school students - many of whom drive to school - would not all evacuate to Needham. The most logical destination for the bulk of Duxbury students appears to be the Newman Middle School (leased until June 30, 1991 to the Criminal Justice Training Center). The overflow could go to Needham High School (or to the Hillside Elementary School if the accident occurred in May or June 1990. Prior to the reopening of the Hillside School for Needham elementary students). Duxbury staff members will accompany students on our school buses. Our staff would be expected to remain with Duxbury children until parents picked up their children or until the Red Cross took over. It does not appear that there would be any reason to dismiss Needham students early even if the Duxbury students arrived. Duxbury students can be housed in the auditorium, gymnasium or cafeteria areas of any school which was in session

with Needham students.
(E1.5)

Pd KENNEDY

Finally, the required radiological emergency training, 50.47[b][14], had not taken place when the NRC permitted Pilgrim to ascend above 5%. There are still many emergency personnel, e.g., teachers who are responsible for the largest segment of the population, who have not yet received any training.
(E1.7)

Pd FLEMING

Host school directions will be posted on the school doors after all children are evacuated - this practice will cause parents working outside the area to have to drive back to area to determine location of host schools and children. The negative - adding additional, unnecessary traffic to roads. No letter has been agreed on or arrived. The positive - there are not enough buses, therefore parents will have to evacuate their own children anyway.
(E1.9)

Pd FLEMING

School IPs: Is it clear in the IPs that parents may pick up children at school? Summary of Prior Information - The School Department Implementing Procedures have a number of references allowing parents the ability to pick up children. April 12, 1990 RERP Committee Comment - Issue closed.
(E7.5)

Pd VOGLER

Furthermore, the Town of Duxbury insists upon and has promised to Needham that our children will be monitored before entering their schools under any circumstances. No equipment is in place.
(Tr.105, li.9-12)

Pd FLEMING

The Duxbury student or adult who has been exposed to radiation is scheduled to be taken to the Reception Center at State Highway Department garage at the intersection of Route 9 and Route 128 in Wellesley. Radiation monitoring and decontamination facilities will be set up at that location. Students can be checked as they sit in the busses in Needham to insure that none have been exposed to radiation, an additional precaution. Radiation monitoring equipment could be available at the Needham schools or could be brought on the buses from Duxbury, however we develop the plan.
(E1.5)

Pd KENNEDY

Pilgrim Area Collaborative - There is no plan for the 75 severely handicapped students; ages - infant to adult.
(E1.9)

Pd FLEMING

Emergency Plan and Implementing Procedures: Presently 44 I.P.'s exist (including small day care centers for six children or less. All I.P.'s were updated following the October, 1989 exercise. Four new I.P.'s have been developed and 2 have been deleted. Pilgrim Area Collaborative has now been included in the Duxbury School Procedures, along with the development of their own P.A.C. Procedure. Review of revised and new I.P.'s is being carried out with input from agency heads.

The RERP Committee will be included in the review process.
(E7.2)

Pd VOGLER

The Pilgrim Area Collaborative (PAC) special needs children housed in 3 classrooms at the Duxbury Intermediate school were once part of the Duxbury Schools Implementation Procedure [IP #06]. They were removed from the school IP in late August, and initial conversations began between Boston Edison Company and PAC headquarters in Pembroke. As of October 18, there is no completed IP for PAC. If an accident occurs in the near future, of course the schools will help PAC and not leave them behind. yet no IP exists for PAC (confirmed on October 18 by PAC Director). Most of these children reside outside of Duxbury, but are bused here daily. (E7.4)

Pd KENNEDY

Detailed plans for host schools to protect children from Duxbury and Marshfield have yet to be completed. (Tr.19, li.8-10)

Pd BOULAY

In poll taken - majority of teachers did not agree to evacuate or participate in Plan. (E1.9)

Pd FLEMING

Different geographic locations of schools could call for differing protection actions. (E1.9)

Pd FLEMING

State Support: Have the support groups (such as State Police, National Guard, etc.) been obligated. What is the obligation? April 12, 1990 RERP Committee Comments - Requests FEMA comment on the lack of a signature page for State agencies covering concept of operations as required by NUREG-0654, Element A3. Concerned about the lack of progress in obtaining a host school there is some doubt about whether Needham will agree to accept Duxbury students. Committee recommends designating the Reception Center as temporary location and expanding the search for a host school. Monitoring capability should be available to ensure that the school children do not go into the host school with no way of knowing if they are contaminated. This may make negotiations with a host school easier as well. (E7.5)

Pd VOGLER

Objective 13. The second deficiency, included the inability to inform the public where the school children had been transplanted after being transferred from their EPZ schools. As we all know underlying cause of this problem was no host schools for Duxbury had been named. The fix for this problem was to name the Criminal Justice Learning Center as the location for parents to go and there they would be told where their children had been sent. The Governor was again to "take" host schools under the state of emergency This FIX does not adequately address the problem. The Selectman indicated their dissatisfaction in a letter sent out to the authorities weeks before the remedial drill took place. (E1.10)

Pd FLEMING

As noted above the Criminal Justice Training Center has been named as the location named for parents to travel to locate their children. The actual additional host schools were not named. CJTC can not handle the entire school population. Yet no other schools were taken under the Governor's State of Emergency. This was a band aid cure for communication not actually addressing the real problem. Duxbury does not have Host Schools and the Governor did not any.

(E1.10)

Pd FLEMING

A new problem that presented itself was the Alden school Fifth Grade Outdoor School. 124 fifth graders and 12 staff members were at Camp Squanto, Plymouth for three days and nights. This activity is part of the school curriculum and the children are technically "in school". As the drill took place I carefully notified all responsible parties along the way. The end result was these children fell through the cracks. After notification of the situation by a parent: Chief O'Niell (Sic.) Duxbury Civil Defense and Doug Hadfield Plymouth Civil Defense did communicate with each other concerning this problem. It was determined hours later that Plymouth would have been aware of these school children but they would fall under the Camp I.P. not the schools. These children would not have fallen into the "precautionary transfer" of school children and no communication would have been issued informing parents of their whereabouts. Indeed these children would have been left at Camp Squanto. Their buses would have been pressed into service elsewhere and they would have no way out. Parents would not have received any public notification of this.

(E1.10)

Pd FLEMING

School Communications - School telephone lines were over-loaded with calls. This happens regularly. The Duxbury EOC could not contact the school for 20 minutes. Seven portable radios have been supplied for schools. Two base radios are being installed.

(E7.3)

Pd GROUX

Lack of a reception center for people evacuated to the north. In a memorandum dated October 6, 1989, Robert J. Boulay, whom we've heard tonight, Director of the Massachusetts Civil Defense Agency, outlined the major deficiencies at Wellesley reception center, in which he said, "preclude a full demonstration of its operational capability and the proposed October 1989 exercise objectives"...

(Tr.119, li.3-10)

W MUIRHEAD

Lack of workable site specific plan and supporting procedures.

(Tr.119, li.19-20)

W MUIRHEAD

There was just one other thing, that the Governor's state of emergency is still key to implementing the plan and it's an ad hoc process that still isn't in place and it's sort of everything is riding on that and that hasn't been finished either.
(Tr.135, li.1-5)

W O'BRIEN

In 1987, FEMA found there was no adequate reception center. Mr. Boulay and Mrs. Thompson have made it abundantly clear that nothing has changed. One major function, perhaps the most important function, of the reception center is to monitor the incoming population. If you accept the NRC/Dr. Bellamy's estimates, it will take 80 hours for the two portal monitors at Wellesley to monitor the 20 percent of the Duxbury population that's supposed to arrive. Your own regulations say this is supposed to be completed in only 12 hours. The monitoring will be supposed to be done by the National Guard. The National Guard says it won't even arrive for between 6 to 12 hours.
(Tr.80, li.10-22)

W LAMPERT

There are two portal monitors on the premises...Ms. Gabaldon insists these can monitor a person every three seconds, previous demonstrations at Pilgrim and follow up conversation with Dr. Bellamy negate the three second statement and establish two to three minutes as a more realistic time assessment.
(E1.1)

W FLEMING

The singular major flaw of the reception center which renders the concept inadequate is monitoring. The National Guard will be performing the monitoring duties. Their [National Guard] official estimated time of arrival will be 12 hours. MCDA "hopes" they can arrive within 6-12 hours. In either situation it is apparent that monitoring will not attempt to locate or train any alternate group to handle monitoring: nor will MCDA require the National Guard to sign the necessary letters of agreement or signature page as required in NUREG 0654. Current planning states the National Guard along with all other support groups will be notified following the Governor's State of Emergency Declaration rather than having notification being at the earliest possible stage thus adding perhaps hours to the official 12 hour estimated time of arrival.
(E1.1)

W FLEMING

20% formula? 6,700 people monitored (12 hours) 2,584 vehicles monitored by 4 teams (of 2) what happens if fast moving accident and 3,500 students must be monitored at WRC also? Now 10,200 people A. Cannot be done.
(E1.2)

W FLEMING

The 20% figure used by FEMA in projecting numbers of people reporting to WRC for decontamination is based on a natural disaster standard not a radiological one. Ms. Gabaldon has acknowledged that if our school children [3,500 students] must additionally be monitored, that it could not be done within a 12 hour period. [decontamination must take place within a 12 hour period to ensure health]

(E1.2)

W FLEMING

At Wellesley Reception Center, the National Guard has been charged with the responsibilities of monitoring at the Wellesley Reception Center. The National Guard has said that they expect to arrive at the reception center in about 12 hours: MCDA expects that it may take only 6-12 hours for the Guard to arrive. Regardless of which is right, it's clear that the necessary monitoring personnel will not be present to even start the necessary monitoring until at least half the mandated 12 hour period has elapsed.

(E3.1)

W LAMPERT

Once the Guard does arrive, there is an even more obvious problem of numbers and time. According to Dr. Ronald Bellamy of the NRC, the Portal Monitors, two are provided at the Wellesley Reception Center, can monitor one person every 2 to 4 minutes. Using this estimate, it will take 80 hours to monitor the planned for 20% [3200] of the Duxbury population. Eighty hours certainly does not fulfill the mandated 12 hour requirement [even assuming that some of the 12 hours still remains when monitoring even begins], and the 3200 person estimate includes none of the arriving Marshfield population, to say nothing of summer residents and beach goers.

(E3.1)

W LAMPERT

The National Guard has been charged with the responsibilities of monitoring the evacuees at Wellesley. The National Guard has stated their estimated time of arrival will be 12 hours. MCDA states perhaps the National Guard will arrive in 6 to 12 hours. In either scenerio, it is obvious that the personnel will not be present to perform the necessary monitoring within the mandated time frame the time factor alone precludes any resonable assurance as determined by Federal regulations and guidelines.

(Tr.103, li.16-55)

W FLEMING

As we noted in our October 5, 1989 memorandum to the Federal Emergency Management Agency, prior to the October 1989 exercise, we must hold a full demonstration of operational capabilities at the state-run reception center in Wellesley.

(Tr.19, li.11-15)

W BOULAY

Lack of an emergency operation center.
(Tr.119, li.16)

W MUIRHEAD

Lack of emergency communications equipment.
(Tr.119, li.18)

W MUIRHEAD

The Wellesley Reception Center was not completed enough to serve as a reception center. The Wellesley Reception Center is presently operational but not entirely complete. Facilities should be complete in two weeks according to MCDA.
(E7.3)

W GROUX

Reception Center in Wellesley: Question appeared to reference unsigned letter dated October 5, 1989 from MCDA to FEMA concerning the Exercise extent of play for the Wellesley Reception Center. This letter identified how the reception center was to be used for the Exercise and its short-comings.
(E7.5)

W VOGLER

Massachusetts Department of Public Works Reception Center : MCDA does not feel that the operational capability of the Massachusetts Department of Public Works (MDPW) Wellesley reception center existed at the time of the exercise and, as requested in our extent-of-play document submitted to FEMA on October 5, 1989, we suggested that a full-scale demonstration of the reception center be evaluated on or before the next biennial exercise. Comments regarding the MDPW reception center evaluation may be found in the appendix.
(E10.1)

W BOULAY

Full Scale Demonstration of MDPW Reception Center: On October 5, 1989, MCDA submitted an extent-of-play for the MDPW Wellesley Reception Center in the October 12-13 exercise. At that time, emergency communications equipment, an emergency operations center, and the full MISSING TEXT
(E10.1)

W BOULAY

In December 1988, against strong objections from the Commonwealth, the NRC authorized restart of the Pilgrim Plant. At that time, emergency plans were not adequate to protect the public health and safety as determined by both FEMA and the Commonwealth. The lack of a northern reception center was a major deficiency and at that time, the Wellesley site was simply a garage with no operational capability. Despite the authorization to restart from the NRC, the Commonwealth continued to work diligently with the licensee to develop a realistic operational capability at the Wellesley DPW. The plant was on-line against the Commonwealth's objections, it was engaged in a power ascension program, and an operational northern reception Center was lacking to respond to an accident.
(E10.8)

W BOULAY

Notwithstanding these actions, there are major deficiencies at the site that preclude a full demonstration of its operational capability and the proposed October 1989 exercise objectives. Lack of a signed agreement between MPDW and the licensee on facility enhancements necessary for the garage to function as a reception center; Lack of an Emergency Operations Center; Inadequacy of sanitary facilities for evacuees; Lack of emergency communications equipment necessary to communicate with all parties involved; Lack of integrated training of all state agency personnel involved in the operation of a reception center; and Lack of a "workable" site-specific plan and supporting implementing procedures. Lack of sufficient designated host school capacity to shelter school children from EPZ communities. A draft Executive Order is attached which empowers use of public facilities for this purpose under an actual emergency. However, no appropriate plans and procedures exist as present and "ad hoc" action is counter to the public safety policy of the Commonwealth. Lack of signed agreement for the transportation staging area. In consideration of the above deficiencies, as well as of the accomplishments, the Commonwealth will not demonstrate all the accomplishments, the Commonwealth will not demonstrate all the

(E10.8)

W BOULAY

In addition, the draft plan and procedures enclosed with this report are not implementable at present. This plan and accompanying procedures are being submitted only for informal technical review in preparation for the upcoming Pilgrim exercise. The ability to monitor, understand and use emergency classification levels (ECLs) through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario will not be fully demonstrated at the Wellesley DPW for the following reasons:

(E10.8)

W BOULAY

Neither the primary nor backup systems for notification are in place at the facility DNN and BECONS.

(E10.8)

W BOULAY

There is no EOC and no mechanism for the 24-hour warning point to relay initial notification or ECLs.

(E10.8)

W BOULAY

Appropriate ECL posting will not take place because there are no facilities for displaying such information.

(E10.8)

W BOULAY

Staff will not perform actions specified by their respective implementing procedures because there is no EOC in place and no equipment to perform their required actions.

(E10.8)

W BOULAY

The ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions will not be fully demonstrated for the following reasons:
(E10.8)

W BOULAY

There is no EOC to mobilize staff for and no EOC to activate;
(E10.8)

W BOULAY

Field locations, such as the Transportation Staging Area, have not been finalized so there is no location for transportation attendants to be mobilized for.

(E10.8)

W BOULAY

Monitoring and decontamination staff will already be at the facility, so mobilization of staff will not be properly demonstrated.

(E10.8)

W LOULAY

The ability to direct, coordinate and control emergency activities will not be fully demonstrated for the following reasons. There is no EOC or an emergency response infrastructure to demonstrate direction and control activities and the required interface between reception center, EOC operations, other appropriate locations, organizations, and field personnel.

(E10.8)

W BOULAY

The ability to communicate with all appropriate locations, organizations and field personnel will not be fully demonstrated for the following reasons: There is no EOC and therefore no communications links exist between the EOC and the reception center or between the EOC and field locations, such as the Transportation Staging Area, overflow parking areas, Host Schools, or congregate care facilities; EOC staff will not be activated and will not be able to simulate communications links.

(E10.8)

W BOULAY

The adequacy of facilities, equipment, displays and other materials to support emergency operations will not be demonstrated at the Wellesley DPW for the following reason: There is neither an EOC nor facilities, equipment, displays, or other materials to support the operation of EOC.

(E10.8)

W BOULAY

The ability to establish and operate rumor control in a coordinated and timely fashion will not be demonstrated for the following reason: No EOC or communications links between the state, Area II and the identified Wellesley DPW rumor control personnel exist.

(E10.8)

W BOULAY

The ability and resources necessary to implement any appropriate protective actions for school children within the plume EPZ will not be demonstrated for the following reasons: Plans, procedures, and personnel are not in place to implement protective actions for school children within the EPZ communities of Duxbury and Marshfield. The designated host school at the Criminal Justice Training Center in Needham is only capable of accommodating approximately half the number of students from the affected EPZ towns.

(E10.8)

W BOULAY

The adequacy of procedures, facilities, equipment and personnel for registration, radiological monitoring and decontamination of evacuees will not be fully demonstrated at the Wellesley DPW for the following reasons: There is no EOC and there are no operational communications links between the reception center and the EOC. Congregate care facilities cannot be demonstrated. The Red Cross EOC Representative who would activate congregate care facilities according to procedures, will not be present.

(E10.8)

W BOULAY

The adequacy of facilities, equipment and personnel for congregate care of evacuees will not be demonstrated at the Wellesley DPW for the following reason: There is no EOC and the Red Cross EOC Representative will not be present to activate or stimulate activation of congregate care facilities. Individuals responsible for the facility cannot be contracted because shelter agreements are not in place and facility personnel have not been trained.

(E10.8)

W BOULAY

The ability to maintain staffing on a continuous 24-hour basis by an actual shift change will not be demonstrated at the Wellesley DPW for the following reason: DPW facility staff have not been trained in shift change procedures.

(E10.8)

W BOULAY

The following is a listing of recommendations. Please note this is not sequential or prioritized. Intelligence Section - develop IP's for position at Area and State. State Plan- incorporate changes and supporting IP' State EOC - duplicate charts located in Area 2 EOC. Memory Telephone Dialers - State EOC (2 Operations, 2 Public Informaiton items: a. Shorten messages b. fax test messages. Single Siren Activation Point - for use by Middleboro State Police in the event of a fast breaker. State EOC DNN link - DNN voice should be send and receive: direct access by State Director to BECO Recovery Manger/EOF is essential (a dedicated line should be established if DNN unavailable for modification). BECONS - MCDA should test this system at least monthly. Wellesley Procedures Notification - DNN drop should be installed at DPW Boston Radio Dispatch with switch to transfer to Wellesley Reception Center upon activation. Up-date/streamline all Wellesley notification procedures.

(E10.10)

W MEISTER

Reception Centers Equipment for monitoring is not in place. Parking at Wellesley is yet to be resolved. State agencies responsible for monitoring and decontamination have people to oversee activities but not actual people to perform functions. decontamination trailers are, by design, only to be considered as back-up facilities. At present, they are the sole facilities.

(E1.9)

W FLEMING

Reception centers host schools, health care facilities and hospitals are found to be deficient in the following areas: Unaware of their partici- pation in plan, not under agreement to participate, not sufficient staff to perform function assigned, training not completed, not adequate to handle volume.

(E1.8)

W FLEMING

lack of training for the Wellesley EOC personnel.

(Tr. 104, li.7)

W FLEMING

Lack of integrated training of all state agency personnel involved in the operation.

(Tr.119, li.19-20)

W MUIRHEAD

All E.O.C. personnel have not been trained. Con. Care Fac., Mass Care Fac., and Red Cross Emerg. Shelter are essentially the same. LOAs have not been signed to provide care and ensure transportation. It is not know if above are handicapped accessible.

(E1.2)

W FLEMING

And the lack of training for the Wellesley EOC personnel leaves planning for the Wellesley reception Center ad hoc at best.

(E1.3)

W LAMPERT

Instructions are geared to slow-breaking accidents only thereby omitting plans for other potential scenarios.

(E1.9)

W FLEMING

The Wellesley reception center as of July 20, 1990 had no sanitary facilities nor decontamination capabilities for the handicapped.

(Tr. 104, li.3-4 & Tr. 105, li.21-24)

W FLEMING

Inadequacy of sanitation facilities for evacuees.

(Tr.119, li.21-22)

W MUIRHEAD

There is no decontamination facilities available at this location for handicapped.

(E1.1)

W FLEMING

Handicapped decontamination will take place at the 13 assigned hospitals that have been designated for injured contaminated. MCDA does not know if these hospitals do have facilities for handicapped contaminated. One cannot assume that a handicapped shower in a hospital is available for this purpose. Once used for decontamination purposes said shower is contaminated and thus unavailable for normal operational use. MCDA must identify adequate handicap showers that will be made available and include this information in the plans. With the necessary information and directions being available before the accident takes place. As is handicapped decontamination is either non-existent or at best "ad hoc".

(E1.1)

W FLEMING

Seating etc. for handicapped or frail is non-existent.

(E1.1)

W FLEMING

There are two handicapped bathrooms in the earliest stages of construction.

(E1.1)

W FLEMING

Are Mass Care Facilities handicapped accessible? A. Unknown

(E1.2)

W FLEMING

WRC construction is incomplete: Handicap bathrooms [1 each male and female] are under construction. Inventories of supplies required to conduct operations are incomplete. Coveralls, booties, Etc. Dry wipe cloths for vehicle decontamination. Vehicle monitoring remains a sensitive issue: Methodology to decontaminate underside of vehicles if vehicle impounded - procedure?

(E1.2)

W FLEMING

There are no accommodations to seat the handicapped, (non-wheel chair, frail and elderly).

(E1.2)

W FLEMING

There are no sanitary or decontamination facilities for the handicapped.

(E3.1)

W LAMPERT

Lack of a signed agreement between Massachusetts Department of Public Works and the licensee on facility enhancements necessary for the garage to function as a reception center.

(Tr.119, li.12-15)

W MUIRHEAD

Traffic Management - State Police and National Guard and other support groups will not mobilize until Gov. calls State of Emergency.

(E1.9)

W FLEMING

Traffic management, etc. is handled by State Police and support group - they will not be called out until Gov. calls for State of Emergency.

(E1.9)

W FLEMING

There are essentially no letters of agreement, or even signature pages, signed by support groups, or by back up congregate care facilities, or by possible transportation providers from reception center to congregate care facilities.

(E3.1)

W LAMPERT

Lack of a signed agreement for the transportation staging area. Mr. Boulay's memorandum established that the exercises conducted on October 12 were a breach of the public trust and a charade which served to confirm the total inadequacy of the RERP for Pilgrim Station.

(Tr.120, li.3-7)

W MUIRHEAD

The failure to have support groups sign letters of agreement effects [sic.] congregate care facilities. Transportation to such facilities, Red Cross participation in these activities, proper training and perhaps notification that these facilities are under consideration for use in case of emergency.

(E1.1)

W FLEMING

Who is provider of Bus Transportation from WRC to Mass Care Facilities? A. Massachusetts Bay Transit Authority

(E1.2)

W FLEMING

Are LOA's signed? A. No

(E.1.2)

W FLEMING

How Many? A. Unknown

(E1.2)

W FLEMING

None of the support groups have signed letters of commitment or signature page as require by NUREg 0654 [sic.].

(E1.9)

W FLEMING

Will contaminated vehicles be washed? A. No - dry method will be used

(E1.2)

W FLEMING

The one principal difference in my proposal and the Edison response is the installation of car and truck tube-type washers for decontamination. They propose a hand-wiping system for decontamination which I find to be ineffective, unworkable and frankly preposterous. Vehicle decontamination is a requirement and should be accomplished in a responsible manner.

(E1.3)

W FLEMING

Planning for the recent disaster of the Exxon Valdez lost touch with the realities when their plan acquired only 15 percent of the personnel and materials necessary to implement their plans relying on myopic optimism, that somehow the 85 percent would become available. We have similar optimistic assumptions in our plant (sic). The reception centers, I believe, are sized only for 20 percent of the population; postulated accidents unfold relatively slowly; and there are other numerous examples.
(Tr.60, li.13-22)

W DIXON

Regarding reception centers - host schools, health care facilities and hospitals, basically - if we do manage to get out of the EPZ, there is still in reality nowhere to go. In Concept, what is presented here could fall into Title 18, Sec. 1001 of the U.S. Code dealing with False or Fictitious Statements.
(E1.8)

W FLEMING

There is no change of clothing to be provided for children who may be evacuated there (Bridgewater).
(Tr.93, li.9-10)

BT CREEDON

As far as we know, there are no double paper masks to be handed out to people at the Bridgewater State College in case the plume of radiation heads in that direction, a minimal protection would be masks to cover the mouth and nose of people who may have to unwittingly inhale it.
(Tr.93, li.24-25, Tr.94, li. 1-3)

BT CREEDON

"However --" and I point out to them that even in that particular report, January 27, 1989, in that particular report, it speaks to "enhancements" being done at the Bridgewater reception center. As a matter of fact, at that point in time, talks with the governing Bridgewater College Board of Trustees were not even scheduled until the following month, so there had been no agreement that they were permitted to use the site, let alone enhance it. "Essentially there is nothing in place except an old gymnasium." I know -- I played basketball there. "Even the portal monitors are stored elsewhere in the town. How then did the emergency staff and Boston Edison testify in October and December that this reception center could perform the functions monitoring and decontaminating the numbers of persons expected to use Bridgewater during an evacuation.
(Tr.47, li.5-21)

BT THOMPSON

...the reception center at Bridgewater State College is not adequately prepared. It's mandated by FEMA and NRC to be able to receive 20 percent of the population within 12 hours. Kingston cannot get people over there in that time, and if they were there, the feeling is that they can't be handled.
(Tr.92, li.21-25, Tr.93, li.1)

BT CREEDON

To highlight that particular item, even today at Bridgewater State College the toilet and shower accommodations are still in the storage boxes.

(Tr.93, li.2-4)

BT CREEDON

That was absolutely untrue testimony on the readiness of the Taunton and Bridgewater reception centers.

(Tr.49, li.2-3)

BT THOMPSON

Also on this so-called report, the Board of Selectmen speaks to planning issues of Taunton, another reception center, the main one of the Town of Plymouth. That building not even cleaned until January 28 and 29, 1989... So it was to be used as a reception center (?). "Note that the portable monitors (not yet properly positioned or tied into the electrical system) didn't arrive until January 10, 1989." How then could anybody testify in October and December that that center was ready to receive and decontaminate? "Note that the portable decontamination unit (not yet connected to plumbing) --" and the date of this February 7, 1989...

(Tr.47, li.22-25; Tr.48, li.1-12)

BT THOMPSON

Ms. Buckbee- a resident of Plymouth ...And I think it's to all our benefit that someone go there as soon as possible and actually see what is there and have it documented

(Tr.114, li.23-24)

BT BUCKBEE

During an emergency it is very difficult to contact off-duty police officers by telephone at home. It is recommended that pagers should be issued to all off-duty police officers when they leave home. During an emergency they could be contacted in the same manner as off-duty firefighters. Telephone pagers would be required since many officers live in Brockton, Middleboro and as far as Dighton therefore a radio type pager would not have enough range to suite our needs.

(E10.2)

BT MAHER

Eight additional portables for school crossing guards who would take care of traffic at the local schools and out of town officers called in to assist us at various traffic posts posts which will need the presence of a uniformed officer.

(E10.2)

BT MAHER

Dosimeters are needed for police personnel.

(E10.2)

BT MAHER

The Tri-town repeater located on top of water tank off of Route 18 has to be replaced. This is the radio repeater for the towns of West Bridgewater, East Bridgewater and Bridgewater should our primary radio system fail. The towns of East and West Bridgewater have come up with their share of the \$9,000.00 needed to replace the repeater and have requested that we come up with at least \$3,000.00 dollars for our share of the costs to replace this essential piece of equipment.

(E10.2)

BT MAHER

The Highway Department is in need of the proper amount and type of traffic control signs necessary for the traffic management plan. Several of the signs delivered by Boston Edison were incorrect.
(E10.2)

BT MAHER

A change in the operating procedures to allow for the Executive Secretary of the Town of Bridgewater, who acts as the Selectmen's designee in their absence, to declare a state of emergency when needed and Selectmen are not present.
(E10.2)

BT MAHER

Identification of additional groups or personnel to augment the Fire Department and to perform the duties of monitoring and decontamination.
(E10.2)

BT MAHER

Well, on a square foot basis, some people have apparently figured out that one place they can go is to Duxbury's Percy Walker Pool. Unfortunately, when they figured out how many people would fit in that building, they forgot that a lot of the swimming pool is under water.
(Tr.81, li.12-16)

SH LAMPERT

Sheltering. There has been no realistic dose reduction study done of shelters within Duxbury. The so-called shelter study was done on a determination of square footage alone. Mr. Lampart pointed out the ridiculousness of the Percy Walker Pool -- 2250 square feet happen to be under water. The supposed study merely attempted to make the numbers fit. They came up with the appropriate number. No thought was given to the current use of the building or the construction of the building. There is a definite need to step back and do a dose reduction study that will determine which buildings effectively act as shelters and which part of those buildings offer the greatest protection to the citizens. This is a goal that is easily attainable to minimum cost. The buildings already exist. Send in an expert who can determine which buildings and what sections will offer protection.
(Tr. 106, li.5-23)

SH FLEMING

50.47 [b][10] requires development of a range of protective actions. Here, no sheltering has been seriously developed; buildings have not been realistically evaluated for dose reduction factors.
(E1.7)

SH FLEMING

Sheltering of Beach Population: There has been no realistic dose reduction study of the proposed shelters within Duxbury. Most are above-ground wooden structures. The beach population requiring sheltering was, as the IG report noted, badly under-estimated. Even in determining how much shelter would be required for a much-too-small estimated population, the only determination made was on the basis of square footage. The problems with this should be obvious; for example, one principal building to be used [one of the few made of brick] is the Percy Walker Pool, but no one making the calculation considered that over 2000 square feet included in the calculation happened to be underwater.

(E3.1)

SH LAMPERT

And I never would have thought that four and a half years after my original concern was raised on this evacuation emergency planning at Hanover Mall - I have never thought I'd be here and I can't believe we're looking at all new faces and you're going to go through this all over again and it's just very discouraging.

(Tr.134, li.12-18)

SH OBRIEN

If Officials Say To Shelter in Place, the Shelter instructions deal with a larger particulate (i.e., fallout from Nuclear Bomb) not the Gamma Cloud or Plume we will experience from Pilgrim. a. Effective and realistic shelter study considering dose-reduction factors has not been done. b. Many shelters and most homes are wood framed structures which offer dose reduction 5% for Gamma Cloud. c. A towel is not effective protection in a Gamma Cloud; a face mask would offer more protection. d. No ingestion instructions are given. e. Cars offer minimal dose reduction factor. People should be aware of this fact. f. Shelter managers are unaware they have been assigned this task.

(E1.9)

SH FLEMING

Cars provide minimum dose-reduction protection in case of Gamma Plume.

(E1.9)

SH FLEMING

They talk about shelters within the Town of Kingston and a few of them are totally inadequate. One was identified as the local Burger King... There's no mention of the recently constructed Independence Mall which is pretty tightly enclosed huge structure which could handle thousands of people on a short-term basis if it were stocked with food, water, bedding, medical supplies, security people and any other thing that might be useful, like entertainment.

(Tr.96, li.18-25; Tr.97, li.1-3)

SH CREEDON

A lack of identifiable public shelters for the (Plymouth) beach population.

(Tr.120, li.9-10)

SH MUIRHEAD

We have plans for 10 miles; Sweden has plans for 25 to 50 miles.

(Tr.61, li.11-12)

EPZ DIXON

Cape Cod, the beautiful peninsula just south of here, is an identified risk area with no specific planning for the dangerously unique conditions involved in a radiological accident. With only two access roads, we have no where to go if a radioactive plume goes south. The Nuclear Regulatory Commission has already identified the 50-mile radius of the nuclear power plant as part of an emergency preparedness zone, the industrial pathway zone, concluding that "much if any particulate matter in a radioactive plume would have been deposited on the ground within about 50 miles from the facility. The NRC only falls short of providing guidance for the public by identifying only the food chain at risk.

(Tr.130, li.1-13)

EPZ TURKO

Well, there's no evacuation plans on Cape Cod. There's nothing.
(Tr.130, li.23-24)

EPZ TURKO

We on Cape Cod demand to be included in the EPZ to develop
protective measures for the population.
(Tr.131, li.8-9)

EPZ TURKO

...the prevailing wind is from Plymouth to Provincetown about 80
percent of the time throughout the year. And it's only about 20 or
25 miles due east.
(Tr.145, li.13-15)

EPZ CREEDON

and additional concerns about affected towns -- some of the folks
are here tonight that are not included in the EPZ but are also in
the ten-mile zone, such as Plympton, Bourne, Onset, and Buzzard's
Bay;
(Tr.57, li.18-21)

EPZ DIXON

The town of Marshfield feels that the entire town should be
incorporated within the EPZ.
(E10.5)

EPZ MCGONAGLE

In June 1985 the American Nuclear Society sponsored a seminar in
Boston to discuss hypothetical accidents to light water reactors,
including the type of the Pilgrim Plant. Based on the above it was
the opinion of the speakers and commentators at the seminar that
whatever the bases for selection of a 10 mile evacuation zone was
years ago, that those same criteria would easily support reducing
the zone to 1 mile [and even less]. Notwithstanding the above,
every decision of significance should be based on a risk benefit
analysis. The risks existent when the 10 mile radius zone was
established are far less now, after careful analysis; mitigating
methods have been improved, and the benefits, in view of the
"greenhouse effect problem" and the problems with assuring an
adequate supply of oil, are far greater than they were. I
therefore strongly urge that evacuation plans not be made a
criteria for operation of a nuclear power plant.
(E5.1)

EPZ KATZENSTEIN

Emergency Warning Signal, Sirens inaudible from many locations in
town [has been reported to NRC on numerous occasions]
(E1.9)

SI FLEMING

Necessary alterations to the siren activation system were
identified by FEMA after the October 1989 exercise are presently
under consideration.
(Tr.19, li.3-5)

SI BOULAY

inadequacies of the testing, the horn; the limits of the tests which have been done before and, as other speakers have mentioned, the request for a full test,
(Tr. 57, li.15-18)

SI DIXON

Siren Procedures - What is the correct procedure with the sirens? Why does the State give conflicting instructions on use of sirens? April 12, 1990 RERP Committee Comment - Open until Remedial Exercise conducted and deficiency cleared.
(E7.5)

SI VOGLER

In reviewing the October 12 exercise that we had, we think that there were some serious deficiencies as noted in the recent FEMA report with regards to communications directly to area 2, the EBS system and the siren sounding coordination. But each time we had to depend on area 2 EBS and the siren system, we were at a loss. We couldn't trust the information we were getting, it was coming from different directions and in most cases it was not accurate.
(Tr.85, li.22-25; Tr.86, li.1-6)

SI MCDONALD

1989 FEMA PNPS Exercise Draft, page 80, objective 13. This objective was found to be one of the two deficiencies cited by FEMA. If I may quote from FEMA, "The contributing factor which led to the citing of this deficiency for the State and Area II EOC were the confused and incomplete messages to the public via EBS. Problems arose concerning the EBS message."
(Tr.108, li. 19-25)

SI FLEMING

Emergency Broadcast System Local radio stations have no general info on EP provided to them by BECO. Stations find EBS communication chain unreliable and untimely.
(E1.9)

SI FLEMING

Did the drill address the deficiencies that directly effect Duxbury? Siren activation and notification of instructions within 15 minutes was tested strictly through communication no actual actions were taken only limited simulations. According to Chief O'Neill these communications did arrive at the E.O.C. properly.
(E1.10)

SI FLEMING

Day Care Centers - What is happening with the day care centers as they are no longer in the School Department IPs but instead in Health Department IPs? Need special report on that. Summary of Prior Information - Day cares were reassigned to the Health Department since they are special facilities. The added notification requirements would be handled by programming the phones for speed dialing and to assign an assistant when notifications are required. The Health Department procedure requires an update to address this. April 1990 Update - Although the manual for the phones indicates a speed dial capability, it isn't clear whether the installed phones have this function. The TSI representative is expected any day to install two more phones and will be asked about this. If the phones do not have the capability, we will see if we can get it. the Health Department IP has been modified to include an assistant. April 12, 1990 RERP

Committee Comments - Need to contact the fifteen small day cares (6 or less children) and determine if there are any special requirements such as transportation.

(E7.5)

SN VOGLER

As a first step, testimony regarding the special needs citizens in the communities near the plant should be comprehensively addressed by the NRC staff. We expect the forthcoming status report on emergency preparedness to reflect the concerns aired at today's hearing.

(Tr.24, li.1-7)

SN PHEARSON

For the elderly and disabled, the FEMA deficiencies of 1987 remain unchanged today.

(Tr.32, li.13-14)

SN WAITKUS-ARNOLD

I would like a written response as to whether you would allow the state to blatantly discriminate against elderly and disabled residents who are most at risk in an emergency, or are we going to have to use our resources for lawsuits?

(Tr.35, li.12-16)

SN WAITKUS-ARNOLD

special needs planning;

(Tr,57, li.12)

SN DIXON

Special Needs concerns remain a very large issue not only with the identification of these people, but with the ability to help them.

(E10.6)

SN HADFIELD

A complete special needs list must be developed.

(E7.3)

SN GROUX

While the special needs self-identification program is underway, it is not complete. There is much work to be done.

(Tr.18, li.25 - Tr.19 li.1-2)

SN BOULAY

The upcoming enhanced special needs survey, paid for by Boston Edison, will be mailed out later this month. Even though we sent a critique of this document to Mass Civil Defense Agency in June, we have had no response from that agency and we have been informed that the survey has already gone to print. This survey, like past surveys, omits any questions relating to people with vision impairments, for frail elderly residents who would need assistance, or the status of children either disabled or latch-key or people with low comprehension skills. We offered several pages of information and ideas that might be used to include the basic requirements of FEMA memorandum 24, but as I said before, there has been no response from MCGA (sic).

(Tr.34, li.8-23)

SN WAITKUS-ARNOLD

The most controversial part of this new survey is the so-called buddy system. According to FEMA, no other state in the country has used this strategy to date. This strategy, according to FEMA memorandum, can be used in states where emergency personnel cannot enter a home. This is not one of those states. If this system is used, which asks for the general public to care for a shelter and evacuate handicapped persons, the state will have abandoned their official responsibility to provide equal protection for disabled citizens. And it seems to me violates not only the Massachusetts constitutional amendment but also Federal laws providing equal protection under our Consitution.

(Tr.34, li.24-25; Tr. 35, li.1-11)

SN WAITKUS-ARNOLD

The special needs information listing is still an inadequate list. I'm hoping for a large response to the letter that is going out the week of September 23rd. This will definitely help. This could be a very large number of people for the Town of Plymouth because of the age categories alone of the citizens. The aged in the town -- we have nine nursing homes, most of them over 75 residents. That's a very large number of people for a town like this. And it's not something that we take lightly. If they can't hear to get notification; maybe they can't see to drive, but these are needs that have to be addressed.

(Tr.54, li.6-22)

SN HADFIELD

the approximate number and location of transportation dependent people has yet to be determined as the survey has not been completed.

(E1.9)

SN FLEMING

We have not yet been able to identify the special need people, let them locate them. And by special needs, we're talking also about people who are hearing impaired who may not even hear the sirens, who don't turn on the radio or T.V., mainly elderly people, handicapped people. Also, there are a good number of people who do not own automobiles or have access to transportation. To my knowledge, that hasn't been addressed by anyone. Do we identify the people who have no one that can give them a ride out of town?

(Tr.94, li.10-19)

SN CREEDON

The special needs population has not been identified.

(Tr. 105, li.17)

SN FLEMING

Nowhere in planning are latch-key children considered.

(Tr. 106, li.3-4)

SN FLEMING

Special needs survey mandated to be completed before exercise takes place. This survey is not yet complete and does not have a target date for completion. Under special assistance does this include "latch-key" children, after-school sports and activities as "Transportation dependent"? Brochure asks special needs people to fill out form - how do retarded, blind, amputees fill out form.

(E1.9)

SN FLEMING

Special Needs Survey The latch key children need to identified as well.

(E7.5)

SN VOGLER

The handicapped population has no assurance of anything: except that they have effectively been forgotten. However, they are not alone: latch-key children are no where included in any planning either.

(E3.1)

SN LAMPERT

The only assurance that elderly and disabled residents have is that they have been effectively forgotten.

(Tr.32, li.15-16)

SN WAITKUS-ARNOLD

The special needs population has not even been identified in any real sense. Today in Plymouth, only 1 percent of the population with special needs has been identified. Only 17 additional people have been identified since 1987. As you are well aware, the United States census survey entitled, "U.S. Disability, Functional Limitation and Health Insurance Coverage" show 18.2 percent of the population had disabilities and functional limitations. Updated figures extrapolated from Massachusetts actually show that figure has raised to 20 percent in 1990. I would like to repeat to you that only 1 percent of the Plymouth special needs population has been identified. We realize historically NRC prefers to accept this 1 percent because anything above these numbers would not fit into your evacuation time estimates for safe evacuation procedures.

(Tr.32, li.21-25, Tr.33, li.1-6)

SN WAITKUS-ARNOLD

Currently, there is not enough transportation for even the 1 percent of the population, and there are no signed contracts for the drivers.

(Tr.33, li.13-15)

SN WAITKUS-ARNOLD

Inadequate planning for the evacuation of the special needs population.

(Tr.120, li.9-10)

SN MUIRHEAD

Disabled residents who may some how reach the reception decontamination centers will find that they will not be able to be decontaminated along with the general population.

(Tr.33, li.15-18)

SN WAITKUS-ARNOLD

The plans now are for the disabled to go from the reception centers to one of the thirteen hospitals designated to treat contaminated injured people in the hopes that they will be able to decontaminate the disabled. However, each of these hospitals is only capable of handling two or three contaminated injured people in 12 hours. And all thirteen hospitals can only handle 39 people in a 12-hour period. The result seems clear: the disabled who may get themselves to reception centers, the residents who need the most help and will be the most traumatized, will find that they won't be allowed in with the general population. They will be separated from their families and will be on their own to find a hospital to decontaminate them.

(Tr.33, li.15-19; Tr.34, li.1-7)

SN WAITKUS-ARNOLD

concerns about hospital planning;
(Tr.57, li.24-25)

SN DIXON

An we hear tonight that we can process 39 people in 12 hours. The (Chernobyl) medical effort required 6,000 doctors, nurses, physicians' assistants and medical students. (Tr.61, li.25, Tr.62, li.1-3) H CAVANAUGH
(Tr.61, li.25; Tr.62, li.1-3)

SN DIXON

Ms. Arnold spoke about the handicapped population. The estimate she gave was that about 18 to 20 percent of the population is estimated to have needs. If you take Duxbury alone, that works out to about 3000 people. Thirteen hospitals at best can handle 39 in a 12-hour period.
(Tr.82, li.2-11)

SN LAMPERT

MCDA has not made a determination as to whether or not the designated injured contaminated hospitals have the capability to also handle contaminated handicapped.
(Tr.105, li.25, Tr. 106, li.1-2)

SN FLEMING

The required arrangements for medical services for contaminated injured individuals ,50.47[b][12], have not been made. There are thirteen hospitals currently under agreement, but the maximum number that any can handle in 12 hours is only two or three; all together they can handle only 39 contaminated injured. Given the size of the population involved, this is not reasonable assurance.
(E1.7)

SN FLEMING

Medical Assistance - Hospitals contracted can only handle 3 [three] contaminated patients in a 12-hour period of time.
(E1.9)

SN FLEMING

Special Needs AS OF TODAY, THE SPECIAL NEEDS POPULATION HAS NOT EVEN BEEN IDENTIFIED EVEN IF IT HAD: There are not sufficient transportation provides (sic.) to transport school children who are transferred first; let alone the special needs population. The Wellesley Reception Center as of July 20, 1990 had no sanitary facilities nor decontamination capabilities for handicapped. The MCDA had not made any determination as to whether or not the designated "injured contaminated" hospitals have the capacity capability to also handle contaminated handicapped. Again numbers come into play. Each of the 13 designated "injured contaminated" hospital is capable of handling only 2 or 3 handicapped or injured contaminated in 12 hours - all 13 can handle only 39 people in the requisite 12 hour period.
(E3.1)

SN LAMPERT

the lack of planning for in-home day care -- a lot of us are parents, one-third of the children in the town are in in-home day care as opposed to centers;
(Tr.57, li.21-24)

SN DIXON

Day Care - Nursery Schools - There is no plan for 328 Nursery School children in Duxbury.
(E1.9)

SN FLEMING

the lack of manpower in place to implement the plans;
transportation resource inadequacies,
(Tr.57, li.10-11)

TR DIXON

Regarding Timely implementation of state and federal support groups, State Police, National Guard, Coast Guard, etc., according to Buzz Hausner [C.D.] and Mr. Watkin (Radiation Control Program, Massachusetts Department of Public Health) will respond when the Governor declares a State of Emergency. That decision will be made on information gathered by Mass. Department of Public health. There is no specific time a State of Emergency is called. These support groups could be needed prior to the time of the declaration of the State of Emergency by the Governor of the Commonwealth of Massachusetts. The mobilization of buses at an Alert Stage to evacuate schools and/or beaches will obviously alert the general public. In reality evacuation will be activated without having traffic management in place.
(E1.8)

TR FLEMING

...lack of letters of agreement or signature pages signed by support groups or backup congregate care facilities or transportation providers from the reception center to the congregate care facilities;
(Tr.104, li.3-6)

TR FLEMING

In 1987, FEMA noted that there was no adequate planning for the evacuation of what it calls the transportation-dependent personnel, obviously largely school children. In 1990, there isn't either. Any of the plans show that in Duxbury there are least 510 busses needed. An analysis of the existing agreements in effect and what could best hope to be done under them show that less than 300 busses will arrive two hours after evacuation is supposed to begin.
(Tr.80, li.23-25. Tr.81, li.1-6)

TR LAMPERT

Again, we talk about evacuating children. There are simply not enough school busses around to be available to adequately take care of the school children in Kingston. There is a Catholic high school, there is an elementary school and there is a regional high school quite widely separated.
(Tr.94, li.4-9)

TR CREEDON

Transportation dependent population. The current bus matrix and letters of agreement prepared by Boston Edison and reviewed by MCDA indicate that 510 busses are required to evacuate the entire EPZ; 384 busses will be necessary for the precautionary transfer of school children alone. Upon careful analysis of the current letters of agreement, there are only 292 busses available within the first two hours. An additional 45 will be available within the first two hours. An additional 45 will be available within four hours. Again, on numbers alone, it is clear that any reasonable assurance has been precluded.

(Tr.104, li.10-19)

TR FLEMING

There are not sufficient transportation providers to transport the school children, who are transported first, let alone the special needs population.

(Tr. 105, li.17-21)

TR FLEMING

Inadequate planning for the evacuation of the transport-dependent population.

(Tr.120, li.13-14)

TR MUIRHEAD

There are discrepancies with MCDA that can give high 500 numberfs for the number of busses that will be available, but again it takes members of emergency response committees to point out that they have no drivers or they are only available at a certain percent after midnight. So I want to know what you're going to do and I want another public hearing to see whether you are on a new track to regain credibility which you sorely have lacked.

(Tr.133, li.3-6)

TR LAMPERT

The NRC NU Reg. 0654 requires either letters of agreement "where response functions are covered by laws, regulation or Executive Orders where separate agreements are not necessary." (NU Reg.0654, page 34, Par.3.). If letters mandate Federal and State participation in a timely fashion. Neither Signature Page nor Letters of Agreement have been signed.

(E1.8)

TR FLEMING

Bus Resources: Do bus companies have an adequate number of drivers? How do we know if there is clear commitment of drivers to respond? Summary of Prior Information - The now outdated letters of agreement required the supplier to provide drivers with the units. Of the 700 drivers who received training prior to the exercise only one driver indicated that she would not respond in a real emergency. Driver training consisted of 3 hours of lecture and practical on basic emergency response, radiation and dosimetry. Training is conducted on an annual basis. Letters of agreement are being updated. April 1990 Update - Training is conducted on an annual basis for bus providers. Chief O'Niel coordinated training for Duxbury employees with the Transportation Coordinator and Boston Edison. The remainder are coordinated between the Commonwealth and Boston Edison. The matrix is being updated and should be available soon.

(E7.5)

TR VOGLER

H.M.M. Associates analysis states 458 buses are needed to evacuate the entire EPZ.

In reality there are 217 buses that can offer "reasonable assurance" of arriving within an acceptable time can offer "reasonable assurance" of arriving within an acceptable time frame (less than 5 hours) to evacuate this area.

(E1.8)

TR FLEMING

In violation of NUREG 0654, letters of agreement with transportation providers, drivers, federal, state and local agencies and other support organizations having an emergency response role within the EPZ do not exist. It is our understanding there is currently no agreement between the Bridgewater State College and the state with regard to a reception center there.

(Tr.120, li.23-25, Tr.121, li.1-4)

TR MUIRHEAD

Buses that do offer "Reasonable Assurance" within 4 hours Total resources available within 4 hours <122>.

(E1.4)

TR FLEMING

Busses that do not offer "Reasonable Assurance" <total> of 371 buses that are included in the overall total of transportation providers but do not provide "reasonable assurance" or any assurance they will participate in evacuation. The reasons these buses do not offer reasonable assurance are: Barnstable and Canning are both located on Cape Cod. During an emergency with the Sagamore bridge closed, these companies can not be considered viable choices. Some bus lines declares time restriction by hours and months. The other companies either state; no buses or no drivers and in some cases neither buses nor drivers are available. Obviously these buses cannot be consider realistically. Buses for the Pilgrim EPZ School population for the EPZ is: 13,533 students 7,911 staff.

(E1.4)

TR FLEMING

Buses that do offer "Reasonable Assurance" Within 2 Hours, Total Resources = 292 That Offer Reasonabe Assurance To Arrive Within Two Hours By this criteria the EPZ will need 384 buses to move the school population alone.

(E1.4)

TR FLEMING

Transportation for evacuation is inadequate; only 217 buses are available and at least 457 are required.

(E1.7)

TR FLEMING

The state says we will need 458 buses minimally to evacuate - There are 217 buses that can provide "reasonable assurance of arriving to evacuate EPZ."

(E1.9)

TR FLEMING

According to the current bus matrix and Letters of Agreement prepared by Boston Edison and reviewed by MCDA, 510 buses are required to evacuate the entire EPZ. 384 buses are necessary for the precautionary transfer of school children alone. However, and as shown by the Attachment to this Statement, an analysis of the current Letters of Agreement shows that only 292 buses will be available within the first 2 hours; and only 45 more will be available within 4 hours. Again, the numbers alone show that the possibility of any "reasonable assurance" has been precluded.

(E.3.1)

TR LAMPERT

But, there are not enough buses to accomplish this feat. The latest "bus contracts" indicate that 384 buses will be needed to transport school populations alone. Yet there are only 292 buses available.

(E1.10)

TR FLEMING

The Wind Study recently done by Harvard's Dr. G.J. Keller clearly demonstrates the constant flux of Wind Direction of the EPZ. This study substantiates the necessity of evacuating the entire EPZ population.

(E1.8)

TR FLEMING

Bus contracts for Duxbury state "School children first". There will not be sufficient buses for school children, therefore no buses available for any other transportation-dependent people.

(E1.9)

TR FLEMING

No buses are available to perform evacuation route tasks, therefore if people follow Emergency Info Brochure instructions, they will be exposing themselves needlessly while waiting outside for buses that will not arrive.

(E1.9)

TR FLEMING

7:40 am - Boston Edison declared an alert. According to Duxbury IP's buses are to be mobilized at this stage. However, according to bus contracts, many of the buses contracted for will not be mobilized before 9 am. See J. Fleming bus analysis..

(E1.6)

TR FLEMING

9:00 - 11:00 am - Buses scheduled to arrive from Bridgewater never arrived. Among other things, the bus's plan states that they are not to mobilize until a site area emergency is declared; not at an alert stage. The buses that were supposed to arrive to evacuate the schools and beaches simply did not. To compensate for this failure, the Town decided to use buses housed in the town for the purpose of the exercise. However, in a real emergency, these buses would not be available; they are scheduled to go to Plymouth.

(E1.6)

TR FLEMING

The communications system in our view is faulty. Other people here this evening have commented on the inadequacy of the communication system which I guess is left up to begging and borrowing various radio equipment which is subject to failure. Even today, the equipment in Kingston was out in service, didn't know it was going to be repaired. That's no way to run a railroad.

(Tr. 95, li.14-20)

Pk CREEDON

I would recommend, having spent many years with the Bell System, that it be mandatory that a private line telephone network be installed and funded by Boston Edison and the Government to connect all the official people in the Town of Kingston and the surrounding communities, all the buildings where large concentrations of people exist such as shopping malls, nursing homes, schools; they should be in these people's homes as well as their official work places. One thing that won't fail during a power outage is the Bell System... I don't think you should be relying 100 percent on radio. There is certainly a need for radio, but I think you ought to go back and review the private line telephone network that's purchased and paid for by many, many Federal Government agencies -- defense, state, everywhere -- and they work and they can be maintained free. I think that's a serious shortcoming in the whole emergency preparedness.

Tr.95, li. 21-25; Tr.96, li.1-17)

Pk CREEDON

TSA activation (Kingston) was delayed due to late notification by EOC. Additional training on notification for the Kingston EOC staff will be conducted. ARCA (E10.4)

Pk VANTANGOLI

As far as we know, there is no adequate training for the emergency personnel, even the report there says we're short one position. And the position that's filled in (sic.) on a part-time basis by an elderly gentleman. The teaching personnel at the elementary school have not been trained on how to handle kids. We don't even know that they will participate. Some of them say they're going to leave and go home take care of their own family, let the parents of these children do what with the kids. We don't know what to do. There's no decision been reached on that.

(Tr.94, li.23-25; Tr.95, li.5-8)

Pk CREEDON

Seems to me that there's a need for mandating such participation by public employees. We even hear that there are some police and fire people who are saying the same thing -- get out of town, everybody's on their own. That's not right.

(Tr.95, li.9-13)

Pk CREEDON

Dosimetry Coordinator (Kingston) at the TSA did not give proper instructions to drivers on use of dosimetry. Additional training for all personnel in the use of dosimetry will be conducted.
(E10.4) Pk VANTANGOLI

TSA Activation during the exercise was delayed due to late notification by EOC. Additional training or notification for the Kingston EOC staff will be conducted (ARCA).
(E10.4) Pk TAVARES

During the exercise the Dosimetry Coordinator of the TSA did not give proper instructions to drivers on the use of dosimetry. Additional training for all personnel in the use of dosimetry will be conducted (ARCA).
(E10.4) Pk TRAVARES

TSA activation, during the exercise, was delayed due to late notification by EOC. Additional training or notification for the Kingston EOC staff will be conducted (ARCA).
(E10.4) Pk TAVARES

During the Exercise the Dosimetry Coordinator at the TSA did not give proper instructions to drivers on use of dosimetry. Additional training for all personnel in the use of dosimetry will be conducted (ACRA).
(E10.4) Pk TAVARES

With respect to Sec. 50.47[b][7], the public information booklet was not released until August, 1989, some 8-9 months after power ascension began. It's therefore obvious that this requirement was not met when the NRC permitted the power.... Moreover, nearly all the information in the booklet, even when it finally was issued, was inaccurate; nothing was correct except for sub-area designations and civil defense directors' phone numbers.
(E1.7) PI FLEMING

Emergency Public Information Material - Do we have flyers and posters? Where are they? Where are the sheltering signs? Why are they not posted? 1. Shelter Signs - Distributed to schools, pool, library, old Town Hall and new Town Hall. 2. Shelter Flyers - Distributed to the Conservation Administrator for the beach population. April 12, 1990 RERP Committee Comments - Need all shelter signs to be posted and Issue raised concerning the need to update the Emergency Information Booklet.
(E7.5) PI VOGLER

Brochure states Nuclear Power Plant can not explode like a nuclear bomb. True - but what about Hydrogen explosions, Steam explosions, Pool by pass accidents and high pressure melt ejections? These can happen or Releases due to direct torus venting.

(E1.9)

PI FLEMING

(Brochure) does not address the man-made isotopes produced by Nuclear Fission. At Pilgrim, this is what we will be dealing with: Caesium 137 - Strontium 90 - Krypton 85. What are their half-lives? What effect do they have on Human Body.

(E1.9)

PI FLEMING

potassium iodide distribution and lack of distributions to residents and schools;

(Tr. 57, li.12-14)

KI DIXON

...We who are too timid to distribute particulate masks so as not to frighten the public, too concerned about image to distribute potassium iodide to residents.

(Tr.62, li.10-13)

KI DIXON

Another item -- we're told that potassium iodide can protect the human thyroid gland from becoming contaminated from radiation poisoning. To our knowledge, there is none of this potassium iodine in storage at Bridgewater State College. And, again, we don't even have permission of the parents of these children to administer this so this is a very vague point. And expert advice is needed to say is this a valid point or is it not valid. We're kind of working in the dark. You can see that we don't really know what is going on.

(Tr.93, li.13-23)

KI CREEDON

Mass. Dept. of Health has stated Potassium Iodine is very important; local area is supposed to be stock piling this. It is not nor is public health education being provided.

(E1.9)

KI FLEMING

Representative Larry Alexander, Chairman of the House Energy Committee, testified to the joint committee on Health Care that over-the-counter sales of potassium iodide should be made available "particularly to residents of Cape Cod who may need to evacuate."

(Tr.130, li.23-24)

KI TURKO

KI for nursing home currently at EOC but will be moved to the nursing home. April 1990 Update - The KI will be moved to the nursing home when the procedure is updated to reflect the new location. April 12, 1990 RERP Committee Comment - Issue will be closed when KI is transferred to the nursing home.

(E7.5)

KI VOGLER

However, we disagree with the comment concerning airborne monitoring of Plymouth Harbor and the lack of plans and procedures for this. This was an ad-hoc activity based upon the scenario of the Exercise and developed by the NIAT members in response to a request for plume tracking over the water. We do not plan to develop formal plans for this procedure in the planning process.

(E10.13)

OE HALLISEY

...Plymouth doesn't have what's needed for anything approaching real time on-site monitoring. Yet without it, how can one judge the severity of a radiological event? How can you judge when evacuation is required or event when it is safe to return to an area?

(Tr. 82, li.21-25)

OE LAMPERT

on off-site, on-site, monitoring,...It is an area of great concern, especially with the added attraction of direct torus venting. I defer to David Dixon's statement and I also have more complete statements in my written report.

(Tr.109, li.9-12)

OE FLEMING

50.47[b][9] requires that adequate methods and systems for monitoring actual or potential offsite consequences of radiological emergency conditions be in use. Pilgrim's off-site monitoring is inadequate to perform this task either accurately or efficiently, in any event. If direct torus venting is used, there is absolutely no monitoring in place.

(E1.7)

OE FLEMING

To date, there is no adequate real-time continuous monitoring at the Pilgrim plant. Absent such monitoring, there is no ability to measure the severity of a radiological event, or properly to judge when evacuation is required, or when return to the area possible.

(E3.1)

OE LAMPERT

Radiation exposure to the public is possible whenever the system is used.

(E2.1)

OE DIXON

newly installed direct torus vent

(Tr.58, li.3)

OE DIXON

Our committee's review, including meetings with BECO, have not given us reassurances that the plans have been updated to include this new powerful and potentially dangerous system.

(Tr.59, li.5-8)

OE DIXON

The European approach, which doesn't agree with the American approach to venting, is filtered vents.
(Tr.59, li.18-19)

OE DIXON

We have not done that. We say it costs too much money in America.
(Tr.60, li.3-4)

OE DIXON

As Mr. Dixon noted, Pilgrim has a new torus vent. The only torus vent. Any opening of that vent will require some emergency planning response. the existing IPs for emergency planning don't even deal with that contingency.
(Tr.82, li.17-20)

OE LAMPERT

The system was designed and installed without adequate technical analysis or NRC regulatory oversight.
(E2.1)

OE DIXON

WHAT NEEDS TO BE DONE: Coordinate the use of the vent with emergency plans Complete the necessary technical analysis to justify the installation and the expense of the system. Determine why the rupture disk setting is so low. Investigate whether the NRC violated its own regulations by allowing the DTVS to be made operational without NRC approval. Convene a public hearing to explain the benefits and risks of the DTVS Change the Technical Specifications to include the new outboard containment valve. [Enclosure contains a lot of technical information and allegations about the direct torus vent E.P.]
(E2.1)

OE DIXON

...direct torus vent
(E3.1)

OE LAMPERT

Hopefully wind conditions, radiological conditions in the containment and the status of evacuation or sheltering will enter into the decision (to open the direct torus vent).
(Tr.59, li.2-4)

OE DIXON

We have been told that the senior reactor operator in charge during the event is impoverished by procedures to push the button.
(Tr.59, li.8-10)

OE DIXON

And we feel the risk of dumping the containment pressure looks like its going to go over 27 PSI is very real and would occur.
(Tr.59, li.10-12)

OE DIXON

And that 27 pounds per square inch, is an important number to remember. For it means that in effect we have the weakest commercial containment in the nation.
(Tr.59, Li.13-15)

OE DIXON

"As a final point, CURE brings to your attention the fact that the Inspector General's report demonstrates that the Boston Edison personnel provided inaccurate information the NRC staff in violation of 10 CFR 50.9. The facts demonstrating a violation of 50.9 appear on pages 3 through 4 of the report. At page 3, the report states, 'The NRC staff learned from BECO that all emergency implementing procedures for the EPZ communities had been submitted to the state for technical review with the exception of five procedures for the towns of Plymouth and Duxbury. The inaccuracy of this information is confirmed at page 4. "Had the NRC staff discussed the status of emergency implementing procedures with local officials, they would have learned the information was not correct. According to Plymouth and Duxbury officials, none of the implementing procedures, which is about 133 procedures for these communities, have ever been approved for submission to the state. In fact, many of these procedures were still being developed."
(Tr.127, li.20-25, Tr.128, li.1-2) OE OTT

"At page 20 of the IG's report, staff defends its reliance on information provided by Boston Edison noting that 'licensees are fully cognizant of the criminal nature of providing false information to NRC.' If, as the IG has documented, Boston Edison did provide false information to NRC staff, then the Commission must pursue this matter. If Boston Edison's actions go unpunished, then the NRC will have demonstrated only that its reliance on 50.9 is entirely misplaced."
(Tr.128, li.3-11) OE OTT

50.47[b][913] (Sic.) requires general plans for recovery reentry; the majority of participants in the October exercise considered recovery reentry to be weak and inadequate.
(E1.7) OE FLEMING

Dear Mr. Miller,
Why doesn't the NRC tell the public how long after the Pilgrim plant is shutdown that no one will be allowed near it for thousands of years. In that sense you can't say that nuclear power is cheap. We will pay for it for generations to come. What a liability to leave our grandchildren! All for the greed of power companies.
(E11.1) OE KARGNRORIS

Ms. Waitkus Arnold- So you have no written definition for reasonable assurance for safe evacuation for the population?
(Tr.153, li.25, Tr.154, li.1-2) OE WAITKUS-ARNOLD

We understand the awesome responsibility we have, however, we are in a financial situation that does not allow us the luxury of just going out and purchasing anything we need.
(Tr.56, li.2-4) OE HADFIELD

The NRC should after this hearing weigh carefully what has been said, in my opinion, and face the need for completion of planning for the provision of the needed equipment and and the NRC should make it clear that the utility should be prepared to provide all necessary equipment and other forms of assistance. There is ample precedent for you to expect the Commonwealth of Massachusetts to allow the utility to recover such costs and therefore to stand such costs. There's precedent that's in law today in Massachusetts to allow the utility to recover such costs and therefore to stand such costs. There's precedent that's in law today in Massachusetts with regard to their ability to do that and it's probably the best way to fund any such effort. As a matter of fact, considering the fiscal situation in Massachusetts today it's not only the best way, but probably the only way.
(Tr.88, li.24-25, Tr.89, li.1-13) OE KIRBY

The NRC should motivate Boston Edison Company to provide the necessary resources for completion of the planning and should then leave it to FEMA to make its decisions based on what is produced in that way.
(Tr.90, li.9-13) OE KIRBY

...the same persons that accepted information from BECO saying that the emergency planning was adequate were the same people that took information on the technical aspects of the plant. And one question for tonight, if we just write down some of them, one question is will there be a revisitation of the technical aspects at the plant? Is the plant still in working condition? Are there any outstanding issues that have not been revisited?
(Tr.137, li.1-9) OE CANTWELL

Area II Director Comments: The Area II Director, prior to the evaluated exercise, had suggested during an MCDA/BECO/Local Weekly Planning Meeting (which FEMA attends occassionally) that a hard copy message system be put in place between MCDA/MCDA Area II and the local EPZ communities to ensure timely and accurate information. I believe that this is an area that still requires corrective action. I believe another system to improve communications would be to install a ring-down dedicated telephone system for MCDA/MCDA Area II and the local EPZ communities. This system would allow immediate voice communication followed by the suggested hard copy.
(E10.12) OE RODGER

Director of the Civil Defense Agency, Office of Emergency Preparedness, is here representing the Governor
(Tr.12, li.8) I BOULAY

Robert J. Boulay, Director, Civil Defense Agency and Office of Emergency Preparedness, Executive Department for the Commonwealth of Massachusetts, Report on the Draft "Final Exercise for the Pilgrim Nuclear Power Plant Plymouth, Massachusetts, Report on the Draft "Final Exercise Assessment Joint State and Local Radiological Emergency Response Exercise for the Pilgrim Nuclear Power Plant Plymouth, Massachusetts, October 12-13, 1989" dated July 16, 1990
(E10.1)

I BOULAY

Robert J. Boulay, Director, MCDA, Memorandum to Distribution dated October 6, 1989 Subject: Wellesley Reception Center Extent of Play for October 12 Pilgrim Exercise.
(E10.8)

I BOULAY

Helen Cappello- Administrative Assistant Deputy Director of the Town of Carver. I am here tonight to represent the Director of Emergency Preparedness for the Town of Carver.
(Tr.67, li.14-17)

I CAPPELLO

Mr. Jim Cantwell- is here representing Senator Golden?
(Tr.135, li.13-14)

I CATWELL

Al Cavanaugh and I represent the Gurnet-Saquish Association.
(Tr.63, li.20-21)

I CAVANAUGH

Letter from citizen, dated August 30, 1990
(E12.1)

I COLE

Mr. Creedon: I'm not an official of Kingston...One of the selectmen was here...he left me some notes...Eugene Creedon resident of the Town of Kingston...What I'm going to read to you now are some notes that were just handed to me during this meeting and they're very broad and not complete...
(Tr.92, li.5-10)

I CREEDON

Gene Creedon- from Kingston.
(Tr.145, li.10-11)

I CREEDON

Heidi Cryson- I live in North Plymouth.
(Tr.147, li2-3)

I CRYSON

David Dixon Town of Plymouth's Nuclear Matters Committee.
(Tr.56, li.17-18)

I DIXON

February 27, 1990, Pilgrim Direct Torus Vent
(E2.1)

I DIXON

Response to Fleming dated 11/13/90 (E2.2)	I	ELSASSER
Jane Fleming- resident of Duxbury, a member of the Radiological Emergency Response Study Committee (Tr.101, li.24-25, Tr.102, li.1)	I	FLEMING
The July 20, 1990 Tour of the Wellesley Reception Center (E1.1)	I	FLEMING
Fleming Analysis of Bus Availability (E1.4)	I	FLEMING
The following chronology was compiled from Dr. Donald Kennedy, Superintendent of Schools, Duxbury, Massachusetts, Beck Chin, Chairman of the Duxbury School Committee, and Thomas Vetra of the Duxbury Emergency Response Committee. (E1.6)	I	FLEMING
Fleming Memorandum dated February 25, 1990 to R. Blough, NRC. (E1.7)	I	FLEMING
Fleming - Comparison of Reality vs. Concept of Emergency Preparedness - The scope of this study is a comparison of the concepts presented in this brochure to the reality of successfully protecting my two children from a radiological accident at Pilgrim. (E1.8)	I	FLEMING
Jane Fleming comments on emergency information brochure (E1.9)	I	FLEMING
Remedial exercise to address deficiencies noted in the February 1, 1990 preliminary deficiencies report. (E1.10)	I	FLEMING
Appointment to Duxbury RERPC dated 6/11/90 (E2.3)	I	FLEMING
Douglas P. Forbes, P.E., Director of Planning, MCDA, June 27, 1990, Memorandum, Wellsley MDPW Reception Center Proposal [Interim Report] (E1.3)	I	FORBES
William Griffin, Executive Secretary Town of Plymouth-Civil Defense Director's comments. (E10.6)	I	GRIFFIN
Duxbury Office of Town Manager, Thomas J. Groux, in reference to the Town Official's Response - FEMA Draft Report October 1989 Exercise Corrective Action Response (E7.3)	I	GROUX

Robert J. Boulay, MCDA dated June 22, 1990 transmits J. Fleming
 Testimony i.e., Encl. 3 as a allegation.
 (E8.1) I GROUX

Douglas Hadfield, Civil Defense Director for the Town of Plymouth
 (Tr.52, li.22-23) I HADFIELD

Robert M Hallisey, Director, Radioation Control Program memorandum
 dated July 3, 1990
 (E10.13) I HALLISEY

Letter from citizen - undated
 (E11.1) I KARGNRORIS

Statement submitted by: Richard L. Katzenstein, August 25, 1990.
 (E5.1) I KATZENSTEIN

This statement (10/23/89) on the October 12 Pilgrim Station
 evacuation drill in Duxbury was prepared by Dr. Donald G. Kennedy,
 Superintendent of Schools and Dr. Richard Marcoux, Assistant
 Superintendent of Schools, both of whom participated in the
 exercise.
 (E7.4) I KENNEDY

Senator Edward Kirby.
 (Tr.87. li.24-25) I KIRBY

James Lampert- Nuclear Affairs Committee for the Town of Duxbury.
 (Tr.78, li.10-12) I LAMPERT

Mary Elizabeth Lampert
 (Tr.131, li18-19) I LAMPERT

James Lampert- Statement of the Nuclear Affairs Committee of the
 Town of Duxbury.
 (E3.1) I LAMPERT

Frank Maher- Town of Bridgewater Office of Selectmen- Critique of
 Pilgrim Exercise dated June 4, 1990.
 (E10.2) I MAHER

Frank Mazzilli Town of Carver Office of Emergency Preparedness and
 Defense, Comments on FEMA Draft Report dated June 22, 1990.
 (E10.3) I MAZZILLI

Mr. Dan McDonald - is representing Marshfield? (Tr.84, li.23-24)
 (Tr.84, li.23-24) I MCDONALD

Letter from Daniel McGonagle, Director, Marshfield Civil Defense, dated June 20, 1990 the Town of Marshfield's response and comments of the FEMA draft report.
(E10.5) I MCGONAGLE

FEMA Pilgrim Exercise Report, From Jerry Meister, Operations Officer dated, June 19, 1990
(E10.9) I MEISTER

Jerry Meister Operations Officer memorandum dated June 19, 1990 on FEMA Pilgrim Exercise Draft Report
(E10.9) I MEISTER

Jerry Meister- Operations Officer memorandum dated May 29, 1990
(E10.10) I MEISTER

Dr. Don Muirhead...Co-Chairman of CURE...Citizens Urging Responsible Energy
(Tr.115, li,14-17) I MUIRHEAD

Kathleen O'Brien- I am really speaking as a citizen.
(Tr.133, li.13-15) I OBRIEN

Mary Ott- I am the other Co-Chair of Duxbury CURE.
(Tr.123, li.4-5) I OTT

Mr. Scott Phearson read a joint statement by Senator Kennedy and Senator Kerry.
(Tr.22, li.23-24) I PHEARSON

Mr. David Quaid- Speech against NRC Personnel
(Tr.110, li.10) I QUAID

Thomas P Rodger Area II Director - As per your June 5, 1990, letter request, enclosed are my written comments to the Pilgrim Exercise Draft Report. In reading the Pilgrim Exercise Draft Report, it would seem to me that my February 15, 1990, letter containing my response comments to the FEMA Summary of Deficiency Report were not provided to FEMA. I have enclosed another copy since this report completely summarizes my exercise comments.
(E10.11) I RODGER

Thomas P. Rodger Area II Director memorandum dated February 15, 1990
(E10.12) I RODGER

Statement submitted by- Margaret Saunders, September 6, 1990
(E6.1) I SAUNDERS

As requested in the June 5, 1990 memorandum from Mr. John Lovering, attached are the City of Taunton comments on the FEMA draft report for the October 1998 Pilgrim Nuclear Power Station exercise (June 21, 1990 memorandum from Robert C. Spearin).
(E10.7)

I SPEARIN

Alba Thompson, Selectman, speaking for the Board of Selectman of the Town of Plymouth
(Tr.40, li.18-19)

I THOMPSON

Statement of Alba Thompson, Selectman, Town of Plymouth, Massachusetts for the Board of Selectman before the Nuclear Regulatory Commission on September 6, 1990, contained in her testimony.

(E4.1)

I THOMPSON

Alba Thompson letter to Lando Zech dated February 7, 1989. Contained in her testimony.

(E4.3)

I THOMPSON

Alba Thompson letter to Kenneth Carr dated August 10, 1990. Contained in her testimony

(E4.4)

I THOMPSON

Alba Thompson letter to U.S. Senators and Congressman regarding the IG report, Contained in her testimony a letter to the Board of Selectmen dated August 28, 1990.

(E4.5)

I THOMPSON

Alba Thompson's statement for September 6, 1990 NRC public meeting.

(E9.1)

I THOMPSON

Alba Thompson letter to Kerry et.al. dated 8/8/90

(E4.2)

I THOMPSON

Diane Turko-citizen from Cape Cod. (Tr.129, li.22)

(Tr.129, li.22)

I TURKO

Arthur Vantangoli Chairman Office of Selectman, Town of Kingston.

(E10.4)

I VANTANGOLI

Ronald A. Varley, Manager, Emergency Preparedness memorandum dated June 19, 1990 - Attached are the Boston Edison Company comments on the FEMA draft report for the October 1989 Pilgrim Nuclear Power Station exercise.

(E10.14)

I VARLEY

Thomas Vetra Emergency Planning Advisor, Duxbury Citizens Urging Responsible Emergency July 20, 1990 - Questions to Julia Gabaldon [MCDA] about Wellesley Reception Center.
(E1.2)

I VETRA

David Vogler, I have a statement on behalf of the Board of Selectmen that I would like to read.
(Tr.70, li.3-4)

I VOGLER

DUXBURY EMERGENCY PREPAREDNESS STATUS AS OF 9/5/90 prepared by Duxbury Civil Defense
(E7.2)

I VOGLER

RERP QUESTIONS 18 APRIL 1990 UPDATE
(E7.5)

I VOGLER

David J. Vogler for Office of Selectmen, Town of Duxbury presentation at the September 6, 1990 NRC public meeting. Read into transcript
(E7.1)

I VOGLER

Anne Waitkus-Arnold chairs the Disabled Persons Advisory Group on Evacuation Planning for the Massachusetts Office of Handicapped Affairs.
(Tr.32, li.4-6)

I WAITKUS-ARNOLD

APPENDIX C

LIST OF DRAFT
EMERGENCY PLANS AND IMPLEMENTING PROCEDURES
OBTAINED BY TASK FORCE
FROM OFFICIALS OF LOCAL COMMUNITIES
AND MASSACHUSETTS CIVIL DEFENSE AGENCY

APPENDIX C

LIST OF DRAFT
EMERGENCY PLANS AND IMPLEMENTING PROCEDURES
OBTAINED BY TASK FORCE
FROM OFFICIALS OF LOCAL COMMUNITIES
AND MASSACHUSETTS CIVIL DEFENSE AGENCY

*The emergency plans and implementing procedures were obtained from the State and town civil defense officials with the understanding that these were the plans and procedures that would be used in the event of an emergency at the Pilgrim Nuclear Power Station.

TOWN OF PLYMOUTH RADIOLOGICAL EMERGENCY RESPONSE PLAN,
 REVISION 9, 5/18/90

IMPLEMENTING PROCEDURES

IP NO.	TITLE	DRAFT NO.	DRAFT DATE
01	BOARD OF SELECTMEN	2	06/29/90
02	CIVIL DEFENSE AGENCY	9	02/16/90
03	POLICE DEPARTMENT	11	02/01/90
04	PLYMOUTH FIRE DEPARTMENT	11	07/20/90
05	DEPARTMENT OF PUBLIC WORKS	5	05/10/89
06	PLYMOUTH PUBLIC SCHOOLS AND PLYMOUTH-CARVER REGIONAL SCHOOL DISTRICT	5	06/15/90
07	BOARD OF HEALTH	4	06/30/89
08	RADIOLOGICAL OFFICER	7	06/15/90
09	TRANSPORTATION	6	06/30/89
10	SHELTER OFFICER	5	07/06/90
11	HARBORMASTER	8	06/29/90
12	SPECIAL NEEDS OFFICER	7	06/27/90
13	COMMUNICATIONS OFFICER	1	06/22/90
14	EMERGENCY MEDICAL SERVICES	3	06/29/90
15	GURNET/SAQUISH ASSOCIATION	2	06/29/90
16	BOSTON EDISON COMMUNITY LIAISON	3	06/22/90
17	TOW TRUCK PROVIDER	1	06/22/90
18-20	NOT USED	-	- -
21	PUBLIC INFORMATION	4	06/15/90
22	EMERGENCY WORKER MONITORING AND DECONTAMINATION STATION	4	03/02/90
23	NOT USED	-	- -
24	MESSAGE CONTROL	3	05/25/90
25	SIREN ACTIVATION	2	08/24/90
26-40	NOT USED	-	- -
41	TINY TOWN CHILDREN'S CENTER	0	01/29/88
42	JACK AND JILL NURSERY SCHOOL	0	01/27/88
43	KINDER KOLLEGE	1	07/06/90
44	BUSY BEE NURSERY AND DAY CARE	1	07/06/90
45	KIDS PORT, INC.	1	07/05/90
46	SEVEN HILLS NURSERY SCHOOL	1	07/05/90
47	METHODIST NURSERY SCHOOL	1	07/05/90
48	COOPERATIVE CHILD CARE CENTER	1	07/06/90
49	STEP-BY-STEP LEARNING CENTER	0	07/05/90
50	ZION CHRISTIAN PRE-SCHOOL	1	07/06/90
51	PLYMOUTH DISCOVERY CENTER	1	07/06/90
52	HAPPY DAY NURSERY, INC.	1	07/06/90
53	KINDER HAUS NURSERY	1	07/06/90
54	PILGRIM MANOR DAY CARE	1	07/06/90
55	NEW TESTAMENT CHRISTIAN SCHOOL	1	07/06/90
56	SOUTH SHORE HEAD START	0	07/05/90
57	PINEWOOD SCHOOL OF MONTESSORI, INC.	0	07/18/88
58	SOUTH SHORE INDUSTRIES	1	10/19/88

TOWN OF PLYMOUTH (cont.)

IMPLEMENTING PROCEDURES

IP NO.	TITLE	DRAFT NO.	DRAFT DATE
59	NOT USED	-	-
60	MAYFLOWER HOUSE NURSING HOME	0-4	02/01/89
61	PILGRIM MANOR NURSING HOME	2	02/01/89
62	BEVERLY MANOR NURSING HOME	3	02/01/89
63	NEWFIELD HOUSE CONVALESCENT HOME	1	05/17/88
64	PLYMOUTH NURSING HOME	2	12/16/88
65	CHILTON HOUSE REST HOME	1	05/17/88
66	HIGH POINT ALCOHOL REHABILITATION CENTER	1	05/17/88
67	PLYMOUTH DAY HABILITATION	2	11/09/88
68	MASSACHUSETTS DEPARTMENT OF MENTAL HEALTH PLYMOUTH AREA OFFICE, COMMUNITY RESIDENCE	4	01/31/89
69	CACHALOT SCOUT RESERVATION	2	08/10/90
70	CAMP CLARK	2	08/10/90
71	CAMP MASSOIT	2	08/10/90
72	CAMP SQUANTO	2	08/10/90
73	CAMP CHILD	2	07/27/90
74	YOUTH ADVOCACY DIVISION	3	08/17/90
75	MASSACHUSETTS DEPARTMENT OF MENTAL RETARDATION - SOUTHEAST REGION V OFFICE COMMUNITY RESIDENCES	1	12/15/88
76	CAMP BOURNE DALE	1	08/10/90
77	BAIRD CENTER	2	08/17/90
78	WIND IN THE PINES GIRL SCOUT CENTER	2	08/17/90
79-80	NOT USED	-	-
81	SHELTER MANAGER - COLD SPRING SCHOOL	2	04/27/88
82	SHELTER MANAGER - COUNTY OFFICES	2	04/27/88
83	SHELTER MANAGER - COUNTY COURTHOUSE	2	04/27/88
84	SHELTER MANAGER - DEPARTMENT OF PUBLIC WORKS BUILDING	2	04/27/88
85	SHELTER MANAGER - SOUTH ELEMENTARY SCHOOL	3	11/07/88
86	SHELTER MANAGER - FEDERAL FURNACE SCHOOL	3	11/04/88
87	SHELTER MANAGER - GURNET LIGHT (KEEPER'S HOUSE)	2	04/27/88
88	SHELTER MANAGER - HEDGE SCHOOL	3	11/07/88
89	SHELTER MANAGER - INDIAN BROOK ELEMENTARY SCHOOL	3	11/01/88
90	SHELTER MANAGER - MANOMET ELEMENTARY SCHOOL	3	11/02/88
91	SHELTER MANAGER - MANOMET YOUTH CENTER	2	04/27/88
92	SHELTER MANAGER - MASSACHUSETTS NATIONAL GUARD	2	04/27/88
93	SHELTER MANAGER - MOUNT PLEASANT SCHOOL	3	11/07/88

TOWN OF PLYMOUTH (cont.)

IMPLEMENTING PROCEDURES

<u>IP NO.</u>	<u>TITLE</u>	<u>DRAFT NO.</u>	<u>DRAFT DATE</u>
94	SHELTER MANAGER - NATHANIEL MORTON SCHOOL	2	04/27/88
95	SHELTER MANAGER - PLYMOUTH COUNTY REGISTRY OF DEEDS	2	04/27/88
96	SHELTER MANAGER - PLYMOUTH LIBRARY AND ANNEX	2	04/27/88
97	SHELTER MANAGER - PLYMOUTH NORTH HIGH SCHOOL	3	01/12/89
98	SHELTER MANAGER - PLYMOUTH SOUTH HIGH SCHOOL	3	01/17/89
99	SHELTER MANAGER - PLYMOUTH MUNICIPAL AIRPORT	2	04/27/88
100	SHELTER MANAGER - WATER DEPARTMENT BLDG.	2	04/27/88
101	SHELTER MANAGER - AMERICAN LEGION POST #40	2	04/27/88
102	SHELTER MANAGER - SECOND CHURCH OF PLYMOUTH, CONGREGATIONAL	2	04/27/88
103	SHELTER MANAGER - BERT'S RESTAURANT	2	04/27/88
104	SHELTER MANAGER - PILGRIM SANDS MOTEL	2	04/25/88
105	SHELTER MANAGER - PLYMOUTH PLANTATION	2	04/27/88
106	SHELTER MANAGER - SAINT BONAVENTURE'S CHURCH	2	04/27/88
107	SHELTER MANAGER - CAMP DENNEN	2	04/27/88
108	SHELTER MANAGER - CORDAGE PARK	2	04/27/88
109	SHELTER MANAGER - ELLIS HAVEN	2	04/27/88
110	SHELTER MANAGER - INDIANHEAD CAMPGROUND	2	04/27/88
111	SHELTER MANAGER - PINEWOODS CAMP	2	04/27/88
112	SHELTER MANAGER - PINWOOD LODGE TRAILER PARK	2	04/27/88
113	SHELTER MANAGER - SANDY POND CAMPGROUND	2	04/27/88
114	SHELTER MANAGER - SHERATON PLYMOUTH AT VILLAGE LANDING	2	04/27/88
115	SHELTER MANAGER - PLYMOUTH ROD AND GUN CLUB	2	04/27/88
116	SHELTER MANAGER - VFW POST 1822	0	03/22/89
117	SHELTER MANAGER - FIRST BAPTIST CHURCH	0	03/22/89

TOWN OF CARVER RADIOLOGICAL EMERGENCY RESPONSE PLAN,
 REVISION 6, 12/1/89

IMPLEMENTING PROCEDURES

IP NO.	TITLE	DRAFT NO.	DRAFT DATE
01	BOARD OF SELECTMEN	3	02/08/90
02	CIVIL DEFENSE AGENCY	3	05/09/90
03	POLICE DEPARTMENT	5	01/22/90
04	CARVER FIRE DEPARTMENT	5	01/30/90
05	DEPARTMENT OF PUBLIC WORKS	2	01/31/90
06	SCHOOL DEPARTMENT	4	02/01/90
07	BOARD OF HEALTH	3	02/08/90
08	RADIOLOGICAL OFFICER	5	03/27/90
09	TRANSPORTATION	5	02/01/90
10	SHELTER OFFICER	4	04/02/90
11	EMERGENCY MEDICAL SERVICES	5	05/31/90
12	COUNCIL ON AGING	4	02/09/90
13	COMMUNICATIONS OFFICER	2	04/30/90
14	BOSTON EDISON COMMUNITY LIAISON	3	06/13/90
15	WRECKER PROVIDER	1	07/10/90
16-20	NOT USED	-	- -
21	PUBLIC INFORMATION	5	06/12/90
22	EMERGENCY WORKER MONITORING AND DECONTAMINATION	3	06/14/90
23	NOT USED	-	- -
24	MESSAGE CONTROL	6	06/05/90
25	SIREN ACTIVATION	2	05/28/90
26-28	NOT USED	-	- -
29	SPECIAL NEEDS PROGRAM MAINTENANCE	1	06/27/88
30	TELECOMMUNICATION DEVICES FOR THE DEAF	1	09/14/88
31-40	NOT USED	-	- -
41	CRANBERRY CROSSING NURSERY & DAY CARE	1	04/20/90
42	NOT USED	-	- -
43	CAPTAIN PAL PRE-SCHOOL	2	04/05/90
44	KIDS COUNT NURSERY & PRE-SCHOOL	0	01/29/88
45	CAMP CLEAR	3	04/23/90
46	HILLTOP REST HOME	2	06/26/90
47	BETTY'S PLACE	2	04/23/90
48	NOT USED	-	- -
49	EDAVILLE RAILROAD	1	06/25/90
50	NOT USED	-	- -
51	SHELTER MANAGER - ATWOOD HOUSE	3	04/04/90
52	SHELTER MANAGER - BENJAMIN ELLIS SCHOOL	3	08/14/90
53	SHELTER MANAGER - CARVER HIGH SCHOOL	3	08/14/90
54	SHELTER MANAGER - CARVER PUBLIC SCHOOL (BUILDING A)	3	08/14/90
55	SHELTER MANAGER - CARVER PUBLIC SCHOOL (BUILDING B)	3	04/04/90

TOWN OF CARVER (cont.)

IMPLEMENTING PROCEDURES

<u>IP NO.</u>	<u>TITLE</u>	<u>DRAFT NO.</u>	<u>DRAFT DATE</u>
56	SHELTER MANAGER - CAMP CLEAR	3	08/14/90
57	SHELTER MANAGER - PINWOOD WAY	3	08/14/90
58	SHELTER MANAGER - CRANEBROOK TEA ROOM	3	08/14/90
59	SHELTER MANAGER - FAITH BAPTIST CHURCH	3	08/14/90
60	NOT USED	-	- -
61	SHELTER MANAGER - VFW POST #7421	3	08/14/90
62	SHELTER MANAGER UNITED METHODIST CHURCH	3	04/04/90
63	SHELTER MANAGER CHRISTIAN UNITY HALL	3	04/04/90
64	SHELTER MANAGER CRANBERRYVILLE TENTING AND TRAILER PARK	2	04/27/88

TOWN OF KINGSTON RADIOLOGICAL EMERGENCY RESPONSE PLAN,
 REVISION 8, 5/15/90

IMPLEMENTING PROCEDURES

IP NO.	TITLE	DRAFT NO.	DRAFT DATE
01	BOARD OF SELECTMEN	6	05/10/90
02	CIVIL DEFENSE AGENCY	6	05/10/90
03	POLICE DEPARTMENT	8	03/01/90
04	FIRE DEPARTMENT/EMERGENCY MEDICAL SERVICES	5	05/10/90
05	HIGHWAY DEPARTMENT	6	03/09/90
06	SCHOOL DEPARTMENTS	7	10/15/90
07	HEALTH EOC REPRESENTATIVE	6	10/11/90
08	RADIOLOGICAL OFFICER/EOC DOSIMETRY COORDINATOR	7	04/10/90
09	TRANSPORTATION	8	10/23/90
10	SHELTER OFFICER	5	04/02/90
11	HARBORMASTER	-	02/08/90
12	SPECIAL NEEDS OFFICER	5	04/12/90
13	COMMUNICATIONS OFFICER	6	05/10/90
14	NOT USED	-	- -
15	TOW TRUCK PROVIDER	0	03/01/90
16	BOSTON EDISON COMMUNITY LIAISON	3	06/05/90
17-20	NOT USED	-	- -
21	PUBLIC INFORMATION	4	06/07/90
22	EMERGENCY WORKER MONITORING AND DECONTAMINATION	7	03/08/90
23	NOT USED	-	- -
24	MESSAGE CONTROL	6	03/08/90
25	SIREN ACTIVATION	2	06/05/90
26-40	NOT USED	-	- -
41	SACRED HEART SCHOOL	3	03/07/90
42	GROWTH UNLIMITED PRE-SCHOOL	3	06/11/90
43	MASSACHUSETTS DEPT. OF MENTAL HEALTH COMMUNITY RESIDENCES	2	04/06/90
44	NOT USED	-	- -
45	PLYMOUTH BAY CHILD CARE	3	06/12/90
46	CAMP MISHANNOCK	2	06/11/90
47	CAMP NORSE	2	06/11/90
48	EVANSWOOD CENTER FOR OLDER ADULTS	3	11/30/90
49	NOT USED	-	- -
50	PROVINCIAL RESIDENCE	3	06/25/90
51	ELIZABETH ANN REST HOME	3	06/14/90
52	MARGARET W. CARTER VETS HOME	2	06/14/90
53	BROCKTON AREA MULTI-SERVICES, INC.	0	08/31/90
54	NOT USED	-	- -
55	SHELTER MANAGER - SACRED HEART ELEMENTARY SCHOOL	3	04/09/90
56	SHELTER MANAGER - SACRED HEART HIGH SCHOOL	3	04/09/90
57	SHELTER MANAGER - STOP AND SHOP PLAZA	3	04/09/90

TOWN OF KINGSTON (cont.)

IMPLEMENTING PROCEDURES

<u>IP NO.</u>	<u>TITLE</u>	<u>DRAFT NO.</u>	<u>DRAFT DATE</u>
58	SHELTER MANAGER - KINGSTON ELEMENTARY SCHOOL	3	04/09/90
59-107	NOT USED	-	- -
108	SHELTER MANAGER - CORDAGE PARK	3	04/09/90

TOWN OF DUXBURY RADIOLOGICAL EMERGENCY RESPONSE PLAN,
 REVISION 7, 12/01/89

IMPLEMENTING PROCEDURES

IP NO.	TITLE	DRAFT NO.	DRAFT DATE
01	BOARD OF SELECTMEN	5	02/13/90
02	CIVIL DEFENSE AGENCY	9	05/10/90
03	POLICE DEPARTMENT	9	04/10/90
04	FIRE DEPARTMENT	13	05/10/90
05	DEPARTMENT OF PUBLIC WORKS	6	03/07/90
06	SCHOOL DEPARTMENT (INCLUDING PILGRIM AREA COLLABORATIVE AND MAGIC DRAGON CHILDREN'S CENTER)	9	09/21/90
07	BOARD OF HEALTH	10	10/04/90*
08	RADIOLOGICAL OFFICER	4	06/15/90
09	TRANSPORTATION OFFICER	4	02/20/90
10	SHELTER OFFICER	5	06/29/90
11	HARBORMASTER	4	05/08/90
12	COUNCIL ON AGING	6	04/05/90
13	COMMUNICATIONS OFFICER/RACES COMMUNICATOR	7	03/21/90
14	BOSTON EDISON COMMUNITY LIAISON	6	06/27/90
15	CONSERVATION DEPARTMENT	3	06/14/90
16	WRECKER PROVIDER	5	04/02/90
17-20	NOT USED	0	08/28/90
21	PUBLIC INFORMATION OFFICER	-	- -
22	EMERGENCY WORKER MONITORING AND DECONTAMINATION	4	06/15/90
23	NOT USED	3	02/09/90
24	MESSAGE CONTROL	-	- -
25	SIREN ACTIVATION	5	06/21/90
26-29	NOT USED	3	10/22/90
30	BERRYBROOK SCHOOL	-	- -
31	FIRST PARISH NURSERY	3	06/20/90
32	GOOD SHEPHERD NURSERY	3	06/21/90
33	LEARN IN PLAY PRE-SCHOOL	3	06/21/90
34	PIED PIPER PRE-SCHOOL	3	06/21/90
35	ST. JOHN'S NURSERY	3	06/21/90
36	BAY FARM MONTESSORI ACADEMY AND MUNCH-KIN MONTESSORI, INC.	3	06/21/90
37	MAGIC DRAGON CHILDREN'S CENTER - DUXBURY HIGH SCHOOL	3	06/21/90
38-39	NOT USED	1	09/24/90
40	BAY PATH/DUXBURY HOUSE NURSING HOME	-	- -
41-42	NOT USED	4	06/29/90
		-	- -

*IP-06, "School Department," Draft 10 will be in effect when the letter of agreement (LOA) with Needham School Department is signed. Last signature on the LOA was obtained on April 28, 1991.

TOWN OF DUXBURY (cont.)

IMPLEMENTING PROCEDURES

<u>IP NO.</u>	<u>TITLE</u>	<u>DRAFT NO.</u>	<u>DRAFT DATE</u>
43	WESTBROOK "NORTH HILL" GROUP HOME UNDER MASSACHUSETTS DEPARTMENT OF MENTAL RETARDATION	4	06/29/90
44-49	NOT USED	-	- -
50	BLAIRHAVEN CAMP	2	06/27/90
51	CAMP WING	2	06/27/90
52	SAINT MARGARET'S	2	06/27/90
53	CEDAR HILL	0	08/29/90
54-60	NOT USED	-	- -
61	SHELTER MANAGER - ALDEN LOWER ELEMENTARY	3	06/26/90
62	SHELTER MANAGER - ALDEN UPPER ELEMENTARY	3	06/26/90
63	SHELTER MANAGER - CHANDLER ELEMENTARY SCHOOL	3	06/26/90
64	NOT USED	-	- -
65	SHELTER MANAGER - DUXBURY FREE LIBRARY	3	06/26/90
66	SHELTER MANAGER - DUXBURY HIGH SCHOOL	3	06/26/90
67	SHELTER MANAGER - DUXBURY INTERMEDIATE SCHOOL	3	06/26/90
68	NOT USED	-	- -
69	SHELTER MANAGER - OLD TOWN HALL	3	06/26/90
70	SHELTER MANAGER - PERCY WALKER SWIMMING POOL	3	06/26/90
71	SHELTER MANAGER - TOWN OFFICE BUILDING	3	06/26/90

TOWN OF MARSHFIELD RADIOLOGICAL EMERGENCY RESPONSE PLAN,
 REVISION 7, 5/15/90

IMPLEMENTING PROCEDURES

<u>IP NO.</u>	<u>TITLE</u>	<u>DRAFT NO.</u>	<u>DRAFT DATE</u>
01	BOARD OF SELECTMEN	4	02/01/90
02	CIVIL DEFENSE AGENCY	4	05/15/90
03	POLICE DEPARTMENT	7	02/07/90
04	FIRE DEPARTMENT	5	01/29/90
05	DEPARTMENT OF PUBLIC WORKS	4	02/07/90
06	SCHOOL DEPARTMENT	0	08/29/89
07	NOT USED	-	- -
08	RADIOLOGICAL OFFICER	4	04/18/90
09	TRANSPORTATION	4	02/08/90
10	SHELTER OFFICER	4	06/20/90
11	HARBORMASTER	5	05/31/90
12	SPECIAL NEEDS COORDINATOR	4	04/03/90
13	COMMUNICATIONS OFFICER	5	04/09/90
14	BOSTON EDISON COMMUNITY LIASION	3	06/10/90
15-20	NOT USED	-	- -
21	PUBLIC INFORMATION	4	05/03/90
22	EMERGENCY WORKER MONITORING AND DECONTAMINATION	3	02/07/90
23	EMERGENCY MEDICAL SERVICES	3	04/12/90
24	MESSAGE CONTROL	5	04/18/90
25	SIREN ACTIVATION	1	06/05/90
26-39	NOT USED	-	- -
40	SHELTER MANAGER	3	06/20/90
41	SHELTER MANAGER - GOV. WINSLOW ELEMENTARY SCHOOL	3	06/20/90
42	SHELTER MANAGER - BRANT ROCK UNION CHAPEL	3	06/20/90
43	SHELTER MANAGER - OUR LADY OF THE ASSUMPTION	3	06/20/90
44	SHELTER MANAGER - SAINT ANN'S BY THE SEA	3	06/20/90

WELLESLEY RECEPTION CENTER PLAN,
DRAFT 2, 1/17/91

IMPLEMENTING PROCEDURES

<u>IP NO.</u>	<u>TITLE</u>	<u>DRAFT NO.</u>	<u>DRAFT DATE</u>
01	RECEPTION CENTER STAFF WELLESLEY DPW FACILITY	3	10/17/90
02	RECEPTION CENTER/EOC MANAGEMENT	3	10/19/90
03	MASSACHUSETTS STATE POLICE TROOP A	3	11/23/90
04	MASSACHUSETTS DEPARTMENT OF HEALTH	5	11/05/90
05	WELLESLEY RECEPTION CENTER	4	12/19/90
05	MA NATIONAL GUARD STATE AREA COMMAND (STARC)	4	12/19/90
06	TRANSPORTATION OFFICER	2	10/18/90
07	PUBLIC INFORMATION OFFICER	7	06/26/90
08	RADIOLOGICAL OFFICER	5	10/19/90
09	COMMUNICATIONS OFFICER	2	10/19/90
10	AMERICAN RED CROSS	2	11/05/90
11	MASSACHUSETTS CIVIL DEFENSE AGENCY	3	10/19/90
12	ANIMAL RESCUE LEAGUE	3	10/22/90
13	MASSACHUSETTS BAY COMMUNITY COLLEGE	3	02/26/91
14	MASS CARE FACILITY ADMINISTRATION	3	11/21/90
15	EMERGENCY MEDICAL SERVICES	3	11/21/90
16*	RECEPTION CENTER MEDICAL SUPPORT	3	- -
17	RECEPTION CENTER SETUP	3	02/01/91
18	MESSAGE CONTROL	3	11/07/90
19	MASSACHUSETTS DEPARTMENT OF EDUCATION WELLESLEY DPW FACILITY	4	10/24/90
20	SOCIAL SERVICES (A.K.A. DEPARTMENT OF MENTAL HEALTH -- WELLESLEY DPW FACILITY)	1	06/26/90
21	RECOVERY COMMITTEE - WELLESLEY DPW FACILITY	1	02/20/91
22	MBTA	2	12/14/90
23	MDPW DISPATCHER	1	- -
25	NEEDHAM SCHOOL SYSTEM SUPPORTING THE HOST SCHOOL EFFORT AT NEEDHAM HIGH SCHOOL	2	01/08/91
23	NEEDHAM POLICE DEPARTMENT SUPPORTING THE HOST SCHOOL EFFORT AT NEEDHAM HIGH SCHOOL	2	01/11/91
27	INITIAL RESPONSE MONITORING AND DECONTAMINATION SECTION ORGANIZATION	1	05/15/91
--	CRIMINAL JUSTICE TRAINING COUNCIL RADIOLOGICAL EMERGENCY RESPONSE PLAN		
--	EXECUTIVE DIRECTOR - CRIMINAL JUSTICE TRAINING COUNCIL		
--	STAFF - CRIMINAL JUSTICE TRAINING COUNCIL		

* Not included and has not been distributed.

TOWN OF BRIDGEWATER RADIOLOGICAL EMERGENCY RESPONSE PLAN,
REVISION 5, 12/01/89

IMPLEMENTING PROCEDURES

<u>IP NO.</u>	<u>TITLE</u>	<u>DRAFT NO.</u>	<u>DRAFT DATE</u>
01	BOARD OF SELECTMEN	6	07/23/90
02	CIVIL DEFENSE AGENCY	6	06/12/90
03	POLICE DEPARTMENT	5	06/08/90
04	FIRE DEPARTMENT	6	06/15/90
05	HIGHWAY DEPARTMENT	5	06/22/90
06	SCHOOL EOC REPRESENTATIVE	6	06/22/90
07	BOARD OF HEALTH	4	06/27/90
08	RADIOLOGICAL OFFICER	5	07/02/90
09	COMMUNICATIONS OFFICER	5	07/03/90
10	AMERICAN RED CROSS REPRESENTATIVE	4	06/12/90
11	NOT USED (Combined With IP No. 09)	-	- -
12	ANIMAL CONTROL OFFICER	5	06/13/90
13	BRIDGEWATER STATE COLLEGE	4	07/27/90
14-16	NOT USED	-	- -
17	EOC RECEPTION CENTER/TRANSPORTATION OFFICER	5	07/13/90
18-20	NOT USED	-	- -
21	PUBLIC INFORMATION	6	07/09/90
22	MONITORING AND DECONTAMINATION	6	04/03/91
23	EMERGENCY MEDICAL SERVICES	4	07/13/90
24	MESSAGE CONTROL	6	07/07/90
25	RECEPTION CENTER MEDICAL SUPPORT	4	12/07/90

CITY OF TAUNTON RADIOLOGICAL EMERGENCY RESPONSE PLAN,
REVISION 6, 5/5/89

IMPLEMENTING PROCEDURES

<u>IP NO.</u>	<u>TITLE</u>	<u>DRAFT NO.</u>	<u>DRAFT DATE</u>
01	MAYOR	1	09/01/89
02	CIVIL DEFENSE DIRECTOR	1	09/05/89
03	POLICE DEPARTMENT	1	08/31/89
04	FIRE DEPARTMENT	1	06/05/89
05	DEPARTMENT OF PUBLIC WORKS	1	05/05/89
06	EOC SCHOOL OFFICER	1	05/05/89
07	BOARD OF HEALTH	1	09/01/89
08	RADIOLOGICAL OFFICER	1	06/05/89
09	COMMUNICATIONS OFFICER	3	01/24/89
10	AMERICAN RED CROSS REPRESENTATIVE	1	05/05/89
11	RACES	3	03/16/87
12	ANIMAL CONTROL OFFICER	3	03/16/88
13	TAUNTON RECEPTION CENTER - FIELD HOUSE TAUNTON HIGH SCHOOL	1	09/01/89
14-16	NOT USED	-	- -
17	TRANSPORTATION OFFICER	3	09/01/89
18	HOSPITAL REPRESENTATIVE (Eliminated)	-	- -
19-20	NOT USED	-	- -
21	PUBLIC INFORMATION	1	07/12/89
22	MONITORING AND DECONTAMINATION - TAUNTON RECEPTION CENTER	1	07/07/89
23	EMERGENCY MEDICAL SERVICES	3	10/19/88
24	MESSAGE CONTROL	4	05/15/89
25	RECEPTION CENTER MEDICAL SUPPORT	3	02/02/88
26*	TRAINING (Not Included)	-	- -
27*	DRILLS AND EXERCISES (Not Included)	-	- -
28*	PROGRAM MAINTENANCE (Not Included)	-	- -

*These have been eliminated and are to be replaced with administrative procedures.

MCDA
RADIOLOGICAL EMERGENCY RESPONSE PLAN

Transmitted to FEMA September 1990 via cover letter from R. S. Boulay entitled "Appendix 2 to Hazard Specific Supplement No. 6, Commonwealth of Massachusetts Radiological Emergency Response Plan for Licensed Nuclear Power Plants"

IMPLEMENTING PROCEDURES

<u>IP NO.</u>	<u>TITLE</u>	<u>DRAFT NO.</u>	<u>DRAFT DATE</u>
01	MCDA DIRECTOR	8	02/09/91
02	MCDA DEPUTY DIRECTOR	4	12/10/90
03	MCDA OPERATIONS OFFICER	7	01/21/91

04	MCDA ADMINISTRATIVE SUPPORT OFFICER	4	12/10/90
05	JOURNAL OFFICER	3	12/03/90
06	MCDA SUPPLY OFFICER	4	12/03/90
07	MCDA SECURITY GUARD	6	12/10/90
08	MCDA COMMUNICATIONS OFFICER	6	11/01/90
09	MCDA MESSAGE CONTROL	5	10/17/90
10	INTELLIGENCE OFFICER	4	10/17/90
11	MCDA PUBLIC INFORMATION	4	12/17/90
12	MCDA PUBLIC AFFAIRS OFFICER	5	01/31/91
13	MCDA FRAMINGHAM RADIOLOGICAL OFFICER	4	12/03/90
14	MCDA FRAMINGHAM MASSACHUSETTS STATE POLICE EOC SECURITY	5	01/08/91
15	PLUME PLOTTING	3	09/13/90
16	MCDA POSTING	4	12/03/90
17	MCDA RUMOR CONTROL OFFICER	3	01/02/91
18	MCDA TECHNICAL HAZARDS OFFICER	4	12/03/90
19	MCDA, E.O. 144 STAFF	1	12/06/90
20	MCDA/OEP FRAMINGHAM-BOSTON EDISON (BECO) LIAISON	4	01/17/91

MCDA AREA II
 RADIOLOGICAL EMERGENCY RESPONSE PLAN,
 REVISION 8, 10/30/90

IMPLEMENTING PROCEDURES

IP NO.	TITLE	DRAFT NO.	DRAFT DATE
01	MCDA AREA II DIRECTOR	7	10/26/90
01*	COAST GUARD (May Move to Framingham)	0	- -
01	PLYMOUTH COUNTY SHERIFF'S DEPARTMENT (To be changed to IP-07S)	2	09/25/89
02	MCDA AREA II OPERATIONS DIRECTOR	3	07/23/90
03	MCDA AREA II RADIOLOGICAL OFFICER - ASSISTANT	3	10/30/90
04	MCDA AREA II TRANSPORTATION GROUP	3	01/31/91
05	MCDA AREA II PUBLIC INFORMATION ASSISTANT	1	07/12/89
06	MCDA AREA II COMMUNICATIONS GROUP	6	12/04/90
07	MCDA AREA II MESSAGE CONTROL	3	08/06/90
08	MCDA AREA II SPECIAL FACILITIES GROUP	6	12/28/90
09	MCDA AREA II TECHNICAL HAZARDS LIAISON	2	07/23/90
10	MCDA AREA II INTELLIGENCE OFFICER	1	06/28/90
09	MCDA AREA II STATE POLICE TROOP D, MIDDLEBORO (To be changed to IP-01S)	3	07/12/90
10	MCDA AREA II MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS (To be changed to IP-02S)	3	05/26/89
11	MASSACHUSETTS NATIONAL GUARD (To be changed to IP-03S)	2	08/03/89
12	AMERICAN RED CROSS (To be changed to IP-04S)	1	06/24/88
13	MYLES STANDISH STATE FOREST (To be changed to IP-05S)	3	12/06/90
14	MASSACHUSETTS CORRECTIONAL INSTITUTE - PLYMOUTH (To be changed to IP-06S)	0	11/30/88
15*	BECO LIASON (To be changed to IP-12)	2	- -
1T	TRANSPORTATION PROVIDER BUS/VAN FOR STAGING AREAS	1	03/27/90
2T	TRANSPORTATION PROVIDER FOR SCHOOLS	-	03/14/90
3T	TRANSPORTATION PROVIDER EMERGENCY MEDICAL SERVICES FOR STAGING AREAS	0	03/28/90
	JORDAN HOSPITAL EVACUATION PLAN	REVISION	4/89
	NUCLEAR INCIDENT ADVISORY TEAM (NIAT) HANDBOOK**		
	(COVER SHEET)	REVISION	10/87
	(TABLE OF CONTENTS)	REVISION	9/89

*Not included and has not been distributed.
 **NIAT Handbook is missing Appendix J.

APPENDIX D

TECHNICAL REVIEW OF
PILGRIM STATION EVACUATION TIME ESTIMATES
AND
TRAFFIC MANAGEMENT PLAN UPDATE (REV. 2)

by

Thomas Urbanik II, Ph. D., P.E.

April 15, 1991

APPENDIX D

TECHNICAL REVIEW OF PILGRIM STATION EVACUATION TIME ESTIMATES AND TRAFFIC MANAGEMENT PLAN UPDATE (REV. 2)

by
Thomas Urbanik II, Ph. D., P.E.
April 15, 1991

The current Pilgrim Station evacuation time estimate study (September 24, 1990) is an evolutionary document which represents the results of an ongoing process that can be traced back at least to NUREG-0654 (January 1980). The first Pilgrim Station evacuation time estimate study in February 1980 was reviewed in NUREG/CR-1856. It was one of only five of a total of 52 operating plants to receive an "excellent" evaluation.

In 1981 in response to revised guidance in NUREG-0654 Rev. 1 (November 1980) and the pending licensing of Pilgrim II, the evacuation time estimate study was revised using a new model specifically developed for evacuation time estimates. The previous study used a sophisticated, but general purpose transportation model. Subsequent to the second study, the Nuclear Regulatory Commission (NRC) staff in early 1981 had Battelle Pacific Northwest Laboratories and myself perform an independent assessment of the Pilgrim evacuation time estimates using CLEAR (see NUREG/CR-2504 for information on CLEAR) that confirmed the reasonableness of the Pilgrim evacuation time estimates. The NRC staff assessment did, however, identify a potential bottleneck beyond the emergency planning zone (at about 11.5 miles) at the Sagamore bridge.

In response to the questions raised in the NRC staff analysis, two additional studies were undertaken. A May 1981 study of Cape Cod traffic (Evacuation Time Estimates for Cape Cod, HMM Associates) resulted in an August 1981 traffic management plan (Evacuation Traffic Management Plan for Sagamore/Buzzards Bay HMM Associates). The traffic management plan was the first detailed traffic management plan ever prepared for a nuclear power plant. It subsequently became a model for other traffic management plans.

In 1987 the evacuation time estimate study process entered its third major phase with the development of the IDYNEV model. IDYNEV is an evolutionary model that was developed from a U.S. Department of Transportation, Federal Highway Administration model. IDYNEV was developed for the Federal Emergency Management Agency and has been evaluated by the NRC as an appropriate evacuation time estimate model (see NUREG/CR-4873 and NUREG/CR-4874). IDYNEV is

a state of the art computer simulation model which has been used at a number of locations including Seabrook Nuclear Station and Shoreham Nuclear Station. KLD Associates has performed a number of IDYNEV analyses including those for the Shoreham and Seabrook Stations. Both the computer model and the consultant have been subjected to extremely intense scrutiny by a number of different individuals and organizations relative to qualifications and the appropriateness of the model. The consultant is well qualified and the model is appropriate for evacuation time estimate studies.

My review of the current evacuation time estimate study (Pilgrim Station Evacuation Time Estimates and Traffic Management Plan Update, KLD Associates, September 24, 1990) followed a two step process. First, a review relative to NUREG-0654 (planning elements J.8, J.10.a and J.10.b) was conducted. Second, current best practice was considered relative to the study performed by KLD Associates for Pilgrim Station.

The study conforms with Appendix 4 guidance in providing maps as specified in planning element J.10.a. The general assumptions used are adequately documented. The methodology used is consistent with the guidance available. Demand estimates follow acceptable procedures and are appropriately reported (see planning element J.10.b). The Pilgrim Station evacuation time estimate report documents all the relevant information in conformance with the guidance of Appendix 4.

Although public apprehension appears to exist concerning the capacity of roadways to handle evacuating traffic, the evacuation time estimate study nevertheless uses appropriate roadway capacities. The presence of extensive congestion during peak hour traffic on many local roads is only an indication of the conditions that exist when traffic demand exceeds capacity. The fact that Pilgrim Station evacuation times are estimated to be up to about six and one-half hours indicates that many roadways will be congested and extensive delays may occur. The existence of congestion either during normal rush hour traffic or an evacuation is essentially the symptom of a large number of people using the limited roadway capacity, it is not an indicator of the inability of the roadway to accommodate an evacuation.

An area not covered explicitly by NUREG-0654, but considered good practice concerns the provision of detailed traffic management plans. Clearly, as indicated earlier, Pilgrim Station has one of the most fully developed traffic management plans for a nuclear power station.

In conclusion, the overall assessment of the Pilgrim Station evacuation time estimate study is that it is well prepared, represents the results of years of effort, is consistent with the overall guidance of NUREG-0654, and goes well beyond the specific guidance of NUREG-0654, Appendix 4 in providing a comprehensive time estimate study.

APPENDIX E

SIXTEEN PLANNING STANDARDS

10 CFR PART 50.47 (b)

OR

44 CFR PART 350.5(a)

OR

PLANNING STANDARDS A THROUGH P OF NUREG-0654

APPENDIX E

SIXTEEN PLANNING STANDARDS

10 CFR PART 50.47 (b)

OR

44 CFR PART 350.5(a)

OR

PLANNING STANDARDS A THROUGH P OF NUREG-0654

1. Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.
2. On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.
3. Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.
4. A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.
5. Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

6. Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.
7. Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.
8. Adequate emergency facilities and equipment to support the emergency response are provided and maintained.
9. Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.
10. A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.
11. Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.
12. Arrangements are made for medical services for contaminated injured individuals.
13. General plans for recovery and reentry are developed.
14. Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.
15. Radiological emergency response training is provided to those who may be called on to assist in an emergency.
16. Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

APPENDIX F

COMMENTS RECEIVED IN
RESPONSE TO DRAFT NUREG-1438
FINDINGS ON ISSUES OF OFFSITE
EMERGENCY PREPAREDNESS FOR
PILGRIM NUCLEAR POWER STATION

APPENDIX F

COMMENTS RECEIVED IN RESPONSE TO DRAFT NUREG-1438 FINDINGS ON ISSUES OF OFFSITE EMERGENCY PREPAREDNESS FOR PILGRIM NUCLEAR POWER STATION

This Appendix contains the following:

1. U.S. Nuclear Regulatory Commission Transcript of Pilgrim Task Force Public Meeting in Plymouth, Massachusetts, June 12, 1991.

Written Comments From Public Officials

2. A. David Rodham, Director, Massachusetts Civil Defense Agency and Office of Emergency Preparedness, Memorandum to Pilgrim Offsite Emergency Preparedness Task Force, June 12, 1991.
3. Alba C. Thompson, Plymouth Board of Selectmen, Comments, June 12, 1991.
4. J. Douglas Hadfield, Plymouth Civil Defense Director, Statement, June 12, 1991.
5. Helen Copello, Deputy Director of Civil Defense for the Town of Carver, Statement (undated)
6. Patricia A. Dowd, Chairman, Duxbury Board of Selectmen, Letter to Robert A. Erickson, Director, Pilgrim Offsite Emergency Preparedness Task Force, June 12, 1991.
7. Donald G. Kennedy, Duxbury Superintendent of Schools, Letter to Robert A. Erickson, Pilgrim Offsite Emergency Preparedness Task Force, June 10, 1991.
8. Daniel McGonagle, Director, Marshfield Civil Defense, Letter to Robert A. Erickson, Director, Pilgrim Offsite Emergency Preparedness Task Force, June 13, 1991.
9. Carolyn Morwick, Chairman, Bridgewater Board of Selectmen, Letter to Ronald B. Eaton, Senior Project Manager, Nuclear Regulatory Commission, June 12, 1991.

10. Dorothy Anderson, Assistant Attorney General, Commonwealth of Massachusetts, Letter to Robert A. Erickson, Chief Emergency Preparedness Branch, Nuclear Regulatory Commission, June 14, 1991.

Written Comments From Private Citizens

11. Mary Lampert, Duxbury Nuclear Affairs Committee, Statement, June 12, 1991.
12. Al Cavanaugh, Gurnet/Saquish Association, Testimony, June 12, 1991.
13. Jane Fleming, Acting Chairman of the Duxbury Radiological Emergency Planning Study Committee, Statement.

Written Comments From the Licensee

14. George W. Davis, Senior Vice President-Nuclear, Boston Edison, Letter to U.S. Nuclear Regulatory Commission, BECo Ltr. 91-075, June 6, 1991.

U.S. NUCLEAR REGULATORY COMMISSION TRANSCRIPT
OF PILGRIM TASK FORCE PUBLIC MEETING
IN PLYMOUTH, MASSACHUSETTS, JUNE 12, 1991.

NUCLEAR REGULATORY COMMISSION
PILGRIM TASK FORCE
PUBLIC HEARING

Wednesday, June 12, 1991

7:00 - 10:00 PM

Sheraton-Plymouth

180 Water Street

Plymouth, MA 02360

IN ATTENDANCE:

Bob Erickson, Chair

Aby Mohseni

Blair Spitzberg

Jack Dolan

Margaret Lawless

Joe Keller

Gail Good

Falk Kantor

Bob Trojanowski

Laura Deskins

P R O C E E D I N G S

1
2 MR. EATON: For the benefit of you all who don't
3 know me, I'm Ron Eaton. I'm the project manager for Pilgrim
4 nuclear power station at headquarters down in Rockland,
5 Maryland.

6 As most of you are aware, the purpose of this
7 meeting is for an opportunity for the task force here to
8 receive input from state, national and local officials
9 relative to their draft report findings on issues of off-site
10 emergency preparedness for Pilgrim nuclear power station,
11 which was submitted to the public on May 28th, 1991.

12 I'd like to go over some of the administrative
13 aspects of this public hearing, so that you're all aware of
14 how it will be conducted. For the benefit of you who do not
15 have copies of the public report, or did not get them from
16 the local library, there are copies on the table outside
17 along with copies of the press release.

18 This meeting is going to be transcribed by a court
19 reporter. And a copy of that transcript will accompany the
20 final report. Additionally, people who do not wish to speak
21 to the panel, they may submit written material which will
22 also be factored into the final report.

23 We will call for speakers that are local officials,
24 state officials, national officials first; followed by the
25 people that registered to speak with me.

1 For the benefit of those who did not register to
2 speak with me who would like to speak tonight, if you could
3 go and see Jane Fitzgibbons over in the corner there, now
4 standing, up and register with her; she will then pass that
5 list to the panel.

6 We ask that the speakers try to keep their comments
7 on the issues to about five minutes so that everybody has an
8 opportunity to be heard. When you begin to speak -- Or when
9 you're called, rather, if you would come to the center
10 microphones here, identify yourself and any organizations
11 that you will be representing, so that the transcript will be
12 full and correct, we'd appreciate that.

13 I'd like to remind you that the purpose of this
14 meeting, again, is to receive comments on the draft report.
15 And about 8:15 we'll have a 15 minute break and follow with
16 additional time as needed.

17 Any media questions will be handled by Bob
18 Erickson, who is the panel chairman after the meeting.
19 Additionally, we have public information officers from the
20 NRC, Diane Screnchy -- Would you please hold up your hand?
21 And also, Ken Hart from FEMA, who will be available to answer
22 non task force issues pertaining to the emergency planning
23 process.

24 Now, I'd like to introduce Bob Erickson. He is the
25 chairman of the panel and he will introduce his task force

1 and then we'll call for speakers.

2 MR. ERICKSON: Thank you, Ron. We're delighted to
3 be here tonight. Thank you for the opportunity of returning
4 to Plymouth where it all began. In this case, where it all
5 began for us, as well.

6 The task force that's before you now was created as
7 a result of a public meeting here in Plymouth in September of
8 last year. The task force was formed to analyze and follow
9 up on public comments that were received at that meeting.

10 Now I'm going to ask -- Can I be heard in the back?
11 Ron, can you hear me well?

12 MR. EATON: [Indicates affirmative.]

13 MR. ERICKSON: Okay. We have worked as
14 objectively and as thoroughly as we could on this project and
15 we believe that we have done a thorough job. Two weeks ago,
16 we published our draft report of findings and placed a
17 hundred copies in the Plymouth public library; along with all
18 the of the references that we used, a couple of hundred in
19 number, so that all of the material that we worked with would
20 be available to you citizens.

21 We sent copies of this to local officials, and to
22 the state officials. We also placed copies for the
23 convenience of citizens in the local libraries of the towns
24 that I've seen listed, which include Kingston, Wareham,
25 Plympton, Marshfield, Duxbury and Carver.

1 And more copies of our report are available here
2 tonight and we would encourage you to take one if you would
3 like, since we don't want to carry very many back with us on
4 the airplane. We also have some abbreviated copies of our
5 public announcement, which include some summaries of the task
6 force findings and they may be even more convenient for some
7 of you.

8 We found that emergency planning is a dynamic
9 process; and that's not news to you, I'm sure. Volunteers
10 come and go, procedures are refined, circumstances change,
11 improvements are made, we the task force witnessed this kind
12 of thing throughout our inquiry.

13 Nevertheless, by the day of our draft publication,
14 May 28th, we found that some matters of off-site emergency
15 preparedness at Pilgrim Station still warranted attention, we
16 felt, certainly by the next scheduled exercise in December.

17 Those issues involved, as you have already seen I'm
18 sure, matters of certain equipment for communications and its
19 maintenance; training of persons involved in emergency
20 response; the identification of persons with special needs;
21 and coordination of plans and procedures between the state
22 and local communities.

23 Now as I stated before, we the task force think
24 we've done a thorough job in putting together our facts. But
25 the purpose of this meeting is to now obtain your comments in

1 sort of a final way, to be able to make our report as
2 up-to-date and as accurate as possible.

3 In preparing our final report, we will review your
4 comments, looking for substantial and material differences
5 from the findings in the draft task force report. And we
6 will forward a record of this meeting, together with the
7 written comments received, to the commission with our final
8 report.

9 Now, before hearing from commenters, I'd like to
10 introduce the members of the task force. And let me begin
11 with, to my left, Jack Dolan, who is from the FEMA Boston
12 office, Region I. That office arranged meetings with state
13 and local officials and facilitated the work of the task
14 force in every possible way and we're delighted to have Jack
15 with us on panel today.

16 Around the curve to my right -- I hope you enjoy
17 this serpentine table that we have today, it's something
18 different. Around the curve to my right is Falk Kantor, who
19 was the team leader for Field Team 1. And I'd like to ask
20 Falk to please introduce his team members and the topics that
21 they covered. Falk?

22 MR. KANTOR: Thank you, Bob. I am Falk Kantor. I
23 am a member of the NRC's emergency planning staff, and I was
24 the leader of Team No. 1. Assisting me was Bob Trojanowski,
25 from our NRC Region II office in Atlanta to my right. And to

1 his right, Laura Deskins of FEMA.

2 My team addressed issues related to emergency
3 planning in the towns of Plymouth, Marshfield, Carver,
4 Kingston, as well as Gurnet-Saquish. We also were involved
5 in obtaining a set of current plans and procedures for all
6 the EPZ towns in the state. Thank you.

7 MR. ERICKSON: The field teams were three in
8 number. Falk was the leader of the first team. The leader
9 of our second team as Ed Podolack. Unfortunately, Ed's
10 mother died on Monday and he could not been here.

11 I'm sorry, he was looking forward to revisiting
12 with you folks, to close the loop on this fact-finding
13 activity. But in Ed's absence, I'd like to ask Margaret
14 Lawless from FEMA headquarters to introduce the rest of the
15 members of that team and the topics that they covered.

16 BY MS. LAWLESS: Thanks, Bob. I'm Margaret
17 Lawless, from FEMA in Washington. To my right is Joseph
18 Keller, from the Idaho National Engineering Lab, a consultant
19 to FEMA. And to his right is Gail Good, from NRC Region V in
20 the San Francisco area.

21 The areas that our team covered included issues
22 concerning the reception centers at Wellesley, Bridgewater
23 and Taunton; also issues concerning the Duxbury plans; and
24 general issues having to do with evacuation time estimates,
25 public information materials, the emergency planning zone,

1 shelters, and the public information materials.

2 MR. ERICKSON: Thanks, Margaret. And our third
3 field team was headed by Aby Mohseni, who is around the curve
4 to the left. Aby, would you please introduce your team
5 members and their topics?

6 MR. MOHSENI: Yes. Thank you, Bob. I'm Aby
7 Mohseni, I was with Team No. 3. And to my right, Blair
8 Spitzberg from NRC Region IV, and Steven Borth from FEMA
9 Region I, who unfortunately could not be here tonight.

10 And the areas we covered included communications;
11 direct torus vent system; persons with special needs;
12 potassium iodide; public notification system; recovery and
13 reentry; and transportation.

14 MR. ERICKSON: Thank you, Aby. Now, before we
15 proceed with comments on the draft report, I'd like to
16 acknowledge that although there are not members from the
17 state legislature here, that Cary Cullen from the Mass. Joint
18 Committee on Energy is in attendance at the meeting. He's
19 right up here in the front row.

20 In terms of public officials, we are pleased to
21 have with us this evening Mr. A. David Rodham, I hope. I
22 didn't see Mr. Rodham, is he here? There he is, in the back.
23 How do you do, sir?

24 He is the director of the Massachusetts Civil
25 Defense Agency. And we thought, Mr. Rodham, if you didn't

1 mind, that we would give you the podium first. If you care
2 to make comments on the draft report, sir, would you just
3 come forward to any one of these microphones?

4 BY MR. RODHAM: I'm Mr. Rodham, Dave Rodham of
5 the Mass. Civil Defense Agency and also is another member of
6 the public safety staff, assistant secretary to public
7 safety, Dale Jenkins, who's in the back, he just came in,
8 too.

9 And I thank you for this opportunity, mostly to,
10 not knock necessarily the draft -- we've made our comments in
11 writing -- but more to meet the people that I have not met
12 prior to this evening. I have only been in office three
13 months, I'm part of the new administration and have been
14 director for three months, which is about halfway through the
15 task force

16 Or you were halfway through your efforts before I
17 hit the scene. I've enjoyed working with the task force,
18 I've enjoyed working with FEMA, and I've enjoyed working with
19 all the activists down in Plymouth as well as the utility.

20 And I think we'll solve a tremendous amount of the
21 problems or issues that have been brought up and I pledge
22 that our administration will be: 1) Open; 2nd) Willing to
23 listen to anybody; and 3rd) We will get these problems solved
24 and we'll get them solved in a timely basis.

25 I thank you again, Mr. Chairman, for this

1 opportunity to speak before you.

2 MR. ERICKSON: Thank you, Mr. Rodham.

3 Are there any other state officials or
4 representatives who would wish to speak? If not, we would
5 like to proceed with officials from the local towns. And
6 we're pleased to have here this evening Alba Thompson,
7 speaking for the Plymouth Board of Selectmen.

8 BY MS. THOMPSON: Thank you for this opportunity.
9 Within the hour, state Senator Kirby called to extend to you
10 and to his constituents his regrets that he was not able to
11 be here tonight himself.

12 I shall be speaking for the entire Board of
13 Selectmen of the town of Plymouth. Our civil defense
14 director is with me, also, as is our fire chief.

15 I am speaking directly to your report. The town of
16 Plymouth thanks you for your effort in the draft report. The
17 method of reviewing disputed issues raised by the Nuclear
18 Regulatory Commission public meeting held in Plymouth on
19 September the 6th, 1990, is commendable.

20 For the first time in the 18 year history of our
21 preparations for radiological emergency at the Pilgrim
22 nuclear power station, we finally have a report based on
23 information by a task force team working on-site with local
24 officials responsible for the planning.

25 Our town had been disillusioned and discouraged by

1 the October and December, 1988 NRC hearings when restart of
2 Pilgrim was premised on testimony of NRC staff that had never
3 seen the town's current plans; or consulted with local
4 officials; or held a public hearing on emergency planning in
5 this area; or even visited our Plymouth emergency operation
6 center.

7 The NRC Inspector General's report of July the
8 26th, 1990, found much of their NRC staff work inaccurate and
9 was, quote from your report, "critical of the staff's
10 determination." Rightly so. We must be unequivocal about
11 what all that means.

12 Plymouth and four other towns within the ten mile
13 emergency preparation zone went into a period of restart of
14 Pilgrim when emergency plans were not complete or approved by
15 responsible local officials, state officials, or Federal
16 Emergency Management Agency officials.

17 From December, 1988 onward, we were at risk and
18 continue to be without important operational aspects of the
19 radiological plans for many months. The criticality of that
20 situation comes home clearly if we all acknowledge that key
21 portions of our implementing procedures were incomplete or
22 missing. Police, fire, schools, and hospital were all
23 missing. That is at the time of the testimony of December
24 the 9th, 1988 before the NRC.

25 Not a single EPZ community had school evacuation

1 plans that had been approved locally. Your statement, draft
2 NUREG-1438, Page 2-2 is therefore immensely welcome. And I
3 quote. "It was, and is, the task force's position that the
4 final word on the status of the town plans and procedures, as
5 well as copies of the plans and procedures themselves, could
6 only be obtained from town officials." End of quote.

7 That was exactly what the town of Plymouth had
8 maintained in the NRC hearing of December the 9th, 1988 and
9 in our written critique of the October, 1988 NRC hearing to
10 which we were not invited, but the owning utility was. It is
11 incomprehensible that your sensible statement was not policy
12 for the NRC in the past when it was evaluating the states of
13 our emergency plans.

14 Your recommendations to the NRC should include that
15 policy statement. You have the makings of a good report
16 here. What you do not have is a consistent designation of
17 who will monitor your findings to see that necessary action
18 is actually taken. Neither do you always deal with the
19 enforcement when regulations have not been met.

20 Your report is a beginning. If little happens
21 thereafter, the report merely becomes expensive pieces of
22 paper. We urge you to annotate both recommended monitoring
23 and enforcement throughout your final report.

24 Please notice, you often refer to the point that no
25 NRC or CFR regulations cover a particular issue. But perhaps

1 your recommendation should be that one ought to be brought
2 into being. Because an issue may not have been previously
3 considered does not mean there is no need to deal with the
4 problem.

5 For example, Page 2-11, quote, "If it becomes
6 necessary for emergency workers" -- and I put my own words in
7 'and the general population' -- "to evacuate Plymouth Subarea
8 3 which includes the police station, the central fire
9 station, and the EOC." End quotes.

10 There is no regulatory requirement for an alternate
11 EOC, emergency operation center, but shouldn't there be one
12 when Plymouth could not operate without the communications
13 net and equipment of these vital services? The establishment
14 of a second or alternate headquarters and the redeployment of
15 public safety equipment and personnel would be absolutely
16 essential if Subarea 3 were to be evacuated.

17 Plymouth has previously posed this problem in clear
18 terms to you. The present plans to remove officials to
19 Massachusetts Civil Defense Area 2, about 30 miles away in
20 Bridgewater will not work. As our police and fire chief have
21 told you.

22 We can not conceive of removing selectmen and key
23 personnel to a point that far away while the town is
24 undergoing disaster conditions. Officials belong close to
25 their stressed people as a demonstration of their concern and

1 the visible commitment to duty. An atmosphere of confidence
2 must be maintained. The knowledge that officials are close
3 by and available and at work is part of the calming effect.

4 A solution for Plymouth for a suitable alternative
5 EOC must be found. We thoroughly agree with your statement
6 in the report, and I quote, "The task force believes that
7 BECo, Boston Edison Company, should continue to work with
8 town officials to find an acceptable solution to the town's
9 concern about possible evacuation from EPZ Subarea 3," end of
10 quote on your Page 2-11.

11 Please note that in this regard NUREG-0654 does not
12 differentiate between a host community that surrounds a
13 nuclear plant and other towns, much farther removed but still
14 in the EPZ. Obviously the needs of Plymouth are somewhat
15 different from those of Marshfield or Carver or other EPZ
16 communities.

17 We suggest your report point out these special
18 considerations, including the establishment of an alternate
19 EOC. As you know, the scenario of the NRC drill of October,
20 1989 did indeed require the evacuation of Subarea 3.

21 Again, Plymouth not only surrounds the Pilgrim
22 nuclear power station, it is entirely in the EPZ, all 103
23 square miles, with a year round population of 45,000
24 residents, a summer population rising to 65,000 residents,
25 and with a transient tourist number of one million visitors

1 in a season stretching from April through November.

2 Our emergency planning and our needs must take
3 these particular statistics into consideration. If current
4 regulations on radiological emergency planning do not cover
5 that unique set of conditions of a host community, they
6 surely should. We request you reflect the needs of such a
7 host community.

8 Another large issue for Plymouth is the status of
9 the reception centers: Wellesley in an old D.P.W. garage,
10 Bridgewater in an old college gymnasium, and Taunton in
11 Taunton High School. Plymouth reported to the NRC in 1988
12 that, in our estimation, neither Bridgewater nor Taunton were
13 actually in a condition to operate. Wellesley Center at that
14 time was not even in existence.

15 It is no comfort to repeat from your draft report,
16 quote, "There was no reception center for people evacuating
17 to the north of the Pilgrim station at the commission's
18 restart decision in December, 1988." End of quote. That's
19 Page 2-95.

20 Returning to the Bridgewater reception center in
21 the Kelly gymnasium. In February, 1991, this year, you
22 discovered communications, that is radio, problems, quote,
23 "At a crisis." That's Page 2-101.

24 You discovered that the Bridgewater fire department
25 would not participate in radiological training and that the

1 provisions of Planning Standard F NUREG-0654 and Criteria 1
2 and 2, quote, "Regarding a primary means for notifying and
3 mobilizing emergency response personnel are not met." End of
4 that quote. That's February 1991, Page 2-105 and Page 2-106.

5 A general indictment by your task force is found on
6 Page 2-109. Here is the quote. "All of these facts point to
7 the conclusion that for some substantial period of time
8 before . . . January 1991, the reception center was
9 understaffed and could not have been set up and operated."
10 End of quote.

11 Plymouth has some doubts that training Bridgewater
12 college volunteers is a suitable substitute for the missing
13 fire department personnel whose general firefighting training
14 gives them an added dimension of effectiveness. At any rate,
15 the capabilities of that reception center has never been
16 demonstrated in an evaluated exercise. Page 2-108. It
17 should have been required.

18 In 1988, the town of Plymouth rightly charged that
19 the Taunton reception center, then on the grounds of what had
20 been a hospital for the insane, was also not operational.
21 Today the Taunton reception center, now in Taunton High
22 School, like Bridgewater, faces the refusal of the Taunton
23 fire department to train or retrain for reception center
24 operations.

25 I believe that department went one step farther.

1 It said it would not, also, take part in the NRC drill. In
2 addition, according to your observations of January the 14th,
3 1991, quote, "The portable monitors were covered with dust
4 and were not attached to an electric source." End of quote.

5 Meaning, of course, the batteries were not charged
6 at all times. And quote from your report, "The wooden box"
7 -- and this is an aside, storing the 15,000 gallon bladders,
8 end of that aside -- "was open to the elements providing
9 minimal protection." End of your quote on Page 2-111.

10 Other equipment and supplies had not been
11 inventoried since October of 1989 and were stored, in your
12 word "haphazardly". "The metal fitting," another quote "for
13 the water bladder could not be located." End of quote on
14 your Page 2-112.

15 In the face of these discrepancies, your task force
16 nevertheless concluded that the reception center was capable
17 of fulfilling its intended function. That's a far reach.

18 In the case of all three reception centers, the
19 local fire departments have declined, as of this reading, to
20 train or retrain for any reception center operations. Notice
21 the three fire departments, all of them. The task force
22 should really address the reasoning that lead to this common
23 decision, since non-public safety volunteers are not likely
24 to come to their task with the expertise of firefighters.

25 In 1988, the testimony and letters of the town of

1 Plymouth to the NRC indicated that it did not believe the
2 Bridgewater and Taunton reception centers were operational.
3 There remain many doubts even today after the task force
4 encouraged a great many 1991 ameliorations.

5 We should like to point out that for years,
6 certainly from before 1988 and until this year, 1991,
7 notwithstanding erroneous testimony of NRC staff given to the
8 Nuclear Regulatory Commission as late as December, 1988 that
9 Wellesley and Bridgewater centers were not operational and
10 Taunton was questionable for some of that time.

11 Fortunately for your task force, you did not deal
12 with the history of these centers, which in the event of a
13 severe accident at Pilgrim would receive the public in the
14 plume exposure pathway for registration, for monitoring
15 and decontamination. That history is a sorry one and it
16 deserves at least a paragraph in your final report. The
17 truth should never be a casualty of space. The truth is
18 indeed a finding, and it would be well for the commissioners
19 to recognize it and finally to admit it.

20 The identification of the special needs population
21 and the measures to develop suitable strategies to protect
22 such individuals remains a problem for Plymouth, which has
23 about 750 known cases, including about 175 new additions.
24 And we still have about a 150 to be contacted. The MCDA and
25 the Boston Edison company report prepared by Chadwick, Martin

1 and Bailey which is in your report and listed as PT-46,
2 Attachment 114 was flawed, since in your quote "It was
3 conducted by the telephone without a telecommunications
4 device for the deaf." Also, "Such surveys cannot reach the
5 transient population or persons without a telephone." End of
6 quote Page 2-115.

7 Originally the report overlooked several zip codes
8 so that 4,000 post office box numbers were left out of the
9 mailings. This included Plymouth's Manomet post office and
10 the Long Pond post office.

11 Much work remains to be done on special needs and
12 Plymouth will be unable to meet the verification responses by
13 the finish date which you indicated in your report and that
14 date is July the 1st, 1991. We do not expect to meet that
15 date. We cannot meet that date.

16 The Saquish-Gurnet procedure is still being
17 revised. I'm sure you'll hear more on that from some of the
18 residents of that area. An interface with Duxbury
19 authorities who would need to assist evacuees during the
20 emergency are still needed.

21 The Plymouth Board of Selectmen, it has not yet
22 received the revised implementing procedure, some of which is
23 based indeed on some new facts, new times and so on, which
24 you yourself discovered.

25 The matter of equipment given to the town by BECo

1 prior to the coming of BECo emergency operations officer
2 Valley and the subsequent comprehensive grant agreement went
3 into effect must be involved. Before Valley and after
4 Valley, quite unlike our calendar of Jesus Christ, has no
5 reference to the need for the equipment nor BECo's
6 responsibility to maintain it.

7 Quote, "If this equipment is not maintained
8 satisfactorily, communication failures could result."
9 Therefore the task force finds quote, "The Planning Standard
10 10 CFR 50.47B8 is not met until the issue involving
11 maintenance of the portable radio for the police and the
12 pagers for the fire department has been satisfactorily
13 resolved." End of quote on Page 2-10. The town believes
14 that the pre-Valley equipment and post-Valley equipment, all
15 issued on the basis of need, should be maintained by BECo and
16 BECo should be so informed. This maintenance of equipment is
17 absolutely essential to a state of radiological emergency
18 preparedness.

19 The town could not possibly meet the objectives of
20 the NRC graded drill scheduled for December, 1991 and more
21 importantly, for a real life emergency, without its equipment
22 and preparedness status. See the summary of your findings,
23 Page 1 through 6, particularly Findings 1 and 2.

24 The town still has many doubts arising out of the
25 BECo transportation matrix, particularly letters of agreement

1 with bus providers, LOAs, signed and this is your quote from
2 your report. "Without any indication of this person's
3 position or title." End of quote, Page 2-130 and which were,
4 quote, "Not clear, concise or consistent." End of quote,
5 Page 2-131.

6 The statement a bus provider representatives that,
7 quote, "They believed that all drivers would respond." End
8 of quote, is debatable. Letters of agreement from trained
9 bus drivers would be imminently preferable and we urge the
10 task force to recommend this action. Two outside buses sent
11 into Plymouth during the NRC drill of 1989 and used to
12 demonstrate response was hardly a test. The exercise of
13 December, 1991 must be strengthened in that record. In fact,
14 neither the NRC exercises of 1985, 1989, nor the coming
15 exercise of 1991 were scheduled during a summer month when
16 population and traffic in Plymouth are at a peak. This is
17 also true of all the other coastal towns, not only Plymouth
18 but Kingston, Duxbury and Marshfield. All of them in the
19 EPZ. It is too long to wait until 1993 to test a summer
20 scenario; and we recommend FEMA and NRC be told that.

21 The summary of the findings of your draft report in
22 Pages 1 through 6 are certainly helpful as partial guides to
23 needed action. We recommend that additional specifics be
24 added. Particularly the unique problems of a host community
25 for a proper alternative EOC. The resolution of the refusal

1 of firefighters to staff reception centers is needed. The
2 lack of readiness and the maintenance of equipment at
3 reception centers requires attention.

4 Transportation needs an improved data base and
5 procedures not just, quote, "Better coordination," end of
6 quote among several agencies. A clear statement that the
7 task force found local officials and local plans the best
8 sources of valid information is needed as a finding, since it
9 was that egregious oversight that caused inaccurate staff NRC
10 reports in the past.

11 The fact that the task force uncovered much that
12 was wrong in emergency preparedness and was the stimulus of
13 immediate change should be noted. There is also no statement
14 as to what agency, FEMA or NRC will have the future
15 monitoring and enforcement functions in radiological
16 emergency preparedness. In other portions of what I have
17 just said there are recommendations, of course, for the
18 strengthening of your findings.

19 Thank you for your patience through these many
20 months of your review and particularly for this long
21 presentation tonight by the town of Plymouth. We in
22 Plymouth, America's hometown, are concerned for the public
23 safety of our historic community and her citizens. Our
24 intensity reflects our need to know you are listening and
25 that you will respond. Thank you.

1 [Applause.]

2 MR. ERICKSON: Thank you, Alba. We appreciate very
3 much the intensity and interest. And I'm certainly sure the
4 task force will be examining these recommendations and the
5 comments that you have made with very great care. As I
6 pointed out, we will be examining these for, in this case,
7 initially for the substantial and material aspects as they
8 relate to our findings.

9 In this case, you used many our of our own findings
10 to emphasize again to us what we have found and we appreciate
11 that. I think there was one thing that you did raise that
12 warrants a response, however, since we want there to be no
13 question about the follow-on to this task force activity.

14 And that relates to what agency, or whom, who is
15 going to be doing this kind of follow-up. I think it's
16 important for us to comment on the fact that the -- Well,
17 I'll leave headquarters Federal Emergency Management Agency
18 person to speak to this, as we move from the task force now
19 to the agency and perhaps Margaret Lawless can comment on
20 that.

21 MS. LAWLESS: Surely. There are several places in
22 the report that specifically mention that FEMA will be
23 reviewing revised procedures or following on to further
24 investigate or to provide technical assistance, but in
25 general, it is also true that FEMA will be proceeding through

1 its plan review based on procedures that we've collected as a
2 result of the task force effort.

3 And we do continue to provide technical assistance.
4 Whenever it's requested, we stand ready to do that. Of
5 course, in preparation for the December exercise, but at any
6 time actually.

7 MR. ERICKSON: So I wanted to make that quite
8 clear that the Federal Emergency Management Agency is going
9 to be continuing what it is doing now, post-task force. When
10 we fold our tent, that's just the beginning as you've
11 indicated. FEMA will be carrying that torch through the
12 process.

13 MS. THOMPSON: That raises another question in my
14 mind which is corollary.

15 Does that mean that the NRC is not going to be
16 concerning itself in emergency preparedness and that we're
17 back to the original old loop when FEMA did that?

18 MR. ERICKSON: No, I would like to emphasize that
19 both agencies have a keen interest in the protection of the
20 public, certainly. The commission considers emergency
21 preparedness to be an essential part of the totality of
22 public protection measures. So certainly that is not true.

23 But FEMA and the NRC do have agreements in which
24 they work together, in concert with FEMA emphasizing the
25 off-site aspects and NRC emphasizing the on-site aspects and

1 working in collaboration for what falls in between. That's
2 the way we would sort that out.

3 MS. THOMPSON: Thank you.

4 MR. ERICKSON: I think it would be appropriate at
5 this point to ask Mr. Hadfield, who is the civil defense
6 director from Plymouth, to ask if he would perhaps like to
7 add some comments to Selectman Thompson's comments.

8 MR. HADFIELD: Thank you. I'm Douglas Hadfield,
9 the civil defense director and I find myself in a very usual
10 situation, following very eloquent Mrs. Thompson. I'm
11 pleased that the task force finally got the information we've
12 been trying to give the NRC correct.

13 Some of the issues have been observed by task force
14 as needing attention ASAP. I do not agree with all of the
15 statements in the report.

16 In the report, a number of instances, the task
17 force says there are no NRC or FEMA requirements for this at
18 this time. I would like to know if there will be any
19 requirements in the foreseeable future; or are they just
20 going to be ignored as issues?

21 You've already answered my next statement, of who
22 will be responsible for the implementation of the task force
23 recommendations. That will be FEMA.

24 The egress issue of the Saquish-Gurnet is an
25 example of the no requirements. The problem is not going to

1 go away just because there is no requirement to fix it.

2 The special needs issue will never be complete.

3 While self-identification letters have been helpful in
4 identifying people with special needs, the right of people
5 not to respond is of great concern, to be able to have an
6 accurate list. I respect their right not to respond, but it
7 creates a very big volume of people that choose not to that
8 really should be on our list of people that need assistance.

9 My concern about transportation available was also
10 reflected in the draft task force report. The task force
11 indicated it found inconsistencies and unsubstantiated
12 numbers for buses that are assigned to areas. My main
13 concern is still the availability of drivers. There are no
14 LOAs with drivers and none are planned by the state. This is
15 another example of the need for more requirements from the
16 federal agencies.

17 Relocation for an alternate EOC is a large issue
18 for Plymouth, as Mrs. Thompson has already explained.
19 Bridgewater is just too far away. This was found to be a
20 serious problem for Plymouth in the 1989 exercise and has not
21 been resolved. Unlike the other EPZ towns, Plymouth has more
22 than one subarea that may or may not be affected by a state
23 directive. Plymouth has set an alternate EOC or mobile
24 communications van is a solution to our problem. However, as
25 I stated before, the alternate EOC cannot be as far away as

1 Bridgewater.

2 The status of reception centers is very clear in
3 the task force report. On some of the issues, not much has
4 changed since December of 1988. The availability of staff
5 that has been trained is still at issue in both Taunton and
6 Bridgewater. If the city of Taunton and the town of
7 Bridgewater cannot get this issue resolved, whose
8 responsibility is it to resolve it? The state or the federal
9 government? This issue has to be resolved to give any
10 credence to evacuation plans to all the towns in the EPZ.

11 I was pleased to see the task force report state
12 that 10 CFR 50 was not met on the requirements of the pre and
13 post Ron Valley issues. The equipment that is in question is
14 very important to the responsibility of the emergency
15 workers. Just because the equipment was given to the town
16 before the agreements were signed does not mean it is not
17 RERE, response related, and should be covered by the
18 agreement. I hope the final report is a little stronger in
19 stating there should be requirements for some of the
20 findings.

21 We have waited a long time for a positive report
22 that states the towns do know what they are talking about
23 when it comes to emergency planning and are not just a group
24 out to make headlines.

25 MR. ERICKSON: Thank you, Mr. Hadfield. We are

1 receiving requests to speak from other officials now. I've
2 just been handed a slip of paper that indicates that we have
3 a representative from Bridgewater. And also from Kingston.
4 Let's ask the gentleman from Bridgewater, Beasley, is he
5 here?

6 Yes, sir. Would you please come forward and state
7 your name and your position, sir?

8 MR. BEASLEY: Thank you very much. My name is
9 Clyde Beasley. I'm a selectman from Kingston, actually. Not
10 Bridgewater, although I do understand that if there is a
11 problem, we will be for Bridgewater.

12 MR. ERICKSON: Oh, all I had to do was turn to the
13 front of my report, look at our list of names and I would
14 have gotten that right, instead of reading the slip of paper.
15 Go ahead, Mr. Beasley.

16 MR. BEASLEY: Thank you. I wanted to, as those
17 have done before me, thank you for your report, the draft
18 report. It clearly shows many problems in the residence
19 off-site emergency preparedness which must be addressed.

20 I'm glad to hear that you have assigned a follow-up
21 mechanism. That was one of the first things I thought of;
22 and I think that certainly naming FEMA and I think possibly
23 delineating the process that would be followed; I think that
24 would be very useful. As I read through this report --
25 and I must admit I did not read it word by word, but I did

1 look through it -- it struck me that a lot of the issues were
2 only addressed when you spoke to the various agencies and
3 folks that were involved in this. It seemed a little bit to
4 me like a teacher that gives a test and then goes and tells
5 what the answers are so that the test will be passed by many
6 of the groups.

7 And that particularly struck me with regards to
8 Kingston. And I want to say that I'm going to speak
9 particularly to Kingston in this, because that's of course
10 what I'm most responsible for. I want to relate back to some
11 of the earlier testimony that I gave and in my absence on one
12 of the evenings that our premiere citizen Jean Creedon over
13 here gave for me.

14 I think one of the first issues that we spoke to
15 was the notification system, the siren system and I noticed
16 that your draft report spoke to the Duxbury survey that was
17 done in 1986 relative to our comments on this. I do not
18 believe that the Kingston problems were sufficiently
19 addressed here vis-a-vis this issue of acoustical
20 effectiveness, it's called, and I would like to see a survey
21 done in Kingston, we'd like to see a look taken at exactly
22 how effective those sirens in Kingston are and how well laid
23 out they are.

24 It doesn't seem to me that, I know to others who
25 commented on this issue in our town, that many of us can

1 really hear what's going on. And also, I again being
2 relatively new to this -- I'm not going to be able to claim
3 that for too much longer -- but having been a year involved
4 in this business, the fact that people are --

5 These phones surveys that are done when people are
6 notified that there's going to be a test, I would rather see
7 there be some sort of a blind test on the system. Although I
8 realize it's not too feasible to scare some peoples' trousers
9 off in regards to that. But I think when people are aware
10 there's going to be an alarm that they can probably hear it a
11 little better than if they don't know, which would be
12 relative to the actual situation.

13 Recently there was an unusual event, the Kingston
14 Board of Selectmen was notified generally, through the
15 grapevine, not actually through the formal process; that may
16 be some problem down here. So I did, as the selectman, call
17 our fire department dispatcher and discovered that the
18 dispatcher did not know what was going on because there was
19 no phone number to call for information.

20 I understand now that there has been a Boston
21 Edison BECo phone number that's installed for information in
22 the event of a situation like this. It struck me that it
23 took more than 10 years to establish a phone number for fire
24 departments to call to get this kind of information, which
25 was slightly absurd, but I guess that's -- At least we now

1 have the phone number.

2 The second problem that my dispatcher had was that
3 the fax machine that she had could not be read and she didn't
4 know what was on the facsimile as it came through. I
5 understand now that that's being taken care of, but again,
6 this is one of those issues that seems to be sort of ex post
7 facto thing and I would certainly, again, like to see it done
8 prior to the actual situation.

9 Question I noted on here is "Does it take a
10 potential emergency to make these improvements?" I think
11 periodic testing of these elements would certainly be
12 helpful. And it also struck me that the kind of thing that
13 you're doing here should perhaps be done every six months,
14 that this whole system would be tested like this. This would
15 be very helpful.

16 We proposed that the Federal Emergency Management
17 Agency, NRC, BECo, look into a possibility of using a
18 different type of notification system which would be in the
19 ringing of telephones in the area. I notice that, at least
20 as near as I could tell in this report, that that issue was
21 not addressed. I would like to know if that's a possibility,
22 if it's something that could be looked at.

23 I think it's used in other situations; I'm told by
24 folks who have worked for the phone company that this is very
25 possible and I think it's something that, if we get beyond

1 this current situation, that it should be looked at very
2 carefully.

3 Point 2 that we raised was that our understanding
4 that the Bridgewater reception center is not add adequately
5 repaired. It's clear that your draft report is in agreement
6 with that. I did do a bit of reading on bladders and once I
7 figured out what a bladder was, I realized the importance of
8 such a thing.

9 That there was clearly problems with the bladders,
10 that there was no way that these, the way it had been
11 currently set up would work. And it was also my
12 understanding that at the time that you spoke to the folks at
13 Bridgewater, the bladders were not available. So I suppose
14 until an emergency at the time that you spoke to them, we
15 wouldn't have any way to deal with the waste from this.

16 The issue of potassium iodide and paper masks,
17 again from a previous commentator I understand that there is
18 no -- and from reading the report -- that there's no
19 requirements for potassium iodide and paper masks be made
20 available. It seems to me, from a common sense point of
21 view, that they should be made available, that both of them
22 are clearly critical in the situation.

23 I understand that the issue is one of evacuation,
24 that you go for evacuation rather than any steps prior to
25 that, but I think that if you were to look at making

1 available masks and potassium iodide to the general
2 population, that that would be well worth while. I
3 understand that's not a federal regulation, but I think
4 federal regulations can always be changed.

5 Transportation. All I can say about the
6 transportation, Item 6, that we have own our list of issues
7 to be spoken to; that the transportation is clearly not what
8 it was set up to be, that the issue of drivers being
9 available -- never mind buses, but the drivers themselves
10 being available -- was a very dicey proposition, that there
11 are many problems with that. And I'm sure others will speak
12 to the transportation issue.

13 Also, the special needs issue, that we have many
14 folks who are not identified who -- This self identification
15 business is very difficult to manage and that we clearly need
16 to do more work on that. And I know there are people here
17 who are going to speak to that issue as well.

18 We mentioned that the Jordan Hospital was not being
19 able to handle the number of exposure victims. When the
20 draft report spoke to that comment, it said that in fact
21 Jordan Hospital was not, has no agreement to handle any
22 victims, any exposure victims. I think there should be an
23 agreement, I think that all the hospitals should be set up to
24 deal with this. I can't think of anymore appropriate place
25 than the hospitals and that's again something that although

1 no agreement exists, that we should definitely pursue.

2 The issue, again this was in Kingston, I didn't get
3 much beyond Kingston relative to the issue of training.
4 School employees and teachers need to be better trained. I
5 do understand that, it's either 14 percent or 17 percent of
6 the training that was to be made available to the teachers
7 was only 14 to 17 percent in the town of Kingston was
8 actually accomplished and I recognize that that is an
9 internal Kingston problem, and that's something that I would
10 tell you that the Board of Selectmen is going to get involved
11 with.

12 I must say, also, that at the time the task force
13 visited the towns, I believe you were around in February,
14 that the Kingston board of Selectmen was not notified of your
15 presence. Apparently, this might have been done through our
16 CD people, and the board itself was not aware of this. I had
17 the staff check back today and see if there was anything that
18 we missed back in that time period and there was not. We
19 would definitely like to be directly involved in all of these
20 things as much as possible.

21 The issue of identification of shelters. Again in
22 readings, the report is clear that your issue is one of
23 evacuation rather than identifying shelters prior to the need
24 to evacuated. I think, given the problems and difficulties
25 that are clearly inherent to the transportation situation as

1 well as human nature involved in the transportation, that
2 there should be a identification of shelters. The shelters
3 should be identified by dose radiation, dose reduction
4 analysis, not by square footage.

5 And the procedures should be developed in an
6 appropriate facility so that we, as the Board of Selectmen in
7 the town of Kingston, and I'm sure the other towns, have some
8 fail safe back-up mechanism so that we know that the
9 Independence Mall is the best, next best alternative to
10 transportation and then the school is next and Burger King
11 after that. Or whatever, whatever way it's going to go.

12 We discussed a little bit about our Board of
13 Selectmen's training. As our new member came on this year,
14 he received the same half hour to an hour of training that I
15 did. Frankly, the training was entirely worthless. It would
16 have helped us a great deal to have a more pragmatic training
17 as far as, say going to Bridgewater, seeing the reception
18 center, knowing what it looked like, knowing what to prepare
19 people for. Knowing better what kinds of actions we can
20 take and what kinds of things to expect.

21 I do not know, frankly, if the training that we
22 received was an issue relative to the BECo person doing the
23 training or whether it was something in the system. And
24 again, that's something that this board will be checking on.

25 The final thing is that the implementing

1 procedures, the IPs, as they're referred to, have not been
2 approved by the Board of Selectmen in Kingston. Training is
3 not being approved by the elementary school committee and I
4 think until we get these issues straightened out and we
5 certainly can use every resource that's available to do that,
6 we will not be approving them.

7 My hope is that the follow-up that you spoke to
8 relative to FEMA and the support that you've been and they'll
9 be providing the communities will help us do that and get us
10 to the point where we can come up with an approved acceptable
11 emergency evacuation procedure.

12 I thank you for your work. Again, being somewhat
13 new to this, it was refreshing finally to read something that
14 was indeed presented a critical analysis of the situation and
15 I, for one, appreciate that. Thank you.

16 [Applause.]

17 MR. ERICKSON: Thank you, Mr. Beasley. I
18 understand that there is another selectman from Kingston who
19 also wished to speak. Ron Maribett, is that correct?

20 MR. MARIBETT: Good evening, thank you very much.
21 I really don't have very much to add to what Mr. Beasley
22 said. We were not able, as we had planned, to rendezvous
23 earlier to discuss our various points. As you know, I'm the
24 newest selectman and I'm coming up to speed on a number of
25 these issues.

1 I would only state that I had a conversation with
2 someone at the statewide civil defense planning group in
3 Framingham, I'm not even sure of the the acronyms right now,
4 even at this point, with regard to the potassium issue.

5 And I was told that, well, in his opinion it will
6 be better to let the parents equip their children with this
7 and prepare them to deal with this. That's what he would do
8 if it were his case, and he outlined some requirements that
9 -- The fact is that there is no requirement and that there
10 were all these reasons why they weren't, possibilities that
11 someone might have a critical negative reaction to the drug,
12 that there were liability issues and so on and so forth.

13 I just wanted you to take back this one notion
14 about that. If we find ourselves in a situation where we
15 have eight, ten, however many busloads of children on one or
16 more roads; and one or more of those roads happens to become
17 obstructed by any kind of a catastrophe that could happen
18 while people are in a panic mode and the plume decides, for
19 whatever reason, or moves in that direction; we can have a
20 large number of supposed children.

21 I am in a position where you have to think of the
22 greatest good for the greatest number. I would like to see
23 some significant serious effort put into reviewing the use of
24 the radiological drugs and do some significant public
25 education on them so that we aren't leaving it up to parents;

1 some of whom know what to do; some of them may not.

2 So I'm very concerned about that and I'm very
3 concerned about the treatment of the children once they're --
4 I haven't seen this facility yet, I fully intend to at the
5 earliest possible moment in Bridgewater, but I'm very
6 concerned about the treatment of those children when we get
7 there and particularly if they have been exposed and then
8 they need to be stripped down and cleaned. I want very
9 specific procedures on who is going to be doing that kind of
10 thing. And I think I speak for a lot of parents.

11 Those are the two issues that I have, as I said,
12 I'm coming up to speed, I intend to dedicate a significant
13 amount of effort to this issue in the coming years.

14 And I thank you for your time and the opportunity
15 to speak.

16 MR. ERICKSON: Thank you, Mr. Maribett. We've
17 heard from several towns, there are still officials here from
18 other towns who would like to speak. I understand that Mr.
19 Tom Groux, the town manager from Duxbury is here. Mr. Groux?
20 Would you like to come forward and make a comment, sir?

21 MR. GROUX: I thank you, Mr. Chairman. I'm
22 speaking on behalf of the board of selectmen, but I must add
23 that the selectmen have not met as a board to review the
24 report, the draft report, since it's come in.

25 I have had an opportunity to look at it and I've

1 spoken to some of them, to all of them, but I do have a
2 statement from the Chairman that I will be filing and I'd
3 like to read briefly from.

4 "Dear Mr. Erickson: On behalf of the board of
5 selectmen of the town of Duxbury, I wish to commend you and
6 the task force for its thorough and comprehensive
7 investigation into the off-site emergency evacuation planning
8 for the Pilgrim nuclear power station. Your May 1, 1991
9 draft report communication to the task force is committed to
10 a full and objective assessment of the off-site emergency
11 plans and procedures.

12 Our board of selectmen agency heads and Duxbury
13 radiological emergency response plan advisory committee will
14 be reviewing the draft in more detail in the coming days.
15 And therefore we wish to submit additional comments beyond
16 the comments we are submitting today. I think there may be
17 some other people from Duxbury here tonight and they will
18 also be speaking.

19 One special and overall comments we wish to make
20 concerns transportation and bussing. Especially the
21 evacuation of the school children. We believe this issue may
22 be an issue common to all of the five towns in the EPZ.

23 It does not appear from the draft report that the
24 task force has investigated sufficiently the weaknesses that
25 we believe exist concerning the evacuation of school

1 children. We suggest that the recent FEMA review of Duxbury
2 and Plymouth, I believe Plymouth was included in that review,
3 of school implementing procedures be reviewed by the task
4 force and that you consider incorporating that review into
5 your final report.

6 The FEMA review, as I understand it, identified a
7 number of issues such as the total number of vehicles
8 actually needed and the number available, the types of
9 vehicles needed, the identification of providers, and it
10 identified these issues as needing further clarification. We
11 believe that's probably appropriate for all the communities.

12 This matter has long been of concern to Duxbury but
13 it is beyond the authority and the responsibility of the town
14 to resolve this matter. The report does not seem to get
15 specifically enough into that and does not recommend further
16 steps to clarify those issues.

17 On some more specific issues concerning Duxbury,
18 only, we will make the following comments -- By way
19 clarification, I wanted to point out these are not the only
20 ones and may well not be the most important ones as we have a
21 chance to review the report in greater detail. The issue of
22 equipment replacement and maintenance for pre-1988 equipment
23 is identified and recognized as an issue, but the report does
24 not point toward a solution. The town still considers this a
25 responsibility of Boston Edison and we do not agree that the

1 cost should be absorbed by the town from its annual
2 administrative grant. Now, this was spoken to earlier
3 tonight by the CD director from Plymouth. We are really
4 echoing those same comments.

5 The draft report states that four pagers with
6 greater distance are needed. Those are for our selectmen and
7 for our health agent. Actually, that's been cleared up and
8 it is no longer an issue.

9 On the other hand our lifeguards on Duxbury beach
10 need portable radios and that has not been corrected to date.
11 The draft report indicates a majority of teachers said in a
12 poll that they would not participate in the exercises or an
13 evacuation. It would be more accurate to say if any comment
14 is made on this point, that a small majority of teachers
15 responded to a survey concerning participation.

16 In fact, I believe the union advised the union
17 members not to respond to the survey. A large number of
18 teachers have already received training in Duxbury and we
19 have no reason to believe that the Duxbury teacher will not
20 assist with evacuation if that should be necessary.

21 At a recent meeting with town officials you asked
22 about our process for improving and correcting our plans and
23 implementing procedures. We would comment on this very
24 briefly by noting that in May of 1989, following the last
25 exercises, the Board of Selectmen convened a special Saturday

1 workshop. At that time the board asked the exercise
2 participants of the department heads, agency heads, and
3 volunteers, to identify what they thought were weaknesses in
4 our operation. The selectmen then developed a list of 18,
5 what we call 18 self identified issues needing follow-up
6 action.

7 Since that date, our civil defense director,
8 working with the department heads has periodically updated
9 this list, as well as the list on emergency planning. Now
10 those reports are reviewed routinely, as shared with the
11 towns RERP committee, department heads and the Board of
12 Selectmen.

13 I might note that many of those issues are still
14 unresolved and as representatives from other towns have said
15 tonight, and we'll probably be saying, the Board of Selectmen
16 in Duxbury have not approved any of our plans for final
17 formal review. We're still working on them and we expect
18 they will need correction and update in great detail. Chief
19 O'Neill, our CD director, I believe has given the task force
20 copies of the most recent updates of these two type of
21 reports that I just referred to.

22 In summary, we wish to thank you for conducting
23 this public hearing and again commend the task force for its
24 work. As we complete our review of the draft report, we may
25 send additional comments. The Board of Selectmen look

1 forward to receiving the final report at an early date and we
2 would be specifically interested in knowing what specific
3 recommendations you're going to be taking with regards to the
4 issues that you address that are still outstanding. Thank
5 you.

6 MR. ERICKSON: Thank you, Mr. Groux, I'm happy to
7 accept those.

8 We have also with us this evening, who wishes to
9 comment, Dan McGonagle, Marshfield civil defense director.
10 Mr. McGonagle?

11 MR. MCGONAGLE: Thank you, Mr. Chairman. I
12 appreciate the opportunity that you've provided me to speak.
13 I'm going to make a comment on some issues that we have been
14 affected, with our emergency response plan in the town of
15 Marshfield.

16 First comment I'd like to discuss is on the report
17 Page 2, Paragraph 4, discussing the pagers. In particular, I
18 quote that "These pagers were made more than adequate to
19 notify personnel slightly beyond the EPZ. But they had
20 limited range." This is an incorrect statement. And I would
21 like to bring that out this at this particular time.

22 Instead, the town of Marshfield firmly believes
23 that effective and reliable communication is essential and
24 the pager system is, in fact, inadequate and it has failed to
25 meet the needs of our community.

1 My second point is on Page 2-46, Paragraph 2.
2 Discusses BECos response to my written communications dated
3 2/4 of '91. I'd like to quote, if I could. The report in
4 brief, in part, states that BECo stated that the December
5 7th, 1987 agreement was made with the understanding that
6 these funds were to be used to pay the civil defense
7 directors and salary and not to buy equipment.

8 In response to that, I'd like to quote from our
9 grant, Page 2, Section 2. "Authorized use of grant funds.
10 The parties hereto agree that the funds provided by the
11 company to the town pursuant to this agreement shall be used
12 exclusively for specific purposes of civil defense as defined
13 in Massachusetts General Laws, Section L, Chapter 31 and in
14 accordance with 10 CFR 50, Appendix E entitled 'Emergency
15 Planning and Preparedness for Production in Utilization
16 Facilities in Nuclear Reg 0654' for the express benefit and
17 for the protection and health and the safety of the residents
18 of the town in preparing for and in response to a radiologic
19 emergency at Pilgrim Station or any other civil defense
20 function.

21 "All that's required by the state and federal laws
22 in regulation, the town may use these funds to retain the
23 services of a consultant or similar contract personnel and
24 other support personnel to assist in attempting to fulfill
25 its responsibilities under this grant agreement. The company

1 will assist the town if the town if the town requests such
2 assistance in preparing requests for proposals for any such
3 consultant or contract personnel."

4 I'd like to point out in that quote, at no time
5 have I mentioned anything about salaries.

6 Page 2-46, Paragraph 3. Radio for Harbormaster.
7 I'd like to provide the board members with an update. Since
8 the writing of this draft, several things have transpired.
9 One of which has led to the delivery of two portable radios
10 to our department for the purpose of the Harbormaster.
11 However, other identified equipment are still pending.

12 Page 2-47, Paragraph 2. Fax machine. This problem
13 has been resolved satisfactorily to our community. We
14 appreciate that.

15 Page 2-47, Paragraph 3, school radios.
16 Antennashave been installed, but as yet we have not received
17 any radios as described in the end of the draft report.

18 On Page 2-47, Paragraph 5, EOC related issues.
19 BECo states "The concern about the thermostat was a result of
20 a misunderstanding of the operation." If this is correct,
21 then I'd like to ask the question, "Why did it take
22 repairman two premise visits and several hundred dollars and
23 a replacement of the existing piece of equipment to resolve
24 the problem?"

25 Page 2-51, Paragraph 1, student transport issue.

1 Since this report was printed, many meetings have taken place
2 between the state to resolve this issue. I'd like to report
3 that a recent agreement has been reached between the state
4 and now the town of the Marshfield and the state now
5 completely supports the transferring of the Governor Winslow
6 school students to the Furnace Brook facility, to which
7 initially they were adamantly opposed.

8 This has been a major accomplishment and we
9 continue to look forward to working with the state as we move
10 forward with your planning process. In addition we, along
11 with the NRC and FEMA, are looking forward to the state's
12 approval for Marshfield's request to incorporate the entire
13 community within the EPZ.

14 Lastly, I'd like to mention that recently I had
15 received a telephone call in the afternoon from a radio
16 station, asking me if I would comment regarding a recent
17 press release that was conveyed to them that afternoon.
18 Unfortunately I could not comment on it, I expressed that,
19 because I was not privy to any of the information. And I
20 would like to ask, if there is something like that's that's
21 being shared, if possibly we could be on the same
22 transmission, so we would receive it also. I would have been
23 happy to comment, but unfortunately I couldn't.

24 Thank you very, very much.

25 MR. ERICKSON: Thank you, sir. I think I'd like

1 to comment and respond only to that last comment that you
2 made. The task force did, I must assure you, try in every
3 way to keep the local officials, state officials well
4 informed of all that was going on. In the case of that press
5 release, I think perhaps we did not get a press release to
6 you thinking that this would be a general information for all
7 the general public.

8 We did, however, have the draft report in your
9 hands at that time, I hope. And essentially the press
10 release parroted the executive summary of that report. So I
11 hope that you still were well informed with the information
12 that was necessary. I'm sorry that we didn't get the press
13 release to you, though.

14 MR. MCGONAGLE: Very well, thank you.

15 MR. ERICKSON: We have now from the town of
16 Carver, however you folks may pronounce that, I can't quite
17 imitate it perfectly. I'm sure the lady from Carver will do
18 it. Ms. Helen Copello, who is the assistant civil defense
19 director from that town.

20 MS. COPELLO: Good evening, ladies and gentlemen.
21 My name is Helen Copello and I am the Administrative
22 Assistant/Deputy Director of Civil Defense for the town of
23 Carver. I would like to thank the task force for a job well
24 done in securing the information they have put together on
25 issues of the off-site emergency preparedness.

1 The town of Carver had six issues that were of
2 concern to us. They were fire department pagers, adequacy of
3 communication with the alternate EOC, EWMDs, adequate space
4 in the present EOC, transportation staging area, and the
5 sixth one, the schools. This issue seems to be the issue
6 with all towns involved with the nuclear power plant.

7 The first issue with the fire department pagers has
8 been ongoing for about three years. Your findings show that
9 they do not meet the code of federal regulations and we now
10 hope to work with BECo to either purchase new pagers or place
11 the present ones under a maintenance agreement.

12 Needless to say, our fire chief is very happy with
13 your findings, since this has been a concern of his for the
14 past few years because of an all volunteer fire department.

15 The second issue was with the alternate EOC, which
16 is located at Area two in Bridgewater. We hope this will be
17 resolved soon. I requested at our most recent meeting to
18 have the state, BECo, town chiefs, and selectmen meet at Area
19 2 and try and resolve the situation. We feel confident that
20 this item will be taken care of.

21 The third issue concerning emergency workers
22 monitoring decontamination station and has been resolved at
23 this time. Plymouth is more than willing to help us out and
24 the personnel that we have will be under their direction and
25 the possibility of being able to add more manpower from the

1 Civil Air Patrol is looking favorable at this time.

2 Item 4 has to do with the space in the present EOC.
3 This is beginning to become a big issue. The task force has
4 found this facility to be adequate as an emergency response
5 facility. The problem seems to be more with security of the
6 police department than size of the EOC. The chief is
7 responsible for any persons within the building, whether they
8 are there for training, a meeting, a prisoner, et cetera.
9 And this has become an impossible task to keep under control.

10 Even though the chief and myself work well with the
11 everyday comings and goings, there is always the possibility
12 of a time when my area cannot have the protection or security
13 she feels necessary.

14 This becomes a definite issue at times of drills
15 and exercises because of the amount of personnel that would
16 be coming in and out of the EOC. We are talking upward of 40
17 to 50 personnel in and out of the EOC. This place is
18 adequate for a problem within the town, but certainly not an
19 emergency at the plant.

20 The every day workings of the police department
21 does not stop because of a drill or exercise or something
22 going on at the plant. We feel that this issue should
23 continue to be worked on and hopefully find a way to resolve
24 this. The present chief and selectmen were not the team in
25 place at the time of the agreement with BECo.

1 Item 5, regarding the transportation staging area
2 has been resolved. The staging area is now located at the
3 rear of the town hall and no longer at the elementary school.
4 We have a chance to see how this works in December with the
5 exercise.

6 The 6th and final issue are the schools. Our
7 school department has taken issue with the same problem as
8 all of the other EPZ towns, but seems to be satisfied with
9 the findings of the task force at this time. I believe the
10 only problem with this procedure was the fact that the school
11 committee would like to see a full scale exercise with
12 children being moved so that they know that even though they
13 accept the procedure in concept, that they can see that it is
14 implementable.

15 I would like to thank the NRC and FEMA for having
16 this open meeting in order that we may continue to bring any
17 concerns to you. Thank you.

18 MR. ERICKSON: Thank you very much, Helen. We
19 have another local official with us tonight. William
20 Ferioli, police chief from Bridgewater. Mr. Ferioli? Chief
21 Ferioli? .

22 MR. FERIOLI: Thanks, Mr. Erickson. My name is
23 Bill Ferioli, police chief in Bridgewater and I'm also the
24 deputy civil defense director for the town of Bridgewater.
25 Roger Walch was the fire chief in Bridgewater, is the

1 director of civil defense, we were both appointed about four
2 weeks ago.

3 I have here a packet of information which I'd like
4 to present to you. Unfortunately, it's addressed to Mr.
5 Eaton. I'm going to read a portion of the cover letter from
6 Mrs. Morwick, who is the chairwoman of the board of selectmen
7 in Bridgewater and just mention briefly a few of our
8 concerns.

9 "Dear Mr. Eaton, Please find enclosed concerns
10 expressed by the town of Bridgewater through our public
11 safety department regarding the inadequacy of the Pilgrim
12 off-site emergency preparedness plan. Thank you for your
13 attention to these concerns."

14 This particular letter does not have, does not in
15 itself address all of the problems, but what Mrs. Morwick did
16 was ask each of department heads that had concerns to prepare
17 a letter, addressed to her, which is here and that, in total,
18 will be presented to the commission.

19 Bridgewater was mentioned quite a few times
20 tonight, a couple times in its lack of response by its fire
21 department. And I will not speak for the fire chief, but I
22 will address a portion of that and their refusal to
23 participate in training. A portion of that was only partly
24 true, because the same is in effect also for the police
25 department. And I'd like to explain our reasons, or our

1 rationale for that decision.

2 For several years, both myself and the fire chief
3 have raised concerns over a portion of the plan, lack of
4 resources, and problems with equipment that we have in the
5 town of Bridgewater. And over those years, those concerns
6 went unheard or they were ignored. Quite often, the only way
7 to get someone's attention when they ignore you is to hit
8 them over the heads. So we decided to withdraw our support
9 and/or our training to get someone's attention. And I guess
10 a portion of this worked. Whether or not it follows through
11 is another matter.

12 But a portion of that involved the fire
13 department's communications equipment. It was a problem with
14 the fire department's computer and its radios. When the
15 computer was running, the fire department tried to transmit a
16 message to its ambulance or to one of the fire trucks, there
17 was a lot of static and it interfered with the message.
18 There were a few other concerns which the fire chief has in
19 his letter.

20 MR. ERICKSON: We captured these, to a large
21 degree, in the draft report, did we not?

22 MR. FERIOLI: Yes, but they have not yet been
23 resolved. In the police department, it involved equipment,
24 pagers, and additional personnel that we had, a portion of
25 which was addressed in the report, and that involved the

1 school crossing guards.

2 A part of the plan, the problem in prior years was
3 that the police and fire chief were not involved in the
4 preparedness of a portion of the plan that involved their
5 departments. What would happen was, BECo would make a change
6 in the plan, add other tasks for the departments, the police
7 chief and fire chief were not informed of this until they
8 happened to read in the draft and catch it themselves. When
9 they inquired how the changes were made or where the
10 resources were going to come from to take care of these new
11 tasks that they were given, they weren't given any answer, so
12 we even, in fact, refused to sign off on our portion of the
13 plan that affected our individual departments.

14 One address that you made in here. We're a small
15 department, roughly 30 men; and we have five part-time police
16 officers and school crossing guards. For us, we have to
17 depend on, to make this plan work, everybody we can get our
18 hands on. We try to address that with pagers. When people
19 are off duty, you can't get ahold of them. I might be out
20 shopping, my officers may be sleeping, they may be out in the
21 back yard. If you can't contact that person when you need
22 them, he's no good to you.

23 We have people available right in the community,
24 school crossing guards, additional tasks we picked up were
25 the host schools. Without having enough policemen, we

1 thought it would be logical to fall back on the crossing
2 guards who were already there, allow them to do the traffic
3 right in front of the schools, which they were doing
4 already, take care of it.

5 That was going to required some extra portable
6 radios. We had some, but we didn't have enough. Not to get
7 them out of the plume is mentioned in the report, but to
8 contact them in case of a traffic problem, an accident, to
9 find out what's going on there. Without communications to
10 your people in the field, forget about it. They're out there
11 and they're alone. You can't find out what's going on out
12 there and they can't communicate to you problems that they're
13 having.

14 So basically, our reports are here and also a
15 report from the highway superintendent who had some concerns.
16 And I'll ends it with that. And I thank you for it.

17 MR. ERICKSON: Thank you, Mr. Ferioli. Thank you,
18 Chief Ferioli.

19 MR. FERIOLI: Call me Bill.

20 MR. ERICKSON: At this time are there any other
21 local officials who wish to speak? I think that we have
22 called all of the local officials.

23 MS. THOMPSON: We have our fire chief here.

24 MR. ERICKSON: Oh, very good. Yes, sir. The fire
25 chief from the town of Plymouth.

1 VOICE: Chief don't from the Plymouth fire
2 department. My main concern with the assessment of our
3 relocation of headquarters fire station, should we have to
4 evacuate Area 3. As we stated when the task force came
5 around, it's of vital importance all the communications of
6 the Plymouth fire department, as well as activation of the
7 siren, formulate through that headquarters. Relocation to
8 Bridgewater is not an answer to that problem. We need an
9 alternates EOC or we need an EOC that is hardened so that we
10 can stay in throughout an evacuation. Thank you.

11 MR. ERICKSON: Thank you, sir. Are there any
12 other public officials who would wish to make a statement?
13 If not, we'd like to proceed at this point maybe for a 15
14 minute break and then we'll come back and get the comments of
15 the citizens in general.

16 So, we can reconvene in 15 minutes.

17 [Break from 8:30 to 8:45 PM.]

18 MR. ERICKSON: The meeting is resumed. Those
19 speakers who spoke before the break, it will be helpful if
20 you are able to speak to the court reporter to confirm the
21 spelling of your names. So if you have a moment later on,
22 please do that.

23 Also, we're reminded that it would be very helpful
24 if each speaker could state their name and their affiliation
25 for the record as they commence their remarks. We do have a

1 number of speakers. I see Chief O'Neil back there, too. Did
2 you care to speak, Chief?

3 CHIEF O'NEIL: No, thank you.

4 MR. ERICKSON: We don't want to miss any local
5 authorities, officials. We are now going into the phase of
6 comments by members of the public at large and also from
7 citizen groups. I understand that we have about, perhaps ten
8 such persons who wish to speak.

9 I think it would be very helpful if we try to keep
10 those statements as brief as possible and we would encourage
11 you to summarize your comments and just lay notes on us or
12 give us your written statements, if possible.

13 Now, I understand that Jane Fleming is here and
14 wishes to make a fairly long statement. Perhaps, Jane, if
15 you wouldn't mind, we could hold you to close halfway through
16 the remainder, so that you would have more time then, and we
17 won't be pressing the clock.

18 MS. FLEMING: That would be fine. Out of respect
19 to the other speakers, I'd be happy to wait my turn. But I
20 will have my turn.

21 MR. ERICKSON: Jane, you've always had your turn.

22 MS. FLEMING: I certainly do, Bob.

23 MR. ERICKSON: Then I'd like to ask if Mary Ott is
24 here, does Mary Ott wish to lead off the speakers? Mary Ott
25 speaking, I presume, for Duxbury?

1 MS. OTT: Yes, thank you very much. Good to see
2 you again, Mr. Erickson. We thank you for the opportunity to
3 comment on the draft report prepared by the USNRC task force.

4 The findings on issues of off-site emergency
5 preparedness for the Pilgrim nuclear power station represent
6 a significant amount of time and resources by the NRC, FEMA
7 and various state and local agencies and citizens engaged in
8 this fact finding process. There is much truth in this
9 report. It, in fact, confirms citizen's worst fears about
10 the state of emergency planning and further validates the
11 USNRC Inspector General's report of July 23rd, 1990.
12 While there are positives to be acknowledged, there are areas
13 of great concern. The task force executive summary states
14 that factual information for this review is obtained
15 primarily by the task force teams working with state and
16 local officials responsible for emergency preparedness.
17 However, on many occasions the task force has relied on
18 information from the Boston Edison Company. The lessons
19 learned from the Inspector General's report of July 23rd have
20 demonstrated the folly of that process.

21 As stated by the Inspector General, "In light of 's
22 vested interest in restarting Pilgrim, BECo was not the best
23 source for the NRC staff to rely on for the status of
24 off-site preparedness." To provide reasonable assurance that
25 adequate protective measures can and will be taken in the

1 event of a radiological emergency, Section 5047 of 10 CFR
2 establishes 16 standards to judge this adequacy. These
3 standards establish procedures and systems designed to reduce
4 the proximity to or time of exposure to radiation.

5 And I guess just for clarification for the record
6 and those, one is assignment of responsibilities; two, the
7 on-site emergency organization; three, emergency response
8 support and resources; four, emergency classification
9 systems; five, notification methods and procedures; six,
10 emergency communications; seven, public education and
11 information; eight, emergency communications; nine, accident
12 assessment;

13 Ten, protective responses; eleven, radiological
14 exposure control; twelve, medical and public health support;
15 thirteen, recovery planning and post accident operations;
16 fourteen, exercises and drills; fifteen, radiological
17 emergency response training; and sixteen, development of
18 periodic review and distribution of emergency plans.

19 Failure to meet the applicable standards set forth
20 above may result in the Commission declining to issue an
21 operating license. We remind that you that it has been five
22 years since the Federal Emergency Management Agency withdrew
23 its approval the Pilgrim plan, saying it was inadequate to
24 protect the public health and safety.

25 We maintain that Pilgrim has operated in violation

1 of 10 CFR 50.47 since that time. Deficiencies in several
2 areas of off-site emergency preparedness were acknowledged by
3 the task force. Five of these areas were said to warrant
4 attention before the next full participation exercise.

5 We feel that the following areas should also be
6 added to that category: staffing of public education and
7 information, medical and public health support, a resolution
8 of the Gurnet-Saquish issue, monitoring facilities at
9 relocation sites, sheltering for beachgoers, and the National
10 Guard response issue.

11 We are shocked that the Commonwealth of
12 Massachusetts has submitted an annual letter of certification
13 mentioned in your report to FEMA, indicating that EPZ and
14 reception community plans and implementing procedure
15 revisions were completed in 1990.

16 While the task force has identified and elaborately
17 analyzed many issues, we are concerned that in instances
18 where a situation appears unresolvable, the forces made the
19 general conclusion that the provisions and the current
20 emergency plans provide acceptable flexibility. This
21 terminology, like the standards for radiation protection at
22 Pilgrim, quote "as low as reasonably achievable" do not
23 inspire confidence in setting standards.

24 In closing, we want to go on record on behalf of
25 the 1600 members of CURA stating that it is an outrage that

1 the NRC, without any opposition from the Commonwealth of
2 Massachusetts, has permitted Boston Edison company to operate
3 and completely defuel the Pilgrim reactor without emergency
4 planning in place.

5 Since January, two unusual events have occurred,
6 forcing the implementation of a plan we are discussing
7 tonight. On March 29th a new fuel bundle was dropped in the
8 spent fuel pool. We ask that you recommend that the NRC
9 withdraw their finding of reasonable assurance for the
10 Pilgrim Station and for the Pilgrim plant.

11 Thank you.

12 MR. ERICKSON: Thank you, Mary Ott.

13 Is Mary Lampert here?

14 MS. LAMPERT: I am Mary Lampert and I'm here
15 tonight to speak for the Duxbury Nuclear Affairs Committee.

16 At the outset of this school year, the NRC came to
17 a public meeting here in Plymouth. The subject was the, 1990
18 report of the Inspector General. And that report made very
19 clear that the NRC had failed emergency planning. It failed
20 to correct known deficiencies that had been reported
21 officially by FEMA in 1987. And most important, it failed a
22 public trust by conducting an emergency planning assessment
23 that was quote "Neither balanced nor thorough and by making
24 Pilgrim's restart, rather than public safety, it's first
25 priority."

1 This task force was formed in response to that IG
2 report and for the last nine months, the task force has been
3 going to school on the subjects that the NRC earlier failed
4 so badly. The draft report is your final examination. In
5 the jargon so often used in report cards, that exam shows
6 that you applied yourself, worked hard and accomplished much
7 that the NRC had failed the previous year.

8 It also shows, however, that there is still some
9 areas that must be corrected to provide the reasonable
10 assurance that is prerequisite to moving on to the next
11 level. Perhaps more important, the report shows that in the
12 critical areas of transportation, staffing of the Wellesley
13 reception center, Gurnet-Saquish, providing for those with
14 special needs, and the direct torus vent; and in a number of
15 other other areas, also, the task force still relied too much
16 on the information from the utility.

17 It also shows that the task force went out of its
18 way to accept interim solutions or promises of future
19 resolution from BECo, FEMA, or the state to avoid making the
20 otherwise unavoidable final determination that specific
21 deficiencies precluded reasonable assurance or precluded any
22 concept of reality. Many of their remaining deficiencies
23 have or will be discussed by others appearing here tonight.

24 In an effort to avoid repetition, I'll try not to
25 reiterate problems discussed by others, but you should not

1 consider my silence as any indication that we as a committee
2 do not feel these problems exist. The Nuclear Affairs
3 Committee has reviewed all portions of the draft report that
4 deal with Duxbury and concurs, for example, with Mrs.
5 Fleming's factual analysis of the current status of planning
6 for the Wellesley reception center, transportation, and the
7 Duxbury schools.

8 In essence, we're signing off on what Jane has to
9 say. But let me turn now to specifics, on which we have a
10 number of comments. In addition, I am providing pages of
11 your actual text of the draft report on which we have
12 highlighted areas of particular concern and made specific
13 marginal comments or suggestions.

14 Gurnet-Saquish. There were two very important
15 issues not addressed at all by the task force. The first
16 issue was sand on evacuation routes. The road connecting
17 Saquish to Gurnet has very deep and soft sand and is
18 frequently impassable and blocked by stuck vehicles. For
19 example, over the recent Memorial Day weekend, 1991,
20 somewhere in the neighborhood of 30 cars were stuck. This
21 issue had been brought up the Gurnet-Saquish Association and
22 David Quaid, both to the NRC and to BECo over the past many
23 years.

24 This is an ongoing, continuous problem. Unlike the
25 water problem which occurs on a regular but periodic basis.

1 The requests, the association had asked BECo to build up this
2 road, the request had not be honored and the problem, which
3 is the point, remains. The result is that there is no
4 reasonable assurance for evacuation along this only motor
5 route.

6 The second issue on the subject of Gurnet-Saquish
7 that you failed to address is, who has authority to maintain
8 the egress routes for Gurnet-Saquish and Duxbury beach?
9 Presently, June 12, 1991, one can do any maintenance work
10 whatsoever on the roads or the beach. Due to a legal hassle,
11 a stay has been ordered by the courts and all work has
12 stopped until the issue is resolved.

13 As a result, for example, the first cutover to the
14 front beach from the bay side back road is virtually
15 impassable. By their very nature, these sand routes require
16 frequent and regular maintenance. What would happen to beach
17 goers? This lack of maintenance issue affects the only
18 egress route servicing, on summer weekends, over 5,000
19 people. It must be resolved, again, before reasonable
20 assurance can be assured.

21 Additional comments on Gurnet-Saquish, Page 2-74,
22 the first full paragraph, probably ranks, I think, is the all
23 time low in the history of this task force. To dismiss the
24 admitted fact that the egress routes on Saquish neck are
25 often impassable on the pretext that, quote, "The NRC's

1 emergency planning regulations do not specify a minimum time
2 by which an evacuation must be completed" is an insult to the
3 intelligence of any rational member of this community.

4 A nuclear accident will not wait for low tide or
5 for a hurricane to blow offshore. When the roads are
6 impassable, it isn't a question of when will an evacuation be
7 completed. The evacuation won't even start. But this
8 paragraph in your draft report gets even worse. The text
9 goes on to say, quote, "Emergency plans are flexible enough
10 to accommodate possible delays." And that "Although the
11 actual amount of flexibility is difficult to establish and
12 cannot be quantified," whatever that's supposed to mean, "the
13 emergency plans and procedures include practical and feasible
14 measures to account for expected natural conditions."

15 What are these practical and feasible measures?
16 The report lists warning sirens; radio communications with
17 Plymouth, which is several very wet miles away; and efforts
18 underway for coordination with Duxbury and concludes that
19 these provide acceptable flexibility.

20 How? Can a siren part the waters or a radio float
21 you across the bay? Have a heart, a head, and admit there's
22 a problem. If you refuse to acknowledge that a serious fix
23 is in order, then at least recommend not sounding the alarms.
24 If the people can't go anywhere, why upset them? Wait till
25 the waters go down and the roads, perhaps, were passable. We

1 all know that there is no way out when these are flooded.
2 Facing facts may be not flexible, but it has the advantage of
3 at least being honest and realistic.

4 Second comment. 2-80. The draft report correctly
5 notes that, quote, "The current Duxbury plans do not take
6 into consideration the fact that a large number of
7 transportation dependent persons could be at the
8 Gurnet-Saquish gate." However, your comment that, quote,
9 "The Duxbury civil defense director reassured the
10 Gurnet-Saquish Association representatives that Duxbury
11 accepts responsibility for the evacuees as they travel
12 through", through is a key word, "Duxbury," misses the point.

13 It's several miles from Gurnet-Saquish gate to
14 Duxbury and the evacuees still have no way to get from one
15 point to the other. That is the point that you missed.

16 Comment three, Section 2-74. Clark's Island, Pages
17 2-82. The above commentary about Saquish neck is equally
18 applicable to Clark's Island. In neither case is there any
19 realistic possibility of an evacuation during many regular
20 tidal conditions. There is no realistic way that this can be
21 achieved; it defies reality.

22 The next comments I have are on Section 2.12,
23 persons with special needs, issues not addressed by the task
24 force. Effectively, there is no staff assigned for special
25 needs evacuees at the Wellesley reception center until the

1 National Guard arrives. I feel this is a violation of
2 NUREG-0654J12. Additional comments. Latchkey children. The
3 draft reports says, Page 2-119 that, quote, "The state's
4 position that children home alone can be considered part of
5 the general population" appears reasonable. And attempts to
6 support this conclusion with its observation that Page 24 of
7 the 1991 public information calendar advises the public to,
8 quote, "Make sure all members of your family, especially
9 children who may be home alone, know what to do in the case
10 of an emergency."

11 We fail to understand how the task force could
12 reasonably reach this conclusion. Children very clearly meet
13 the criteria of transportation dependents and special needs.
14 They do not have driver's licenses. They are not adults and
15 they can not be expected to act as adults, especially in an
16 emergency situation. This is reality.

17 A recent school daycare needs assessment in Duxbury
18 found that 70 odd percent of the Duxbury school population
19 are latchkey children. In taking its position, the state
20 recognized that it had a special need to get rid of this
21 problem by redefining it.

22 A realistic and obvious solution exists. Run the
23 school buses, the same ones which just dropped them off,
24 along the school routes to pick them up again to evacuate
25 them. This had been suggested but nobody has commented,

1 because in redefining the latchkey children as not special
2 needs, the problem is then thrown away and no attempt in
3 reality to solve it has been made.

4 Consistent with the suggestion to BECos 1991
5 calendar, the children, if you followed the plan of sending
6 the buses out again, could be taught to get back on the
7 buses. If it were an emergency.

8 Two, the buddy system. The draft report Page
9 2-120, states that the Massachusetts Office of Handicapped
10 Affairs has strongly objected to the use of volunteers to
11 assist persons with special needs during a manmade, i.e.,
12 nuclear accident and believes that professional care should
13 be contracted for this purpose instead. Any realistic look
14 at the buddy system favored by the state and town -- or why
15 other states across the nation do not allow it. Is BECo
16 going to provide the buddies with long range pagers with
17 lifetime maintenance contracts?

18 Nursing homes, Plymouth House of Corrections. The
19 draft report noted that, quote, "The task force could not
20 identify monitoring provisions at the host facilities nor
21 could it identify plans to send nursing home residents
22 elsewhere for monitoring and decontamination, Page 2-121.

23 Essentially, the same situation was identified with
24 respect to the Plymouth House of Corrections, Pages 2-121,
25 2-123. And apparently exists with respect to the injured

1 contaminated. All of these appear to be in violation of
2 NUREG-0654J12.

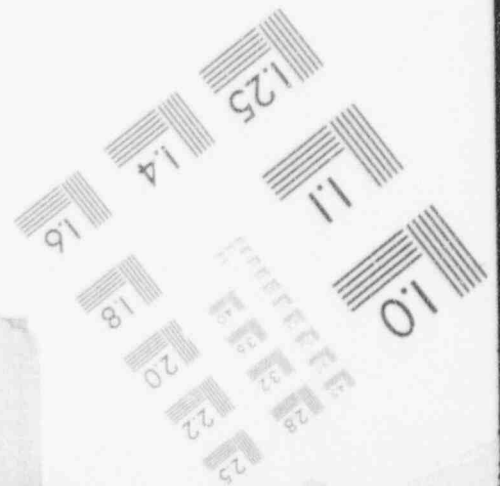
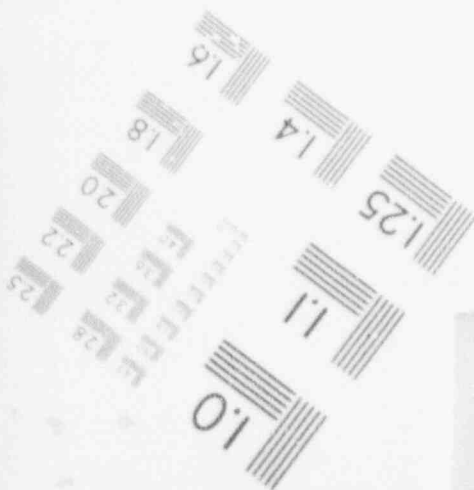
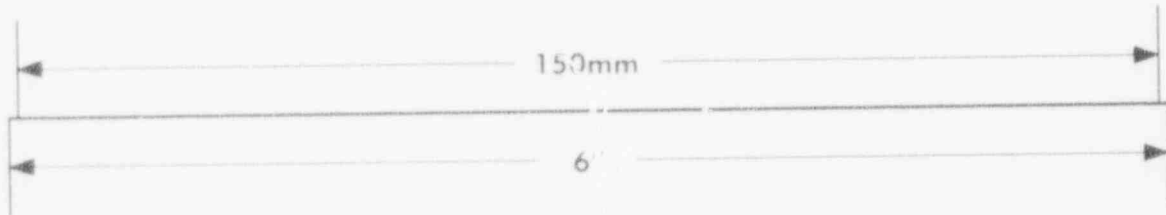
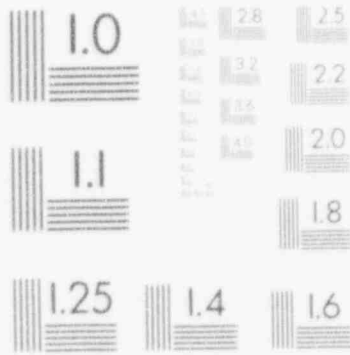
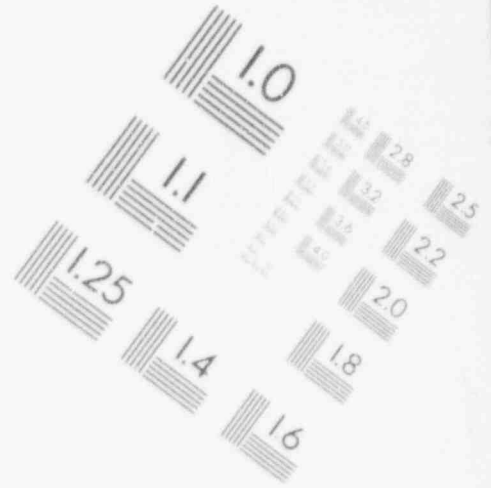
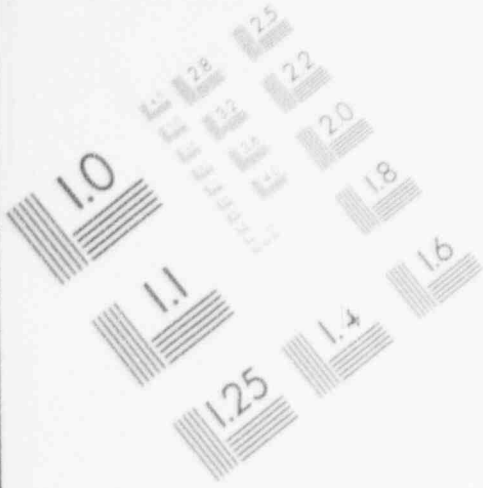
3 Sheltering. Issues addressed the task force, I
4 have covered here. Additional comments. The draft reports
5 that, quote, "No realistic dose reduction study has been
6 performed for the shelters in Duxbury." The excuses for this
7 deficiency provided by the task force again defy reason. For
8 example, Excuse No. 1, quote, "NUREG-0654 states that the
9 shelter dose reduction factor should be included in the basis
10 for the selection of protective actions. This does not mean
11 that each and every building must be analyzed to determine
12 its individual shelter factor." End quote.

13 We agree that reason does not dictate doing each
14 and every house. However, a reasonable man would suggest
15 doing the main primary town shelters, such as the school.
16 Children particularly, since the buses to evacuate them
17 probably won't arrive in time in the event of a fast breaking
18 accident.

19 Which leads to Excuse No. 2. "The most
20 appropriate," quote, "protective action for areas within
21 about two miles of the plant in severe core melt accident
22 sequences is immediate evacuation" and, quote, "The task
23 force did not visit or evaluate the adequacy of Mass. public
24 shelters for the transients, since both FEMA and the NRC have
25 concluded that it is better to evacuate transients from the

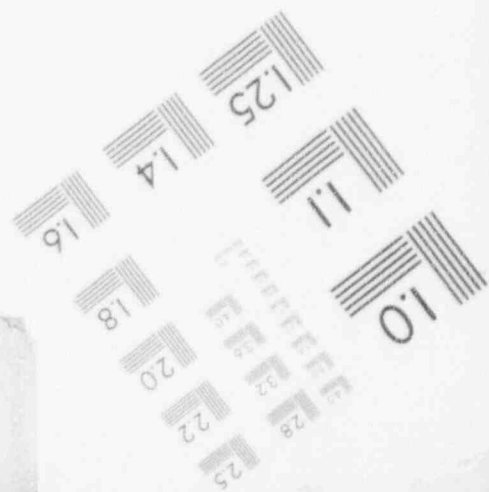
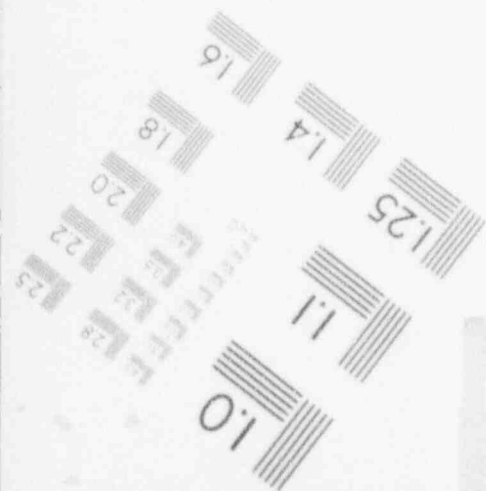
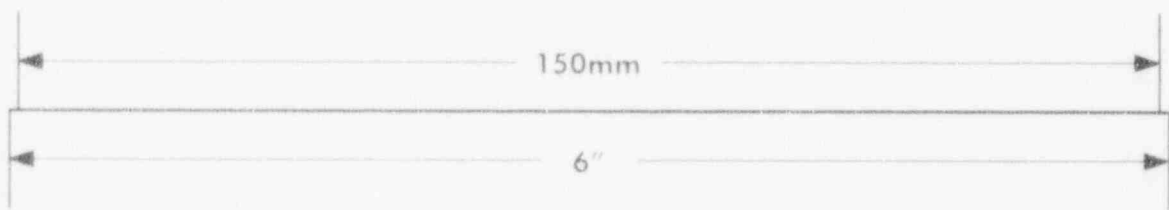
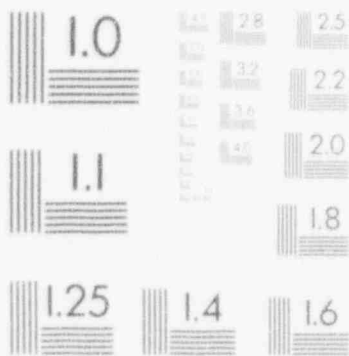
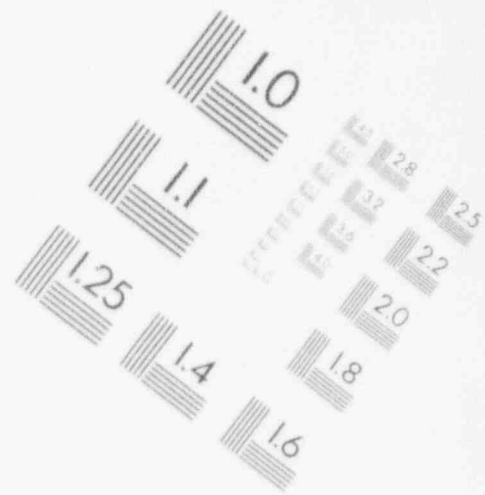
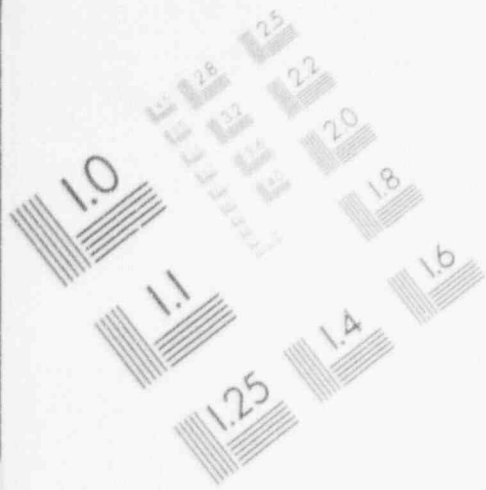
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IMAGE EVALUATION TEST TARGET (MT-3)



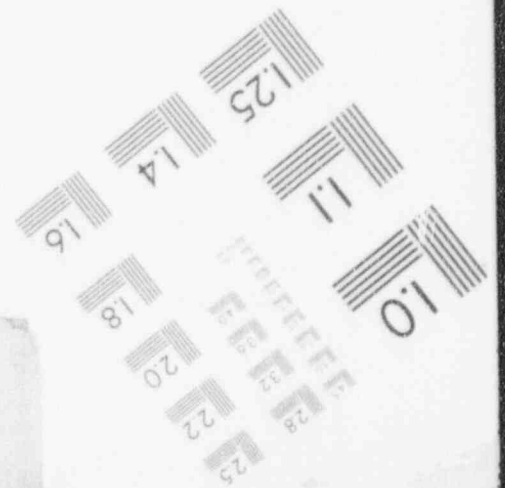
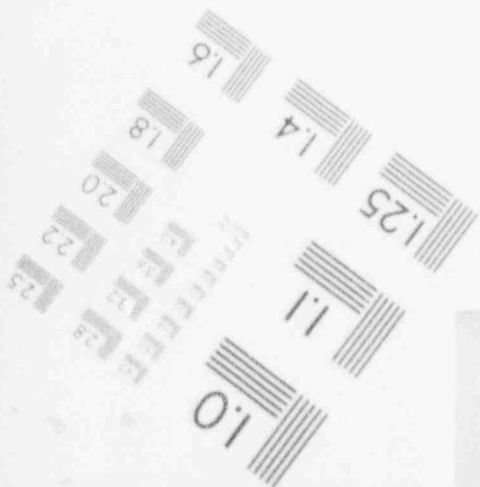
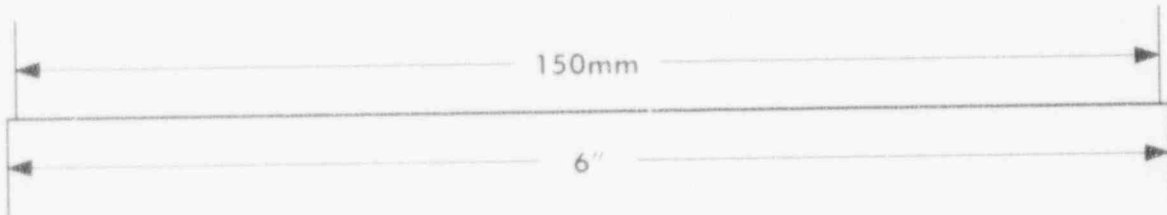
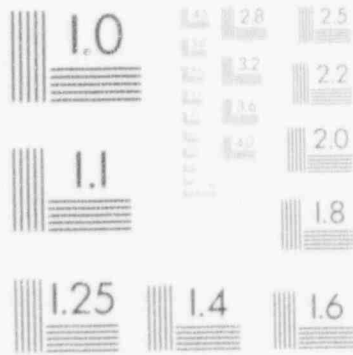
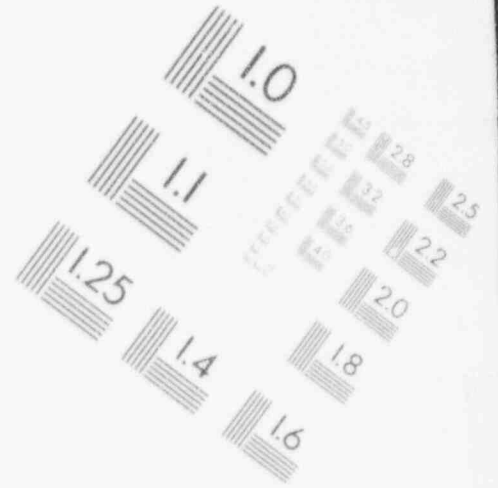
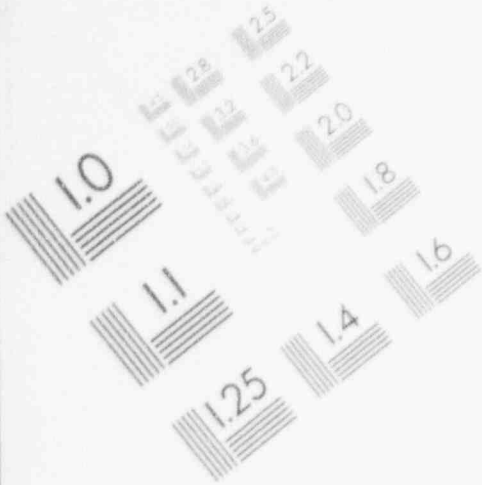
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IMAGE EVALUATION TEST TARGET (MT-3)



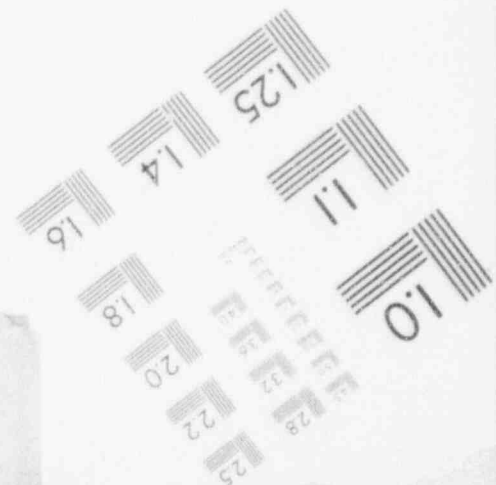
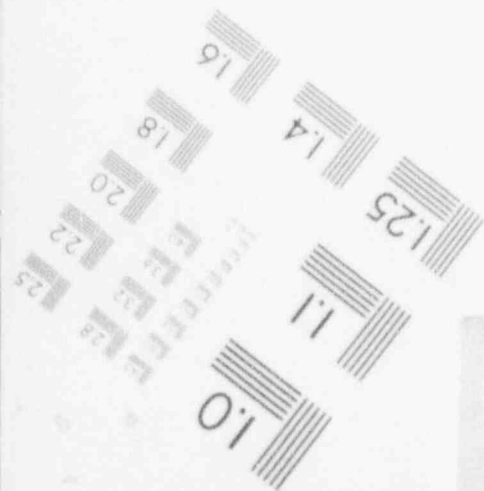
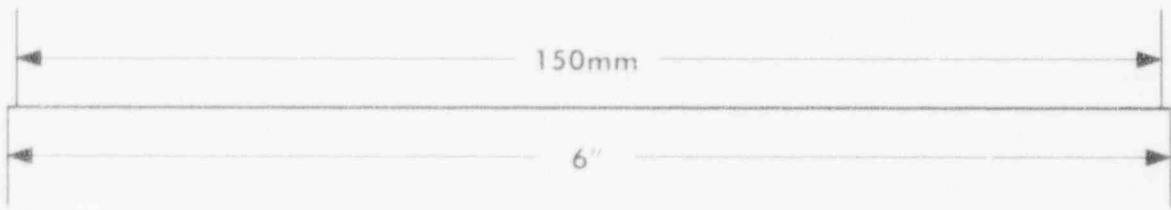
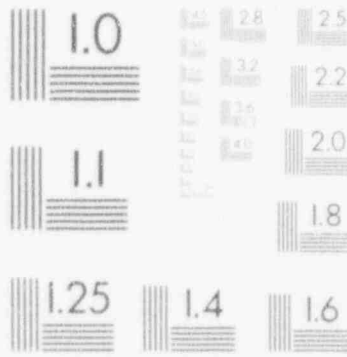
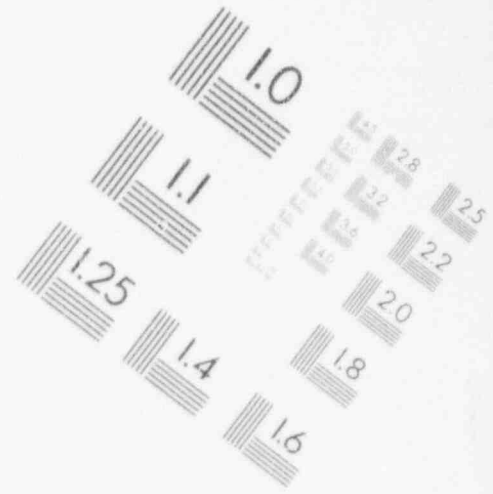
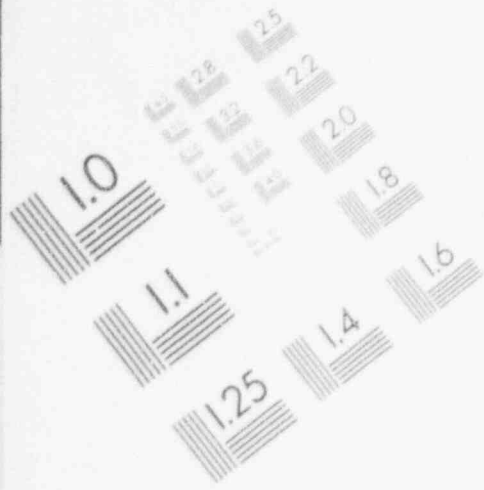
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IMAGE EVALUATION TEST TARGET (MT-3)



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IMAGE EVALUATION TEST TARGET (MT-3)



1 EPZ than to move them to Mass. public shelters within the
2 EPZ."

3 Several questions are immediately apparent. FEMA's
4 two mile statement was made in the context of Seabrook.
5 NUREG-0654 recognizes sheltering as an effective and
6 necessary protective action, and all of the towns have
7 included it as part of their planning. Because you can't do
8 it in Seabrook doesn't mean we shouldn't have it here. The
9 FEMA and NRC conclusion that evacuation of transients is a
10 preferable course has nothing to do with school children and
11 other residents who aren't transient.

12 School children in particular are already in
13 buildings that are proper dose reduction studies have been
14 accomplished can serve as main Mass. public shelters. In the
15 case of school children and other residents, it isn't a
16 question of whether to move them to shelters or to evacuate
17 them. The NRC and the FEMA conclusion assumes that everyone
18 is already on the buses and ready to go somewhere.

19 For children in the schools and the other
20 transportation dependent, the problem isn't what to do once
21 you're on a bus; rather, it's what if there is no bus or
22 there simply isn't time to evacuate? What do you do?
23 Again, reality. Even BECo and the BECo drafted IPs have
24 recognized the important role of sheltering. Why else, for
25 example, do we have shelter signs outside some of our

1 buildings provided by BECo? And why are these shelters in
2 the emergency information distributed by the utilities?
3 Obviously sheltering is a key part of planning and dose
4 reduction analysis of Mass. shelter buildings is an essential
5 first step.

6 Last issue I will discuss. The direct torus vent
7 system. The draft report noted that the task force, quote,
8 "Concludes that existing emergency operating and associated
9 direct torus vent procedure may not result in the proper
10 emergency classification and off-site notification preceding
11 the activation of the direct torus vent and considers it
12 important that BECo develop and implement appropriate
13 controls to enable BECo to notify off-site agencies before
14 the activation of the direct torus vent."

15 However, the report said nothing about the
16 timeframe within which the controls were to be implemented
17 nor what should be done in the interim. The realistic
18 solution appears simple. Recommend the NRC prohibit use of
19 the direct torus vent until such time as BECo has developed,
20 and the NRC and FEMA have approved, state and local officials
21 have implemented procedures that will insure that an
22 emergency will be declared. And that the off-site
23 authorities have all done emergency planning will be notified
24 before the direct torus vent is opened.

25 In conclusion, I think I brought up many points and

1 I'm trying to be brief and there are other points that I will
2 hand to you, that indicate very clearly that the plans that
3 you have identified many areas of violating NUREG-0654.

4 I feel further, as selectman Alba Thompson has
5 pointed out, and others, that when there has been a lack of
6 specific regulation to point to, then your reasoning defies
7 any concept of reality. And I think you have a serious
8 problem there, too. Thank you for your efforts.

9 [Applause.]

10 MR. ERICKSON: Thank you. Thank you for your
11 comments. The next speaker we'd like to invite to the
12 microphone is Mr. David Quaid.

13 MR. QUAID: I'm speaking for the Gurnet-Saquish
14 Association. And we thank you for the opportunity for this
15 input. Upon receipt of NUREG-1438, the emergency planning
16 committee of the Gurnet-Saquish Association met on two
17 occasions to evaluate the findings contained thereof. The
18 committee agreed on the following, 1] The committee was
19 startled to find absolutely no mention in the report of soft
20 sand condition of the cross over between Gurnet point and
21 Saquish beach.

22 In a report by David Quaid, residents of Gurnet t
23 to Samuel Chilt, secretary of the NRC, dated September 17th,
24 1988, this situation was delineated by text, maps a series of
25 eight by ten aerial and ground photographs.

1 Page 2, Paragraphs 5 and 6 of the September 17th,
2 '88 report to Samuel Chilt, quote, "During the monthly
3 astronomically high tides, the marsh area between Gurnet
4 point an Saquish beach is inundated from any vehicle traffic
5 across the road at A" -- These letters indicate positions put
6 on the maps and photographs which we do not have here now.
7 "And the back road at C. B is the one soft sand principal
8 access to Saquish beach. At the very best of times, getting
9 through B without meeting another vehicle coming in the other
10 direction is by chance. Someone must back up. In an
11 emergency, B would prove to be a very difficult situation
12 indeed.

13 "Recommendation for Saquish beach. The roads at A
14 and C, see Photo 8, must be raised for all-weather access.
15 The gap at B must be double-tracked to make an evacuation at
16 all possible." Close quotes.

17 The cross over is a single lane sand trap. It's
18 not double-tracked. During the last Memorial Day weekend, in
19 excess of 34 four-wheel drive vehicles were trapped in a
20 cross over. Several times more than one were stacked. As
21 many as 15 vehicles were backed up on either side of the
22 cross over as efforts were made to clear the blockage. On
23 nine separate occasions the gate watch, [Gurnet-Saquish
24 security] called the resident civil defense official to help
25 alleviate the problem.

1 During the week, one woman skilled at driving on
2 sand became stuck three times on one trip. The following
3 weekend a four by four was stuck in a cross over; it 15 men
4 to free it. This vehicle's drive train was ruined in the
5 process. While on an inspection trip around Gurnet-Saquish a
6 couple falls ago, George Mullahey of the Inspector General's
7 office of the NRC and the David Quaid were stuck in the sand
8 for a period of three hours.

9 The sand is an ever present impediment to
10 evacuation of the area. Two, tidal data, Page 2-60, Table
11 2.1. This table of the highest monthly tides of Boston shows
12 that during the months of maximum occupation of
13 Gurnet-Saquish, the summer months, the astronomical tides are
14 the highest of the year equalled only by December/January.

15 The winds of the summer months are generally
16 prevailing from the southwest, but much of the time are also
17 from the southeast, coming directly from Pilgrim I to
18 Gurnet-Saquish, just four scant miles across the water. The
19 time of greatest occupation is obviously also the time of
20 greatest possible hazard from the plant.

21 The task force, provided a videotape entitled
22 "Observation of tidal conditions at Saquish/Gurnet and Clarks
23 Island, Massachusetts 10/6-7/1990. This videotape was shot
24 on a mild day with light winds and merely 11.5 inch tides.
25 The tide tables published for the 1991 summer months show the

1 tides for the four months of summer averaging twelve foot. A
2 full seven inches higher than shown on a video tape. This
3 video tape taken from the inside of the CD vehicle, looking
4 forward through the windshield, documents a slow trip of
5 about a half hours, over the inundated roads of Saguish.

6 An event at Pilgrim I this summer necessitating
7 evacuation during a lunar tide would have to prove a
8 disaster. On a flat, calm day the tide height on a back road
9 will be an excess of 20 inches deep. A column of vehicles
10 moving through the water will certainly produce a wave action
11 which would quickly stall some of them, use of a wet
12 ignition, impeding if not ending the evacuation.

13 We believe there also could be panic. The task
14 force feels that an evacuation in a nuclear emergency can be
15 equated with problems like natural phenomena, such as ice,
16 fog, hurricanes and the like. This is absurd. People react
17 well during natural disasters. In fact, we leave the area
18 long before the onset of a hurricane. But this might not be
19 the case in an unnatural disaster, a nuclear disaster.

20 People can relate to and handle physical problems
21 which can be seen, touched and contested against. We do not
22 believe it would be the same against an invisible threat to
23 their well-being.

24 Three. Population estimates. Boston Edison
25 estimates from aerial photographs taken during the summer of

1 1987 that the summer population of the area is 650 people.
2 They stands with that figure for evacuation planning. In
3 1988, at an emergency response meeting in Duxbury attended by
4 Cavanaugh and David Quaid, Al Sama, the off-site supervisor
5 for Pilgrim, I stated that BECo had conducted an overflight
6 on a pleasant summers weekend and estimated that the total
7 beach population at 16,000. Our estimate for Gurnet-Saquish
8 is 3500 to 5,000 people. At a meeting with Craig Concoran of
9 the NRC a figure of 3,000 to 5,000 as agreed to for emergency
10 planning.

11 There are 200 homeowners in the area, but there are
12 another 200 plus property owners who use the beach but are
13 not included in BECo estimates. The photograph included in
14 the report shows some of those who arrived by boat but not
15 considered in the task force report.

16 Four, we question the adequacy, reliability and
17 quality of communication equipment furnished by BECo. To
18 date, there has not even been a test to certify that of this
19 equipment is functional.

20 Five, interface with the town of Duxbury has not
21 been pursued. They have had meetings for three months. We
22 have just gotten notice of a meeting for June 26th. With
23 this late start, nothing concrete will happen until after the
24 busy season is over. In essence, we have lost another year.
25 The buses for Gurnet-Saquish evacuation are not settled. At

1 a task force meeting approximate months ago, was to work out
2 details of a bus commitment with Bonnie Yetman of BECo and Al
3 Slaney of Commonwealth. This is a great disappointment for
4 our membership.

5 Summary. We feel that the task force report is
6 biased in favor of BECo and totally unrealistic on area
7 emergency planning. NUREG-1438 Section 2.7 Gurnet-Saquish B
8 findings paragraph four, quote. "BECo offered to construct a
9 road across the dunes to provide an evacuation route that
10 would not be subject to flooding. However, as indicated at
11 the task force meeting with BECo on February 19th, 1991, the
12 Gurnet-Saquish Association did not accept its proposal
13 because the residents were concerned that the environmentally
14 sensitive dunes might erode."

15 This offer by BECo to build a road across the dunes
16 is most cynical an arrogant solution to a serious human
17 safety problem. BECo is well aware that no state or federal
18 agency would permit such a road to be built. The
19 Gurnet-Saquish Association members have labored over the
20 years to protect this barrier beach which prevents the open
21 ocean from invading the towns of Plymouth, Kingston, and
22 Duxbury. The most disturbing of the BECo road offer is that
23 the task force accepts the BECo offer without any further
24 investigation and the language of the paragraph unfairly
25 blames the owners for lack of progress on a Gurnet-Saquish

1 Association.

2 It is with great reluctance that we must conclude
3 that the NRC task force report ignores and plays down the
4 true difficulties of a evacuation at any time. Anyone who
5 viewed the NRC videotape and still feels that orderly
6 evacuation during the lunar tides is possible is at the very
7 best few foolish and naive. BECo does not want to raise the
8 evacuation route, so the task force makes believe that
9 evacuation under flood conditions is viable. The report
10 reveals a disturbing lack of interest by the task force and
11 public safety. It seems to be an attempt to legitimize the
12 fraudulent emergency planning by the NRC that resulted in an
13 recent office of the Inspector General investigation. Some
14 of us believe that this lack of interest in public safety
15 could be viewed as criminal.

16 The cross over must be double-tracked. The back
17 road must be elevated for safety. And also for a sense of
18 security and peace of mind for the area residents.

19 Respectfully submitted, Emergency Planning Committee,
20 Gurnet-Saquish Associates.

21 I would like to make a personal comment. I have
22 been a renter or visitor at Gurnet point since immediately
23 after World War II. I have had the opportunity to view the
24 situations out there under every condition. I am aghast at
25 the findings of your task force. You believe that

1 intelligent people could view the conditions out and come to
2 the conclusions that you incorporated in your report? I
3 would like to, also, include some of the recent newspaper
4 articles, for your interest. BECo probes system failures.
5 Pilgrim officials confirm failure of cooling system.
6 Officials were kept in the dark. Fax, frenzy slowed Edison's
7 fire facts. Pilgrim shutdown moves up NRC inspection. Fire
8 breaks out at Pilgrim.

9 This is why people in this area are worried about
10 the ineptness of the plant. And obviously, the fact that the
11 plant must be deteriorating to have this kind of trouble
12 constantly. I thank you.

13 [Applause.]

14 MR. ERICKSON: Thank you, Mr. Quaid. I'd like to
15 ask you one question. Is it your -- Am I correct in saying
16 that you consider the solution to the evacuation of Saquish
17 to be to date up the roads?

18 MR. QUAID: Yes.

19 MR. ERICKSON: Okay.

20 MR. QUAID: I'll go further on that.

21 MR. ERICKSON: No, thank you. Thank you much,
22 sir.

23 Is there a David Slesinger here?

24 Can you clearly state your name and your
25 affiliation, Mr. Slesinger?

1 MR. SLESINGER: My name is Bart Simpson and I
2 represent the Cartoon Characters United for Ecological
3 Sanity. And I want to start out by saying that this rt as a
4 professional, as a professional at entertaining people, this
5 report is a bad joke. I would like to also say that the
6 details of what would make an acceptable evacuation plan are
7 irrelevant. Why? Because Edison and the NRC and FEMA are
8 never going to tell the public that there's a serious
9 accident quickly. You're going to stall. You know that.
10 This is crazy.

11 I want to ask a question of the audience. How many
12 people here believe that if there's an accident at rim that
13 the public is going to be notified in a timely fashion? Is
14 there anybody in the audience who will believe that it will
15 happen in a timely fashion? None. I think that's striking.
16 None.

17 Next, I want to say that if either FEMA or the NRC
18 or any part of it were to ever admit the truth, the truth
19 about evacuation is there is such thing as an evacuation plan
20 that will work. If either of your agencies would admit the
21 truth, that there's such thing as a safe evacuation plan, I
22 will illustrate personally eat that report. You send it to me in
23 care of the Cartoon Characters United for Ecological Sanity
24 and I will publicly eat that report.

25 I have one more question for the audience. How

1 many people in the audience have heard that the so-called
2 Mafia is more of a threat to the health and safety of them
3 and their loved ones than Edison, FEMA, and the NRC, and the
4 people who run the Pilgrim nuke? How many are more afraid of
5 the Mafia? I think that's also pretty striking.

6 Now, I'm going to take my mask off. Because I want
7 to look you folks in the eyes and see my eyes. I'm David
8 Slesinger. And it's very unusual, you really are looking me
9 in the eyes. Most of the time, the NRC officials shuffle
10 paper. When I've spoken to them in the past, so let me
11 commend you.

12 So I've just said that I feel you folks are like
13 gangsters, that's horrible. You don't want to be gangsters.
14 What cype of a life is that? I mean, at least with the
15 Mafia, they basically don't hurt people unless you're stupid
16 enough to deal with them.

17 You can, everybody here -- The people didn't raise
18 their hands because people don't deal with the Mafia so we're
19 not particularly afraid of them. But the people that you
20 folks kill are just random. Whoever happens to be in the
21 wrong place at the wrong time. Radiation gets out of this
22 plant regularlarly, even if there's not a big accident and
23 you know that. It's -- You don't want to be gangsters.
24 You're killing people. You're killing innocent people. Even
25 if they aren't innocent, you're killing people. You're

1 gangsters. You don't want to be gangsters. Well, you might
2 be saying, "Well I'm concerned with public health and the
3 reason I'm in my job is even though my superiors may not
4 understand, I might be able to do a little bit." You know
5 who your superiors are. You know the people in charge of
6 this decision.

7 There's no way they'll ever admit that there's such
8 thing. That there's a safe evacuation plan. If you were to
9 say something like that, you'd be out the door in a minute.
10 The best way you can help people is to come forward and
11 expose the lies.

12 MR. ERICKSON: Can you wrap up, Mr. Slesinger,
13 please?

14 MR. SLESINGER: Excuse me?

15 MR. ERICKSON: I just wanted to ask you to please
16 wrap up, so we could move onto another speaker as well.

17 MR. SLESINGER: Okay. I hope you'll take this to
18 heart, sir. Please don't be a gangster. It's really a
19 horrible way to live your life.

20 MR. ERICKSON: Thank you, Mr. Slesinger.

21 [Applause.]

22 MR. ERICKSON: Is there a Paul Gunter here? 07

23 MR. GUNTER: Well sir, since this microphone is 08 little
24 bit low, does this pick up okay for the report? 09 name is
25 Paul Gunter. I'm a co-founder of the Clamshell Alliance and

1 I have been active with this concern for the last 15 years.

2 I come here with the expertise of watching the
3 activities of the Nuclear Regulatory Commission and Federal
4 Emergency Management Agency and how they dealt with forcing
5 the operation of Seabrook station on us in New Hampshire and
6 in New England.

7 I think that the reason that I came down here, and
8 I apologize if there are those among you who feel that I'm,
9 that I have overstepped my bounds coming into your community;
10 but the message that I would bring to you is first of all,
11 that with a community with the cultural heritage of the last
12 four centuries, it's important for us to understand the
13 importance of that.

14 And the striking thing about this industry that the
15 NRC and FEMA are involved in regulating is that the
16 consequences of an accident at the Pilgrim nuclear power
17 plant would -- could I should say, could very well eliminate
18 the heritage of your community.

19 And you know, I think that one striking example is
20 and I would speak directly to your report NUREG-1438 in this
21 regard, is that this report is strikingly deficient in terms
22 of scope of the disaster, the potential disaster at the
23 Pilgrim nuclear power plant. And it is completely deficient
24 in the scope of reentry and recovery of communities as a
25 consequence after catastrophic release from that power plant.

1 Now, the reason that I come before you is first of
2 all to speak to this distinguished body and this
3 distinguished community to say that this report is not an
4 evacuation plan. This report is, in fact, the continued
5 licensing of the Pilgrim nuclear power plant and the purpose
6 of this report is not to provide for safe evacuation, this
7 report is to provide for the continued operation of the
8 Pilgrim nuclear power plant, an antiquated technology of a GE
9 BWR Mark I that the industry has clearly recognized as an
10 extremely dangerous reactor. So much so that this particular
11 reactor has been outfitted with a direct torus vent and the
12 sole purpose of this was to preserve the structural integrity
13 of the reactor in the event of an over-pressurization
14 accident.

15 And that means that their going to vents Boston
16 Edison will directly vent radiation from the primary
17 containment of this building and, as I understand it, this
18 report says without necessarily activating the emergency
19 notification procedures. Am I correct, Mr. Chair? Is it
20 true that this report states--

21 MR. ERICKSON: Our report stands as we wrote it.
22 And if you are quoting from our report--

23 MR. GUNTER: Are you familiar with a chapter--

24 MR. ERICKSON: That is our report and what we have
25 said, we've said and it's part of the potential problem we

1 have identified.

2 MR. GUNTER: Okay. I'd like to indulge you just
3 for a moment. I think what this states is that the DTV will
4 be activated and that people will not necessarily be
5 notified. So what's the point of an evacuation plan in the
6 first place? What's any more different about that case than
7 when Boston Edison vented radiation in 1978 from bad fuel
8 that, you know, has caused leukemias in this community since
9 that time? What distinguishes that situation from the
10 situation that's been happening all along at the reactor? I
11 don't believe that there is a distinction.

12 MR. ERICKSON: Mr. Gunter, with all due respect, I
13 recognize that you have strong sentiments about these points
14 that you're making, but it would be very helpful if you could
15 confine your remarks more to the content of the draft report,
16 because we're trying to refine that.

17 MR. GUNTER: Okay. I think the DTV, in and of
18 itself should, that this committee should not be recommending
19 evacuation procedures, but should be standing strong on the
20 position that this reactor is extremely dangerous and that
21 the DTV precedent should call for this committee saying that
22 the only relevant protection is prevention and you have to
23 shut this reactor down and that's, I think that's the
24 position that you should be taking.

25 Not whether or not you can put, you know, asphalt

1 over a sandy beach, because the scope of this is sorely
2 deficient. I mean, I come down here from New Hampshire
3 because -- Well, let me just explain one thing.

4 MR. ERICKSON: Mr. Gunter--

5 MR. GUNTER: I understand, you want to go home.

6 MR. ERICKSON: No, what we are concerned about is
7 that citizens in the local community here have an opportunity
8 to speak and we would like to proceed.

9 MR. GUNTER: Well, okay if you will allow me,
10 without interruption, I will try to be brief, okay? First of
11 all, the situation is that it's not a local problem. The
12 Pilgrim reactor and you know, this is for the record. We
13 understand that the Pilgrim reactor is -- Its containment is
14 rated at 30 PSI, okay? That's under tire pressure.

15 And that that carbon rupture disc for that torus
16 vent will rupture at 30 PSI, vent directly to the atmosphere
17 and that's with no filtration system, okay? So that's one,
18 okay? But the scope is another. You know --

19 Let me just give you a quick quote for the record.
20 On July, no June 15th, 1986 the New York Times reported a
21 press conference in Moscow and in that press conference a
22 noted Russian historian took the podium and before
23 international press said this -- This is extremely important.

24 And he held up a bible in one hand and he held up
25 the Ukrainian dictionary in the other and he said, before an

1 international press, he read from the book of Revelation is.
2 Chapter 8, verses 10 and 11. And it reads to the effect "And
3 the third angel sounded and a great star fell upon the earth,
4 burning as it were a lamp. And the name of the star will be
5 wormwood and a third of the waters, rivers and fountains were
6 made bitter." Because they were made bitter with wormwood
7 and many men died. He closed the book of Apocalypse and then
8 he opened the Ukrainian dictionary and the Ukrainian word for
9 wormwood, which is a wild herb which grows in the steppes of
10 the Ukraine is Chernobyl.

11 Then the article goes on to talk about
12 contamination and how the food contamination is, you know, is
13 common talk.

14 MR. ERICKSON: Can you wrap up in about one
15 minute, Mr. Gunter, please?

16 MR. GUNTER: You know, this reactor has been
17 operating since 1979 in the absence of an adequate evacuation
18 plan and you wish to limit comments of the public because--

19 MR. ERICKSON: No, sir, I'm most concerned about
20 providing opportunities to local citizens to make their
21 comments.

22 MR. GUNTER: Okay. I'll close on this. And I'll
23 keep my remarks specific to the inadequacies of recovery and
24 reentry. Now, you wish to limit the remarks with regard to
25 local people and I--

1 MR. ERICKSON: We're not trying to limit your
2 remarks, we're just trying to be fair about this.

3 MR. GUNTER: I understand that. Well, I think
4 it's fair to say that given the example of the Chernobyl
5 accident where Scandinavia, Finland, Eastern Europe, Southern
6 Germany, Italy, Turkey, Ukraine, Southern Russia have been
7 affected by an accident, that it's fair to say that a ten
8 mile emergency planning zone is completely ridiculous.

9 And nobody that would sit up here and talk about
10 having a plan that limits the scope of your concerns to ten
11 miles should be, should have their head examined because
12 this, if there is a release, it will go far beyond ten miles.
13 And like I said --

14 In closing, this is not an evacuation plan. This
15 is an effort to keep the reactor on line and I think that
16 anybody on this committee that takes that to heart is going
17 to know that they have a responsibility to tell the truth.
18 And the truth is that this is a big cover up.

19 [Applause.]

20 MR. ERICKSON: I understand that Heidi Price would
21 like to speak and that she said that she had a very short
22 comment.

23 MS. PRICE: It's short. My name is Heidi Price, I
24 live in Plymouth -- between a rock and a hard place. I've
25 looked at the findings here and I'm overwhelmed with the

1 number of unresolved issues and the fact that the plant
2 continues to operate.

3 To save time, I'm in complete concurrence with Alba
4 and Mary Lampert and what Jane's going to say. I read the
5 portion about potassium iodide, that's 2-153 and I find it
6 hard to believe that Boston Edison feels a responsibility to
7 the thyroids of only inmates of the farm, nursing homes and
8 of civil defense officials. In the wake of Chernobyl, we
9 know just how important it is to protect our thyroids.

10 Since Boston Edison is putting us all at risk, I
11 think Boston Edison should be responsible for stockpiling
12 potassium iodide for each and every person within the EPZ
13 whose thyroid they haven't already toyed with in their normal
14 operations.

15 The question of egress is another big one,
16 especially for those of us who are expected to be by way of
17 Route 44. We, that's 2-83, we know we have a better chance
18 if we swim east. And I am not kidding.

19 [Applause.]

20 We know that Boston Edison and the NRC expect a
21 certain number of casualties and we know that we are among
22 them. This isn't a war and Boston Edison isn't our
23 government. Is it?

24 In preparation for this meeting, I have produced
25 these findings and I've taken a look at No. 12 of the

1 off-site emergency training pertaining to emergency response
2 and this is all of the information, I didn't get this one,
3 just the little one. It's all the information that my son's
4 school has pertaining to emergency response.

5 I've made a number of phone calls regarding the
6 emergency plans of the two private schools my kids attend, I
7 live in Plymouth, one kid goes to school in Kingston, another
8 goes to school in Duxbury. So it's a very difficult thought,
9 if you're thinking about evacuation.

10 I made a lot of phone calls the past couple of days
11 preparing for this meeting and no one seems to be able to
12 give me any immediate concrete information and there seems to
13 be a great discrepancy between the number of people needing
14 evacuation and the number of buses available. A very big
15 discrepancy. All that I could find out in two days of making
16 telephone calls was that some lady on the Board of Health
17 from Duxbury who was on vacation but was supposed to be the
18 one to call my son's school, but instead, since she wasn't
19 available, then the building inspector was the one who was
20 supposed to be responsible.

21 I don't know about you, but have you ever tried to
22 get in touch with the building inspector? I don't know about
23 you but these don't sound like very good plans to me. This
24 small bit of research that I did leads me to wonder a
25 disturbing conclusion.

1 People in the EPZ have been lulled into living in a
2 state of denial. Everyone who lives here knows very well
3 that there's no workable plan. There is no way out. Nobody
4 wants to face up to the real probability of an emergency,
5 therefore no one is willing to be prepared. One is
6 prepared, and one ever will be prepared. This fat book of
7 findings here fails to address the real issue of our
8 emergency preparedness.

9 And that is, there is no workable plan. There is
10 no reasonable assurance and you can't get there from here.
11 You can't.

12 [Applause.]

13 MR. ERICKSON: Is Priscilla Dean here?

14 MS. DEAN: My name is Priscilla Dean and I'm from
15 Cape Cod. I am a retired dental hygienist. I was trained to
16 take dental X-rays. We used a lead apron to protect the
17 patient's body; we used a collar to protect the thyroid in
18 the neck. I left, I left the room. I stood behind a lead
19 wall and pushed the timer. The patient was exposed for two
20 or three seconds.

21 I cannot imagine the horror of five minutes of
22 radiation or an hour or five hours of exposure while buses
23 come and people are evacuated. In my opinion, men, women and
24 children in this densely populated area are doomed if there
25 is a nuclear accident.

1 I appreciate an opportunity to express my opinion.
2 We do have choices. We must choose to eliminate Pilgrim
3 nuclear power. America's hometown is at risk. As are many,
4 many other towns for many miles around.

5 Around Chernobyl 10,000 people are dying of
6 radiation exposure, after a nuclear accident. Children 180
7 miles away are showing the same symptoms as the workers from
8 that nuclear power plant. The real estate market is not
9 good in that area.

10 [Laughter.]

11 Russians are warning us of the danger. We have the
12 potential here for more of the same. And what are you doing
13 with the nuclear waste? We have a monster in a canary cage,
14 and there are many ways for that monster to escape. The
15 danger is always there. If, God forbid there were a nuclear
16 accident that people from Cape Cod must go in the direction
17 of the accident? That's our evacuation plan. This is our
18 escape route. This is insane.

19 One off cape bridge is to be closed to us. On a
20 normal day, we can't get over two bridges. Your evacuation
21 plan is non-existent, there is no escape for us, we must swim
22 east or die.

23 I want this plant closed before an accident, not
24 after. Close this nuclear power plant now. Thank you.

25 [Applause.]

1 MR. ERICKSON: Is there a Sean Fensel here? Mr.
2 Fensel.

3 MR. FENSEL: My name is Sean Fensel. I enjoy the
4 position of being in acute mercy for you when it comes to
5 this issue because I'm not only a citizen of this town for
6 the past 25 years, but a vice-president of Plymouth Nuclear
7 Information Committee for the past 15 years and I also sit on
8 the town's radiological response planning committee and on
9 the town's nuclear affairs committee.

10 I hadn't planned to speak this evening, but there
11 are some quick points that I think should be made and I'm one
12 to welcome the fact that you're here. On this plan and on
13 your purpose for being here.

14 I think that all name calling is irrelevant.

15 I don't see anyone in this as evil, I'm hoping that
16 what we've seen as mistakes have been either well-intentioned
17 or bureaucratic blunders. What the townspeople of Plymouth
18 and the citizens of the United States need from the NRC is
19 some kind of assurance that you people are honoring the
20 middle word of your name. We have all too often seen
21 evidences that you're not regulating, but promoting. We
22 need to see that you're protecting us, for one. For
23 instance, I hope to avoid this disaster and all of this in
24 the future, I would hope that you gentlemen would insist that
25 an evacuation plan, a workable evacuation plan be on your

1 table before a plant is sited, because this, the siting of a
2 nuclear power plant in this spot --

3 Despite the fact that it's an aging BWR; despite
4 the facts that it's a commercial area for tourist
5 attractions; despite the fact that it's on the seacoast with
6 only 182 degrees of egress; despite the fact that it's, that
7 the town of Plymouth made a mistake as well in that we did
8 not take the tax boon of Edison and sequester it somewhere,
9 we put it into our general funds and it artificially
10 depressed our tax rate for so long that it sucked people into
11 our town and gave us a tripled problem on evacuation planning
12 because we have more schools and more load on roads and town
13 services that are already taxed by the sheer geographic size
14 of our town.

15 On the plan -- and these are just some impressions
16 and I'm hoping that by my repeating a couple of them briefly
17 it will emphasize some of the more detailed statements that
18 you've gotten and will get. We need an alternate EOC closer
19 than Bridgewater. It's unworkable.

20 Two, one of the things that I brought up at the
21 Duxbury hearings a year and a half or two ago was that one of
22 the my first concerns as the citizen member of the emergency,
23 RERP committee was to do a minimum manpower valuation of the
24 plan. I don't think it's ever been done adequately.

25 Because we have a number of municipal servants,

1 including school teachers in Duxbury, Plymouth and Kingston
2 who have expressed their willingness to not participate in
3 the plan. To my way of thinking we've got a problem in two
4 basic areas: the school departments and the Department of
5 Public Works in all three of the major towns.

6 And I'm not saying that any of the towns in EPZ are
7 not major, but you know, the ones closest to the plant, we
8 have a problem in that I, as a member of the RERP do not have
9 the assurance that we've sufficient manpower to minimally run
10 the plan. All of these other concerns are ludicrous if we
11 don't have the manpower. If we don't have enough people that
12 are going to stay and help.

13 Now, I'm a Yankee, and like Alba and a number of
14 other people, I believe that when asked, people will
15 volunteer. At a time of crisis, I believe that people will
16 come forward. But we do not have, that's not, that's not
17 solid planning. That's not the kind of thing that we would
18 like to present to the NRC or have the NRC or FEMA present to
19 us. That's a consideration that you should think about.

20 Another thing, radio communications with the school
21 buses at the moment is citizens band radios or worse. One
22 radio to a convoy of buses. I think that you ought to
23 examine in that plan exactly how a radio communication to the
24 school bus, school buses that are doing evacuation, are going
25 to be handled, because I'm a citizens band operator and I

1 think that there are a few people in the nuclear industry who
2 know what affects the sun spot activity is having on
3 transmissions and on transmission lines and it's certainly
4 having an affect on radio communications. The static is so
5 high in the daytime that communications over a limited, over
6 anything but a limited area is extremely short with the
7 citizens band radio. In the school plan; if you'll notice
8 in the school part of the plan, there is a paragraph that
9 concerns us, it concerns a number of us in Plymouth. And
10 that is, we couldn't see legally how we could exclude this
11 one paragraph that allows parents to show up to remove their
12 children before they're evacuated. Gentlemen, I want you to
13 imagine that in the school system the size of Plymouth the
14 effect of a number of misinformed, uninformed parents showing
15 up at the schools to take their kids out. With the number of
16 children who are iffy on the plan anyways, being able to
17 account for sign out and be able to account for, at the
18 receiving end, missing children that have been signed out to
19 parents or people who say they are parents. It exists in the
20 plan and we had to leave it in. It's been passed the school
21 board. It's in the concept in front of you, but it's a real
22 concern to me.

23 If those people were told "If you want to come pick
24 up your kids, you are thereby volunteering to stay and help
25 with the remainder or there was someway of dealing on our

1 narrow roads here-- in this 350 or 400 year old town, are
2 cow paths paved.

3 We, I would like those of you who have direct
4 connection with FEMA, I mean I understand that the normal
5 process was gone by on Edison. Normally speaking, NRC would
6 have a FEMA report and when you had the FEMA report before
7 you, you guys would set it up. This time around it it went
8 backwards. We by passed FEMA's recommendations. If you make
9 any changes at all at the federal level, I certainly hope
10 that the NRC is willing to be bound by rulings on FEMA. As
11 it is now, FEMA could rule against an evacuation plan and the
12 NRC could still pass it. I think as a citizen and as a
13 member of any body with any common sense, that does not make
14 any sense when we have a federal agency whose title is
15 Emergency Management and its rulings and its dictates could
16 be ignored by NRC. Then it does the American citizens
17 believe that the NRC is there to promoted the continuation of
18 the use of nuclear power without regulatory safety.
19 That's something which you gentlemen can change just
20 assurances and a willingness to accept FEMA's rulings.
21 MR. ERICKSON: Do you think you can wrap up? Your comments
22 are very much appreciated.

23 MR. FENSEL: Okay. I'm trying not to beleaguer
24 anything. Another thing that concerns us in Plymouth about
25 this plan is that we realize that when Boston Edison reaches

1 the expected life of this plant and despite the fact that
2 they would probably try to do the same thing that Yankee Rowe
3 did and get their license extended; we hope that that doesn't
4 happen.

5 I hope that the town of Plymouth has some input on
6 any license applications, I don't think that we do. But
7 whether or not Edison continues, if I were to have it, I'd
8 have you shut the plan down to 5 percent until a plan is in
9 operation that you approve of. I would have it that Edison,
10 as a good corporate neighbor, would come clean with the fact
11 that it cited a questionable BWR reactor here in Plymouth and
12 that they're long term goal would be to continue producing
13 power, but with a new gas turbine or with a from the Bay of
14 Fundy, now that the technology existfor super conductors.

15 Maybe we can bring in D.C. power from Canada. I
16 don't know. I understand the need to save the transmission
17 system and I understand the expense that's been gone through,
18 but I would hope that eventually that we'll end up with a gas
19 turbine here.

20 But that leaves us with a problem since, in the
21 original presentation that Edison made to the town of
22 Plymouth, we were assured that there would not be long term
23 storage of on-site high level waste; it was going to be
24 temporary. That's what the wording is in the prospectus in
25 the town of Plymouth. Well, temporary is not five years,

1 it's not ten years, it's not fifteen. It represents a need
2 for Plymouth to have a continuing evacuation plan long after
3 the there is no longer a working plant there.

4 We are concerned -- what happens if Edison, in it's
5 corporate intelligence, decides this is a losing financial
6 proposition, closes down the plant and leaves the town of
7 Plymouth with all of that high level radioactive waste?
8 They're not paying for a radiological waste depository in
9 Plymouth. They're not being taxed for that. It's under
10 their license as an operating plant.

11 MR. ERICKSON: Could you just wrap up?

12 MR. FENSEL: One more thing, then I promise to wrap
13 up. MR. ERICKSON: Thank you.

14 MR. FENSEL: It's just that, you know, it's very
15 infrequent that we get this opportunity to speak to you.

16 MR. ERICKSON: I understand.

17 MR. FENSEL: The use of the direct torus vent. We
18 know that you at the NRC allowed it as an improvement, there
19 are no NRC regs that cover DTVs, but from a planning point of
20 view, our evacuation plan does not take into effect a high
21 wind day with an onshore wind and Edison -- not the NRC
22 on-site inspector, not NRC in Washington -- but BECo deciding
23 that to save the containment or for the sake of safety of
24 their equipment, that that DTV is going to need to be opened.

25 I would like assurance that not only that Doug

1 Hadfield is consulted with and asked whether it's all right,
2 but that the NRC inspector and that our town is prepared;
3 that this plan is drawn up with some, for some fast break
4 accident if the DTV would be activated prior to being
5 notified. The other two things--

6 MR. ERICKSON: Please, sir. I must ask you--

7 MR. FENSEL: I'm sorry. The other two things that
8 I wish you would really consider when you're evaluating what
9 you've heard here tonight when you're going over these tapes
10 is that the general citizen in the town of Plymouth needs to
11 have, we need to have your backing and the state' civil
12 defense and some real education program that when those vents
13 go off, they do not make the mistake of getting in their cars
14 and jamming our roads. That the understand that the first
15 thing is shelter; the second thing would be evacuation;
16 because it would destroy our plan if our roads got clogged
17 uninformed people.

18 There has not be a concentrated information program
19 done to make sure that the citizen knows that the first
20 course of action is to go inside, turn on your radio, close
21 your windows and listen for instructions.

22 And the last thing, the last thing, sir, is that
23 everyone of us that lives in this town would have every one
24 of you visit us this coming Fourth of July and try to get out
25 of this town after the fireworks. To understand, to

1 understand, sir, that we have a limited number of routes out
2 of this town. And the only really effective ones in the plan
3 are those that go north and northwest, and possibly west. If
4 you can call 44 an effective route.

5 But when you understand that that's only a 90
6 degree segment of a 360 degree wheel; the other 90 degrees is
7 southwest and south toward the cape, which conveniently does
8 not fit into the ten mile EPZ.

9 The people on the cape, when they hear Plymouth is
10 evacuating, are going to take to the cars and head to the
11 bridges. The situation at the Bourne rotary is going to be a
12 zoo. Southbound on Route 3 is going to be inaccessible. And
13 unless you people keep that in your mind and speak for' us,
14 if you have to, to the commission on this airport siting.
15 The reason why Plymouth was picked for a location for Boston
16 Edison's power was to get it away from the Boston
17 Metropolitan area and their airport. We are facing the very
18 real possibility that some bureaucratic faux pas may locate a
19 major Eastern Massachusetts airport in Plymouth.

20 MR. ERICKSON: Now we really are moving afield,
21 you know.

22 MR. FENSEL: It's part of the evacuation plan,
23 sir. I would appreciate it if the NRC would speak to the FAA
24 and say please exclude Plymouth from airport planning.

25 Thank you very much for your time.

1 [Applause.]

2 MR. ERICKSON: Is Ann Waitkus-Arnold around,
3 please?

4 MS. WAITKUS-ARNOLD: My name is Ann Waitkus-Arnold.
5 I'm the director of Citizens At Risk, chairman of the town
6 commission on handicapped affairs, chairman of the Plymouth
7 nuclear affairs committee, and chairman of the statewide
8 advisory board on evacuation planning for special needs of
9 the office of the handicapped affairs.

10 I'm here tonight speaking for Citizens At Risk
11 only. I came with this big speech again to talk about
12 special needs, but really after all these years I think it's
13 really pretty useless. I really think the agencies involved
14 have been just deaf and blind to the needs of people who need
15 assistance, although recently I have met some people who work
16 in the NRC who I think I think are very, very decent
17 individuals.

18 I would like to address your NRCs, I think it's Mr.
19 Eaton's comments, that the NRC has a keen interest in Pilgrim
20 Station. Of course they do. The NRC continues to take good
21 care of their utilities and protect them at any cost to the
22 public. It doesn't seem to matter that there is no way to
23 evacuate the population and it doesn't seem to matter that
24 people downwind have been sick and dying for years.

25 This cat and mouse game of meetings, reports and

1 public comments continues for years. It's a game that you
2 play with us just to keep people busy while Pilgrim Station
3 keeps rolling on. While more and more of our friends and
4 neighbors, including children, continue to be stricken with
5 leukemia, thyroid cancer and brain cancers.

6 The calls keep coming into our office, more
7 children with leukemia and other cancers, more funerals to
8 attend -- and it's not easy. More families to help cope with
9 losing a loved one. Families devastated from Pilgrim
10 Station. And the NRC is ultimately responsible.

11 Now we're left with FEMA. The Federal Emergency
12 Management Agency. We have our Boston director, Jack Dolan,
13 then we have the regional director, Dick "Crash" Strong.
14 Dick likes to be called "Crash" by his friends. That
15 doesn't give us a lot of security, sense of security. Dick
16 was a friend of John Sununu's. Finally, we have Wally
17 Fickney, the new federal director of FEMA. He worked for EPA
18 and department of transportation in New Hampshire. Wally's
19 also a friend of Mr. Sununu; but he has no experience in
20 emergency planning.

21 Between the NRC's advocacy of nuclear power and
22 FEMA's incompetence, this is just no more than a prescription
23 for disaster for people living at Pilgrim Station. I don't
24 feel that tonight's testimony, or any other -- my testimony
25 or any other testimony will make any difference in providing

1 for the safety for people around Pilgrim Station. It's been
2 too many years. 15 that I have counted.

3 We do feel that Boston Edison and all of the
4 agencies who are responsible for public safety, but don't
5 have the guts to say it won't work, should be held criminally
6 liable for all of the harm done to citizens of this country.

7 Thank you.

8 [Applause.]

9 MR. ERICKSON: I would like to ask Jane Fleming to
10 please come to the microphone.

11 That's fine, Jane. Yes, any of them will work.

12 MS. FLEMING: That's a hint.

13 MR. ERICKSON: I wonder, is that significant?

14 MS. FLEMING: I don't know. She's changing the
15 paper. I dropped my Pepsi. I think we're here.

16 I have excused my friends. They can leave, go get
17 a drink, have dinner, take a shower, come back; I'll still be
18 here.

19 You guys have to stay. Too bad!

20 MR. ERICKSON: Now, Jane, you can cut short some of
21 that by simply laying the paper on us, too. So if you could
22 distill --

23 MS. FLEMING: No, Bob, this is the last opportunity
24 that the public gets to speak before the public. Needless to
25 say, you'll hear from me privately, but this is the last

1 opportunity to deal with the Task Force findings publicly,
2 and I'm certainly sure that we should say it all.

3 MR. ERICKSON: Let me, just for the record, state
4 that the Task Force has been very much engaged with Jane
5 Fleming. In fact, there have been eight references in our
6 report that I've noted, at least eight formal references to
7 her communications and interactions with Jane Fleming and
8 dozens, literally dozens and dozens of telephone calls, and
9 the entire Task Force met for a full day on January 30th, and
10 we have a complete transcript of that meeting, which has been
11 made public along with everything else over at the Plymouth
12 Public Library.

13 So that was with the full Task Force for at least
14 six hours of transcription, which is all a matter of public
15 record, and those of you who may wish to read it are
16 certainly encouraged to do so.

17 So I think that we've had a good deal of
18 interaction with Ms. Fleming. And now, however, it's your
19 chance to speak again.

20 Jane Fleming.

21 MS. FLEMING: You certainly have, Bob, as you've
22 indicated, and with all of that conversation, interaction
23 beyond that, hundreds of pages of documentation, I still have
24 a lot more to say. There's a lot more work to be done.

25 I am, for the record, Jane Fleming, if anyone

1 hasn't gathered that yet. I am a Duxbury citizen, a member
2 and Acting Chairman of the Radiological Emergency Planning
3 Study Committee, and as always, I am addressing you as a
4 mother of two, and I want emergency planning.

5 Before we begin, I would like to acknowledge Ed's
6 absence, and through you, I would like to express my sympathy
7 to him.

8 First, I want to commend the members of the Task
9 Force for the amount of work and effort that you have put
10 into your job. You have identified and acknowledged the
11 myriad of planning problems. Some of the problems are the
12 ones that we have been trying for years to get anyone to
13 acknowledge, and we are grateful finally to have them
14 acknowledged.

15 Others, such as the Transportation Officers being
16 part of the National Guard's job, came as a shock to those of
17 us who thought we knew more than we ever wanted to know about
18 emergency planning.

19 I appreciate how extensive a task it was to muck
20 through four years of botched planning and the political
21 coverups that went with it.

22 With this finding as a starting point and with the
23 additional corrections and information you are receiving
24 tonight, I am hopeful that you will be able to present an
25 accurate and comprehensive final report to the Commission.

1 With such a final draft, particularly since it will be
2 coupled with the State's new and improved attitude on the
3 issue, we finally have a chance to achieve realistic
4 emergency planning.

5 However, our chance, our hope, will only become a
6 reality if you successfully complete your task by
7 recommending that the Commission set the 120-day clock as
8 provided by 10 CFR 50.47(s)(2).

9 This is not, as some in the room wish and some in
10 this room fear, a request to shut down Pilgrim. Rather, it
11 is a realistic assessment of the attitudes of all the key
12 players, and it rests on the reality that they will achieve
13 realistic planning only if the NRC applies its only truly
14 effective tool available to it.

15 In this State, we have a new Administration, and
16 thank God for that on many levels. But on this issue in
17 particular, this Governor certainly cannot be classified as
18 anti-nuclear, and with his legal background, we can be
19 assured that he not only wants, but will insist upon
20 emergency planning that comports with 10 CFR 50.47. From an
21 economic standpoint, it is obvious that the Governor does not
22 want a major power plant to be closed.

23 In the public safety department, Jim Roche has
24 already set the tone. Planning is a top priority. The
25 Public Safety Staff -- Bill is here tonight -- has been very

1 cooperative and more than eager to learn this new world of
2 planning. I am confident this attitude will prevail.

3 MCDA's new Director, Dave Rodham, has been
4 aggressively addressing the problems of planning. He is
5 aware of the political hotseat he is in, and he is aware and
6 is dealing openly and effectively with the fact that he has
7 inherited the agency that is responsible for the lack of
8 planning we currently have. He is making great strides
9 forward, and his somewhat reluctant staff is now starting to
10 follow his lead. There his hope, folks!

11 On the Hill, Beacon Hill, we have Representative Al
12 Herran, who is Chairman of the Joint Legislative Committee.
13 Cary is here tonight representing him.

14 He is currently putting together a comprehensive
15 bill that will properly assess the utilities for the cost of
16 emergency planning. In reality, it is nothing more than
17 another cost of doing business.

18 The bill directs the funds to the appropriate state
19 agencies. This bill, 1906, has bipartisan support, which is
20 no easy trick in the Massachusetts Legislature these days.

21 In short, the pieces and the players are all in
22 place, with one exception. Everyone is singing from the same
23 book. The sole exception, the only one player left to get in
24 line, is BECo.

25 BECo claims and has spent million on planning.

1 Unfortunately, it did so with a payoff mentality, rather than
2 an honest effort to achieve any valid end results. BECo has
3 lied, misrepresented facts, threatened opponents, bullied or
4 cajoled half the world in an attempt to be the new messiah
5 and falsely claim that planning is in place.

6 History is clear. BECo will do absolutely nothing
7 to protect the public unless its back is flat against the
8 wall. You have the power, and it is your responsibility to
9 put BECo's back to that wall. You can force BECo to sing
10 from the correct hymn book. You can make BECo join in the
11 new state effort and put planning in place for the first time
12 since 1987.

13 You, the NRC, and FEMA -- not BECo -- are charged
14 with the responsibility of protecting us, the public.
15 Recommend that the Commission invoke 10 CFR 50.47(s)(2) and
16 set the 120-day clock. The responsible agencies will do
17 their job.

18 For a little of the history, which I'll skip a lot
19 of, in August '87, FEMA determined that offsite emergency
20 preparedness had deteriorated to such an extent that FEMA
21 could no longer make a finding that the state and local
22 planning were adequate. Thus FEMA bit the bullet, as I am
23 asking you to do. And it rescinded the '82 finding of
24 adequacy.

25 The NRC Staff judged at the time that the

1 deficiencies identified in that FEMA report were significant.
2 The NRC decided the plant would not be permitted to restart
3 until it demonstrated improvements had been made in emergency
4 plans. That's when the fun began.

5 The history of that, through the IG's reports and
6 all, we all are familiar with. I won't run through that.

7 Since early April '89, Pilgrim has been operating
8 in violation of 10 CFR 50.47, as I have stated to the NRC so
9 often. The recent Task Force findings clearly support that
10 position.

11 In 1988, the NRC Staff presented misinformation.
12 The Commission made an incorrect decision based on that
13 misinformation.

14 Today, two and one-half years after the plant was
15 permitted to restart, the same key issue in the 1987 FEMA
16 report -- transportation, reception center to the north,
17 planning for schools, special needs -- are still in dispute.

18 I will discuss particular issues in a moment. But
19 first, let's take an overview look at the Task Force.

20 The Task Force is the end result of the lessons
21 learned from the IG's report, July 1990. On September 24th,
22 James Taylor, the EDO, forwarded the charter for the Task
23 Force to the Commission. The charter set forth five specific
24 tasks:

25 Identify Pilgrim's offsite issues in dispute.

1 Determine the factual status of the issues in
2 dispute.

3 Describe the current status of offsite EP for
4 Pilgrim.

5 Identify and assess the significance of existing EP
6 problems.

7 And recommend whether the NRC should reconsider
8 it's reasonable assurance finding.

9 By and large, the Task Force took the charter
10 instructions seriously. There are, to be sure, some
11 particular problems remaining, but the Task Force did
12 identify many critical issues, fairly describe most of the
13 current status, and assess the significance of most of the
14 still remaining problems.

15 Indeed, in identifying and assessing the
16 significance of the current emergency planning problems, the
17 Task Force correctly and unequivocally concluded that two
18 particular problems precluded a finding of reasonable
19 assurance.

20 The existing emergency plans state that the
21 Massachusetts National Guard is to provide transportation
22 officers and staff to the Wellesley Reception Center. After
23 reviewing all of the facts, the original determination made
24 by the Task Force was: Because the National Guard would not
25 arrive at the Wellesley Reception Center for four to eight

1 hours after notification, the twelve-hour monitoring
2 evaluation criteria, J.12, and the protective measures
3 planning standard, 10 CFR 50.47(b)(10), would not have been
4 met.

5 Had this determination made its way to the final
6 version in the report, the Task Force would have had not
7 choice but to recommend that the Commission set the 120-day
8 clock.

9 That result, however, was avoided by a ninth -- no
10 actually a tenth -- inning rally by none other than BECo.

11 The events that followed the Task Force's original
12 determination are now an issue of concern. What happened can
13 only be called the "quick fix." Quickly defined, the "quick
14 fix" was, BECo prematurely became aware of the original
15 determination, and BECo, out of the goodness of its heart,
16 offered to unilaterally resolve the underlying problems by
17 usurping the State's authority in planning and placed a few
18 of its own employees in positions which can only result in a
19 clear and direct conflict of interest.

20 And the NRC and FEMA nod their consent, accept the
21 unacceptable, and avoid having to face up to the facts
22 underlying the initial determination.

23 The details of the quick fix will be discussed at
24 the appropriate times throughout this testimony. However,
25 the seriousness of the problem is such that it is necessary

1 to at least raise the important questions now.

2 Number one, was the utility given advance warning
3 of the Task Force's initial findings, and if so, by whom?

4 Two, on what basis did the utility usurp the
5 State's authority?

6 Three, how can BECo employees monitor evacuees at
7 the Wellesley Reception Center without creating a clear
8 conflict of interest?

9 Four, why did not the Task Force recognize that the
10 level of staffing provided by the quick fix is totally
11 inadequate.

12 Five, did the Task Force delay issuing its draft
13 report to permit BECo to accomplish the quick fix?

14 Six, did the NRC and FEMA accept or even encourage
15 the quick fix to accommodate BECo and avoid having to set the
16 120-day clock?

17 Hopefully these questions will be resolved
18 satisfactorily by the Task Force, but they will in any event
19 be sent on to the IG's of both the NRC and FEMA. Protection
20 of my family is far too important to lose to a BECo quick
21 fix.

22 Now to get on with the other issues that are still
23 in dispute, I have focused my attention on three issues --
24 only three of them tonight, not all of them, folks: the
25 Wellesley Reception Center to the north, transportation, and

1 the Duxbury schools.

2 The Wellesley Relocation Center. In its findings,
3 the Task Force determined that the issues pertaining to the
4 relocation center fall into two broad categories: facilities
5 and equipment and staffing.

6 Excuse me [drinking]. It's a class act. Never
7 trust a diabetic long without a drink.

8 Staffing is a key word so far as the Wellesley
9 Relocation Center is concerned. The National Guard has
10 repeatedly made clear that planning should proceed on the
11 basis that the Guard will require a twelve-hour response
12 time. Because of this, Wellesley does not meet the standards
13 for a functioning relocation center.

14 The first evacuees will arrive about eleven and a
15 half hours, if I'm driving, before the National Guard, and
16 the Guard cannot possibly monitor all the evacuees in the 30
17 minutes they will have remaining after they arrive.

18 Over the past few years, I have identified the
19 obvious problem of the National Guard response time to all
20 the responsible parties. I hand-delivered this information
21 to Chairman Carr of the NRC on October 12, 1989, the day of
22 the recent almost full-scale training exercise.

23 In the exercise itself on that date, the NRC, MCDA,
24 and BECo covered up the response time problem by giving the
25 Guard several days -- not hours, several days advance notice

1 -- that they were to report to Wellesley on the morning of
2 the 12th. All of the responsible authorities were aware of
3 this.

4 Yet FEMA's assessment of the exercise failed to
5 identify the deficiency.

6 Why? The answer seems simple. And admission that
7 the Wellesley Relocation Center would be completely unable to
8 monitor evacuees in the prescribed time, twelve hours, at
9 least without several days of advanced notice, would have
10 precluded the NRC from making its critical finding of
11 reasonable assurance.

12 This time, the Task Force listened to,
13 acknowledged, identified, and assessed the significance of
14 this deficiency. In this respect, they fulfilled the
15 requirements of their charter. And if you had stopped there,
16 you would have been heroes today.

17 They would have done their job, and the results of
18 their finding would have given BECo the 120 days to correct
19 the situation, or shut down.

20 But in the tradition of the NRC, just doing your
21 job and honestly protecting public health and safety is never
22 the top priority. The top priority, as always, is to protect
23 the industry -- never shut it down.

24 Thus we have the quick fix. Just let BECo say
25 they'll do the job.

1 BECo will not fill the void and handle monitoring
2 and other staffing positions assigned to the National Guard,
3 our knights in shining armor -- BECo, led by King Ralph, with
4 the help of some MCDA workers from Fort Devens, which is
5 about to close, and with a few DPW workers from Arlington.
6 The quick fix appeared as a last desperate attempt on the
7 part of BECo to avoid Part V of the Task Force charter,
8 "Recommend whether the NRC Should Reconsider Its Reasonable
9 Assurance Findings." And if there is no reasonable
10 assurance, to set the 120-day clock.

11 By the end of April, the Task Force had basically
12 completed its review, had found that the National Guard
13 staffing of the Wellesley Relocation Center did not meet the
14 federal regulatory requirements. To avoid setting the clock,
15 the Task Force seemed to have delayed issuing its already
16 completed report, told BECo whatever it was unwilling to tell
17 us, the public, and then gave itself and BECo the extra time
18 to find this obviously inadequate quick fix.

19 What are the particular problems with the quick
20 fix?

21 The first quick fix problem: Usurping the State's
22 responsibility.

23 Planning, as we all know, as all of you should
24 know, is the responsibility of the state and local
25 authorities. The new Director of MCDA, Dave Rodham, not only

1 appears to be extremely competent; he has displayed a
2 willingness to do his job properly. Indeed, Mr. Rodham has
3 recognized the significance of the National Guard's staffing
4 problem and has been working on a realistic solution to the
5 deficiency. He has identified approximately 85 professionals
6 with radiation backgrounds and is now in the process of
7 getting them onboard under an agreement to fill the vacancies
8 the National Guard cannot handle in a timely manner.

9 But to avoid setting the 120-day clock, the NRC and
10 BECo pushed aside a reasonable and acceptable resolution that
11 had already been proposed, and both then and currently is in
12 progress at MCDA. By doing so, they simply usurped the
13 authority of the State.

14 The State wanted time to put in place a workable
15 plan that would protect its citizens. Neither BECo nor the
16 NRC was willing to permit the State to do this. Letting the
17 State provide something that might work might mean setting
18 the clock, and if the clock was set, fixing the problems
19 would finally become a priority. That would be a welcome
20 change, since BECo certainly has never made fixing the
21 problem a significant priority in the past.

22 The second quick fix problem: Conflict of
23 interest.

24 The United States Court of Appeals defined a
25 conflict of interest in 463 F.2nd 600, 602, a "situation in

1 which the regard for one duty leads to the disregard of
2 another. The concept refers to the clash between public
3 interest and private finances of an individual."

4 It doesn't take a Harvard law degree to quickly
5 understand the conflict here. Every BECo employee will know
6 that every person he monitors and he finds contaminated is a
7 potential lawsuit against BECo. Every BECo employee will
8 know also that an honest monitoring job may well mean the end
9 of Pilgrim I and of his job. There is no double check to
10 provide any assurance of accuracy and honesty in monitoring.
11 A total of two men are assigned to the three monitors i
12 Wellesley.

13 The conflict of interest is clear, and the result
14 is a very real danger that contaminated citizens will not be
15 identified and will not be decontaminated. The cancer will
16 show up later.

17 The third quick fix problem: Inadequate staffing
18 at Wellesley.

19 BECo and the Task Force would like us to believe
20 that they can replace 50 trained and disciplined military
21 personnel by giving two training sessions to the twenty BECo
22 employees, 16 DPW workers from Arlington, and if it hasn't
23 closed yet, the four MCDA employees from Fort Devens. Had
24 Stormin' Norman known about this, I'm sure he could have
25 ended the Desert Storm in less than twelve hours. Had we

1 told Saddam about the BECo boys coming and sent him Pilgrim's
2 track record, we could have stopped the whole war without
3 ever dropping a bomb. Incompetence is far more frightening
4 than a smart missile.

5 Let's compare what the BECo boys -- you already
6 heard the line, Pixie -- let's compare what the BECo boys
7 with their two training sessions will be doing to the jobs
8 that had been assigned to the National Guard. I have a whole
9 list here comparing the things for the sake of the people.
10 You can read the list and compare.

11 What does it mean, without me going through the
12 list?

13 The most obvious problem is the portal monitor
14 operators. Portal monitor operators, the National Guard had
15 four; BECo has two. They're twice as good as the Guard.

16 We finally got the long-fought third monitor, so
17 that if that monitor got -- if monitoring got started at a
18 reasonable time, it could be completed within the prescribed
19 twelve hours. But now we don't have an operator. Another
20 example of BECo's planning expertise.

21 BECo finally provided the third monitor. One would
22 have thought that whoever at BECo planned the quick fix would
23 have remembered and provided the third operator.

24 More important, each portal monitor really should
25 have two operators, particularly in view of the conflict of

1 interest issue. So we're short four men, not only one.

2 The so-called initial monitors, which are really
3 the secondary monitors, they are the hand-held monitors that
4 follow the two or three portal monitors. They're supposed to
5 locate the particular area of contamination on people who
6 have set off the alarms of the portal monitors. By the way,
7 BECo sets the alarms about once a year. That's a little more
8 confidence we can have.

9 The hand-held monitors are very time-consuming. At
10 a minimum, there should be two initial monitors for each of
11 the two or three portal monitors, not two total. Now we're
12 down two to four initial monitors and four more men.

13 I should also point out that at some time these two
14 initial monitors, the two men standing with hand-held
15 monitors behind the three portal monitors will have to run
16 across the room every now and then, and they are solely in
17 charge of monitoring handicapped people, babies, anyone who
18 is unable to go through a portal monitor. At the bare
19 minimum, two more initial monitors and trained people to
20 operate them are needed.

21 The personnel recorders are supposed to take down
22 all the personal information that is required to ensure
23 family reunification. We have two recorders assigned to the
24 portal monitors, one more assigned to the handicapped. The
25 flow will be anything but rapid. And don't forget, all of

1 this work must be done within the twelve-hour time.

2 Interestingly enough, BECo has assigned not one or
3 two, but ten people, one-third of their total number of
4 available personnel, to do vehicle monitoring, although no
5 vehicle will be decontaminated until after the National Guard
6 gets there. They'll monitor it, but they're not going to
7 clean those cars.

8 The priority of cars over people is interesting, to
9 say the least, and it makes one wonder what the BECo boys
10 have been trained to do. Maybe they do work overtime for a
11 car wash.

12 No radio operator. This one is truly amazing.
13 It's amazing how much time you people -- the NRC in general,
14 FEMA -- discuss the importance of communication. And then
15 you accept a quick fix that doesn't even include a radio
16 operator during the early and most crucial parts of the
17 accident, no radio operator until the National Guard finally
18 gets there.

19 Communication was an integral part of the entire
20 evacuation planning process. Without a radio operator,
21 anyone that Wellesley was supposed to communicate with now
22 has a communication deficiency.

23 Even more amazing to all of us is that we are to
24 believe that BECo and their friends, who are fully trained in
25 two quick fix training sessions, May 14th and 16th, in just a

1 few short hours, they didn't just learn one job they were
2 supposed to do; they learned everything there is to know
3 about jobs at a relocation center, any job. They can
4 monitor, they can register, they can decontaminate anything,
5 be it a car, a mother, a baby, or a quadraplegic.

6 Is there any need to say it? The quick fix is a
7 disaster.

8 All we are asking is that you do your job. State
9 as you did initially in the draft report that the monitoring
10 and evaluation criterion, J.12, and the protective measure
11 planning standard, 10 CFR 50.47(b)(10), have not been met,
12 and say so unequivocally.

13 I could have gotten a glass; it would have been
14 politer.

15 It is a very easy statement to make. I've been
16 saying it since April of 1989. The NRC, FEMA, and BECo --
17 you are all in violation of NUREG 0654 and 10 CFR 50.47 by
18 allowing Pilgrim to operate at above 5 percent power without
19 emergency planning in place. The quick fix isn't a fix at
20 all.

21 The list of problems with Wellesley Relocation
22 Center goes on beyond the quick fix. First, the question of
23 whether or not you people think you need -- think you need -
24 - an LOA to ensure the cooperation of the Red Cross, even
25 though the guidelines of NUREG 0654 are clear that all

1 support groups must sign an agreement or signature page, the
2 real issue is identified: The Red Cross congregate care
3 centers don't exist. They don't know of their existence.

4 And also the other issue identified: The Red Cross
5 in the past has stated it won't participate in your man-made
6 disaster. Those were the issues you should have checked.

7 The statement in the draft report that the third
8 monitor is needed only in the case that one of the other
9 breaks is not quite accurate, just using the time estimates
10 that you chose, similar to the one that Chairman Carr chose
11 by chance, the third is needed to perform monitoring within
12 the prescribed time. It's not a backup. It is necessary to
13 monitor the population from Duxbury and Marshfield, the 20
14 percent population that will be arriving.

15 FEMA's guideline for sending contaminated injured
16 to nearby hospitals would be fine if the transportation were
17 provided, which it isn't, and if we had enough hospitals to
18 handle the volume. Collectively, and using the numbers that
19 you have accepted, thirteen hospitals can handle 39 people in
20 twelve hours. There are over 900 special needs people that
21 have been identified.

22 Chances are if any one person becomes contaminated,
23 many will be. A plume does not selectively seek out only one
24 or two people. It will cover a vast area and everyone in it.
25 Thirty-nine people in twelve hours is just the beginning.

1 Relocation centers, like all things in planning --
2 you're changing my drink [laughing]; I like my Pepsi. It's
3 nice to have a helping hand here.

4 The relocation center, like all things -- oh, no,
5 Bob, I'm not stopping -- like all things in planning, must
6 conform to common sense. Reading all your and BECo's
7 justification of ridiculous planning scenarios brings Clare
8 Donahue to mind again. Clare would have listened and read
9 through all the foolishness and would have brought it right
10 back down to reality with her now immortal quote: "And who
11 will bring the towels?" Clare, there are still no towels.

12 Buses -- Aby, Blair -- buses; are we ready?

13 On the issue of transportation, I will say ad
14 libbing -- oh, God, now she's going to ad lib! -- Aby and
15 Blair did an overwhelming amount of work when they took on
16 the transportation. They did work. They spent hours on it.
17 They did identify many, many problems. They did do basically
18 a very good job, still not perfect.

19 And I'm here to tell you where the mistakes came
20 in.

21 On the issue of transportation, I will identify
22 four major problem areas that either (a) have not been
23 adequately identified by the Task Force, or although
24 identified, the resolution is not quite what it should be.

25 The are first of all the BECo transportation

1 officers; secondly, the essentially exclusive use of BECo
2 information; third, the insufficient numbers of buses
3 available; and fourth, the new format letters of agreement,
4 LOAs.

5 Under BECo transportation officers, this was
6 another critical part of the quick fix. In its draft report,
7 the Task Force said that "another area of transportation that
8 had to be corrected in order to ensure that a prompt
9 evacuation could be performed, if necessary, was that the
10 response time for the transportation officers staffing, the
11 Area II emergency operation, had to be shortened so that it
12 could -- so that they could promptly assess transportation
13 needs and notify providers." That's their sentence -- whew!
14 I talk a lot, but that's one heck of a sentence!

15 And that "because of the delays associated with
16 its response time, the National Guard was not suitable to
17 fill the Area II transportation positions."

18 Rather than facing the issue squarely, the Task
19 Force again turned and bowed to its friends at BECo. As this
20 report said: "This aspect of overall transportation has been
21 satisfactorily addressed by the temporary assignment and
22 training of staff from BECo to replace the National Guard
23 personnel."

24 Satisfactory, I may ask, to whom?

25 The Task Force draft report is strangely silent

1 about this training. It may have been part of the two
2 training sessions for the Wellesley Relocation Center
3 personnel, but the transportation officers are nowhere
4 mentioned or listed, although they are stationed at the
5 Wellesley Center.

6 Probably more important, BECo says that these
7 temporary personnel will only be available for four to six
8 months -- four months, 120 days. Does it ring a bell?

9 Without the impetus of the 120-day clock, on what
10 basis should we expect that fully trained, real replacements
11 will be available then or ever? This probably is the most
12 blatant example of the Task Force expressly finding that
13 existing plans utterly fail to provide reasonable assurance
14 that the NRC's own regulations require, and then looking for
15 a quick and cheap way to let BECo off the 120-day hook.

16 Part II, essentially exclusive use of BECo
17 information.

18 In explaining the procedure to be used by the Task
19 Force, Chairman Carr characterized BECo's input into the
20 process as that of a strawman. In other words, the job of
21 the Task Force was to compare the information given to it by
22 BECo with independent information from reliable sources.

23 The Task Force spent endless hours examining
24 problems that existed with transportation providers, chiefly
25 buses. They carefully examined the information provided by

1 BECo and MCDA and determined that there were a great many
2 inconsistencies between the two.

3 This, by itself, is a finding of considerable
4 interest. BECo developed both sets of information, as the
5 Task Force was informed repeatedly on January 30, 1991.

6 The fact that BECo was the source of both its own
7 and MCDA's data means that the strawman was compared only to
8 itself. The discrepancies thus prove only one thing. BECo's
9 planners are not very good or even very consistent in their
10 misinformation.

11 On the other hand, the draft report is clear that
12 the Task Force did not address the discrepancies between
13 vehicle assignment in the town procedures and the Area II
14 transportation group IP. That translated means that the Task
15 Force didn't look at the transportation needs that the towns
16 identified and compared what the towns said to what BECo said
17 in its work and MCDA's.

18 In short, perhaps unwittingly, at least until the
19 situation was called to your attention in late January, the
20 Task Force effectively ignored Chairman Carr's admonition
21 that the job was to compare what BECo said with independent,
22 reliable information. Once again, the NRC relied exclusively
23 on the utility's assessments of needs, rather than going to
24 the towns to determine what their needs actually were.

25 Had the Task Force addressed the discrepancies

1 between town procedures and the Area II transportation group
2 IPs, BECo's work, I am sure they would have identified many
3 critical glitches in the BECo information.

4 Take, for example, Duxbury's school special
5 transportation needs. According to Dr. James Lyng, Duxbury's
6 Director of Special Education, and Patricia Monahan, Plymouth
7 Area Collaborative, a program for the severely handicapped
8 ranging from nine months to adult, the Duxbury schools will
9 need for Alden Upper and Lower one lift van. That was
10 correct on the information. For Chandler School, the
11 integrated kindergarten program six vans or station wagons
12 with seatbelts. For the Duxbury Intermediate School for the
13 PAC students, one lift van for the two wheelchair students.
14 I believe that was correctly identified. For Duxbury High
15 School's Magic Dragon Program, ranging six weeks to five
16 years, six vans or wagons with car seats. I think all of us
17 can agree a six-week-old cannot be thrown on the big yellow
18 school bus.

19 The Task Force draft report, by comparison, left
20 out Chandler and the High School Magic Dragon Program.

21 Until the Task Force addresses these discrepancies
22 between vehicle assignments in the town procedures, or even
23 better, discusses the needs with the town's responsible
24 personnel -- and I would suggest for any of the town members
25 that are here, have your personnel check to see what it says,

1 because these could be fixed, if you take the time to check
2 them -- there will be no accurate count of what the
3 vehicles really require. The strawman-to-strawman comparison
4 that has been made means that once again the people that will
5 be hurt or left behind are the children, the handicapped, and
6 the elderly.

7 Insufficient number of buses, unacceptable LOAs.
8 Lone before this Task Force held its first meeting here in
9 Plymouth, I told the NRC time and time again: There are not
10 enough buses to successfully evacuate the children, let alone
11 the others who are transportation-dependent. This statement
12 is still true today.

13 The Task Force determined that 361 buses are needed
14 to evacuate the school children, and another 140 buses,
15 making a total of 501, are required to evacuate the entire
16 EPZ transportation-dependent population. The Task Force
17 draft report says that 518 buses are available. Reality is
18 that at the present time, the maximum number of buses that
19 can be counted on is only 298. This translates into a
20 shortfall of all together 203 buses, 63 for the schools
21 alone, and no buses will be there for the rest who require
22 them.

23 The principal reasons for the chasm between the
24 draft report and the real world are -- I won't go through
25 them all; I'll give you a few examples:

1 Barnstable. It's assigned four buses assigned to
2 nursery schools: Busy Bee -- if you hear your child's school
3 called, this is like the game, you will have a Crispy Critter
4 at the end of this -- Busy Bee, Kiddy Kollege, Tiny Town, and
5 Kinder Haus. They have buses coming from Barnstable.

6 Jack, I didn't excuse you.

7 [Laughter.]

8 Okay, I'll still be here, Jack.

9 The problem with this company -- Jack hates
10 transportation issues. I've been trying to identify the LOAs
11 to Jack for three years. Three years ago last February, Jack
12 walked out of his office on me as I tried to show him the
13 LOAs.

14 VOICE: He didn't.

15 MS. FLEMING: History does repeat itself. Ah,
16 trust FEMA!

17 The problem with Barnstable is obviously that it's
18 a Cape Cod company. The plans call for the Sagamore Bridge
19 to be closed and only one lane of the Bourne Bridge to be
20 open. Under those conditions, traffic will be gridlocked for
21 hours. They keep telling me, but -- but -- it's for the
22 special vehicles we've opened the lane. They'll never get to
23 the bridge. They forget, it's not just the bridge; it's the
24 whole Cape.

25 For example, on the Tuesday following Memorial Day

1 -- and Memorial Day was light on the Cape, and this was the
2 day after the weekend -- there was a 17-mile backup, and both
3 bridges were open and operating.

4 Some of the other companies that I have problems
5 with, and there are many -- not many, but there are some here
6 -- C.S. Phillips. The problem with that is a reverse LOA.
7 I've spoken to Aby about this problem. What happened in this
8 circumstance is, Marshfield wrote a letter to C.A. Phillips
9 saying: We need twelve buses. They're calling that a
10 reverse LOA. I call it a request. There is no written
11 response. They maybe have requested, and Aby assures me that
12 Phillips' intent is to come, but they have not signed. Right
13 now today, there is no contract signed with C.A. Phillips.
14 It must be there. The letter of agreement has to be there to
15 make it count. Intent is great, but it just doesn't work.

16 Reliable has ten buses assigned.

17 Pardon me? No, no. That's the new format, Bob. I
18 checked, Bob. I check and I doublecheck and I triplecheck my
19 information.

20 The new format LOA is there.

21 VOICE: Even in the old format, Jane, I went
22 through that again after we talked.

23 MS. FLEMING: Did you fine one?

24 VOICE: There is a signature by Mr. Phillips on the
25 LOA, on the datasheet, that substantiates as strongly as

1 other LOAs.

2 MS. FLEMING: There is one that has been -- what's
3 the date of that one?

4 VOICE: I don't recall it. I don't have it in
5 front of me. But there is a signature by Phillips on the
6 datasheet.

7 MS. FLEMING: Whose signature?

8 VOICE: Mr. Phillips'.

9 MS. FLEMING: Okay. And has it -- we're not
10 discussing the new LOA format.

11 VOICE: I don't want to engage -- I just want to -
12 - some of these points, I think, you know --

13 MS. FLEMING: All right. Other major problems
14 without going through all of them is, many of the bus
15 companies -- Reliable, Mederios, Tremblay -- they are -- they
16 have stated on their LOAs, there will be a three-hour
17 mobilization time. That's three hours before they start to
18 move.

19 Then they all being from New Bedford and Fairhaven
20 have about an hour or an hour and a half to get here. That
21 equals a total estimated time of arrival before they get
22 here.

23 If we had enough buses already for the schools, and
24 they were just going to the TSAs, the staging areas, maybe
25 that would be acceptable. But there aren't enough buses yet

1 for the schools. So every bus coming into town will be
2 pressed into service to evacuate schools.

3 It just -- it doesn't work. We're short. We're
4 short 63 buses for schools alone, 201.

5 The Task Force assessment essentially ignores many
6 of the buses it is counting -- in the case of the buses
7 coming -- four and a half hours. Fine. If an accident
8 happens at Boston Edison, at Pilgrim, between 7:00 and 10:00
9 in the morning. If an accident happens after 10:00 in the
10 morning, the kids are sitting in school for four and a half
11 hours waiting for their bus to come by, they go home. School
12 is out at 2:30.

13 It's over, folks! What are you talking about?
14 Evacuating schools with a bus that won't come for four and a
15 half hours. They don't care if there's an accident. When
16 school's out, the kids will go home.

17 The next, new format LOA. Although it never
18 reviewed the new LOA format, the Task Force -- that's on page
19 2-131 of your draft report -- the Task Force somehow came up
20 with the conclusion that the new format would ensure
21 uniformity and clarify of commitment. Had they reviewed the
22 new format, the Task Force would have reached quite a
23 different conclusion.

24 The new LOAs seriously diminish the effectiveness
25 of evacuation planning. Their effect is to delay evacuation

1 by at least three hours and to add a new "smoke-and-mirrors"
2 quality to the transportation provider issue.

3 Section II.A.3, NUREG 0654, requires that "each
4 plan shall include written agreements between federal, state,
5 and local agencies and other support organizations having
6 emergencies -- emergency response role within Emergency
7 Planning Zones." That section applies to many issues in
8 planning that hasn't quite been done. But written agreements
9 -- written agreements.

10 The new formats of all the LOAs mean that they are
11 not agreements at all. Rather, they are nothing more than
12 what is normally called a letter of intent. A letter of
13 intent is not an agreement or a contract, but as the courts
14 have so often observed, it is simply an expression of the
15 tentative intentions of the parties.

16 In addition, the content of the new format is such
17 that it cannot possibly act as an effective agreement.
18 Unlike the old LOAs, there is no longer anything to indicate,
19 or more important to commit to, the numbers of drivers
20 expected to be available.

21 Without committing to drivers, the new format can
22 provide no assurance that an adequate number of buses will
23 arrive. The Task Force noted that many of the old LOAs did
24 not provide an adequate number of drivers. The Task Force
25 properly eliminated any buses without drivers from its

1 calculations.

2 BECo did not solve the no drivers problem by simply
3 eliminating both firm commitments and necessary information.

4 The information on how many drivers that BECo's new format
5 manages to hide must be considered in assessing the extent to
6 which the problem exists.

7 Those of us who live in the EPZ -- Bob, I am
8 certainly sure that in the last public meeting on this issue,
9 an issue that we have all been concerned about for so many
10 years, you don't want to shut off the public, and the public
11 -- I have given my permission to leave; you people, I
12 haven't.

13 [Laughter.]

14 Those of us who live in the EPZ aren't reasonably
15 assured by an expression of tentative intentions. Our fear
16 that there will not be an adequate number of buses is not
17 dispelled by a new format that forgets BECo has not yet
18 advanced technology to the point that buses will come without
19 drivers.

20 The new format also allows all buses to use three
21 hours even to mobilize. This helps BECo with numbers, but
22 delays actual evacuation from three to five hours. A NeSHP
23 report on evacuation times stated that within a ten-mile EPZ
24 -- this one's an important one to hear; I'll clue them when
25 it's important -- decreasing evacuation delay time from five

1 to zero hours will decrease whole-body radiation doses,
2 decrease the chance of being contaminated by an approximate
3 factor of 75 times.

4 The new format increases delay time by three to
5 five hours. Thus it increases our chances of contamination
6 by about the same factor, 75 times.

7 The new format, as the Task Force noted, ensured
8 uniformity and clarity of commitments, but because of it, the
9 entire process is moving backward rather than improving.

10 On Wednesday, January 30, 1991, I identified the
11 problem of the new LOA format to the Task Force. In
12 response, the Task Force assured me that they would find the
13 answers, because they could ask the person who wrote it.
14 Then later they said, okay, we will find out.

15 Did they find out? The unfortunate answer is no.
16 Instead, the NRC decided not to deal with the issue. They
17 turned it over to FEMA. Jack Dolan of FEMA was at the
18 January meeting during this discussion, and true to form,
19 FEMA has yet to address the issue.

20 From three years of experience, as I've mentioned,
21 Jack does not like to deal with transportation problems.

22 The one thing that the new format does reasonably
23 assure is that real efforts to address our transportation
24 needs will be greatly diminished. Delayed evacuation time
25 will increase, and no one will have any idea how many buses

1 will really arrive, because they don't know how many drivers
2 are committed by each company.

3 We can be assured that a bus without a driver will
4 not arrive. The new format is simply not acceptable.

5 I ask the Task Force to again look at this problem,
6 assess it honestly, and insist that the State -- I have
7 already spoken to Dave Rodham of MCDA about this -- and BECo
8 use a format that will provide real contracts, not letters of
9 intent, that require real buses with real drivers to arrive
10 in the EPZ to effectively evacuate our people.

11 For you people, I'm now going on to schools.
12 Planning for the Duxbury schools is still plagued with
13 problems. The majority are created by mistakes in the Area
14 II planning by a failure to integrate Area II plans with
15 local plans.

16 The statement that "no man is an island" is
17 particularly pertinent when applied to planning. It is not
18 enough for each individual to do his own job to ensure that
19 the small section for which he is responsible reflects the
20 outstanding needs for that particular portion of overall
21 plans.

22 Real success comes only when all of the codependent
23 individual aspects are examined, and that the necessary
24 dovetailing of integration is then accomplished, so that all
25 the different pieces can be brought together.

1 Here, many of the individual plans have not been
2 properly developed, and very few of the individual pieces
3 have been fit together.

4 The lack of monitoring, perhaps the most critical
5 shortcoming of the schools, is the lack of any plan for
6 effective monitoring.

7 NUREG 0654, J.12, provides in pertinent part:
8 "Each organization shall describe the means for registering
9 and monitoring of evacuees at relocation centers in host
10 areas. The personnel and equipment should be capable of
11 monitoring within about a twelve-hour period all residents
12 and transients in the plume exposure EPZ arriving at
13 relocation centers."

14 In the draft report, the Task Force finds the
15 concept of monitoring school children at reception centers,
16 relocation centers, acceptable. I concept, I agree. But
17 once again, the centers, the so-called host schools, have no
18 monitoring capabilities. It would be difficult to imagine a
19 more unique and clear violation of the just cited NUREG
20 provision.

21 As an aside, I should note that contrary to what is
22 said in the Task Force draft report the idea of host schools
23 for the school population was not an option first presented
24 or developed by the State. Rather it was another of BECo's
25 ideas: Let's keep numbers down at the reception centers; to

1 hell with the kids!

2 Let's dispel some of the myths that BECo has
3 presented to justify this blatant violation of the NUREG
4 monitoring requirement.

5 Precautionary transfer of school children. BECo
6 has attempted to convince the world that the children will be
7 moved out before any release occurs. As might be expected,
8 there are a number of flaws in this BECo thinking.

9 As I have already discussed, there are not enough
10 buses to evacuate the entire school population, and the new
11 LOA format allows, and in many cases actually creates, a
12 three to five-hour delay time before any evacuation will even
13 begin. Yet according to NUREG 0654, a release from Pilgrim
14 could occur from zero to 30 minutes.

15 If the children leave the schools and pass through
16 a radioactive plume while riding on one of the supposed
17 buses, the buses will be contacted by radio and told to go to
18 Wellesley.

19 Given the length of time it will take to get the
20 children on the buses in the first place, the likelihood of
21 the buses passing through a plume is far greater than it
22 should be. If they do, it is not a laughing matter. The
23 buses offer less than a 1 percent dose reduction, meaning
24 that they might as well be standing out in the open.

25 What is worth at least a chuckle is BECo's apparent

1 confidence4 that the buses will be contacted. During the
2 only recent almost-full-scale exercise in October of 1989,
3 the town of Duxbury lost all communication with the buses
4 very early in the game.

5 Since neither FEMA nor the NRC acknowledge this
6 failure in the FEMA report reviewing the exercise, there is
7 no way of knowing if the communication void has been or will
8 be corrected.

9 By the way, William Russell of the NRC was in
10 Duxbury's EOC during the time the entire EOC was trying to
11 find the buses. Bill neither noticed nor reported this
12 problem, although the buses weren't official "found" until
13 the next day.

14 MR. ERICKSON: We really do need to wrap up.

15 MS. FLEMING: Bob, we really do need emergency
16 planning for our children.

17 MR. ERICKSON: Certainly, of course

18 MS. FLEMING: So let's get our priorities straight.
19 This is more important than a good night's sleep.

20 MR. ERICKSON: It isn't a matter of sleeping.

21 MS. FLEMING: That is what it's a matter of.

22 MR. ERICKSON: It isn't a matter of a good night's
23 sleep for me; it's a matter of what is the most efficient way
24 of providing the comments that you wish to provide to us
25 tonight.

1 MS. FLEMING: No, I think it's a matter of -- Bob,
2 as I said --

3 MR. ERICKSON: That is not the important thing at
4 this juncture.

5 MS. FLEMING: Maybe if we stop discussing it and I
6 finish giving my oral presentation, then maybe we can wrap
7 up, okay?

8 MR. ERICKSON: Please, Jane, please try to
9 complete it in the next five minutes, if you would.

10 MS. FLEMING: I'll try.

11 MR. ERICKSON: Thank you.

12 MS. FLEMING: If the children have been
13 contaminated, they will be sent to Wellesley to be monitored.

14
15 Let's think of it this way, too, Bob. A little
16 aside.

17 If you had done your job perfectly, right, all I'd
18 have to say here tonight is: Hey, great job, guys. Thank you
19 very much. You did a wonderful job.

20 But unfortunately the job wasn't done perfectly,
21 and my children are still at risk.

22 Therefore, for the 40th time, to illustrate, I will
23 go through this. If you think you're bored, I have repeated
24 this information millions of times.

25 MR. ERICKSON: It's not a matter of being bored,

1 Jane. It's a matter of --

2 MS. FLEMING: Then pay attention, Bob.

3 If the children have been contaminated, they will
4 be sent to Wellesley to be monitored.

5 Here again, there is a wide variance between
6 reality and the BECo "truth". Again, as I have already
7 discussed, Wellesley simply does not have the capability to
8 monitor the school population with the prescribed twelve-
9 hour time. The reception center can't even handle the non-
10 school population within that time period.

11 The new suggestion that school monitoring will be
12 solved by providing some "express line" ignores, one, that
13 there aren't monitors to use in such a line and, two, that
14 the quick fix doesn't provide any people to operate the
15 express monitor, even if one should be found, and three, that
16 monitoring Duxbury's students and staff will take ten hours,
17 not including the Marshfield students and staff, who will be
18 in the same express line.

19 As an aside, this is probably an appropriate time
20 to raise a related question: Given the obvious length of
21 time it would take to monitor children in Wellesley, even if
22 Wellesley had monitoring capabilities, why does the plan
23 bother with separate host schools student relocation centers
24 at all?

25 The "take the children to the Needham host school

1 after they're monitored in Wellesley" concept will result in
2 chaos. parents will be arriving at Needham to find their
3 children are still at Wellesley. Then with their pre- or
4 post-school children, they'll arrive at Wellesley,
5 overloading a system that already is not equipped to handle
6 the minimum population percentage -- 20 percent --
7 requirements. This can only result in bedlam, foreseeable to
8 all.

9 On whom can we pin the blame? BECo, MCDA, the
10 State, FEMA, or the NRC? They all know. They are all aware.
11 And the have all been personally informed.
12 Maybe we should get out our legal shotguns and go after them
13 all.

14 MR. ERICKSON: May I interrupt a moment, please?
15 Just a moment.

16 What I'd like to do at this point is discontinue
17 the transcription. We'll listen to your comments, and
18 you'll be able to then also provide us with a copy of your
19 statement.

20 MS. FLEMING: That is your choice. I don't find
21 it acceptable.

22 MR. ERICKSON: Will you be able to wrap up
23 shortly, Jane?

24 MS. FLEMING: I'll try, Bob.

25 MR. ERICKSON: Please, please try.

1 MS. FLEMING: Can this flaw be fixed? Yes, it can.

2 On June 3, 1991, the Duxbury School Committee voted
3 -- and I will give you a copy of their vote -- that in the
4 event of a radiological accident at Pilgrim Nuclear Power
5 Station, all Duxbury students and staff relocated from
6 Duxbury to Needham, the current relocation center for Duxbury
7 students, will be monitored by portal monitors at the Needham
8 Relocation Center, also sometimes referred to as the host
9 school.

10 The School Committee also voted that Boston Edison
11 Company provide two portal monitors to be kept at the Needham
12 High School or at any other host school that may hereafter be
13 designated for Duxbury students or staff; that the
14 Massachusetts Civil Defense Agency assign and train the
15 appropriate personnel in a number sufficient to operate the
16 portal monitors at the host school; and that all appropriate
17 IPs be corrected and redrafted, as required, to reflect and
18 provide that the Duxbury school population will be monitored
19 at the host school relocation sites.

20 As a hidden bonus, these two additional monitors
21 could also be used to monitor parents and siblings who arrive
22 in Needham to pick up their children and provide some needed
23 relief to the overloaded monitoring system in Wellesley.

24 I discussed this "monitor the school children in
25 Needham" procedure with Chairman Carr, and his response to it

1 was favorable. Dave Rodham of MCDA has told me that to
2 monitor the school children at the Needham host school was
3 feasible and realistic and has given his word that he will
4 put the procedure in place.

5 If the Task Force will face up to the inadequacy of
6 the present plan and support the relatively simple solution,
7 this is one area in which reasonable assurance may actually
8 be provided.

9 There are other problems for the Duxbury schools.
10 Unfortunately the current lack of monitoring plans or
11 facilities is not the only problem with the proposed
12 emergency planning for the Duxbury public schools.

13 For example, hand-held monitors. BECo has not
14 delivered the hand-held monitors it promised the School
15 Superintendent. Among other things, these are needed to back
16 up portal monitors in Needham.

17 Training of teachers: Less than 50 percent of the
18 teachers have been trained. Perhaps this is an indication
19 that the teachers meant it when, in response to a poll, they
20 said that they would not participate.

21 Interim assignment of transportation officers: This
22 is another part of the quick fix. As has been noted in a
23 letter that the School Committee submitted to the Task Force:
24 "The committee is seriously concerned with the proposed
25 interim assignment of BECo personnel and employees as Area II

1 transportation officers. Trained transportation officers are
2 essential to the successful evacuation of the Duxbury school
3 population. We do not believe that this critical need is met
4 by BECo volunteers on an interim basis, and not for more than
5 a four to six-month period. We request that whatever
6 personnel are required be assigned on a permanent basis."

7 Dose reduction: As the School Committee said, a
8 dose reduction study should be performed on each school
9 building that has been designated as an emergency shelter.
10 In the event of a fast-breaking accident, current plans call
11 for sheltering, not evacuating, the school children.

12 A dose reduction study is necessary, one, to
13 provide guidance to those who must decide whether to shelter
14 or evacuate and, two, if sheltering is the choice, to permit
15 the Duxbury school staff to move the student body to the
16 areas of each building that offer the greatest sheltering
17 factor.

18 The new LOA format: The new format, which the Task
19 Force did not review, severely diminishes the level of
20 effective evacuation planning for the schools. The extended
21 mobilization time delays evacuation to such an extent that
22 the concept or precautionary transfer of school children is a
23 joke.

24 Misrepresentations of host schools: The Task Force
25 draft report refers somewhat obliquely to the fact that just

1 before the October 1989 exercise, it was discovered that BECo
2 had misrepresented to the NRC that Framingham and Newton were
3 the host schools for Duxbury.

4 The Task Force treatment of this is another
5 interesting example of its habit of relying on BECo for
6 factual information and avoiding public statements
7 embarrassing to BECo. The fact is, BECo lied to the State,
8 to Duxbury, to FEMA, and to the NRC.

9 Did you, the Task Force, identify this violation of
10 Title 18, Section 1001 to Mr. James Taylor, the EDO, as you
11 were supposed to?

12 Camp Squanto: Dr. Kennedy and the Task Force again
13 missed the point. This is not a training problem. It is a
14 problem in planning.

15 The children to which the Task Force draft report
16 refers, including my son, fell through the cracks because
17 BECo's planners, as they admitted in their October 4, 1990
18 response to the NRC, could not comprehend that schools and
19 camps might run simultaneously. Under BECo's plans, when
20 schools are open, camp IPs will not be activated.

21 The reverse is also true, as was apparent in
22 Duxbury last summer when the schools were not notified of an
23 unusual event. BECo planners have not yet figured out that
24 all schools and all camps must be notified any time that
25 emergency planning is activated.

1 Remember, as NRC officials have taught me over the
2 last four years: Planning is simply get them out and get
3 them out monitored! Those two key issues have not yet been
4 satisfactorily resolved for Duxbury's school children.

5 What can the Task Force do? Recommend setting the
6 120-day clock, so the State will have the time and BECo will
7 have the real incentive to fix the problems.

8 I thank you very much for your time.

9 The only thing I would like to add to illustrate is
10 the fact that I hope the delay of the quick fix doesn't
11 result in the fact that this whole process goes before the
12 Commission for hearing after the Chairman leaves office.

13 If that is the case, that is a crime. Chairman
14 Carr and I have worked together on these problems for four
15 years. We started our relationship as adversaries. We are
16 still some percent of the time adversaries. But through our
17 relationship, I've learned a great deal of respect for him as
18 a man and for his position. I don't always like his
19 decisions, but I oftentimes understand why he has made them.

20 In this particular case, the chairman has more
21 knowledge on this issue than actually any of you, even after
22 all the work you've done. He knows it, understands it, and
23 he will make an informed decision.

24 And of all the things the quick fix did, delaying
25 this and having this decision go on until after the chairman

1 is gone would be the biggest crime.

2 Thank you.

3 [Applause.]

4 MR. ERICKSON: Thank you, Jane.

5 We had one more speaker from BECo, but given the
6 time, he has declined. We will acknowledge that he is here
7 and thank him for his interest.

8 And considering, then, that there are no further
9 speakers, we will conclude the proceedings at this time.

10 Thank you very much.

11 [Whereupon, at 11:20 o'clock, p.m., the proceedings
12 were concluded.]

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C E R T I F I C A T E

COMMONWEALTH OF MASSACHUSETTS
COUNTY OF PLYMOUTH

I, ROSANNE LEE HANS, Notary Public duly
commissioned and qualified in and for the Commonwealth of
Massachusetts, do hereby certify that there came before me
on the 12th day of June, 1991, the people hereinbefore
named; and do hereby certify that this transcript of the
hearing is a true record.

IN WITNESS WHEREOF, I have hereunto set my
hand and affixed my seal this 13th day of June, 1991.

Rosanne Lee Hans
ROSANNE LEE HANS,
Notary Public

My commission expires:
January 25, 1996

COMMENTS FROM A. DAVID RODHAM, DIRECTOR,
MASSACHUSETTS CIVIL DEFENSE AGENCY
AND OFFICE OF EMERGENCY PREPAREDNESS



WILLIAM F. WELD
GOVERNOR

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT

CIVIL DEFENSE AGENCY AND OFFICE OF EMERGENCY PREPAREDNESS
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A. DAVID RODHAM
DIRECTOR

M E M O R A N D U M

To: Pilgrim Offsite Emergency Preparedness Task Force
U.S. Nuclear Regulatory Commission

From: A. David Rodham, Director, Mass. Civil Defense Agency
and Office of Emergency Preparedness

Date: June 12, 1991

Subject: NUREG-1438, "Findings on Issues of Offsite Emergency
Preparedness For Pilgrim Nuclear Power Station"

I have had Douglas P. Forbes, Director of Planning and his staff review the above-captioned Draft Report.

In general, we agree with the findings and are engaged in a continuing process to improve the plans for Pilgrim offsite emergency preparedness. As you are aware, we have solved multiple issues, especially during the last few months that were of concern to the Task Force. This was as a result of a tremendous cooperative effort between FEMA, local government, other state agencies, the utility, the Executive Office of Public Safety and our own MCDA staff. We will of course, keep FEMA informed as we continue to address any and all items in which interested parties and the Task-Force had a concern.

In this Draft Report for Comment, the NRC Task Force identified 5 items that warrant attention before the next full participation exercise in December of 1991. MCDA's response to those 5 items is as follows:

Issue

Emergency notification communications equipment (e.g., pagers and radios) for some emergency response personnel in some towns need improvement.

continued...

MCDA will work with the Federal Emergency Management Agency, the licensee and the communities to assure that improvements to essential emergency communications equipment are completed. As needs are specifically identified in any plan revisions or updating, BECo has agreed to provide necessary equipment.

Issue

Responsibility for maintenance of some emergency response equipment in some towns needs to be resolved.

Response

MCDA will work with the Federal Emergency Management Agency (FEMA), licensee and the local communities to assure that all essential emergency response equipment is included in the existing maintenance agreements between the licensee and the communities.

Issue

Participation in training for offsite emergency response personnel needs to be substantially increased.

Response

MCDA and the licensee continue to offer unlimited training opportunities to all emergency workers. In fact, training has been conducted during normal work hours, in the evenings and on weekends. In addition, the licensee has agreed to reimburse emergency workers for time spent in training. It is however, the responsibility of local government officials to schedule training and to insure participation of their emergency workers. 10 CFR 50.47 (b) (15) (Planning Standard O in NUREG-0654) requires the following: "Radiological emergency response training is provided to those who may be called on to assist in an emergency." NUREG-0654, Evaluation Criterion 0.5 provides that "each organization shall provide for the initial and annual retraining of personnel with emergency response responsibilities". MCDA and the licensee strongly encourage training, but have no direct control over local scheduling. It is the goal of MCDA and the licensee to have all training completed prior to the December 1991 Exercise. Classroom training is ongoing and tabletop practicals and drills are scheduled to begin in July. We are making excellent progress to date and the training ratios will be much higher in 1991. This goal is attainable and to this end, MCDA will continue to promote and strongly encourage local participation in the training program.

It is, however, expected that certain categories of personnel such as teachers and bus drivers may not be fully trained. We are putting together crisis training elements in a kit form that can be quickly implemented during a period of increased readiness and to plant conditions. For instance, a laminated card on the use of dosimetry. The category "Percentage Hours Completed" will increase dramatically as the drills are completed over the next few months.

We have attached an amended training report dated June 1, 1991.

Issue

State and some town civil defense agencies need to incorporate results from the self-identification program survey into their lists of persons with special needs and provide for regular maintenance of those lists.

Response

State Civil Defense does not and should not have access to special needs lists. These are held in confidence by the towns. When the towns have finished all data collection and completed callbacks, MCDA will receive a special needs profile from each community, which will be reviewed to ensure that special needs for Reception Center/Mass Care Shelters can be met. MCDA is working with those local and state agencies identified and the licensee to insure that the results of the self-identification program are fully incorporated and maintained. All towns have completed the callbacks except for Plymouth. Plymouth is expected to complete the program on or about July 1, 1991.

Issue

Plans and implementing procedures for the Massachusetts Civil Defense Agency (MCDA) and the Department of Public Health and MCDA Area II need to be made consistent with those of the local communities.

- Transportation procedures need to be better coordinated among MCDA Area II, transportation providers, and the towns.
- State plans need specific procedures to guide officials who must make protective action decisions.

Response

MCDA and licensee have renewed the letters of agreement with transportation providers using a new format that will ensure uniformity and clarify of the commitments. MCDA is presently reviewing appropriate transportation procedures for clarity and consistency and ensure coordination among all parties. We are presently working with the licensee to develop and maintain Administrative Procedures (AP's) to insure that consistency is maintained between all planning elements. A meeting was held on 6/11/91 to evaluate and review the latest AP's. We have had reservations that some planning elements were not being revised or updated in a coordinated fashion with local states and licensee involvement. This system of AP's will solve these problems and elevate our confidence level.

In regard to protective action decision making, MCDA will review this finding with the State Department of Public Health and develop specific procedures as necessary.

OVERVIEW REFRESHER TRAINING STATUS (1)
 PILGRIM EPZ
 LOCAL EMERGENCY WORKERS

Community	Number Personnel Required by Procedure	Number (2) Personnel Trained	Percentage (2) Personnel Trained	Percentage (3) Hours Complete
Bridgewater	118	140	119%	62%
Carver	117	132	113%	50%
Duxbury	155	150	97%	38%
Kingston	195	177	91%	35%
Marshfield	64	118	185%	27%
Needham	47	45	96%	96%
Plymouth	488	248	51%	25%
Taunton	202	15	8%	3%

- (1) Status as of May 31, 1991
 This chart does not include teachers who are reported separately.
- (2) Number and percentage of personnel trained may exceed number required because more individuals than the minimum required by procedure are being trained.
- (3) Percentage hours complete based on total number of trained hours assigned not the minimum required by procedure and include classroom instruction as well as tabletop drills and exercises scheduled to begin in July, 1991.

June 1, 1991

OVERVIEW REFRESHER TRAINING STATUS (1)
 PILGRIM EPZ
 STATE AGENCIES

Agency/ Department	Number Personnel Required by Procedure	Number Personnel Trained	Percentage Personnel Trained	Percentage Hours Complete
MDPW Wellesley Reception Center (2)	230	224	97%	77%
MCDA Area II (3)	86	54	63%	47%
MCDA Headquarters (4)	58	35	60%	15%
MSP Troop D	128	0	0%	0%
MSP Troop A	35	12	34%	9%

(1) Status as of May 31, 1991

(2) Includes all staff required to run reception center.

(3) Includes MCDA, EO # 144, National Guard and BECo staff.

(4) Includes EO # 144 staff.

June 1, 1991

OVERVIEW REFRESHER TRAINING STATUS (1)
PILGRIM EPZ
TEACHERS ONLY

Community	Number Teachers Assigned	Number Teachers Trained	Percentage Teachers Trained	Percentage Hours Complete
Carver	147	56	38%	31%
Duxbury	245	114	47%	48%
Kingston	275	145	53%	51%
Marshfield	32	0	0%	0%
Needham	46	46	100%	100%
Plymouth	650	0	0%	0%

(1) Status as of May 31, 1991

June 1, 1991

OVERVIEW REFRESHER TRAINING STATUS (1)
PILGRIM EPZ
TRANSPORTATION PROVIDERS

	Number Assigned	Number Trained	Percentage Trained	Percentage Complete
Transportation Providers	764	605	80%	82%

(1) Status as of May 31, 1991

COMMENTS FROM ALBA C. THOMPSON,
PLYMOUTH BOARD OF SELECTMEN

COMMENTS OF PLYMOUTH BOARD OF SELECTMEN

PRESENTED BY SELECTMAN ALBA C. THOMPSON

JUNE 12, 1991

SHERATON HOTEL, PLYMOUTH MASSACHUSETTS

FINDINGS ON ISSUES OF OFF-SITE EMERGENCY PREPAREDNESS FOR PILGRIM
NUCLEAR POWER STATION (DRAFT REPORT)

PILGRIM OFF-SITE EMERGENCY PREPAREDNESS TASK FORCE

The Town of Plymouth thanks you for your effort and the draft report. The method of reviewing disputed issues raised by the Nuclear Regulatory Commission (NRC) public meeting held in Plymouth on September 6, 1990, is commendable. For the first time in the 18 year history of our preparations for radiological emergency at the Pilgrim Nuclear Power Station (PNPS), we finally have a report based on information by a task force team working on site with local officials responsible for the planning.

Our town had been disillusioned and discouraged by the October and December 1988 NRC hearings, when re-start of Pilgrim was premised on the testimony of NRC staff that had never seen the Town's current plans or consulted with local officials, or held a public hearing on emergency planning in this area, or even visited our Plymouth Emergency Operations Center (EOC). The NRC Inspector General's Report of July 26, 1990 found much of that NRC's staff work inaccurate and was "critical of the staff's determination." Rightly so.

We must be unequivocal about what that all meant. Plymouth and four other towns within the 10 mile Emergency Preparedness Zone (EPZ) went into a period of re-start of Pilgrim when emergency plans were not complete or approved by responsible local officials, state officials, or Federal Emergency Management Agency (FEMA) officials. From December 1988 onward, we were at risk and continued to be without important operational aspects of the radiological plans for many months. The criticality of that situation comes home clearly if we all acknowledge that key portions of our implementing procedures were incomplete. Police, fire, schools, and hospitals were missing (testimony December 9, 1988, p.7). Not a single EPZ community had school evacuation plans that had been approved locally.

Your statement, Draft NUREG 1438, p. 2-2, is therefore immensely welcome. "It was, and is, the task force's position that the final word on the status of the town plans and procedures, as well as copies of the plans and procedures themselves, could only be obtained from town officials." That was exactly what the Town of Plymouth had maintained in the NRC hearing of December 9, 1988, and in our written critique of the October 1988 NRC hearing to which we were not invited but the owning utility was. It is incomprehensible that your sensible statement was not policy for the NRC in the past when it was evaluating the status of our emergency plans. Your recommendations to the NRC should include that policy statement.

You have the makings of a good report here. What you do not have is a consistent designation of who will monitor your findings to see that necessary action is actually taken. Neither do you always deal with the enforcement when regulations have not been met. Your report is a beginning. If little happens hereafter, the report merely becomes expensive pieces of paper. We urge you to annotate both recommended monitoring and enforcement throughout your final report.

Please notice you often refer to the point that no NRC or CFR regulations cover a particular issue. But perhaps your recommendation should be that one should be brought into being. Because an issue may not have been previously considered, does not mean there is no need to deal with the problem. For example, p. 2-11, "if it becomes necessary for emergency workers (and the general population) to evacuate Plymouth Sub-area 3, which includes the police station, the central fire station, and the EOC " there is no regulatory requirement for an alternate EOC (Emergency Operations Center). But, shouldn't there be one when Plymouth could not operate without the communications net and equipment of these vital services?

The establishment of a second or alternate headquarters and the re-deployment of public safety equipment and personnel would be absolutely essential if Sub-area 3 were to be evacuated. Plymouth has previously posed this problem in clear terms to you. The present plans to remove officials to MCDA Area II about 30 miles away in Bridgewater will not work as our police and fire chief have told you. We cannot conceive of removing selectmen and key personnel to a point that far away while the Town is undergoing disaster conditions. Officials belong close to their distressed people as a demonstration of their concern and the visible commitment to duty. An atmosphere of confidence must be maintained. The knowledge that officials are close by and available is part of a calming effect.

A solution for Plymouth for a suitable alternate EOC must be found. We thoroughly agree with your statement "the task force believes that BECO should continue to work with Town officials to find an acceptable solution to the Town's concern about possible evacuation from EPZ Sub-area 3." (p. 2-11)

Please note that in this regard, NUREG 0654 does not differentiate between a host community that surrounds a nuclear plant and other towns much farther removed but still in the EPZ. Obviously the needs of Plymouth are somewhat different from those of Marshfield or Carver or other EPZ communities. We suggest your report point out those special considerations, including the establishment of an alternate EOC. As you know, the scenario of the NRC drill of October 1989, did indeed require the evacuation of Sub-area 3.

Again, Plymouth not only surrounds the Pilgrim Nuclear Power Station, it is entirely in the EPZ - all 103 square miles with a year round population of 45,000 residents, a summer population rising to 65,000 residents, and with transient tourist visitors numbering one million in a season stretching from April through November. Our emergency planning and our needs must take those particular statistics into consideration. If current regulations on radiological emergency planning do not cover that unique set of conditions of a host community, they should. We request you reflect the needs of such a host community.

Another large issue for Plymouth is the status of the reception centers: Wellesley (DPW garage), Bridgewater (college gymnasium) and Taunton (high school).

Plymouth reported to the NRC in 1988 that, in our estimation, neither Bridgewater nor Taunton were actually in a condition to operate. Wellesley center at that time was not even in existence. It is no comfort to repeat from your draft report "There was no reception center for people evacuating to the north of the Pilgrim station at the Commission's restart decision in December 1988." (p. 2-95) Returning to the Bridgewater Reception Center in the Kelley gymnasium - in February 1991, you discovered communications (radio) problems "at a crisis." (p. 2-101) You discovered that the Bridgewater Fire Department would not participate in radiological training and that the provisions of Planning Standard F, NUREG 0654 (Criterion 1 and 2) "regarding a primary means for notifying and mobilizing emergency response personnel are not met." (February 1991 p. 2-105, 106) A general indictment by the task force is found on p. 2-109. "All of these facts point to the conclusion that for some substantial period of time before January 1991, the reception center was understaffed and could not have been set up and operated." Plymouth has some doubts that training Bridgewater College volunteers is a suitable substitute for the missing Fire Department personnel whose general fire fighting training gives them an added dimension of effectiveness. At any rate, the capability of this reception center has never been

demonstrated in an exercise. (Reference on p. 2-108) It should have been required.

In 1988 the Town of Plymouth rightly charged that the Taunton Reception Center then on the grounds of what had been a hospital for the insane was also not operational. Today the Taunton Reception Center, now in Taunton High, like Bridgewater faces the refusal of the Taunton Fire Department to train or re-train for reception center operations. In addition, according to your observations (January 14, 1991) "The portable monitors were covered with dust and not attached to an electrical source" meaning, of course, the batteries were not charged at all times. "The wooden box (storing the 15,000 gallon bladder) was open to the elements providing minimal protection." (p. 2-111). Other equipment and supplies had not been inventoried since October 1989 and were stored "Haphazardly." "The metal fitting for the water bladder could not be located." (p. 2-112)

In the face of these discrepancies, your task force nevertheless concluded that the reception center was capable of fulfilling its intended function. That's a far reach.

In the case of all three reception centers, the local Fire Departments have declined, as of this reading, to train or re-train for reception center operation. The task force should really address the reasoning that led to this common decision since non-public safety volunteers are not likely to come to their tasks with the expertise of fire fighters.

In 1988, the testimony and letters of the Town of Plymouth to the NRC indicated it did not believe the Bridgewater and Taunton Reception Centers were operational. There remain many doubts even today after the task force encouraged a great many 1991 ameliorations.

We should like to point out that for years, certainly from before 1988 and until this year, 1991, not withstanding erroneous testimony of NRC staff given to the Nuclear Regulatory Commission as late as December 1988, that Wellesley and Bridgewater Centers were not operational and Taunton was questionable for some of that time. Fortunately for your task force, you did not deal with the history of these centers which in the event of a severe accident at Pilgrim would receive the public in the plume exposure pathway for registration, monitoring, and decontamination. The history is a sorry one, and it deserves at least a paragraph in your final report. The truth should never be a casualty of space. The truth is indeed a "finding" and it would be well for the Commissioners to recognize it and admit it.

The identification of the special needs population and the measures to develop suitable strategies to protect such individuals remains a problem for Plymouth which has about 750 known cases including about 175 new additions with 350 still to be contacted. The MDDA and BECO report prepared by Chadwick, Martin and Bailey (PT-46, Attachment 114) was flawed since "It was conducted by the telephone without a telecommunications device for the deaf. Also, such surveys cannot reach the transient population or persons without a telephone." (p. 2-115) Originally the report overlooked several zip codes so that 4,000 p.o. box numbers were left out of the mailings. (p. 2-117) This included Plymouth's Manomet post office and the Long Pond post office. Much work remains to be done on special needs and Plymouth will be unable to meet verification of responses by the finish date you indicated (July 1, 1991) (p. 2-117) in your draft.

The Saquish-Gurnet Implementing Procedure (IP) is still being revised, and interface with Duxbury authorities who would need to assist evacuees during an emergency is still needed. (P. 2-80)

The matter of equipment given to the Town by BECO prior to the coming of BECO Emergency Operations Officer Varley and the subsequent Comprehensive Grant Agreement went into effect, must be resolved. "Before Varley" and "after Varley" has no reference to the need for the equipment nor BECO's responsibility to maintain it. "If this equipment is not maintained satisfactorily, communications failures could result. Therefore, the task force finds "the Planning Standard 10CFR 50.47 (b) (8) is not met until the issue involving maintenance of the portable radios for the police and the pagers for the Fire Department has been satisfactorily resolved. (p. 2-10)" The Town believes the pre-Varley equipment and the post-Varley equipment, all issued on the basis of need, should be maintained by BECO and BECO should be so informed. This maintenance of equipment is absolutely essential to a state radiological emergency preparedness. The Town could not possibly meet the objectives of the NRC graded drill scheduled for December 1991 or any other real life emergency without its equipment in preparedness status. (See Summary of Findings p. 1-6, particularly Findings one and two.)

The Town still has many doubts arising out of the BECO transportation matrix, particularly letters of agreement with bus providers (LOA) signed "without any indication of this person's position or title" (p. 2-130) and which "were not clear, concise or consistent." (p. 2-131) The statement of bus provider representatives that "they believed that all drivers would respond" (p. 2-131) during an emergency has always been a debatable point. Letters of agreement from trained bus drivers would be eminently preferable, and we urge the task force to recommend this action. Two outside buses sent into Plymouth during the NRC drill of October 1989 and used to demonstrate response was hardly a test. The exercise of December 1991 must be strengthened in that regard.

In fact, neither the NRC exercise of 1985 nor the 1989, nor the coming exercise of 1991 were scheduled during a summer month when population and traffic in Plymouth are at a peak. This is true of the coastal towns, Plymouth, Kingston, Duxbury, and Marshfield, all of them in the EPZ. It is too long to wait until 1993 to test a summer scenario, and we recommend FEMA and the NRC be told that.

The summary of the findings of your draft report (p. 1-6) are certainly helpful as partial guides to needed action. We recommend that additional specifics be added, particularly the unique problems of a host community for a proper alternative EOC. The resolution of the refusal of fire fighters to staff reception centers is needed. The lack of readiness and the maintenance of equipment at reception centers requires attention. Transportation needs an improved data base and procedures, not just "better coordination" among several agencies. A clear statement that the task force found local officials and local plans the best source of valid information is needed as a finding since it was that egregious oversight that caused inaccurate NRC staff reports in the past. The fact that the task force uncovered much that was wrong in emergency preparedness and was the stimulus of immediate change should be noted.

There is also no statement as to what agency, FEMA or NRC, will have the future monitoring and enforcement functions in radiological emergency preparedness.

In other portions of this commentary, there are recommendations for strengthening your "Findings."

Thank you for your patience through these many months of your review and particularly for this long presentation tonight by the Town of Plymouth. We in Plymouth, America's Hometown, are concerned for the public safety of our historic community and her citizens. Our intensity reflects our need to know you are listening and that you will respond.

COMMENTS FROM J. DOUGLAS HADFIELD,
PLYMOUTH CIVIL DEFENSE DIRECTOR

STATEMENT OF J. DOUGLAS HADFIELD ON JUNE 12, 1991

I am pleased the Task Force finally got the information we have been trying to give the NRC correct. Some of the issues have been observed by the task force as needing attention ASAP. I do not agree with all the statements in the report. In the report in a number of instances, the Task Force says there are no NRC or FEMA requirements for this at this time.

I would like to know if there will be any requirements in the foreseeable future or are they just going to be ignored as issues?

Who will be overseeing the implementation of the Task Force Recommendation? Will it be FEMA or the NRC?

The egress issue for the Saquish/Gurnet area is a good example of this. The problem is not going to go away just because there is no requirement to fix it.

The Special Needs issues will never be complete. While the self-identification letters have been helpful in identifying these people, the right of people not to respond is of great concern to be able to have an accurate list.

My concern about transportation available was also reflected in the Draft Task Force Report. The Task Force indicated it found inconsistencies and unsubstantiated numbers for buses that are assigned to areas. My main concern is still the availability of drivers. There are no LOA with drivers and none are planned by the State. This is another example of the need for more requirements from the federal agencies.

Relocation for an alternate EOC is a large issue for Plymouth. Bridgewater is too far away. This was found to be a serious problem for Plymouth in the 89 exercise and has not been resolved. Unlike other EPZ towns, Plymouth has more than one sub area that may or may not be effected by a State directive. Plymouth has said an alternate EOC or a mobile communications van is a solution to our problem. However, as I stated before, the alternate EOC cannot be as far away as Bridgewater.

The status of reception centers is very clear in the task force report. On some of the issues, not much has changed since December 1988. The availability of staff that has been trained is still at issue in both Taunton & Bridgewater. If the City of Taunton & Town of Bridgewater cannot get this issue resolved, whose responsibility is it to resolve it, the State or the Federal government? This issue has to be resolved to give any credence to evacuation plans for all the Towns.

I was pleased to see the Task Force report state that 10CRF-50 was not met on the requirements of the pre-and-post Ron Varley equipment issues. The equipment that is in question is very important to the responsibility of the emergency workers. Just because the equipment was given to the Town before the agreements were signed, does not mean it is not RERP response related and should be covered under the agreement.

I hope the final report is a little stronger in stating there should be requirement for some of the findings. We have waited a long time for a positive report that states the towns do know what they are talking about when it comes to emergency planning and are not just a group ~~of~~ ~~administrators~~ out to make headlines.

COMMENTS FROM HELEN COPELLO,
DEPUTY DIRECTOR OF CIVIL DEFENSE
FOR THE TOWN OF CARVER

Good evening ladies and gentlemen my name is Helen Copello and I am the Administrative Assistant/Deputy Director of Civil Defense for the Town of Carver. I would first like to thank the Task Force for a job "well done" in securing the information they have put together on issues of the Offsite Emergency Preparedness.

The Town of Carver had six issues that were of concern to us. They were:

1. - Fire Department Pagers
2. - Adequacy of communications with the alternate EOC
3. - EWMDS
4. - Adequate space in present EOC
5. - Transportation staging area

and six the schools. This issue seems to be an issue with all towns involved with the Nuclear Power Plant.

The first issue was the Fire Department Pagers and has been on going for about three years. Your findings show that they do not meet the code of Federal Regulations and we now hope to be able to work with BECO to either purchase new pagers or place the present ones under the maintenance agreement. Needless to say our Fire Chief is very happy with your findings since this has been a concern of his for the past few years because of an all volunteer Fire Department.

The second issue was the adequacy of communications with the alternate EOC, which is located at Area II in Bridgewater. We hope this will be resolved soon. I have requested at our most recent meeting to have the state, BECO, Town Chiefs and Selectmen meet at Area II and try and resolve this situation. We feel confident that this item will be taken care of.

The third issue concerns Emergency Workers Monitoring and Decontamination Station and has been resolved at this time. Plymouth is more than willing to help us out and the personnel that we have will be under their direction and the possibility of being able to add more man power from the Civil Air Patrol is looking favorable at this time.

Item #4 has to do with the space in the present EOC. This is beginning to become a big issue. The Task Force has found this facility to be adequate as an emergency response facility. The problem seems to be more with security of the police department than size of the EOC. The chief is responsible for any persons within the building whether they

are there for training, a meeting, a prisoner, etc. and this has become an impossible task to keep under control. Even though the Chief and myself work well with the every day comings and goings there is always a possibility of a time when my area can not have the protection or security she feels is necessary. This becomes a definite issue at time of drills and exercise because of the amount of personnel that would be coming in and out of the EOC. We are talking upward of 40 to 50 personnel in and out of the EOC. This space is adequate for a problem within the town but certainly not for an emergency at the plant. The everyday workings of the police department does not stop because of a drill, exercise or something going on at the plant. We feel that this issue should continue to be worked on and hopefully find a way of resolving this. The present chief and selectmen were not the team in place at the time of making the agreements with BECO.

Item #5 regarding the transportation staging area has been resolved. The staging area is now located at the rear of the Town Hall and no longer at the elementary school. We will have a chance to see how this works in December with the exercise.

The sixth and final issue are the schools. Our school department has taken issue with the same problems as all of the other EPZ towns but seem to be satisfied with the findings of the task force at this time. I believe the only problem with this procedure was the fact that the school committee would like to see a full scale exercise with children being moved so they know that even though they accept the procedure in concept they can see that it is implementable.

I would like to thank the NRC and FEMA for having this open meeting in order that we may continue to bring any concerns to you.

Thank You.

COMMENTS FROM PATRICIA A. DOWD, CHAIRMAN,
DUXBURY BOARD OF SELECTMEN

Town of Duxbury, Massachusetts
Office of Selectmen



PATRICIA DOWD

DAVID J. VOGLER

ABDULKADER C. HAMADEH

June 12, 1991

Robert A. Erickson, Director
Pilgrim Offsite Emergency Preparedness Task Force
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Erickson:

On behalf of the Board of Selectmen of the Town of Duxbury I wish to commend you and the Task Force for its thorough and comprehensive investigation into the off-site emergency evacuation planning for the Pilgrim Nuclear Power Station. Your May, 1991, draft report demonstrates that the Task Force is committed to a full and objective assessment of the off-site emergency plans and procedures.

Our Board of Selectmen, Agency Heads and the Duxbury Radiological Emergency Response Plan Advisory Committee will be reviewing the draft in more detail in the coming days and therefore may wish to submit additional comments beyond the comments we are submitting today.

One special and overall comment we wish to make concerns transportation and busing, especially the evacuation of school children. We believe this issue may be an issue common to all of the five towns in the Emergency Planning Zone (EPZ). It does not appear from the draft report that your Task Force has investigated sufficiently the weaknesses that we believe exist concerning the evacuation of school children. We suggest that the recent FEMA review of Duxbury and Plymouth School Implementing Procedures (IPs) be reviewed by the Task Force and that you consider incorporating that review into your final report. The FEMA review identified a number of issues such as the total number of vehicles actually needed and number available; types of vehicles needed; identification of providers; etc. as needing clarification. This matter has long been of concern to Duxbury but it is beyond the authority and responsibility of the Town to resolve the matter.

On some more specific issues concerning Duxbury only we would make the following comments:

The issue of equipment replacement and maintenance for pre-1988 equipment is identified and recognized as an issue but the report does not point toward a solution. The Town still considers this a responsibility of Boston Edison and we do not agree that the costs should be absorbed by the Town from its annual administrative grant.

The draft report states that four(4) pages with greater distance are needed. They have since been provided and this is not an issue.

On the other hand life guards on Duxbury Beach still need portable radios.

The draft report indicates a "majority of teachers" said in a poll that they would not participate in exercises and/or evacuation. It would be more accurate to say that a "small majority of teachers" responded in a survey concerning participation. A large number of teachers have already received training and we have no reason to believe Duxbury teachers will not assist with evacuation if that should ever be necessary.

At a recent meeting with Town officials you asked about our process for improving and/or correcting our plans and Implementing Procedures. We would comment on this by noting that in May, 1989, following the last exercises the Board of Selectmen convened a special Saturday workshop. At that time the Board asked the exercise participants both Department Heads and volunteers to identify what they thought were weaknesses. The Selectmen then developed a list of eighteen (18) "self-identified" issues needing follow-up action. Since that date, our Civil Defense Director, working with Department Heads has periodically up-dated this "List of Eighteen Questions" and he has also periodically prepared "Emergency Planning" update reports.

These up-dated "Eighteen Questions" and Emergency Planning reports are also reviewed by our Radiological Emergency Response Plan Advisory Committee. That committee also provides comment on these up-dated reports and brings its own comments and recommendations to our Board.

Chief O'Neil, our CD Director, has given your Task Force copies of the most recent up-dates of these two types of reports.

In summary, I wish to thank you for conducting this public hearing and again commend the Task Force for its work. As we complete our review of the draft report we may send additional comments. The Board of Selectmen look forward to receiving the final report at an early date.

Sincerely,



Patricia A. Dowd
Chairman
Board of Selectmen

COMMENTS FROM DONALD G. KENNEDY,
DUXBURY SUPERINTENDENT OF SCHOOLS



THE PUBLIC SCHOOLS OF DUXBURY

130 ST. GEORGE STREET DUXBURY, MASSACHUSETTS 02332
TELEPHONE (617) 934-5601

OFFICE OF THE SUPERINTENDENT

June 10, 1991

Mr. Robert Ericson
Pilgrim Offsite Emergency
Preparedness Task Force
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Ericson:

This statement is in response to the NRC Task Force's Draft Report for Comment entitled "Findings on issues of Offsite Emergency Preparedness for Pilgrim Nuclear Power". The School Committee requests that the statement be made part of the official record of the NRC Task Force Public Hearing to be held in Plymouth, Massachusetts on June 12, 1991.

First, the School Committee understands that NUREG 0654.J.12 provides:

"Each organization shall describe the means for registering and monitoring of evacuees at relocation centers in host area. The personnel and equipment should be capable of monitoring within a 12 hour period all residents and transients in the plume exposure EPZ arriving at relocation centers."

On June 3, 1991, the Duxbury School Committee voted:

"That in the event of a radiological accident at Pilgrim Nuclear Power Station, all Duxbury students and staff relocated from Duxbury to Needham High School (the current relocation center for Duxbury students) will be monitored by portal monitors at the Needham High School (also referred to in Implementation Plans as the "host school").

The School Committee also voted to make the following requests:

1. That Boston Edison Company provide two portal monitors to be kept at the Needham High School or at any other "host school" that may be designated for Duxbury students or staff. With respect to this request, we note that the Task Force suggested that portal monitor requirements be determined based on a "ten seconds per person" formula. Using this formula, over ten hours would be required to

monitor the Duxbury school population with a single monitor. The two monitors are requested in view of this fact, and with consideration of the possibility of mechanical failure.

2. That the Massachusetts Civil Defense Agency assign and train personnel to operate the portal monitors at the Host School.

3. That all appropriate Implementation Plans be revised to reflect, and provide, that the Duxbury school population will be monitored at the host school relocation sites.

The Duxbury School Committee believes that the above vote and requests comply with federal regulations and guidelines, including the NUREG cited above.

In addition to this vote and requests, we take this opportunity to raise five other concerns and ask that they also be made part of the official record of the June 12th hearing:

1. Vans for Handicapped Students - The draft Task Force report (see page 2-138) inaccurately assumes that only 2 vans, and no lift vans, are required for handicapped students in the Duxbury schools. We have attached a schedule which accurately assesses the transportation needs for the Duxbury Public Schools. In particular, you will note that the current requirement is for vans and lift vans, as follows: Alden School 1 lift van; Chandler School 6 vans with children's car seats; Intermediate School 1 lift van; High School 6 vans with children's car seats.

2. Training - The draft report notes (pages 23-44) that 349 Duxbury school personnel required training and that as of February 26, 1991 only "98 of the 349 persons had received training during the previous 12 months." The report also noted that "additional training sessions for School Department personnel had been scheduled for March 18-21, 1991." As of the current date, June 3, 1991, only 40% to 50% of those required have been trained.

3. Transportation Officers - The Committee is seriously concerned with the proposed "interim" assignment of BECO employees as Area II Transportation Officers. (Draft report, pages 2-144). Trained transportation officers are essential to the successful evacuation of the Duxbury school population. We do not believe that this critical need is met by "BECO volunteers ... on an interim basis and ... not ... for more than a 4-6 month period." We request that whatever personnel are required be assigned on a permanent basis.

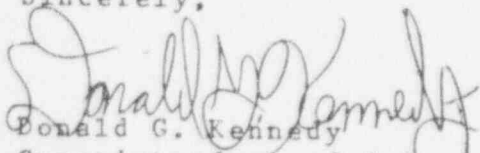
4. Dose Reduction - The draft report notes that "no realistic dose-reduction study had been performed for the shelters in Duxbury" (pages 2-150) and that the "State plans do not contain specific procedures to guide officials who must decide whether sheltering or evacuation is the protective action recommendation. (Pages 2-150).

Both to (A) provide guidance to those who must decide whether to shelter or evacuate, and (B) permit the Duxbury school staff to move the student body to the areas of each building that offer the greatest shielding factor, the School Committee requests that a dose reduction study be performed on each school building which has been designated as an emergency shelter.

5. LOA format - We note that the "Task Force did not review the new LOA format". (Draft report, pages 2-131). The School Committee has done so, and it is clear that the new LOA format effectively reduces the level of effective planning. Among other things, the new format extends mobilization time to three hours, and delays evacuation. According the NESHAP documents, this delay will greatly increase the possibility of exposure. Further, the new format omits the numbers of drivers that will be available, and thus makes it impossible to determine the actual number of busses that can be provided.

The Duxbury School Committee is grateful for the time and effort the Task Force has committed to reviewing the Emergency Preparedness Process for the Pilgrim EPZ. We are hopeful that it will continue with its efforts, and will resolve these remaining issues to insure that Duxbury school children will be properly protected in the event of an accident at Pilgrim.

Sincerely,



Donald G. Kennedy
Superintendent of Schools
for the Duxbury School Committee
DK/pc

cc: Affected parties

COMMENTS FROM DANIEL MCGONAGLE,
DIRECTOR, MARSHFIELD CIVIL DEFENSE

June 13, 1991

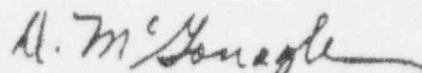
Mr. Robert Erickson, Director
Pilgrim Offsite Emergency
Preparedness Task Force
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Director Erickson:

During the Public Hearing conducted last night in Plymouth Mass. to discuss your Task Force Draft Report, I presented several comments on behalf of the community of Marshfield.

I am enclosing a copy of my written comments to you for your records. In addition, we look forward to receiving the Task Force final report and recommendations in the near future.

Sincerely,



Daniel McGonagle, Director
Marshfield Civil Defense

Enclosure:

cc: Chief of Police

June 12, 1991
NRC Public Hearing
Comments on Task Force Draft Report

Comments:

Page 2-45 Parag. 4 Pagers

"these pagers were more than adequate to notify personnel slightly beyond the EPZ, they had limmlted range"

INCORRECT

Marshfield firmly believes that effective and reliable communications are essential and that this pager system is inadequate and has failed to meet the needs of our community.

Page 2-46 Parag. 2 BECO Response of 2-4-91

"BECO stated that the December 7, 1987, agreement was made with the understanding that these funds were to be used to pay the Civil Defense Director's salary and not to buy equipment."

INCORRECT

Quote from agreement-- Authorized Use of Grant Funds:

"The parties hereto agree that the funds provided by the Company to the Town, pursuant to this Agreement shall be used exclusively for the specific purpose of civil defense, as defined in Massachusetts General Laws, Spec. L. Chapter 31, and in accordance with 10 CFR 50, Appendix E, entitled "Emergency Planning and Preparedness for Production and Utilization Facilities", and NUREG 0654, for the express benefit and for the protection of the health and safety of the residents of the Town in preparing for and in response to a radiological emergency at Pilgrim Station or any other civil defense function, all as required by state and federal laws and regulations. The Town may use these Grant Funds to retain the services of a consultant or similar contract personnel and other support personnel to assist it in attempting to fulfill its responsibilities under this Grant Agreement. The Company will assist the Town if the Town requests such assistance, in preparing request for proposals from any such consultant or contract personnel."

Please note that this did not state, TO BE USED TO PAY DIRECTOR'S SALARY AND NOT TO BUY EQUIPMENT.

Page 2-46 Parag. 3 Radio for Harbormaster

Provide Up-date

Two portable radios have been delivered but other equipment is still pending.

Page 2-47 Parag. 2 F A X Machine

Problem has been resolved satisfactory.

Page 2-47 Parag. 3 School Radios

Antenna has been installed but have not received radio.

Page 2-47 Parag. 5 E O C Related Issues

BECO states the concern about the thermostat was the result of a misunderstanding of its operation.

INCORRECT

If that was correct, then why did it take a repairman two premise visits and several hundred dollars later to resolve, replace, and correct this problem??

Page 2-51 Parag. 1 Student Transfer Issue

Since this report was printed many more meetings with the State have taken place to resolve this issue.

A recent agreement has been reached and the State now supports Marshfield's position in transferring Gov. Winslow students to the Furnace Brook School. This has been a major accomplishment and we continue to look forward to working with the State as we move forward with our planning process.

In addition, we along with the NRC and FEMA are looking forward to the State's approval to Marshfield's request to incorporate our entire community within the EPZ.

Press Release

Recently I received a telephone call from a radio station asking me to comment on a Press Release which they just received. I explained that I have not seen a Release, therefore, could not comment on it. I would request that Marshfield be receive FAX copies of all Press Releases in the future so that we could be informed prior to distribution.

COMMENTS FROM CAROLYN MORWICK,
CHAIRMAN, BRIDGEWATER BOARD OF SELECTMEN

TOWN OF BRIDGEWATER

OFFICE OF SELECTMEN



CAROLYN MORWICK, Chairman
PETER RIORDAN, Member
JOHN COLFORD, Clerk
(508) 697-0919

Bridgewater, MA 02324

FRANK MAHER
Executive Secretary
(508) 697-0920

June 12, 1991

Ronald B. Eaton
Senior Project Manager
Project Directorate I-3
Division of Reactor, Projects, I/II
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Eaton:

Please find enclosed concerns expressed by the Town of Bridgewater through our Public Safety Departments regarding the inadequacy of the Pilgrim Offsite Emergency Preparedness Plan.

Thank you for your attention to these concerns.

Sincerely yours,

A handwritten signature in cursive script that reads "Carolyn Morwick".

Carolyn Morwick, Chairman
Board of Selectmen

CM/d
Enclosures



TOWN OF BRIDGEWATER
Fire Department

HEADQUARTERS
22 SCHOOL STREET
BRIDGEWATER, MASSACHUSETTS 02324-2515

RODERICK K. WALSH
CHIEF

TEL: (508) 697-0900
FAX: (508) 697-9407

BCD 39-6-91

Mr. Steven Borth
NRC/FEMA Pilgrim Task Force

Dear Mr. Borth:

Attached are my concerns, as the Civil Defense Director, Town of Bridgewater, as they pertain to Emergency Preparedness Plan for the Pilgrim Nuclear Station.

Many of the areas have been an on-going problem and have not been adequately addressed.

The efforts of Mr. Joseph McDonough have been a notable improvement for past contacts with the Boston Edison Company.

Thank you for your attention to this matter.

Very truly,

RODERICK K WALSH
Chief
Bridgewater Fire

DISTRIBUTION:
B - BPD, BHD, BOS

"... we protect and conquer"

BRIDGEWATER FIRE DEPARTMENT

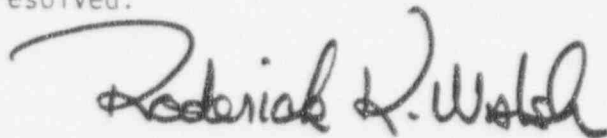
REFERENCE OR OFFICE SYMBOL	SUBJECT
BFD 38-6-91	BECO - Pilgrim Nuclear Station

TO	FROM	DATE
Mr Steven Borth Pilgrim Task Force	CHF RK Walsh Bridgewater Fire	12 June 1991

1. The below listed items are still of the utmost concern for the Town of Bridgewater Fire Department in meeting the requirements for the Pilgrim Nuclear Plant evacuation plan and the Massachusetts Civil Defense mandates.

- 1) Inadequate personnel strength to achieve assigned tasks.
- 2) The need for telephone paging for recall of off-duty personnel.
- 3) The need to reassess our radio base station and the location of the existing antennas.
- 4) Additional portable radios so that each individual has communication capability.

2. The problem with our computer system as it relates to radio communications is in the process of being resolved.



RODERICK K WALSH
Chief
Bridgewater Fire

DISTRIBUTION:
C



TOWN OF BRIDGEWATER

POLICE DEPARTMENT
BRIDGEWATER, MA 02324

Telephone

(508)
697-6118

William P. Ferioli
Chief of Police

June 12, 1991

Mrs. Carolyn Morwick, Chairman
Board of Selectmen
Town Hall
Bridgewater, Ma.02324

Dear Mrs. Morwick,

Prior to 1987, the Boston Edison plan for the Town of Bridgewater did not require the police department to provide security at any of the shelters, nor did it require traffic control personnel at any of the host schools.

Later, BECO changed the plan without consulting the police department and added security at the shelters and traffic control at the host schools to the police department plan. Due to these changes, and the fact that BECO refused to address these new duties, I refused to sign-off on the plan.

With a small department, and limited personnel, it is critical that the Chief of Police be kept informed of all changes and additional duties that effect the police department.

The police Department presently has five (5) school crossing guards and five (5) special police officers. With the additional duties added at the shelters and host schools, it was determined that the best and most practical method of dealing with these new duties was to assign the school crossing guards and special police officers to these locations. This requires training and additional equipment. When we approached BECO for eight (8) portable radios to equip these additional personnel who are critical to the police plan, we were told they were not needed. These are Bridgewater Police personnel who live within the Town and can be readily called in for duty, if needed. We would not have to wait for mutual aid from another town or agency and these people are the most logical to use; especially since they are so readily available.

In addition, in a letter to the former Civil Defense Director, Mr. Donald Ford, (see attached) I stressed the need for telephone pagers for police personnel.

During the October 12th and 13th exercise, we were only able to contact four (4) off-duty police officers. Without our duty personnel, we will not be able to function and the plan will surely fail. At the present time there are forty-three full-time and part-time personnel.

Sincerely yours,

William P. Ferioli

William P. Ferioli
Chief of Police

WPF/jmb



William P. Ferioli
Chief of Police

TOWN OF BRIDGEWATER
POLICE DEPARTMENT
BRIDGEWATER, MA 02324

Telephone

(508) 697-6118

April 4, 1990

Mr. Donald E. Ford, Director
Town Hall
Bridgewater, Ma. 02324

Dear Mr. Ford,

With regards to the letter of March 8, 1990, concerning the issues raised by (MCDA) during the critique of the Pilgrim exercise, the following is a list of issues and concerns that I also have, which involve the Police Department.

With only a thirty man police department it is imperative that we contact as many off-duty police officers as possible during any emergency. During daytime and evening hours many off-duty officers are not able to be reached at home. During the October 12th/13th exercise, I had the desk officer actually call all off-duty officers in an attempt to make contact with as many officers as possible. As I had thought, we were able to contact four (4) off-duty officers by telephone.

What the police department needs are pagers which the officers could take with them when they leave home. During an emergency they could be contacted in the same manner as off-duty fire fighters. We would need telephone pagers as many officers live in Brockton, Middleboro, and as far south as Dighton.

A radio type pager would not have enough range to suit our needs.

We could also use eight additional portables for school crossing guards who would take care of traffic at the local schools and out of town officers called in to assist us at various traffic posts which will need the presence of a uniformed officer.

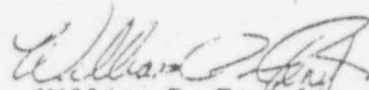
The Tri-Town repeater that is located on top of the water tank off of route 18 has to be replaced. This is the radio repeater for the towns of West Bridgewater, East Bridgewater, and Bridgewater, should our primary radio system fail. The towns of East and West Bridgewater have come up with their share of the \$9,000.00 needed to replace the repeater and have requested

we come up with at least three thousand (\$3,000.00) dollars for our share of the costs to replace this essential piece of equipment.

I would recommend Edison consider the funding for this repeater.

We also need dosimeters for the police personnel.

Sincerely yours,


William P. Ferioli
Chief of Police

WPF/jmh



TOWN OF BRIDGEWATER

POLICE DEPARTMENT
BRIDGEWATER, MA 02324

Telephone

(617)

697-6118

William P. Ferioli
Chief of Police

May 20, 1988

Chief Ervin G. Lothrop
West Bridgewater Police Department
W. Center St.
West Bridgewater, Ma 02379

Dear Chief Lothrop,

Boston Edison Company has been developing plans for the safe evacuation of the residents of certain communities who fall within a ten mile radius of it's Pilgrim Nuclear Plant, in the event of an emergency.

The Town of Bridgewater recently signed an agreement with Boston Edison where-by they agreed that Bridgewater would be a host community to certain towns should evacuation of their citizens ever become necessary. A portion of this plan deals with the large volume of traffic coming to Bridgewater via certain designated traffic routes. Part of this traffic plan calls for directing all vehicles to a monitoring area and then to a reception center and onward to certain designated shelters.

This plan calls for a large number of traffic officers who will be required to assist and direct traffic to key areas and through key intersections.

Since our department is not large enough to provide the number of officers which will be required to man those critical traffic posts it will be necessary for me to ask for your support in providing additional manpower.

At this time it appears that I would need approximately five officers from both West Bridgewater and Middleboro.

It would be of primary importance that these officers have radio communication with our department plus the necessary equipment to sustain or protect them under various weather conditions.

In addition, please be advised that Route 28 and Route 106 will be key roads through your community for those persons wishing to pass through Bridgewater for other destinations.

I realize that this letter fails to address many questions, such as pay and liability, among a few, but I hope that we will be able to meet in the near future to discuss this request and resolve any problems.

Sincerely yours,

William P. Ferioli
Chief of Police



JOHN L. SILVA
Chief of Police

Town of East Bridgewater
Police Department
Maple Avenue - P. O. Box 475
East Bridgewater, Mass. 02333
617-378-7223

April 8, 1988

Board of Selectmen
Town Hall
Bridgewater, Massachusetts 02324

Re: Exacuation - Boston Edison Power Plant

Dear Board of Selectmen:

Conversation with Chief of Police William Ferioli revealed that Bridgewater will be the host town for the evacuation of the Boston Edison Power Plant.

During this conversation it was brought to my attention that this plan requires man power from the East Bridgewater Police Department in the following locations:

Route # 106 and 104
Route # 18 and 106
Central and Bedford Streets (Center)
Old Plymouth Street and Route # 106

As of this date, no one from the Boston Edison has contacted me regarding these evacuation plans; therefore, I have no intention of placing any officers at these locations, until this matter is resolved.

Your interest and cooperation in this matter is greatly appreciated.

Yours truly,

John L. Silva
John L. Silva
Chief of Police

JLS:gal

cc: Board of Selectmen - East Bridgewater



BOSTON EDISON

Emergency Preparedness Department
59 Industrial Park Road
Plymouth, Massachusetts 02360

May 4, 1988
EP88-519

Mr. Peter P. Spagone
Chairman
Board of Selectmen
175 Central Street
East Bridgewater, MA 02333

Dear Mr. Spagone:

I am in receipt of your letter dated April 27, 1988 regarding the need for East Bridgewater's involvement in evacuation plans for the Pilgrim Nuclear Power Station.

We are currently in the process of assisting in the upgrading of emergency planning programs for all towns involved in the support of a response to an incident at Pilgrim Station. Through the planning process it has been realized that several towns along evacuation routes may be affected should an evacuation be necessary, and that planning with these towns is a priority.

The process for setting up meetings and initiating planning activities requires that the Massachusetts Civil Defense Agency (MCDA) take the lead in establishing the meetings with the affected towns. MCDA, the Commonwealth Agency responsible for this program, should be initiating these meetings shortly.

One of our emergency planners (Mr. Mark Force) recently spoke with your Police Chief, John Silva to discuss this matter. I also spoke with your Executive Secretary, Mr. Fred Portway to assure him that when arranged by MCDA, we will be involved in the planning efforts associated with East Bridgewater.

Should you have any further questions concerning this matter, please contact me at 747-9464.

Sincerely,

Ronald A. Varley
Manager - Emergency Preparedness

RV/dlw
ID#1264

cc: P. Agnes
R. Boulay
J. Hausner
J. Silva
F. Portway
A. Samano

MEETINGS ON
MONDAY 7:30 P.M.

COPY

TELEPHONE
(617) 378-229

EXECUTIVE SECRETARY (617) 378-7403



Board of Selectmen

175 CENTRAL STREET

EAST BRIDGEWATER, MASSACHUSETTS 02333

ERIC W. GREENE
IRENA SWARTZ, Clerk
PETER P. SPAGONE, Chairman

FRED PORTWAY, Executive Secretary

April 27, 1988

Boston Edison Plant
Obery Heights
Plymouth, Massachusetts 02360

Re: Evacuation - Boston Edison Power Plant

Gentlemen:

The Board of Selectmen has received information that Bridgewater will be the host town for the evacuation of the Boston Edison Power Plant.

It was brought to the Boards attention that this plan requires man power from the East Bridgewater Police Department in the following locations:

Route # 106 and 104
Route # 18 and 106
Central and Bedford Street (Center)
Old Plymouth Street and Route # 106

As of this date, no one from the Boston Edison has contacted this office regarding these evacuation plans. We would like to be made aware of these or any proposed plans for the future.

Your interest and cooperation in this matter is greatly appreciated.

Yours truly,
Peter P. Spagone
Peter P. Spagone, Chairman
Board of Selectmen

PPS:gal



JOHN L. SILVA
Chief of Police

Town of East Bridgewater
Police Department
Maple Avenue - P. O. Box 475
East Bridgewater, Mass. 02333
617-378-7223

April 8, 1988

Board of Selectmen
Town Hall
Bridgewater, Massachusetts 02324

Re: Exacuation - Boston Edison Power Plant

Dear Board of Selectmen:

Conversation with Chief of Police William Ferioli revealed that Bridgewater will be the host town for the evacuation of the Boston Edison Power Plant.

During this conversation it was brought to my attention that this plan requires man power from the East Bridgewater Police Department in the following locations:

Route # 106 and 104
Route # 18 and 106
Central and Bedford Streets (Center)
Old Plymouth Street and Route # 106

As of this date, no one from the Boston Edison has contacted me regarding these evacuation plans; therefore, I have no intention of placing any officers at these locations, until this matter is resolved.

Your interest and cooperation in this matter is greatly appreciated.

Yours truly,

John L. Silva
John L. Silva
Chief of Police

JLS:gal

cc: Board of Selectmen - East Bridgewater



JOHN L. SILVA
Chief of Police

Town of East Bridgewater
Police Department
Maple Avenue - P. O. Box 475
East Bridgewater, Mass. 02333
617-378-7223

September 5, 1989

Board of Selectmen
Town of Bridgewater
Town Hall
Bridgewater, Massachusetts 02324

Re: Evacuation Plan - Boston Edison Power Plant

Dear Board of Selectmen:

In April of 1988 I brought to your attention that there was no formal agreement in place for East Bridgewater to assist in the evacuation plan to your town. Seventeen (17) months later this situation has not changed. I have read in the newspaper how the plan is in place, but from my personal knowledge, know this is not true.

Since the Town of East Bridgewater has not volunteered to take part in this plan, I feel it is the responsibility of Boston Edison to address the concerns. The two (2) concerns that must be handled prior to my assistance from East Bridgewater are:

- I. A written agreement between the Town of East Bridgewater and Boston Edison as to: compensation for overtime and training and supplies needed.
- II. The communication problems via police radio between the Bridgewater's.

The evacuation cannot be done smoothly or swiftly without the three (3) police departments having the capability to communicate.

Anticipated cooperation in addressing my concerns and the solutions of these matters is expected.

Sincerely,

John L. Silva
John L. Silva
Chief of Police

JLS:gal

cc: Board of Selectmen - Town of East Bridgewater
Chief of Police William Ferioli



MICHAEL S. DUKAKIS
GOVERNOR

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT

CIVIL DEFENSE AGENCY AND OFFICE OF EMERGENCY PREPAREDNESS
400 WORCESTER ROAD
P.O. BOX 1496
FRAMINGHAM, MASS 01701-0317



ROBERT J. BOULAY
DIRECTOR

August 9, 1989

Mr. Peter P. Spagone, Chairman
Board of Selectmen
175 Central Street
East Bridgewater, MA 02333

Dear Mr. Spagone:

The Massachusetts Civil Defense Agency and Office of Emergency Preparedness (MCDA) is committed to providing offsite emergency planning assistance to local communities in the event of an accident at Boston Edison's Pilgrim Nuclear Power Station in Plymouth, MA.

Recently, the Massachusetts Civil Defense Agency has provided your police chief, or his representative, with draft plans that affect evacuation routes through your community. These draft plans contain procedures for your police and public works, as well as notification elements for the selectmen and civil defense director.

The Massachusetts Civil Defense Agency would like to invite you, your police chief, civil defense director and DPW commissioner (or their representatives) to a dinner meeting to explain and finalize traffic management through your community. The dinner meeting will be held at Ridder's Country Club, Oak Street (Rte. 14) in Whitman, MA on Thursday evening, September 7, 1989 starting at 6:30 p.m. (See enclosed map)

Please contact the MCDA Nuclear Safety Emergency Preparedness Program (NSEPP) located at Area II in Bridgewater at (508) 697-3105 to make the dinner reservations for the above individuals before September 1, 1989 if you wish to attend this function.

Sincerely,

Thomas P. Rodger
Area II Director

TPR/jcs

cc: John L. Lovering, Deputy Dir.
Chief John L. Silva
Eric W. Greene, CDD
DPW official



Town of East Bridgewater
Police Department

Maple Avenue - P. O. Box 475
East Bridgewater, Massachusetts 02333

(508) 378-7223

JOHN L. SILVA
Chief of Police

August 21, 1990

Fortunato G. Graca, Campus Police Chief
Bridgewater State College
Bridgewater, Massachusetts 02324

Re: Use of Primary Radio Frequency

Dear Chief Graca:

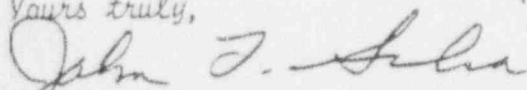
In answer to your letter of August 16, 1990, please be advised that since April 1988 I have brought concerns to the Boston Edison Company about their evacuation program. One of the concerns was our aging repeater system. The Towns of East Bridgewater and West Bridgewater are trying to correct the problem, and have tried repeatedly to obtain assistance from Boston Edison Company and the Town of Bridgewater, as it is felt that it was their problem as well as ours.

I have been told by representatives of the Boston Edison Company that they do not plan to give any assistance with the communication problems. To date, the Town of Bridgewater has not made a commitment either.

As long as this problem continues, I cannot grant the approval to use our primary police frequency to assist the Boston Edison Company with their evacuation plan.

Should this situation change, I would be willing to reconsider at that time.

Yours truly,


John L. Silva
Chief of Police

JLS:gal



BRIDGEWATER STATE COLLEGE
Bridgewater, Massachusetts 02324

August 16, 1990

Campus Police
617/697-1360

Chief John Silva
East Bridgewater Police Department
P.O. Box #475
East Bridgewater, MA 02333

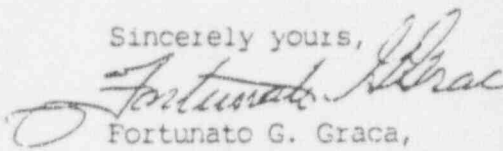
Dear Chief Silva,

This letter is to inform you that Bridgewater State College is presently involved in the evacuation plans structured by the Boston Edison Nuclear Power Station at Plymouth, Massachusetts.

The Boston Edison Company recently purchased radio equipment for use by this Department, and to be used in the event of a nuclear accident at the Plymouth Station. Since it may become necessary to communicate with the various Police Departments along the evacuation route, I am requesting that this Department have access to your Primary/Police frequency on a needs only basis. I am requesting a letter of approval from your office if you consent.

The frequency assigned to the Campus Police Department is 472.61250. Our new radio equipment is scheduled to become operational on or about September 7, 1990. Let me take this opportunity to thank you in advance for your anticipated cooperation.

Sincerely yours,


Fortunato G. Graca,
Campus Police Chief

cc: Vice President Lynette Willett, Student Services
Vice President Joseph Chiccarelli, Administration & Finance
James Cummings, Director of Facilities
file



JOHN L. SILVA
Chief of Police

Town of East Bridgewater
Police Department

Maple Avenue - P. O. Box 475
East Bridgewater, Massachusetts 02333

(508) 378-7223

November 19, 1990

Mr. Thomas P. Rodger, Area II Director
Massachusetts Civil Defence Agency
P. O. Box 54
Bridgewater, Massachusetts 02324-0054

Re: Area Local Letter #: 10-90
Dated: November 5, 1990
Subject: Communications Equipment Opportunity

Dear Mr. Rodger:

In response to your recent communication, as stated above, I am applying for \$3,772.50 or 50% matching funds for a Radio System that was purchased on October 21, 1990 by the Towns of Bridgewater, West Bridgewater and East Bridgewater.

I understood the contents of your letter and we were told not to purchase without your authorization. However, I feel our situation for matching funds has been documented since the Spring of 1988 and, therefore, should be taken into consideration for approval.

As indicated in Chief Graca's and Chief Ferioli's letters, there are plans to use our Police Radio System as part of the evacuation plan. Without this repeater system this plan would not be possible.

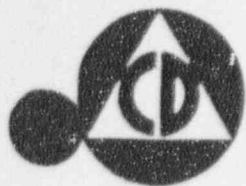
As indicated previously, I do not intend to participate in the evacuation plan nor will I give permission to use the Police frequency as long as no assistance is given to the communication problem.

Should this situation change, I would be willing to reconsider. You may contact me at the station, address and telephone listed above.

Yours truly,

John L. Silva
John L. Silva
Chief of Police

Enc.



MASSACHUSETTS CIVIL DEFENSE AGENCY

AND OFFICE OF EMERGENCY PREPAREDNESS

AREA II

P.O. Box 54, Bridgewater, Mass. 02324-0054

MICHAEL S. DUKAKIS
GOVERNOR

ROBERT J. BOULAY
STATE DIRECTOR

AREA LOCAL LETTER #10-90

TO: All Local Civil Defense Directors in Southeastern Massachusetts
FROM: Thomas P. Rodger, Area II Director
DATE: November 5, 1990 *T.R.*
SUBJECT: COMMUNICATIONS EQUIPMENT OPPORTUNITY

The Federal Emergency Management Agency has advised MCDA that under the direct and control and warning program administered through our Agency that there are some monies appropriated for local programs seeking communications equipment on a matching funds basis. 50% of the equipment cost is to be paid by local government with FEMA providing a 50% match. The matching funds are to be used for R.A.C.E.S. equipment and radios on the high band local community to Area Headquarters link.

The High Band Radio may be a multi-channel unit which can also serve your local government. Radios must be installed in the EOC.

If you are interested in this offer, please do not do anything without first consulting with the Area II Director. I will need a letter from you or your appointing authority stating (A) the description of the communications equipment you intend to purchase (type and estimated cost)--[do not purchase without our authorization]; and (B) a signed statement stating that your local government program will pay 50% of the entire cost.

If you have any questions pertaining to this, please call me. If you are interested, I would recommend acting as soon as possible since this is a very limited offer.

TPR/ds

Enclosure: Winter Storms Brochure

NO. 1707

PLYMOUTH COUNTY COMMUNICATIONS
 305 Temple Street
 Whitman, Massachusetts 02382
 (508) 584-8226

CUST NO.		MODEL NO.		SERIAL NO.		DATE
						10-1-90
VEH	UNIT	TYPE ACC	P O NO / CONTRACT NO		DATE COMPLETED	
WORK LOCATION				TECH	LIC.	
NAME				<input type="checkbox"/> SER CALL <input type="checkbox"/> PREV MAIN <input type="checkbox"/> FCC <input type="checkbox"/> INSTALL <input type="checkbox"/> REM <input type="checkbox"/> SALE		BILLING
STREET						
CITY		STATE	ZIP			
				EACH	TOTAL	
QTY.						
1	New Johnson 110 WPT Reporter Model CR1010				4750.00	
1	New Standard DWPIT Reporter Model RP-70				1495.00	
	5 year extended warranty for 2 Reporters Nov 1 1990 Oct 31 1995				1600.00	
REC METER MODEL SERIAL		MOD METER MODEL SERIAL		PARTS	7845.00	
AS FOUND		ADJUSTED TO		LABOR	300.00	
F1	MC		MC			
F2	MC		MC	TAX		
F3	MC		MC	TOTAL	7545.00	
F4	MC		MC			
MOD			KC	CUST. SIGN.		
PWR IN	EP	IP	W	EP	IP	W
PWR OUT			W	FWD	REF	W
REMARKS				REC SENS	UV	P L CODE
CR1010 model # 27855						
RP 70 model # 134023						

3-8-90

Officials critical of evacuation plan

EAST BRIDGEWATER — Police Chief John Silva and Highway Surveyor Leo Trudeau were critical of Boston Edison's proposed evacuation plan in the event of an emergency at the Pilgrim nuclear power plant in Plymouth. While Silva said, "I may seem frustrated, and frankly, I must say to you that I am," Trudeau stated that "Boston Edison has been a little remiss to say in the newspaper that there is an evacuation plan in place when there's no plan in place in East Bridgewater."

Chief Silva explained that the Boston Edison proposal designates Bridgewater as a "host community" and that a major evacuation route would follow Route 106 to Route 104 and then on to Bridgewater. Silva explained that in April of 1988 he had written to the Bridgewater Board of Selectmen on the subject and that later in the same month the East Bridgewater selectmen had written to Boston Edison in an effort to clarify the plan as it pertains to this community.

To date there has been not one meeting with Boston Edison or the state's Civil Defense agency,"

Silva said.

An issue is the funding for the legal cost which could be involved in an evacuation. "I would not be willing to go under a mutual aid pact on this," Silva said. "It is an evacuation plan of Boston Edison and I feel that if I have to use our officers, I believe that Boston Edison should pay the expense, not the taxpayers of East Bridgewater."

Silva quoted Boston Edison as having said "we don't have the resources for the peripheral communities such as East Bridgewater. If they don't, I'm not willing to assist them with their evacuation plan," the chief said. Silva explained that as a host community, Bridgewater would have its evacuation-related expenses paid by the utility company and that the company and the town have executed an agreement to that effect.

Trudeau added his contention that with the barriers, signs, and other equipment which would be needed to mark evacuation routes and to direct traffic being stored in a state facility in Whitman and the state's workforce being reduced, it would be impossible for the equipment to be delivered to East Bridgewater in time for its use.

Trudeau called the plan as it pertains to routing traffic locally "a total disaster."



WILLIAM F. WELD
GOVERNOR

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE DEPARTMENT

CIVIL DEFENSE AGENCY AND OFFICE OF EMERGENCY PREPAREDNESS
400 WORCESTER ROAD
P.O. BOX 1496
FRAMINGHAM, MASS. 01701-0317



A. DAVID RODHAM
DIRECTOR

April 26, 1991

Chief John L. Silva
Director of Civil Defense
Maple Avenue P.O. Box 475
East Bridgewater, MA 02333

Dear Chief Silva:

Unfortunately, the Federal Emergency Management Agency (FEMA) has been unable to support your request for matching funds under the Direction, Control and Warning program for FY 91.

Please resubmit your request for FY 92 prior to October 1, 1991, and, in this manner, Massachusetts communities will be assured of early review by FEMA. At this time, FEMA will only support equipment on the RACES network or the community-to-Area high band frequency.

Sincerely,

Royce N. Sawyer
Communications Officer

RNS/hlr

cc: Thomas P. Rodger
Area II Director

COMMUNICATIONS SECTION
Civil Defense Agency
400 Worcester Road
Framingham, MA 01701-0317

MAY 6 1991



TOWN OF BRIDGEWATER

OFFICE OF
SUPERINTENDENT OF STREETS

SUPERINTENDENT
ALBERT BENINATI
697 2115

SPRING STREET
BRIDGEWATER, MA
January 24, 1991

Roger Provost, Chairman
Board of Selectmen
Bridgewater, MA 02324

RE: Boston Edison - Evacuation Plan

Dear Mr. Provost:

The role of the Highway and Forestry Departments in the event of evacuation of Plymouth area residents to host community Bridgewater is to put in place directional signs and information for motorists. This includes those destined for Bridgewater as well as through traffic. Our men would also assist with traffic control when the signs are in place.

Since the plan was designed, the Highway Department has six fewer employees. Exclusive of the Superintendent and Deputy, the total available personnel is 14, comprised of 11 Highway and 3 Forestry, compared to 20 when the plan was designed.

Our plan of action was to have four crews of four men each to put the signs in place, with the other men in leadership roles and in emergency repairs to vehicles and equipment.

With a reduced work force, we feel it will be extremely difficult to quickly and effectively implement our role in the plan. We suggest that Boston Edison be made aware of this situation.

Very truly yours,

Albert Beninati
Superintendent of Streets

Andrew P. Bagas
Deputy Superintendent



TOWN OF BRIDGEWATER

OFFICE OF
SUPERINTENDENT OF STREETS

SUPERINTENDENT
ALBERT BENINATI
697 2115

SPRING STREET
BRIDGEWATER, MA

April 4, 1990

Frank Maher, Executive Secretary
Town Hall
Bridgewater, MA 02324

RE: Civil Defense Issues

Dear Mr. Maher:

As requested in your memo dated March 23, 1990, we would like to offer the following comments on the critique of the Pilgrim exercise.

The Highway Department does not to this day have the proper amount and type of traffic control signs necessary for the traffic management plan. Several of the signs delivered by Boston Edison are incorrect. Boston Edison has been aware of this for several months. Repeated requests by us for the correct equipment have been unanswered.

Very truly yours,

Albert Beninati
Superintendent of Streets

Andrew P. Bagas
Deputy Superintendent



SUPERINTENDENT
ALBERT BENINATI
697 2115

TOWN OF BRIDGEWATER

OFFICE OF
SUPERINTENDENT OF STREETS

SPRING STREET
BRIDGEWATER, MA

July 16, 1990

Frank Maher, Executive Secretary
Town Hall
Bridgewater, MA 02324

RE: ECC Material

Dear Mr. Maher:

As requested, we have reviewed the Emergency Management Plan received from you on July 10, 1990 and would like to make the following comments.

The traffic control points and the equipment assigned to each point are incorrect and not up to date. Following the evacuation drill in September, 1989, we informed the Board of Selectmen and Joseph McDonough of BECO that our traffic control plan needed additional points and equipment.

We have received the necessary cones and barricades from BECO. However, the traffic plan and control points still need to be updated, and we still do not have several necessary traffic control signs. Again, BECO has been aware of this for months.

Very truly yours,

Albert Beninati
Superintendent of Streets

Andrew P. Bagas
Deputy Superintendent

cc: Joseph McDonough, BECO



SUPERINTENDENT
ALBERT BENINATI
697-2115

TOWN OF BRIDGEWATER

OFFICE OF
SUPERINTENDENT OF STREETS

SPRING STREET
BRIDGEWATER, MA

September 21, 1989

Carolyn Morwick, Chairman
Board of Selectmen
Bridgewater, MA 02324

RE: B.E.C.O. Drill

Dear Mrs. Morwick:

We would like to offer the following comments as a result of the training drill held on September 20, 1989. The Highway Department has sufficient personnel to perform our task in placement of signs and safety equipment along the designated routes in Town. This is provided that no emergency situation such as a snow storm or flood should arise. In that situation, we have no backup personnel.

The traffic control points established by B.E.C.O. do not, in the opinion of ourselves and Police Chief Ferioli, provide adequate management of traffic. Additional traffic control points need to be established and additional safety equipment and signs are needed (see attached list).

Prior to the Town signing the agreement with B.E.C.O., the shortfalls of the traffic management plan were documented to B.E.C.O. who assured us that after the initial drill these issues would be addressed.

We strongly urge a meeting to be arranged with B.E.C.O. to improve the traffic management plan and to provide the missing signs and equipment.

Very truly yours,

Albert Beninati
Superintendent of Streets

Andrew P. Bagas
Deputy Superintendent

cc: Executive Secretary
Rep. Lewis
Police Chief

COMMENTS FROM DOROTHY ANDERSON,
ASSISTANT ATTORNEY GENERAL,
COMMONWEALTH OF MASSACHUSETTS,



Office of the Attorney General
One Ashburton Place
Boston, MA 02108-1698

OFFICE OF THE ATTORNEY GENERAL
ATTORNEY GENERAL

(617) 727-2200

June 14, 1991

Robert A. Erickson,
Chief
Emergency Preparedness Branch
Division of Radiation Protection
and Emergency Preparedness
Office of Nuclear Reactor Regulation
Nuclear Regulatory Commission
Washington, D.C. 20555

RE: Comments on the NRC Pilgrim Task Force Emergency Planning
Draft Report

Dear Mr. Erickson:

Please accept the enclosed comments which are submitted by the Massachusetts Office of the Attorney General to the Pilgrim Offsite Emergency Preparedness Task Force. Although we attempted to have these comments delivered to the public hearing Thursday evening, we were unable to determine if they were actually received by the Task Force.

Thank you for your attention to this matter.

Very truly yours,

Dorothy Anderson
Assistant Attorney General
Environmental Protection
Division
(617) 727-2200

Enc.

DRAFT REPORT

TO: NRC Pilgrim Task Force
FROM: The Office of the Attorney General of the
Commonwealth of Massachusetts
DATE: June 12, 1991
RE: Task Force Draft Report

In December 1988, when the Nuclear Regulatory Commission ("NRC") authorized the restart of the Pilgrim Nuclear Power Station, it recognized that there were some unresolved emergency planning issues. Despite that recognition the NRC authorized the restart of the plant on the supposition that during the projected six months that it would take the Pilgrim plant to escalate to full power, the emergency planning problems would be addressed. The draft report of the Pilgrim Offsite Emergency Preparedness Task Force reflects that today, two and a half years after the decision to restart Pilgrim, there are still outstanding emergency planning issues. Two and a half years is too long a period for issues pertaining to public safety to remain unresolved.

The draft report indicates that certain regulatory guidance requirements are not being met because communication equipment used to mobilize and assist emergency response personnel is lacking or deficient. (Pages 2-10, 2-20, 2-36, and 2-105-06.) The draft report also states that there are unresolved disputes

between Boston Edison and the towns in the program area -- who is responsible for maintenance of emergency response equipment. (Pages 1-6, 2-10, and 2-20.) Furthermore, the report describes a failure to integrate the response plans of the local towns and Boston Edison with the state response plan to be implemented by the Massachusetts Civil Defense Agency. (Pages 1-6, 2-133-43, and 2-164-5.)

Perhaps the most troubling findings of the report are those that reflect staffing deficiencies that came to light as a result of the Task Force investigation. At the time that the Task Force commenced its investigation last fall, two of the three reception centers where evacuees are supposed to report for radiation monitoring and decontamination were without reliable staffing sources to respond to a fast breaking emergency. While, as a result of the investigation and the impending report, efforts have been made to fill those positions, the staffing at those centers remains at levels below that required by emergency plans for the operation of the facilities. (Pages 2-96-112.) The Wellesley reception center lacks a full compliment of first shift personnel, and the second shift staffing of at least one of the other two centers appears to be problematic. Since even this minimal staffing level has been achieved only as recently as May 1991, the new emergency response personnel have little or no training. Hence, the Task Force found that training for offsite response personnel needs to be increased substantially. (Page 1-6.)

transportation officer positions that fulfill the critical role of summoning transportation resources to evacuate schools, nursing homes, hospitals, and other transit dependant people were lacking in reliable staffing for a fast breaking accident. (Page 2-144.) As of May 1991, a temporary solution to that problem has been found in Boston Edison's commitment of personnel to fill these positions for four to six months; but permanent staffing will have to be found for these positions.

It is time to reach closure on whether there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the Pilgrim Nuclear Power Station. The Pilgrim emergency plan must comply with regulatory guidance. These unresolved issues must be resolved. The temporary staff stop-gap protective measures should be replaced by planning provisions that can be relied upon on an ongoing basis. Emergency response positions should be filled and training should be provided to these new response personnel.

The people who live and work in the vicinity of the Pilgrim plant are entitled to an emergency plan that will afford reasonable assurance of adequate protective measures in the event of an emergency. According to the NRC's Office of Inspector General's own report, the NRC's December 1988, finding of adequacy was based on an NRC Staff review that, at

...best, was not balanced or thorough, and the information contained therein contained information that was simply inaccurate. This Task Force has a unique opportunity to correct past deficiencies with respect to oversight of emergency planning provisions for the Pilgrim area. Accordingly, the Office of the Attorney General of the Commonwealth of Massachusetts urges the Task Force to recommend to the NRC that, unless the outstanding emergency planning issues are immediately addressed and resolved and a reasonable date certain for the resolution of these issues is established, the NRC's finding of reasonable assurance should be reconsidered.

COMMENTS FROM MARY LAMPERT,
DUXBURY NUCLEAR AFFAIRS COMMITTEE

Nuclear Affairs Committee
Town of Duxbury, Massachusetts
June 12, 1991

STATEMENT SUBMITTED TO THE
PILGRIM OFFSIDE EMERGENCY PREPAREDNESS TASK FORCE
OF THE NUCLEAR REGULATORY COMMISSION

I am Mary Lampert, and I am here tonight both as a member of the Nuclear Affairs Committee of the Town of Duxbury, and as a concerned citizen who has spent much of the past five years working with issues raised by the Pilgrim I nuclear power plant.

At the outset of this school year, the NRC came to a public meeting here in Plymouth. The subject was the July 1990 report of the Inspector General; and that report made clear that the NRC had failed Emergency Planning. It had failed to correct known deficiencies that had been reported officially by FEMA in 1987; and, most important, it had failed the public trust by conducting an Emergency Planning assessment that "was neither balanced nor thorough", and by making Pilgrim's re-start, rather than public safety its first priority.

This Task Force was formed in response to that IG report; and for the last nine months, the Task Force has been going to school on the subjects that the NRC earlier failed so badly. The draft report is your final examination. In the jargon so often used in report cards, that exam shows that you applied yourself, worked hard, and accomplished much that the NRC had failed the previous year. It also shows, however, that there are still some areas that must be corrected to provide the "reasonable assurance" that is prerequisite to moving on to the next level.

Perhaps more important, the report shows that in the critical areas of transportation officers, staffing of the Wellsley Reception Center, Gurney-Saguish, those with special needs, and the Direct Torus Vent, and in a number of other areas also, the Task Force still relied too much on information from the utility. It also shows that the Task Force went out of its way to accept "interim" solutions, or "promises" of future resolution by BECo, FEMA or the State to avoid making the otherwise unavoidable final determination that specific deficiencies precluded "reasonable assurance".

Many of the remaining deficiencies have, or will be, discussed by others appearing here tonight. In effort to avoid repetition, I will try not to reiterate problems discussed by others; but you should not consider my silence as any indication that we do not think that those problems exist. The Nuclear Affairs Committee has reviewed all portions of the draft report that deal with Duxbury, and concurs, for example, with Ms. Fleming's factual analysis of the current status of planning for the Wellesley Reception Center, transportation, and the Duxbury schools.

Let me now turn to specifics, on which we have a number of comments. In addition, I am providing pages of the text of the draft report on which we have highlighted areas of particular concern and made specific marginal comments and suggestions.

2.7 GURNET-SAQUISH

ISSUES NOT ADDRESSED BY THE TASK FORCE

1. SAND ON EVACUATION ROUTES

The road connecting Saquish to Gurnet has very deep and soft sand and is frequently impassable and blocked by a stuck vehicle. For example, over the recent Memorial Day week-end, 1991, somewhere in the neighborhood of 30 cars were stuck. This issue has been brought up by the Saquish-Gurnet Association and David Quaid, both to the N.R.C. and to BECo. This is an on-going problem. The association asked BECo to build up the road. The request has not been honored and the problem remains. The result is that there is no reasonable assurance for evacuation along this only motor route.

2. WHO HAS AUTHORITY TO MAINTAIN THE EGRESS ROUTES FOR GURNET-SAQUISH AND DUXBURY BEACH?

Presently, June 1991, no one can do any maintenance work whatever on the roads or beach. Due to a legal hassle, a stay has been ordered by the courts and all work has stopped until the issue is resolved. As a result, for example, the first cut-over to the front beach from the bayside back road is virtually impassable. By their very nature, these sand routes require frequent and regular maintenance. What would happen to beachgoers? This lack-of-maintenance issue effects the only egress routes servicing, on summer weekends, over 5,000 people. It must be resolved before reasonable assurance can be assured.

ISSUES ADDRESSED BY TASK FORCE

Commentary on relevant portions of the actual text are attached.

ADDITIONAL COMMENTS

1. page 2-74 - The first full first paragraph probably ranks as the all time low in the history of this task force. To dismiss the admitted fact that the egress routes on Saquish Neck are often impassible on the pretext that "the NRC's emergency planning regulations do not specify a minimum time by which an evacuation must be completed" is an insult to the intelligence of members of this community. A nuclear

accident will not wait for low tide, or for a hurricane to blow offshore. When the roads are impassible, it isn't a question of when will an evacuation be "completed"; the evacuation won't even start.

But this paragraph of your draft report gets even worse. The text goes on to say that "...emergency plans ... are flexible enough to accomodate possible delays ..."; and that although "the actual amount of flexibility is difficult to establish and cannot be quantified ..the emergency plans and procedures include practical and feasible measures to account for expected natural conditions." What are these "practical and feasible measures" The report lists warning sirens, radio communications with Plymouth (several very wet miles away), and "efforts underway for coordination with Duxbury"; and concludes that these provide "acceptable flexibility". How? Can a siren part the waters, or a radio float you across the bay? Have a heart, and a head, and admit there is a problem. If you refuse to acknowledge that a serious "fix" is in order, then, at least recommend NOT sounding the alarms if the accident occurs when the roads are flooded. We all know there is no way out. Facing facts may not be "flexible", but it has the advantage of at least being honest and realistic.

2. page 2-80 - The draft report correctly notes that "the current Duxbury plans do not take into consideration the fact that a large number of transportation-dependent persons could be at the Gurnet Saquish gate." However, your comment that "the Duxbury Civil Defense Director reassured the Gurnet-Saquish Association representatives that Duxbury accepts responsibility for the evacuees as they travel through Duxbury" misses the point. It is several miles from the Gurnish-Saquish gate to Duxbury; and the "evacuees" still have no way to get from one to the other.

3. Sec. 2.7.4 Clarks Island, page 2-82 - The above commentary in (a) about Saquish Neck is equally applicable to Clarks Island. In neither case is their any realistic possibility of evacuation during many regular tidal conditions.

Sec. 2.12 PERSONS WITH SPECIAL NEEDS

ISSUES ADDRESSED BY TASK FORCE

Commentary on relevant portions of the actual text are attached.

ISSUES NOT ADDRESSED BY TASK FORCE

Effectively, there is no staff assigned to monitor special needs evacuees at the Wellesley Reception Center until the National Guard arrives. Is this in violation of NUREG 0654(j)(12)?

ADDITIONAL COMMENTS

1. Latch-Key Children - The draft report says (pg 2-119) that

"The State's position that children home alone can be considered part of the general population appears reasonable"

and attempts to support this conclusion with its observation that

"Page 24 of the 1991 public information calendars advises the public to 'make sure all members of your family, especially children who may be home alone, know what to do in case of emergency.'"

We fail to understand how the task force could reasonably reach this conclusion. Children very clearly meet the criteria of "transportation dependent" and "special needs". They do not have drivers' licenses, they are not adults, and they cannot be expected to act as adults especially in an emergency situation. This is reality.

A recent school day care needs assessment found that 70-odd percent of the Duxbury school population were "latch-key" children. In taking its position, the state recognized that it had a "special need" to get rid of this problem by re-defining it. A realistic and obvious solution exists -- run the school busses (the same ones which dropped them off) along the school routes to pick them up and evacuate them. Consistent with the suggestions in BECO's 1991 canendar, the children could be taught to get back on the busses in case of emergency.

2. The "buddy system" - The draft report notes (pg. 2-120) that "MOHA has strongly objected to the use of volunteers to assist persons with special needs during a man-made (i.e., nuclear) accident [and] believes that professional care should be contracted for this purpose instead." Any realistic look at the "buddy system" favored by the State and town makes clear why other states across the nation do not allow it. Is BECO going to provide the " buddies" with long-range pagers with lifetime maintenance contracts?

3. Nursing Homes/Plymouth House of Corrections - The draft report noted that "the task force could not identify monitoring provisions at the host facilities, nor could it identify plans to send nursing home residents elsewhere for monitoring and decontamination." (pg. 2-121). Essentially the same situation was identified with respect to the Plymouth House of Correction (pp. 2-121 and 2-123); and apparently exists with respect to injured contaminated. All of this appears to be in violation of NUREG 0654(j)(12).

2.15 SHELTER

ISSUES ADDRESSED BY TASK FORCE

Commentary on relevant portions of the actual text are attached.

ADDITIONAL COMMENTS

The draft reports that " No realistic dose reduction study has been performed for the shelters in Duxbury." (pg 2-150) The "excuses" for this deficiency provided by the task force defy reason. For example:

a. Excuse 1 - "NUREG-0654 states that the shelter dose reduction factor should be included in the basis for the selection of protective actions. This does not mean each and every building must be analyzed to determine its individual shelter factor." (pg. 2-151).

We agree that reason does not dictate doing each and every house. However, a reasonable man would suggest doing the mass primary town shelters such as those for the school-children, particularly since the busses to evacuate them probably will not arrive in time in the event of a fast-breaking incident. Which leads to...

b. Excuse 2 - "the most appropriate protective action for areas within about 2 miles of the plant in severe core melt accident sequences is immediate evacuation"; and "the task force did not visit or evaluate the adequacy of mass public shelters for the transients [since] both FEMA and the NRC have concluded that it is better to evacuate transients from the EPZ than to move them to mass public shelters within the EPZ." (pg 2-151)

Several question are immediately apparent -

FEMA's "2 mile" statement was made in the context of Seabrook. NUREG 0654 recognizes sheltering as an effective and necessary protective action; and all of the towns have included it as part of their planning.

The FEMA and NRC "conclusion" that evacuation of transients is the preferable course has nothing to do with schoolchildren and other residents who aren't "transients". Schoolchildren, in particular, are already in buildings that, if proper dose reduction studies had been accomplished, can serve as mass public shelters.

In the case of schoolchildren and other residents, it isn't a question of whether to move them to shelters or to evacuate them. The NRC and FEMA "conclusion" assumes that everyone is already on the busses and and ready to go somewhere. For children in the schools and the other transportation dependent, the problem is what to do once you're on the bus - rather its what if there is no bus, or there simply isn't time to evacuate?

Even BECo (and the BECo-drafted IP's) have recognized the important role of sheltering. Why else, for example, do we have shelter signs outside some of our buildings provided by BECO, and why are these shelters in the Emergency Information Brochure distributed by the utility? Obviously, sheltering is a key part of planning and dose reduction analyses of mass shelter buildings is an essential first step.

2.18.1.2 The Direct Torus Vent System

ISSUES ADDRESSED BY TASK FORCE

Commentary on relevant portions of the actual text are attached.

ADDITIONAL COMMENTS

The draft report noted that "the task force concludes that existing emergency operating and associated DTVS procedures may not result in the proper emergency classification and offsite notifications preceding the activation of the DTVS [and] considers it important that BECO develop and implement appropriate controls .. [to] enable BECO to ... notify offsite agencies before the activation of the DTVS." (pg. 2-165)

However, the report said nothing about the time frame within which the controls were to be implemented, nor what should be done in the interim.

The realistic solution appears simple - Recommend that the NRC prohibit use of the DTVS until such time as BECO has developed, the NRC and FEMA have approved, and State and local officials have implemented, procedures that will insure that an emergency will be declared, and the offsite authorities involved in emergency planning will be notified, before the direct torus vent is opened.

Mary Elizabeth Lempert

Additional Comments of the Duxbury Nuclear Affairs Committee

Mrs. Mary Lampert also submitted a copy of Draft NUREG-1438 marked up to show additional comments of the Duxbury Nuclear Affairs Committee. Because these pages could not be printed adequately the handwritten comments are summarized here as if they were statements from Mrs. Lampert.

1. On page xii, Mrs. Lampert questioned why Anne Waitkus-Arnold was not listed as an official of the Massachusetts Office of Handicapped Affairs rather than as an individual.
2. On page 2-15, Mrs. Lampert stated that the training of personnel at camps and campgrounds was not just a summertime problem because the camps were used year around for school groups from around the State.
3. On page 2-36, Mrs. Lampert stated that the task force should have assessed who was responsible for maintaining emergency equipment in Duxbury. Mrs. Lampert also characterized the current way equipment was maintained as a "quick fix."
4. On page 2-36, Mrs. Lampert stated that the issues of 1) a backup means for notifying the Selectmen and Health Officer and 2) radios for the lifeguards, should be fixed before approval can be given.
5. On page 2-37, Mrs. Lampert states that the task force's position on breathing apparatus is a violation of NUREG-0654 because it assumes that the likelihood of an evacuation is slim and that this defies the reasonable assurance doctrine.
6. On page 2-37, Mrs. Lampert stated that the Radiological Emergency Response Plan Advisory Committee is in the direct line of approval (for implementing procedures) before the Selectmen.
7. On page 2-39, Mrs. Lampert stated that the characterization of an issue regarding the Criminal Justice Training Center as a host school was wrong.
8. On page 2-41, Mrs. Lampert, in referring to the subsection on monitoring of school children, states that the 1991 Duxbury School Committee policy on radiological monitoring "negates this foolishness."
9. On page 2-44, Mrs. Lampert questions how there can be reasonable assurance if the ratio of training hours received versus training hours assigned is low.

10. On page 2-43, Mrs. Lampert states that Camp Squanto has not just a training issue but a transportation, notification, implementing procedures, etc. issue.
11. On page 2-57, Mrs. Lampert states that BECo should honor the request to build up the road on Gurnet-Saquish to solve the sand problem. She states that BECo's offer to construct a road across the dunes is "truly outrageous" and "unacceptable" and is simply a ruse to look good.
12. On page 2-47, regarding egress from Gurnet-Saquish, Mrs. Lampert states that a NESHAP Report shows that a delay time of "5 to 0 hours" (Sic. she may have meant 5 to 10 hours.) can increase the possibility of contamination by a factor of 75.
13. On page 2-76, Mrs. Lampert objects to NRC using BECo for population information for Gurnet-Saquish.
14. On page 2-79, Mrs. Lampert states that "awareness" of the various peak population estimates for Gurnet-Saquish by local officials does not solve the problems of transportation, road maintenance, etc.
15. On page 2-80, Mrs. Lampert identifies a general problem with implementing procedures that are not based on a worst case which she believes is the only reasonable approach. She also states that the coordination meetings to address the Gurnet-Saquish problems (that had not taken place but were planned) did not provide reasonable assurance.
16. On page 2-81, Mrs. Lampert states that the "progress" (cited in the report) won't get you across the (Powder Point) bridge. Also, Mrs. Lampert states that the low tide issue for Clarks Island is in large measure the same as the high-tide issue for Gurnet-Saquish.
17. On page 2-82, Mrs. Lampert states that local official's familiarity with the low-tide issue on Clarks Island does not mean that the problem is fixed and that ad hoc measures are a "raindance."
18. On page 2-84, Mrs. Lampert states that on a summer weekend you cannot move on Route 3 and that the ETE was not a worst case scenario.
19. On page 2-85, Mrs. Lampert states that she cannot hear a siren, which is located three blocks away, from inside her house. She questions siren audibility for nighttime or winter accidents. She states that the FEMA telephone survey was for daytime, outside, windows up, etc.
20. On page 2-94, Mrs. Lampert states that dry decontamination methods for vehicles is not reasonable or acceptable.

21. On page 2-94, Mrs. Lampert states that there is a letter of agreement problem with hospitals designated for decontamination of the handicapped and that handicapped persons would not be able to be monitored with hand-held instruments until the National Guard personnel arrived (at the reception center).
22. On page 2-96, Mrs. Lampert states that the State's plan to handle the decontamination of handicapped persons at nearby hospitals is not realistic.
23. On page 2-98, Mrs. Lampert sees a conflict of interest in BECO providing monitoring personnel for the Wellesley Reception Center.
24. On page 2-99, Mrs. Lampert objects to starting the clock on monitoring when the first evacuees arrive. She states the conflict of interest issue for BECO.
25. On page 2-115, Mrs. Lampert highlights the criticism of the Chadwick, Martin and Bailey Study (special needs study).
26. On page 2-117, Mrs. Lampert states the need to plan for latch-key children and states that more than 70 percent of the families in Duxbury have latch-key children.
27. On page 2-119, Mrs. Lampert questions what can, in fact, latch-key children do in case of an emergency.
28. On page 2-120, Mrs. Lampert wants to know which States use volunteers to assist persons with special needs.
29. On page 2-120, Mrs. Lampert states that the task force needs to sample more than three hospitals because one did not agree with the State's interpretation of its letter of agreement.
30. On page 2-121, Mrs. Lampert stated that it was not reasonable to assume that hospital personnel would or could drive back into the EPZ during an accident.
31. On page 2-122, Mrs. Lampert asked if anyone spoke to the Carman's Union regarding the MBTA transporting prisoners from the Plymouth House of Corrections. She also questioned the reasonable assurance finding when the task force found that plans for the prisoners had not been made.
32. On page 2-123, Mrs. Lampert stated that the task force missed an important issue when it did not evaluate the adequacy of plans for the special needs population confined to every institution. She also questioned whether the letters of agreement with hospitals covered monitoring of nursing home residents.

33. On page 2-131, Mrs. Lampert stated that letters of agreement for transportation providers needed a separate column for drivers, vehicles, etc. and without the appropriate format reasonable assurance could not be determined.
34. On page 2-150, Mrs. Lampert objects to the statement about the adequacy of homes in the 10-mile EPZ as shelters because they are wood frame.
35. On page 2-150, Mrs. Lampert questions whether KI is used in other States.
36. On page 2-157, Mrs. Lampert states that the real-time offsite monitoring system at Plymouth Station is not adequate and she cites a January 30, 1991, evaluation of the system by herself and Jane Fleming.
37. On page 2-160, Mrs. Lampert highlights a problem with the torus vent procedure.
38. On page 2-165, Mrs. Lampert characterizes BECo's reason for not changing their torus vent procedure as baloney. She also states that there cannot be reasonable assurance until the procedure is modified.

COMMENTS FROM AL CAVANAUGH,
GURNET/SAQUISH ASSOCIATION

AL CAVANAUGH
Gurnet/Saquish Association
84 King Street
Hanover, MA 02339

June 12, 1991

Pilgrim Offsite Emergency Preparedness Task Force
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Testimony by the Gurnet/Saquish Association at the Public
Hearing in Plymouth, MA, June 12, 1991:

Upon receipt of NUREG - 1438, entitled Findings on Issues of
Offsite Emergency Preparedness for Pilgrim Nuclear Power
Station, produced by the NRC Pilgrim Offsite Emergency Task
Force, the Emergency Planning Committee of the Gurnet/Saquish
Association met on 2 occasions to evaluate the findings
contained therein. The committee agreed on the following:

1: The committee was startled to find absolutely no mention
in the report of the soft sand condition at the crossover
between Gurnet Point and Saquish Beach. In a report by David
Quaid, a resident of Gurnet Point, to Samuel Chilk, Secretary
of the NRC, dated 9/17/88, this situation was delineated by
text, maps and a series of 8X10 aerial and ground
photographs.

Page 2, paragraphs 5 and 6 of the 9/17/88 report to S. Chilk.
"During the monthly astronomically high tides, the marsh area
between Gurnet Point and Saquish Beach is inundated
preventing vehicular traffic across road at (A) and the back
road at (C). (B) is the one-lane soft sand principal access
to Saquish Beach. At the best of times getting through (B)
without meeting another vehicle coming from the other
direction is by chance. Someone must back up. In an
emergency (B) would prove to be a very difficult situation
indeed.

Recommendation for Saquish Beach: The roads at (A) and (C),
see photo #8, must be raised for all-weather access. The gap
at (B) must be double-tracked to make evacuation at all
possible".

During the last Memorial Day weekend, in excess of 30 4-wheel
drive vehicles were trapped in the crossover, several times
more than one were stuck. As many as 15 vehicles were backed
up on either side of the crossover as efforts were made to
clear the blockage. On 9 separate occasions, the Gate Watch
(Gurnet/Saquish Security), called the resident Civil Defense
official to help alleviate the problem. During the week, one
woman skilled at driving on sand became stuck 3 times on 1
trip. The following weekend a 4X4 vehicle was stuck in the
crossover, it took 15 men to free it. This vehicle's drive

Page 2:

train was ruined in the process. While on an inspection trip around Gurnet/Saquish in the fall, George Mulley of the Inspector General's Office of the NRC and David Quaid, were stuck in the sand for a period of 3 hours. The sand is an ever present impediment to evacuation of the area.

2: Tidal Data: Page 2-60, Table 2.1.

This table of the highest monthly tides at Boston shows that during the months of maximum occupation of Gurnet/Saquish, the summer months, the astronomical tides are the highest of the year equalled only by December and January. The winds of the summer months are generally prevailing from the southwest, but much of the time are also from the southeast coming directly from Pilgrim I to Gurnet/Saquish, just 4 scant miles across the water. The time of greatest occupation is obviously also the time of greatest possible hazard from the plant.

The Task Force provided a video tape entitled, Observation of Tidal Conditions at Saquish/Gurnet and Clark's Island, MA, 10/6-7/90. This video tape was shot on a mild day with light winds and merely an 11.5' tide. The tide tables published for the 1991 summer months show the tides for the four months of summer averaging 12.0', a full 7 inches higher than shown on the video tape. This video tape taken from inside of the CD vehicle looking forward thru the windshield documents a slow trip, of about a half hour duration, over the inundated roads of Saquish. An event at Pilgrim I, this summer, necessitating an evacuation of the area during a lunar tide would have to prove a disaster. On a flat calm day the tide height on the back road will be in excess of 20" deep. A column of vehicles moving through the water would certainly produce a wave action which would quickly stall some of them, because of wet ignition, impeding if not ending the evacuation.

We believe that there could also be panic. The Task Force feels that an evacuation in a nuclear emergency can be equated with problems with natural phenomena such as ice, fog, hurricanes, the like. This is absurd. People react well during natural disasters, in fact we leave the area long before the onset of a hurricane, but this might not be the case in an unnatural disaster - a nuclear disaster. People can relate to and handle physical problems which can be seen touched and contested against. We do not believe it would be the same against an invisible threat to their well-being.

3: Population estimates: Boston Edison estimates from aerial photos taken during the summer of 1987 that the summer population of the area is 650 people. They stand with that figure for evacuation planning. In 1988, at an Emergency Response meeting in Duxbury attended by Al Cavanaugh and

David Quaid, Al Samano, the Offsite Supervisor for Pilgrim 1, stated Beco had conducted an over flight on a pleasant summer weekend and estimated the total beach population at 16000. Our estimate for Gurnet/Saquish is 3500 to 5000 people. At a meeting with Craig Conklin, of the NRC, a figure of 3000 to 5000 was agreed to for emergency planning. There are 200 home owners in the area, but there are another 200+ property owners who use the beach, but are not included in BECO estimates. The photograph included in the report shows some of those who arrive by boat, but are not considered in the Task Force report.

4: We question the adequacy, reliability and quantity of communication equipment furnished by BECO. To date, there has not even been a test to certify that any of this equipment is functional.

5: Interface with the Town of Duxbury has not been pursued. There have been no meetings for 3 months. We have just gotten word of a meeting for June 26. With this late start, nothing concrete will happen until after the busy summer season is over; in essence, we have lost another year.

The buses for Gurnet/Saquish evacuation are not settled. At a Task Force meeting, 3 months ago, Joe Grady, Conservation Officer for Duxbury Beach, was to work out details of a bus commitment with Barney Yettman of BECO and Al Slaney of the Commonwealth. No action. This is a great disappointment for our membership.

6: Summary: We feel that the Task Force report is biased in favor of BECO and totally unrealistic on area emergency planning.

NUREG-1438 Section 2.7, Gurnet/Saquish, B: Findings, Paragraph 4.

"BECO offered to construct a road across the dunes to provide an evacuation route that would not be subject to flooding (PT-08, pg.-83). However, as indicated at the Task Force meeting with BECO on February 25, 1991 (PT-70), the Gurnet/Saquish Association did not accept this proposal because the residents were concerned that the environmentally sensitive dunes might erode".

This offer by BECO, to build a road across the dunes, is a most cynical and arrogant solution to a serious human safety problem. BECO is well aware that no State or Federal agency would permit such a road to be built. The Gurnet/Saquish Association members have labored, over the years, to protect this barrier beach which prevents the open ocean from invading the Towns of Plymouth, Kingston and Duxbury. The most disturbing aspect of the BECO road offer is that the Task Force accepts the BECO offer without any further

investigation and the language of the paragraph unfairly places the onus for lack of progress on the Gurnet/Saquish Association.

It is with great reluctance that we must conclude that the NRC Task Force report ignores and plays down the true difficulties of evacuation at any time. Anyone who viewed the NRC videotape and still feels that orderly evacuation, during lunar tides, is possible is at the very best foolish and naive. BECO does not want to raise the evacuation route, so the Task Force makes believe that evacuation under flood conditions is viable. The report reveals a disturbing lack of interest, by the Task Force, in public safety. It seems to be an attempt to legitimize the fraudulent emergency planning by the NRC that resulted in the recent Office of the Inspector General investigation. Some of us believe that this lack of interest in public safety could be viewed as criminal.

The crossover must be double-tracked, the back road must be elevated for safety, and also for a sense of security and peace of mind for the area residents.

Respectfully submitted
Emergency Planning Committee,
Gurnet/Saquish Association.

Enclosures.

September 17th. 1988

REPORT ON PROBLEMS OF EVACUATION AND SHELTERING OF BEACH/TRANSIENT POPULATIONS DUE TO THE PROXIMITY OF PILGRIM 1 STATION.

This report and the aerial photographs contained with the report were occasioned by the irresponsible letter of October 21st., 1987 to the Nuclear Regulatory Commission concerning beach/transient populations by Admiral Bird of Boston Edison. Quote: "In our submittal of June 4th., 1987, we conclude that adequate planning is possible for sheltering beach/transient populations (estimated at approximately 9000 people). Our position was then, and remains, that there is more than sufficient sheltering capacity available for sheltering the population of concern".

In a letter to Chairman Zech, of the NRC, I asked for representatives of his agency and of Boston Edison to tour the beach areas with me to see for themselves that absolutely no sheltering, whatsoever, exists and that much of the beach area harboring a large summer population is just three miles, downwind from Pilgrim 1 Station. Dr. Ronald Bellamy, Chief, Facilities Radiological Safety and Safeguards Branch made an appointment with me and on March 10th., 1988, we toured the entire area. It being winter most of the area was quite abandoned except for some all-year residents at Gurnet Point. He mentioned that he would like to see the area on a summer's weekend.

The aerial photographs were made to fulfill his request and those of others. The photos enclosed were made on July 3rd., 1988, during the period between 2:30pm and 3:30pm. The day was chilly so the beaches were about 50% under-utilized. This fact is obvious, when considering the photos of the 1/2 empty town parking lot and the same condition at the Duxbury Public Beach lots. Mr. Albert Samano, Supervisor of Off-site Safety, reported at a Duxbury Emergency Response Committee meeting, that BECO in 1987 had also made an "overflight", on a pleasant summer's weekend, of the beach areas near Pilgrim 1 Station and from the photographs estimated the beach population at 16000 people.

Photo #1: ^{#1}

Shows the proximity of Pilgrim 1 Station to Gurnet Point, slightly over three miles distant. The NRC estimates that the speed of a radioactive plume from a reactor accident would be 10 miles per hour, which would allow but 20 minutes to evacuate the area. During the summer months the prevailing winds are from the southwest making the beach area downwind of the plant for the entire season of maximum recreational use.

Photo#2: ^{#2}

Is typical of the Duxbury Beach road. As can be seen, the road is cabled for its entire length to preclude access to the conservation areas. This fencing is broken in only two places along 4 miles of road for access to the beach and are referred to locally as crossovers. These crossovers are in extremely soft sand, under some

conditions even four-wheel drive become stuck.

Photo#3: 43

One of only two crossovers in 4 miles of beach.

Photo #4: 44

At bottom of photo, a car can be seen exiting a crossover to the beach. The vegetation and the dunes are protected by fencing both on the beachside and the roadside. Cars exiting from the beach can leave only through the crossover at the bottom of the picture or through the one out of frame at the top.

Photo #5: 45

At this hour on a holiday weekend, 2:30pm, the parking lot would normally be full and overflow cars turned away at the far end of the bridge. The chilly day held down attendance.

Photo #6: 46

The entire parking lot is normally full at this hour, capacity, 2500 cars. When viewing these photos a factor of +1/3 to +1/2 should be added to obtain a realistic impression of the population.

Photo #7: 47

It was estimated by the Gurnet/Saquish security that there were 3500 people and 400 to 500 vehicles on Saquish Beach on the afternoon of July 3rd., 1988.

Photo #8: 48

During the monthly astronomically high tides, the marsh area between Gurnet Point and Saquish Beach is inundated preventing vehicular traffic across road at [A] and the back road at [C]. [B] is the one-lane soft sand principal access to Saquish Beach. At the best of times getting through [B] without meeting another vehicle coming from the other direction is by chance. Someone must back up. In an emergency [B] would prove to be a very difficult situation indeed.

Recommendation for Saquish Beach: The roads at [A] and [C], see Photo#8, must be raised for all-weather access. The gap at [B] must be double-tracked to make evacuation at all possible.

For Duxbury Beach: An additional crossover to make a total of three.

General recommendation: Due to prevailing southwest summer winds, close Pilgrim 1 Station, June 1st. to October 1st, yearly.

Respectfully submitted,

David L. Quaid

David L. Quaid

Resident of Town of Duxbury/Gurnet Point.

Photo #s in BLACK - PRESENTATION AT DUXBURY EMERGENCY RESPONSE COMM

Photo #s in RED - PHOTOS SENT TO WAKES ON CURIE OVER LETTER.

Photo #s in GREEN - RECENT PHOTOGRAPHS 9/27/25/88 OF TIDE.

SAQUISH

CCT 5/30/91

Pilgrim probes system failures

By ANNE BRENNAN
STAFF WRITER

PLYMOUTH — Pilgrim Nuclear Power Station and Nuclear Regulatory Commission officials are investigating why two safety systems were inoperable in March as the plant was gearing up to full power, commission officials said yesterday.

Pilgrim engineers did not realize that the two systems were inoperable during the power ascension until two weeks later, according to a commission report.

Pilgrim spokeswoman Elaine Robinson confirmed the report, and two commission officials, who asked that they not be identified, provided further details on the incident.

On March 24, plant officials reduced power when solar flares caused an electrical disturbance that shut down a transformer supplying electricity to the plant, Robinson said.

Two days later, after transformer circuits were repaired, plant officials began ascending to full power. They turned on a huge recirculation pump that draws tremendous current, according to the report.

This caused a reduction in power to other plant operations and shut down the high-pressure coolant injection and reactor-core isolation cooling systems, the commission officials said.

An inverter, which controls water flow for the two systems that provide water coolant to the reac-

Please see **NUCLEAR** /A-8

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NUCLEAR

Continued from A-1

tor in case of an emergency, tripped as a protective measure when the electrical flow varied, the report said.

Although control-room operators knew immediately that the inverter had tripped, they did not realize that the systems would not have operated in case of a reactor problem, the report said.

Plant control-room operators realized the two systems were down and continued the power ascension of the recirculation pump, figuring that reactivation was only a matter of pushing a few buttons, Ms. Robinson said.

About nine minutes after the inverter tripped, operators pushed those buttons and assumed the safety systems were again operable.

According to commission regulations, plant operators must notify the commission by telephone if a safety system is down for more than four minutes, one of the commission officials said. But he said he doesn't think the commission will take any action against the utility because of the infraction.

In addition to the safety-system problems, the commission inspection report also notes the accidental dropping of new fuel bundles on to an underwater rack holding spent fuel rods, which once occupied the reactor core.

Had the spent fuel rods been ruptured, they would have emitted radioactive gas, a commission official said.

It was later determined that no radioactivity was released, it said.

Pilgrim officials confirm failure of cooling system

By Anne Stuart
The Patriot Ledger

Wednesday, September 12, 1990

A cooling system for the reactor of the Pilgrim nuclear power plant failed repeatedly during an unplanned shutdown 10 days ago, plant officials confirmed yesterday.

Back-up equipment operated properly, but a switch for a third system that removes excess reactor heat didn't work, plant spokesman David Tarantino said. Workers held it in place manually.

The two system problems came after the workers "scrammed" or shut down Pilgrim because of a reactor valve malfunction.

Inspectors for Boston Edison and the Nuclear Regulatory Commission concluded that operators reacted properly to the problems, Tarantino said. But he conceded that the failure could stem from inadequate procedures.

Pilgrim remains shut down today as managers travel to King of Prussia, Pa., where they will discuss the failures with NRC officials.

"I don't want to downplay it," Tarantino said yesterday. "We're in business to produce electricity and this isn't good for us. It's a serious thing, serious in terms of economic impact and equipment and the regulators." But he said the events posed no danger to the public or to workers.

Yesterday was the first time Edison acknowledged problems beyond the valve malfunction. The delay prompted a new outburst of criticism from Pilgrim opponents.

"It's the last straw for Edison's credibility," said Mary Ott, co-chairman of Duxbury Citizens Urging Responsible Energy.

Ann Waitkus-Arnold of Plymouth also criticized NRC Region I officials for failing to mention the cooling-system problems when they met with local officials Thursday to discuss local emergency-response plans.

"They knew about this the night we were there and they didn't have the honesty to tell us the truth about what happened in the plant last week," said Waitkus-Arnold, director of Citizens at Risk.

"They're not even watchdogs anymore; they're just guard dogs — for the utility."

The activists said the plant should remain shutdown until questions are resolved.

The problem began about 10:30 p.m. Sept. 2 when operators discovered that the malfunctioning feed-water control valve had allowed too

“
I don't want to downplay it. We're in business to produce electricity and this isn't good for us. It's a serious thing, serious in terms of economic impact and equipment and the regulators.”

— David Tarantino
Pilgrim plant spokesman

High water levels can result in steam that is too wet for the plant's turbines.

In shutting down the plant, operators attempted to start the reactor-core isolation cooling system, which cools the core with water.

"It failed three times to start," Tarantino said.

Operators switched to a standby system, the high-pressure coolant injection system, which quickly shoots large amounts of coolant into the reactor vessel.

That system operated properly, Tarantino said. However, workers had problems with related equipment, the residual heat removal system.

"There was a switch that when moved to the correct position had to be held for a minute," Tarantino said. "The switch didn't work, but the system did."

Subsequently, workers cooled down the plant and repaired the valve. Last week, in-house teams and a special NRC "multidisciplinary analysis team" visited the plant to investigate the incidents. Their re-

ports will be considered at today's meeting.

The 670-megawatt plant will remain shut down at least through today. Tarantino said officials delayed restart only because of the maintenance and repair schedule, not because of any NRC order.

But an NRC Region I official said the plant won't restart unless the agency is satisfied that Edison has corrected the problems.

Two anti-nuclear activists with engineering backgrounds said the Sept. 2 incident renews their concerns about equipment at Pilgrim and other aging nuclear plants.

"This event has some real safety consequences because these systems are not in the best shape to begin with," said Dr. Ellen Cargill of Cambridge, an independent researcher.

In particular, she expressed concern about the residual heat removal switch problem, noting that leaks in that system in April 1986 led to the plant's controversial 32-month shutdown.

The reactor-core cooling systems are "supposed to operate reliably in a major accident," said Dr. Robert Pollard of the Union of Concerned Scientists in Washington, D.C., a former NRC staff engineer.

Pilgrim foes also criticized Edison for not declaring "an unusual event," the lowest of the four federal emergency designations, on Sept. 2.

"An unusual event was not declared nor was one required," Tarantino said.

But Ott said federal guidelines cite the use of the core-cooling systems as an example of a condition justifying the declaration.

"If this isn't an unusual event, then what is?" Ott said. "Early notification is the first line of defense. We have to be told when a problem happens so we can get ready to get out of here."

LOCAL

Reactor cooling system failed repeatedly during Pilgrim shutdown — 7



ax, frenzy, slowed Edison fire facts

Officials were kept in the dark

Scully
Newspapers

PLYMOUTH — A problem with Boston Edison's fax machine, coupled with the strain placed on local police trying to deal with notifications from Pilgrim, a storm and their regular actions, led to a delay in notifying local officials about a fire at the nuclear power plant Jan.

"Boston Edison is not without fault in this," said Edison's emergency preparedness manager Ronald Varley, meeting Tuesday with selectmen.

"During the assessment, we found that the control room staff did not successfully initiate the notification to the Commonwealth and local communities until several minutes after the Nuclear Regulatory Commission (NRC) prescribed 15-minute time limit," Varley wrote on Thursday.

The plant's verbal warning to local authorities of an unusual event, the lowest category of emergencies for nuclear plants, happened 22 minutes after the declaration, Varley said.

Varley added that the assessment also revealed that the capabilities of dispatchers at the police stations were strained by having to simultaneously handle notifications from Pilgrim and

maintain other fundamental communications.

As a result, Edison senior vice president George Davis has agreed to compensate each community's department for labor costs associated with calling in a second dispatcher when an unusual event is declared.

Civil defense director Doug Hadfield, while saying the offer was nice, questioned how quickly another dispatcher could be in the station to assist.

Last week, selectman chairman Bruce Arons said he had been told that the delay was due to an inexperienced police dispatcher. Chief George Madsen declined comment last week, but police reports to selectmen this week indicate that wasn't true.

According to a written statement from Lt. Arthur Budge, the shift commander at the police station the night of the fire, the police station did not receive written confirmation of the event until 9:21 p.m., almost 90 minutes after the unusual event was declared.

Budge reported that he received a call from Edison at 8:50 informing him of the small fire in the turbine building. He said he was told a fax would be forthcoming.

"At this point, having knowledge of an unusual event but not possessing all pertinent information regarding said event, I made the decision to withhold

notification to listed parties (police chief, selectmen, etc.) until all information was received," wrote Budge. He said he notified the police chief at 9:25 p.m. and chairman Bruce Arons at 9:32 p.m.

According to Madsen, there is a procedure that states if the fax is delayed the person answering the phone should take all pertinent information.

With this in mind, the civil defense director recommended training all shift commanders and superior officers in what to do if a similar situation should arise.

Usually, the dispatcher on duty takes the call from Boston Edison. However, the dispatcher was busy with normal police calls, especially since it was snowing, and Budge answered the phone. Budge, according to Madsen, was told the fax would arrive in a couple of minutes; instead it arrived about an hour later.

Selectmen had invited the police department, civil defense director and Boston Edison in to discuss the issue.



Wrong time for an emergency

Radioactive leak closes plant

Water leaks from seal on pump

By Susan A. Scully *5/2/91*
O.C.M.
MPG Newspapers

PLYMOUTH — Boston Edison shut down the Pilgrim nuclear power plant Monday afternoon because radioactive water was leaking from a seal in a recirculation pump. The plant started to shut down at 2 p.m. An unusual event, the lowest of four emergency classifications for nuclear plants, was declared at 4:50 p.m. when the leak increased.

The leak was contained, and Edison said it posed no danger.

"The event posed no danger to the public or plant personnel and there was no release of radioactivity to the environment," said Edison spokesman David Tarantino.

The nuclear plant was scheduled to shut down Saturday for 70 days for refueling. The unusual event ended at 12:25 a.m. Tuesday, but the plant will stay shut down until refueling is complete.

Monday's shutdown ended 217 days of operation without a shutdown, a record for the plant.

Edison had already started to shut down the plant Monday when the leak increased to the point that required a shutdown and declaration of an unusual event under the technical specifications set by the plant's operating license.

According to Edison, it knew for about a week that a seal on one of the two recirculation

pumps was leaking. When the leak increased to 2.5 gallons per minute Monday, Edison voluntarily shut the plant down.

At 4:50 p.m., when the leak rate increased to about 6 gallons per minute, one gallon per minute above the specifications set by Pilgrim's license, an unusual event was declared.

Plymouth civil defense director Doug Hadfield said he was notified that an unusual event had been declared within the 15 minutes required and had been in contact with Edison since 2 p.m. He said he was also in contact with both selectmen chairman Bruce Arons and selectman Alba Thompson.

The radioactive water flowed into designed drains and went through a series of filters before it went into storage tanks. Once it is treated, and meets EPA guidelines, it will be released into the discharge canal, Tarantino said.

Anti-nuclear activist Mary Ott, chairman of Duxbury's Citizens Urging Responsible Energy, called this another in a series of problems at Pilgrim.

"This is the fifth time then have declared an unusual event



PILGRIM — "Unusual event" was declared. (File photo)

since they restarted," said Ott. "This is not the first time they have had problems with this pump either. It seems Boston Edison's mentality of 'let's operate Pilgrim until it quits' is still continuing. Despite knowing about the leaks earlier, they continued to operate,

rather than shut down and deal with the problem. Doesn't matter if it is leaks or fires, their motto is 'operate until we are forced to shut down.' Public health and safety is never factored in."

According to Ott, the leak increased from 2.5 gallons per minute to 6.8 gallons by 4:52 p.m., to 10 gallons by 8:15 and to 12.6 gallons by 10:50 p.m.

Boston Edison spokesman Elaine Robinson said those figures sound about right, but there is no significance to them. She said the mechanism is designed for a maximum of 20 gallons per minute, and compared that to putting a kitchen faucet on full force.

Ott said the amount of radioactive water leaked is significant considering it was leaking at an average rate of 6 gallons per minute and an unusual event was declared for

more than seven hours.

The plant was operating at 100 percent power when Edison started to shut it down at 2 p.m. Monday. By 5, it was operating at 75 percent, by 6 it was at 30 percent and it was producing no power by 9, according to Tarantino.

The main reason for the planned 70-day shutdown is to replace about a third of the 580 nuclear fuel assemblies that power the plant. Boston Edison will also do some equipment modifications and routine tests, inspections, and maintenance work that can't be accomplished while the plant is operating. The seal that was leaking was scheduled for routine replacement during the shutdown, Tarantino said.

Boston Edison senior vice president George Davis said the refueling shutdown was planned so that the plant would be available during the winter and summer, when demand for electricity is highest.

There will be 150 to 500 additional workers at Pilgrim during the outage, depending on what work is being done.

"We only expect about 100 people, mostly experts in outage related work, to come from outside southeastern Massachusetts," said Davis. "Most of the workers will be hired through local unions and that should have a positive, albeit small, impact on the local economy."

Some of the temporary workers were going through training sessions last week.

Pilgrim shutdown moves up NRC inspection

By ANNE BRENNAN
STAFF WRITER

PLYMOUTH — A special Nuclear Regulatory Commission inspection team is making an early visit to Pilgrim Nuclear Power Station as a result of a sequence of equipment failures that led to a plant shutdown in early September.

The team, which started its inspection Nov. 5, was scheduled to inspect the plant in the spring during a planned shutdown for refueling, but that was moved up because of the September failures, said William Olsen, the resident commission inspector at the plant.

Critics say that the maintenance inspection is another indication that the events of Sept. 2 were far more serious than regulators and the utility will admit.

"This one was scary because a single component failure led to multiple failures," said Mary Ott, co-chairman of Duxbury Citizens Urging Responsible En-

■ NRC ROLE CHALLENGED: U.S. Rep. Gerry Studds plans to file legislation denying the Nuclear Regulatory Commission control over off-site emergency planning. — Page 3

ergy. "We felt that an unusual event should have been called."

An "unusual event" is the lowest emergency condition the commission has established for nuclear plants, but calls for prompt notification of officials in surrounding towns. Most town officials were not notified about the shutdown until about a day after it happened, said Plymouth Selectman Alba Thompson.

Many of the equipment failures that led to the shutdown were blamed on poor maintenance, according to a commission inspection report on the incident. In addition, a recent commission overall plant inspection, called a systematic assessment of licensee per-

formance, or SALP, for the period between July 1989 and August 1990 found there were "weaknesses" in equipment maintenance and repair.

While such maintenance inspections are usually done when a plant is idle, "We felt this would be a better time to do it," Olson said, because of "the SALP report coupled with the Sept. 2 event, when there appeared to be a tie to maintenance."

But Pilgrim spokeswoman Elaine Robinson denied the shutdown had anything to do with the timing of the inspection, saying Boston Edison, the company that owns and operates Pilgrim, has been expecting it for some time.

The plant was closed for three weeks and is operating at full power now. The current inspection is expected to last two weeks, Olsen said.

The Sept. 2 equipment failures began when a fuse

See NRC, Page 10

Just how low the water level
dropped is not specified in the
report, only that it fell below the
depth at which an alarms sounds
— 21 inches below normal.

SHOULD HAVE BEEN CLOSED. WHILE THE FUSE BURNED, THE
valve it controls drifted open and allowed water to
flow uncontrollably into the reactor.

But because the fuse also controls an alarm mechanism, control-room personnel did not know there was a problem until they were alerted that there was too much water in the reactor.

The proper reactor water level is vitally important because if it drops too low, the fuel rods may be exposed, possibly causing them to overheat or release radioactive material. If the level is too high, the pressure inside the reactor increases, and may pose a threat to the power-generating turbine.

Attempts were made to control the reactor water level but with little success. In the first four hours, while attempting to cool the reactor core, water levels swung wildly, according to the commission report. In one three-minute period the water level went from somewhere below 21 inches under the normal operating level to 23 inches above, the report said.

Just how low the water level dropped is not specified in the report, only that it fell below the depth at which an alarms sounds — 21 inches below normal.

Operators attempted to cool the core with the reactor-core isolation cooling system, but the system failed. Another cooling system, called the low-pressure residual-heat removal system, could not be used because of the pressure build-up in the reactor.

Operators had to revert to the high-pressure coolant-injection system, an emergency cooling system, which failed at first, then worked when applied manually. The trouble that started at about 10 p.m. was finally brought to a conclusion at 5:30 p.m. the next day, according to the report.

Olsen said that the Sept. 2 shutdown was not an unusual event because operators never lost control of the reactor.

But Dr. Ellen Cargill of Cambridge, a radiation specialist and independent researcher, said that under commission rules an unusual event must be declared any time a safety-related system, such as the high-pressure coolant-injection system, is used to shut down a plant.

The commission report on the shutdown and equipment failures noted that the reactor-core isolation-cooling system failed because of a maintenance problem. Olsen said too much head-gasket material was used on the system's turbine, which gummed up the operation of the cooling system.

In addition, the valve that started the incident was noticed to be leaking steam in mid-August. It was slated for repair but was considered a medium priority, Olsen said.

On Aug. 30 the leak had worsened and a temporary sealant was used to plug the leak. But a day later the valve was leaking again and new sealant was placed on top of the first application and that apparently held.

But the steam that had leaked from the valve apparently condensed and leaked into the junction box that contained the fuse, causing it to blow, according to the report.

Ms. Robinson of Boston Edison said that is not what happened. She said water entered the junction box through an electrical conduit. She said it had not been determined where the water came from.

Ms. Ott and Dr. Cargill met recently with Gov. Michael Dukakis and Peter Agnes, his assistant in charge of nuclear affairs, to discuss the shutdown, the failure to declare an unusual event, and what they perceive is a continuing history of maintenance and equipment failures at the plant.

As a result of that meeting the state is doing its own investigation of what occurred Sept. 2, Agnes said.

Fire breaks out at Pilgrim

By Dawn Chmielewski,
Brendan Daly and Mark Hamblett
The Patriot Ledger

PLYMOUTH — Fire broke out in a building at the Pilgrim nuclear power plant Friday night.

The fire burned for two hours before it was extinguished.

Elaine Robinson, a spokeswoman for Boston Edison, which runs the plant, said the fire was apparently touched off by workers welding an exhaust fan in the roof of the turbine building shortly after 8 p.m.

The turbine building is separate from the reactor building, Edison spokesman David Tarantino said. There was no release of radiation,

no contamination, and nobody was injured, Tarantino said.

"The emergency situation has been terminated," a loudspeaker at the plant announced to Pilgrim personnel just after 10 p.m.

The plant cut back to 70 percent power during the emergency but did not shut down, Tarantino said.

Boston Edison notified the federal Nuclear Regulatory Commission and declared an "unusual event" at 8:31 p.m., Tarantino said. "It's the lowest level of four emergency declarations... it just puts everyone on notice."

Local officials were not immediately notified of any problem at the plant, several Plymouth officials said Friday night.

The fire apparently was touched off by sparks from welding operations as workers were installing a bracket in an exhaust fan on the turbine building, according to Robinson. The sparks ignited far on the roof, she said.

Tarantino said the the exhaust fan was still smoldering at 9:30 p.m. The fire was declared out about 10 p.m.

Plymouth Firefighter Thomas Vacchino said Boston Edison reported the fire at about 8:50 p.m. Friday. He said two Plymouth fire companies were sent to fight the fire.

Please see PILGRIM — Page 48

Fire extinguished at Pilgrim building

■ PILGRIM

Continued from Page 1

The plant fire brigade called Plymouth firefighters for assistance when plant personnel were unable to extinguish the fire within 10 minutes, Tarantino said.

Edison had not notified local officials of any problem at the plant more than an hour after the fire was discovered — a situation that irked several Plymouth officials and anti-Pilgrim activists.

Selectman Alba Thompson said she was unhappy to learn of the fire from a reporter.

"Somehow, they've simply got to tighten up their information system and their communication," Thompson said. "They will maintain they did everything within the law. To that I say, 'Nuts.' There are steps beyond that, and that is a necessity to keep the public informed. It's not simply what the law requires, it's what the need to know requires."

The turbine building is the part of the Pilgrim plant in which electricity is generated. Tarantino said the exhaust fan is one of a number of 250-pound vent fans in the turbine building.

Plymouth Selectmen Chairman Bruce Arons and Civil Defense Director Doug Hadfield said they had not been notified by 9:15 p.m. Friday.

The fire caused Edison to shut down one of three huge pumps that bring cooling water to the turbine building, Tarantino said. He said that was done as a precaution to avoid damage to the pump from water used to extinguish the fire. Because the pump was shut, Pilgrim was cut back to 70 percent power, he said.

Critics of the nuclear power plant said they were disturbed that local officials were not notified immediately.

Robinson said Edison gave proper notification to officials, despite having problems with a machine that sends a written copy of the notification.

"Each town has a designated 24-hour notification point, and we did

make those notifications," she said. "Any notification beyond that is an internal process. Those contacts are to be made by their own procedures."

In Plymouth, the police department is the agency notified by Edison.

Selectmen Chairman Arons said he is concerned he was not notified until more than an hour after the fire began, especially since a new procedure was put in place after a mechanical malfunction caused the plant to shut down in September.

"We've always had a problem with it that we thought we had fixed, but obviously there seems to be another problem that needs to be addressed," Arons said.

Anti-Pilgrim activists also faulted Edison.

"It's business as usual for those guys," said Diane Buckbee, a member of the anti-Pilgrim group CURE Citizens Urging Responsible Energy. "We've been through this for years and years now. It's so discouraging."

Buckbee criticized Boston Edison for downplaying the significance of the fire.

"Lately, it just seems they're putting in a awful lot of time and effort into (public relations) work, trying to convince the communities that everything is fine. Yet when these kinds of things happen, it's the same old story," she said.

Janice Nickerson, co-chair of Pilgrim Alliance, said she was disturbed to hear about the fire through the local grapevine. And she criticized Boston Edison officials for failing to notify neighbors of the emergency.

"If there's a fire in the plant, there should be a news break on Boston television stations so that people are alerted to it," Nickerson said Friday night. "If something happens to-night, there's no way that we could get out of here."

Nickerson said even the police were uncooperative, refusing to provide information to concerned residents.

"I have been notified, but only through the network of activists," Nickerson said. "The police are hanging up on people, telling them to go back to bed."

COMMENTS FROM JANE FLEMING,
ACTING CHAIRMAN OF THE DUXBURY
RADIOLOGICAL EMERGENCY PLANNING STUDY COMMITTEE

Introduction

I am Jane Fleming, Duxbury Citizen, and member and acting Chairman of the Radiological Emergency Planning Study Committee. As as always I am addressing you as the mother of two and I want planning.

Before we begin I would like to acknowledge Ed's absence, and through you to express my sympathy to him.

First, I want to commend the members of the Task Force for the amount of work and effort that you have put into your job. You have identified and acknowledged a myriad of planning problems. Some of the problems are ones that we have been trying for years to get anyone to acknowledge, and we are grateful to finally have them acknowledged. Others, such as the Transportation Officers being part of the National Guard came as a shock to those of us who thought we knew more than we ever wanted to know about emergency planning. I appreciate how extensive a task it was to muck through four years worth of botched plans and political cover ups.

With this as a starting point, and with the additional corrections and information you are receiving tonight, I am hopeful that you will be able to present an accurate and comprehensive final report to the Commission. With such a final draft, particularly since it will be coupled with the state's new and improved attitude on the issue, we finally have a chance to achieve realistic emergency planning.

However, our chance or hope will only become reality if you successfully complete your task by recommending that the Commission Set The 120 day Clock as provided by 10 CFR 50.47(s)(2). This is not, as some wish and some fear, a request to shut Pilgrim down. Rather it is a realistic assessment of attitudes of all the key players, and is rests on the reality that they will achieve realistic planning only if the NRC applies the only truly effective tool available to it.

In this, State we have a new administration. Thank God for that on many levels, but on this issue in particular. This Governor certainly can not be classified anti-nuclear; and with his legal background we can sure he not only wants, but will insist that Emergency Planning comports with 10 CFR 50:47. From an economic point of view, it is obvious that the Governor does not want a major power plant to be closed.

In Public Safety, Jim Roche, has already set the tone. Planning is a top priority. The Public Safety staff has been very cooperative and more than eager to learn this new world of planning. I am confident this attitude will prevail.

MCDA's new director Dave Rodham has been aggressively addressing the problems of planning. He is aware of the political hotseat he is in; he is aware, and is dealing openly and effectively with the fact he inherited the agency that is responsible for the lack of planning we currently have. He is making great strides forward and his somewhat reluctant staff is now starting to follow his lead. There is hope folks!

On the Hill, Beacon Hill, we have Representative Al Herran who as Chairman of the Joint Legislative Committee on Energy is currently putting together a comprehensive bill that will properly assess the utilities for the costs of the emergency planning - in reality it's nothing more than another cost of doing business - and direct the funds to the appropriate state agencies. This bill, #1906, has bipartisan support which is no easy trick in the Massachusetts legislature these days.

In short, the pieces and the players are in place. With one exception, everyone is singing from the same book. The sole exception, the only one player left to get in line, is BECo.

BECo claims to have millions on planning. Unfortunately it did so with a "pay-off" mentality, rather than in an honest effort to achieve any valid end results. BECo has lied, misrepresented facts, threatened opponents, and bullied or cajoled half the world in its attempts to be the new Messiah and falsely claim that fact planning is in place. History is clear - BECo will do absolutely nothing to protect the public unless and until its back is flat against the wall.

You have the power and it is your responsibility to put BECo's back to that wall. You can force BECo to sing from the correct hymn book. You can make BECo join in the new State effort and put planning in place for the first time since 1987. You, the NRC and FEMA, not BECo, are charged with the responsibility of protecting us, the public. Recommend that the Commission invoke 10 CFR 50.47(s)(2) and set the 120 day clock, and the responsible agencies will do

their job.

Now let us return to a little more history.

In August of 1987 FEMA determined that offsite emergency preparedness for Pilgrim's EPZ had deteriorated to such an extent that FEMA could no longer make a finding that State and local plans were adequate. Thus FEMA bit the bullet, as I am asking you to do, and rescinded its 1982 finding of adequacy with respect to Pilgrim's offsite emergency preparedness.

The NRC staff judged that the deficiencies identified in that FEMA report were significant. The NRC decided the plant would not be permitted to restart until demonstrated improvements had been made in the Emergency Plans.

That's when the fun began! FEMA began reviewing evacuation plans shortly after issuing its report, but its efforts were short-circuited. In early 1988, the NRC determined that all the equipment and operational problems would be resolved, and the plant would be ready for operational restart, by a date that was too early to permit FEMA to complete its review of planning issues. Therefore, the NRC decided to conduct its own unilateral review of planning issues to avoid any possible delay of restart.

The NRC review, as we all know from the IG's report, "was not balanced or thorough, and information provided by the staff to the Commission was inaccurate." The IG found that the staff relied far too heavily on information obtained from the utility, rather than obtaining information from the proper state and local officials.

The IG's Audit goes further and states that the regulations and MOU do not allow the NRC to conduct a unilaterally review of offsite emergency preparedness. Despite all of this, the NRC staff pushed forward and presented their inaccurate, unbalanced and biased finding to the Commission and recommended that Pilgrim be allowed to restart.

Since early April 1989, Pilgrim has been operating in violation of 10 CFR 50.47, as I have stated to the NRC so often. The recent Task Force Findings clearly support that position. In 1988 the NRC staff presented misinformation; and the Commission made an incorrect decision based on that misinformation.

Today, two and one half years after the plant was permitted to restart, the same key issues listed in the 1987 FEA report --Transportation, Reception Center to the North, Planning for Schools, Special Needs -- are still in dispute. I will discuss particular issues in a moment. First let's take an overview look at the Task Force.

The Task Force is the end result of the "Lessons Learned" from the IG's Report of July, 1990. On Sept 24, 1990, Mr. James Taylor, the EDO, forwarded the charter for the Task Force to the Commission. The charter set forth five specific tasks:

1. Identify Pilgrim offsite EP issues in dispute.
2. Determine the factual status of issues in dispute.
3. Describe the current status of offsite EP for Pilgrim.
4. Identify and assess the significance of existing EP problems.
5. Recommend whether the NRC should reconsider it's reasonable assurance finding (that adequate measures can and will be taken in the event of a radiological emergency at the Pilgrim Nuclear Power Station).

By and large, the Task Force took the charter instructions seriously. There are, to be sure, some particular problems remaining; but the Task Force did identify many critical issues, fairly describe most of the current status, and assess the significance of most still remaining problems.

Indeed, in identifying and assessing the significance of current emergency planning problem, the task force correctly and unequivocally concluded that two particular problems precluded a finding of "reasonable assurance."

Existing Emergency Plans state that the Massachusetts National Guard is to provide Transportation officers and staff the Wellesley Reception Center staff. After reviewing all of the facts, the original determination made by the Task Force was that:

"Because the National Guard would not arrive at the Wellesley Reception Center for 4 to 8 hours after

notification, the 12-hour monitoring evaluation criterion (J.12) and the protective measures planning standard [10 CFR 50.47 (b) (10)] would not have been met."

Had this determination made its way into the final report, the Task Force would have had no choice but to recommend that the Commission start the 120 day clock. That result, however, was avoided by a ninth, no actually at least a tenth, inning rally by none other than BECo.

The events that followed the Task Force's original determination are now an issues of concern. What happened can only be called "The Quick Fix". Quickly defined, "The Quick Fix" was that

1. BECo prematurely become aware of the original determination and
2. BECo, out of the goodness of its heart, offers to unilaterally resolve the underlying problem by usurping the state's authority in planning, and placing a few of its own employees in positions which can only result in a a clear and direct conflict of interest, and
3. The NRC and FEMA nod their consent, accept the unacceptable, and avoid having to face up to the facts underlying the initial determination.

The details of "The Quick Fix" will be discussed at the appropriate times throughout my testimony. However, the seriousness of the problem is such that it is important to at least raise the most important questions now:

1. Was the Utility given advance warning of the Task Force initial findings; and if so by whom?
2. On what basis did the utility usurp the state's authority?
3. How can BECo employees monitor evacuees at the Wellesley reception center without creating a clear conflict of interest?
4. Why did not the task force recognize that the level of staffing provided by "The Quick Fix" is totally inadequate?

5. Did the Task Force delay issuing its draft report to permit BECo to accomplish "The Quick Fix?".
6. Did The NRC and FEMA accept, or even encourage, "The Quick Fix" to accommodate BECo and avoid having to set the 120 day clock?

Hopefully, these questions hopefully will be resolved satisfactorily by this Task Force; but they will in any event be sent on to the IG's of both the NRC and FEMA. Protection of my family is far to important to lose to a BECo "Quick Fix"

Now let's get on with other issues that are still in dispute. I have focused my attention on three major areas - the Wellesley Reception Center to the North, Transportation, and the Duxbury Schools.

Wellesley Relocation Center

In its findings, the task force determined that the issues pertaining to the relocation centers fall into two broad categories - (1) facilities and equipment and (2) staffing.

Staffing is the key word so far as the Wellesley Relocation Center is concerned. The National Guard has repeatedly made clear that planning should proceed on the basis that the Guard will require a twelve hour response time. Because of this, Wellesley does not meet the standards for a functioning relocation. The first evacuees will arrive about eleven and a half hours before the National Guard -- and the Guard cannot possibly monitor all the evacuees in the thirty minutes remaining.

Over the past few years I have identified the obvious problem of the National Guard response time to all the responsible parties. I hand delivered the information to Chairman Carr of the NRC on Oct. 12, 1989, the day of the only recent almost-full scale training exercise. In the exercise itself, the NRC, MCDA and BECo covered up the response time problem by giving the Guard several days (not hours) advance notice that they where to report to Wellesley on the morning of the 12th. All of the responsible authorities were aware of this, yet the FEMA assessment of the Exercise failed to identify the deficiency. Why? The answer is simple - An admission that the Wellesley receptio center would be completely unable to monitor the evacuees in the proscribed twelve hours (at least without several days advance notice) wold have precluded the NRC from making its critical finding of "reasonable assurance."

This time the Task Force listened to, acknowledged and identified and assessed the significance of this deficiency. In this respect they fulfill the requirements of their charter; and if they had stopped here they would have been hero's today. They would have done their job; and the result of their so finding would have been giving BECo 120 days to correct the situation - or shut down.

But in the tradition of the NRC, just doing your job and honestly protecting public health and safety, is never top priority. The Top Priority, as always, is protect the industry - never to shut it down. Thus we have THE QUICK FIX - just let BECo say it will do the job.

BECO will now fill the void and handle monitoring and the other staffing positions assigned to the National Guard. Our knights in shining armor.....BECO!!!, with the help of some MCDA workers from Fort Devens (which is about to close) and DPW workers from Arlington.

THE QUICK FIX appeared as a last desperate attempt on the part of BECO to avoid part 5 of the Task Force Charter - "Recommend Whether the NRC Should Reconsider its Reasonable Assurance Finding," and if there is no "reasonable assurance" to set the 120 Clock.

By the end of April the Task Force had completed its review, and had found that the National Guard staffing of the Wellesley Reception Center did not meet federal regulatory requirements. To avoid setting the 120 day clock, the Task Force delayed issuing its already completed report, told BECO what it was unwilling to tell the public, and then gave itself and BECO extra time to find this obviously inadequate QUICK FIX.

What are the problems with the QUICK FIX:

THE FIRST QUICK FIX PROBLEM - USURPING STATE RESPONSIBILITIES

Planning is the responsibility of the State and Local Authorities. The new director of MCDA, Dave Rodham, not only appears to be extremely competent, he has displayed a willingness to do the job properly. Indeed Mr. Rodham recognized the significance of the National Guard staffing problem and has been working on a realistic resolution to the deficiency. He has identified approximately 85 professionals with radiation backgrounds and is now in the process of getting them on board and under agreement to fill the vacancies the National Guard can not handle in a timely manner.

To avoid setting the 120 day clock, the NRC and BECO pushed aside a reasonable and acceptable resolution that had already been proposed by, and both then and currently is in process at, MCDA. By doing so, they simply usurped the authority of the State.

The State wanted time to put into place a workable plan that would protect its citizens; neither BECO nor the NRC was willing to permit the State to do so. Letting the State provide something that worked might mean setting the clock. But if the clock were set, fixing the problems would finally

become top priority - which would be a welcome change since BECO certainly hasn't made fixing the problems a significant priority in the past.

THE SECOND QUICK FIX PROBLEM: CONFLICT OF INTEREST

A United States Court of Appeals defined a conflict of interest (463 F.2d 600, 602) -

"Situation in which the regard for one duty leads to the disregard of another."

"The concept refers to a clash between Public Interest and private pecuniary (finances) of the individual."

It does not take a Harvard Law Degree to quickly understand the conflict here.

Every BECO employee will know that every person he monitors and finds contaminated is a potential law suit against BECO.

Every BECO employee will know that honest monitoring may well mean the end of Pilgrim I, and of his job.

There is no double check to provide any assurance of accuracy and honesty in monitoring; a total of two men are assigned to the three monitors at Wellesley.

The conflict of interest is clear; and the result is the very real danger that contaminated citizens will not be identified and decontaminated.

THE THIRD QUICK PROBLEM: INADEQUATE STAFFING AT WELLESLEY

BECO and the Task Force would like us to believe that they can replace 50 trained and disciplined military personnel by giving two training sessions to 20 BECO employees, 16 DPW workers from Arlington and, if it hasn't closed, 4 MCDA employees from Fort Devens. Had Stormin' Norman know this, I am sure he could have ended Desert Storm in less than 12 hours. Had we told Saddam the BECO boys were coming and sent him Pilgrim's track record, we could have had an total surrender without a single bomb being dropped. Incompence is far more frightening than a smart missile.

Let's compare what the BECO boys (with their 2 training

session) will be doing to the jobs that had been assigned to the National Guard.

Reception Center Position	Number of National Guard	BECo and friends
EOC Liason	1	0
Radio Operator	1	0
Monitoring/Decon Station Coordinator	1	1
Docimetry Coordinator	1	1
Docimetry collector	1	0
Personnel Monitoring/Decon Group leader	1	1
Vehicle Monitoring/Decom Group Leader	1	1
Portal Operator	4	2
(n.b. there are now only 2 operators for 3 portal monitors)		
Initial Monitor (handheld)	2	2
Personnel recorder	3	2
Personnel decon assistant	4	2
Secondary Monitor (Decon)	4	4
Runners	6	4
Vehicle Monitor	12	10
Vehicle recorder	4	2
Vehicle Decon Assistants	4	0
	-----	-----
	50	32

What does this mean? The most obvious problem is the portal monitor operators. We finally got the long-fought-for third monitor, so that if monitoring got started at a reasonable time it could be completed within the proscribed 12 hours. But now we don't have an operator. Another example of Beco planning expertise. BECo finally provided the third monitor; one would have thought that whoever at BECo planned the Quick Fix would have remembered and provided a third operator. More important, each portal monitor really should have 2 operators, particularly in view of the conflict of interest issue. So we're really short 4 men, not only one.

The so-called Initial Monitors are really second - they are hand-held monitors that follow the 2/3 portal monitors and are supposed to locate the particular area of contamination on people who have set off the alarms (which are set by BECo about once a year) of the portal monitors.

This very time consuming. At a minimum, there should be 2 initial monitors for each of the 2/3 portal monitors; not two total. (We're down 2 to 4 initial monitors, and four more men). I should also point out that, at some time, these two initial monitors are supposed to be used to monitor all all the handicapped people, babies and others who can't use a portal monitor. There are over nine hundred identified handicapped in the EPZ. At a bare minimum, at least two more initial monitors (and trained people to operate them) are needed.

Personnel recorders are supposed to take down all the personal information that is required to insure family reunification. With two recorders assigned to the portal monitors, and one more assigned to the handicapped, the flow will will be anything but rapid; and don't forget that this all has to be completed within the mandated 12 hour time frame.

Interestingly enough, Beco has assigned 10 people (a third of the total number of available personnel) to do Vehicle Monitoring, although no vehicle will be decontaminated until until after the National Guard gets there. The priority of cars over people is interesting, to say the least, and it makes one wonder what the BECO boys have been trained to do. Do they work overtime for a car wash?

NO RADIO OPERATOR. It is truly amazing^{now} much time the Task Force, FEMA and the NRC spend talking about the importance of communication, when they then accept a QUICK FIX that doesn't even include a radio operator during the early and most crucial part of the accident. Communication was an integral part of the entire evacuation planning process. Without a radio operator, anyone that Wellesley was supposed to communicate with now has a communication deficiency.

Even more amazing is that we're supposed to believe that the BECO BOYS and friends were fully trained in two QUICK FIX training sessions MAY 14, and 16th. In just a few short hours, they didn't learn just the job they were supposed to do, they learned everything there is to know about a relocation center -- they can monitor, register, and decontaminate anything, be it a car, mother, baby or quadraplegic.

Is there a need to say it ? The QUICK FIX IS A DISASTER. All we are asking is that you do your job. State as you did in the draft report that "the monitoring evaluation criterion (j.12) and the protective measure planning standard [10 CFR 50.47(b)(10)] have not been met;" and say so unequivocally.

It is an easy statement to make; I have been saying it since April of 1990 . The NRC, FEMA and BECO - you are all in violation of NUREG 0654 AND 10 CFR 50.47 by allowing Pilgrim to operate at above 5% power without Emergency Planning in place.

The Quick Fix isn't a fix at all; and the list of problems with the Wellesley Reception Center goes on.

1. The question is not whether you think you need an LOA to insure the cooperation of the Red Cross, even though the guidelines in NUREG 0654 are clear that all support groups must sign an agreement or signature page. The real issue is that the Red Cross Congregate Centers don't even exist, and that the Red Cross has stated that it will not participate in your man-made disaster.

2. The statement in the draft report that the third monitor is needed only in case one of the others breaks is not quite accurate . The third is needed to perform monitoring within the proscribed time.

3. FEMA's guideline for sending contaminated injured to a "nearby" hospital would be fine if the transportation were provided (which it isn't), and if we had enough hospitals to handle the volume. Collectively, and using the numbers that you have accepted, the thirteen hospitals can handle 39 people in 12 hours. There are over 900 special needs people that have been identified. Chances are if any become contaminated, many will be. A plume does not selectively seek out only one or two people; it covers a vast area and everyone in it. Thirty-nine people in 12 hours is just the beginning.

4. Relocation Centers, like all things in planning, must conform to common sense. Reading your and BECO's justifications of ridiculous planning scenarios brings Clare Donahue to mind again. Clare would listen to and read through all the foolishness and bring it right back to reality with her now immortal quote; "And who will bring the towels?" There are still no towels.

Busses, or the Lack Thereof

On the issue of transportation, I will identify four major problem areas that either (a) have not been adequately identified by the task force or (b) although identified have not been resolved. They are:

- I. BECO Transportation Officers
- II. Essentially Exclusive Use of BECO information
- III. Insufficient Number of Busses Available
- IV. The "New Format" Letters of Agreement ("LOA's")

I. BECO Transportation Officers -

This was another critical part of the Quick Fix. In its draft report, the Task Force said that

"Another area of transportation that had to be corrected in order to ensure that a prompt evacuation could be performed if necessary [was that] the response time for the Transportation Officers staffing the AREA II emergency operations had to be shortened so that they could promptly assess transportation needs and notify providers",

and that

"Because of the delays associated with its response time, the National Guard was not suitable to fill the AREA II transportation positions."

Rather than facing the issue squarely, the Task Force again turned, and bowed, to its friends at BECO. As the report says:

"[T]his aspect of the overall transportation has been satisfactorily addressed by the temporary assignment and the training of staff from BECO to replace MNG personnel."

Satisfactory, I may ask, to whom?

The Task Force draft report is strangely silent about this "training". It may have been part of the two training sessions for the Wellesley Reception Center personnel, but the transportation officers are nowhere mentioned or listed although they are stationed at the Wellesley center.

Probably more important, BECO says that these "temporary" personnel will only be available for 4 to 6

months. Without the impetus of the 120 day clock, on what basis should we expect that fully trained, real replacements will be available then?

This probably is the most blatant example of the Task Force expressly finding that the existing plan utterly failed to provide the "reasonable assurance" that the NRC's own regulations require, and then looking for a quick and cheap way to let BECo off the 120 day hook.

II. Essentially Exclusive Use of BECo information

In explaining the procedure to be used by the task force, Chairman Carr characterized BECo's input into the process as that of a "strawman". In other words, the job of the task force was to compare the information given it by BECo with independent information from reliable sources.

The Task Force spent endless hours examining problems that exist with transportation providers, chiefly busses. They carefully examined information provided by BECo and MCDA, and determined that there were a great many inconsistencies between the two. This, by itself, is a finding of considerable interest. BECo developed both sets of information, as the Task Force was informed repeatedly on January 30, 1991. (See, Official Transcript of proceedings entitled Pilgrim Task Force Meeting with Citizens from the Town of Duxbury, Ma. [hereinafter "January 30 Transcript"], pg 76, lines 12-19). The fact that BECo was the source of both its own and the MCDA data means that the "strawman" was compared only to itself. The discrepancies thus prove only one thing - BECo's planners are not very good, or even consistent in their misinformation.

On the other hand, the draft report is express that "the task force did not address discrepancies between vehicle assignments in town procedures and the area II transportation group IP." (pg. 2-133). Translated, the task force didn't look at the transportation needs that the towns identified and compare them to what BECo said.

In short, perhaps unwittingly, at least until the situation was called to its attention in late January, the Task Force effectively ignored Chairman Carr's admonition that the job was to compare what BECo said with independent, reliable information. Once again, the NRC relied exclusively on the utility's assessment of needs, rather than going to the towns to determine what their needs actually were. Had the task force "address[ed] the discrepancies between ... town procedures and the area II

transportation group IP", I am sure that they would have identified many critical "glices" in BECo's information.

Take, for example, Duxbury's special transportation needs. According to Dr. James Lyng, Duxbury's Director of Special Education, and Patricia Monahan of the Plymouth Area Collaborative (a program for the severely handicapped ranging in age from 9 months to adult), the Duxbury school will need:

Alden Upper/Lower	1 lift van
Chandler (Integrated Program)	6 vans
Duxbury Intermediate School (PAC Students)	1 lift van
Duxbury High School (Magic Dragon Program, ages from	6 vans or wagons with car seats

The task force draft report, by comparison, left out Chandler and the high school Magic Dragon Program.

Until the task force addresses the discrepancies between vehicle assignments in the town procedure (or, even better, discusses the needs with the town's responsible personnel) and the Area II (or BECo transportation group IP, there will be no accurate count of what vehicles are really required. The "strawman" to "strawman" comparison that has been made means that, once again, the people that will be hurt or left behind are children, handicapped, and elderly.

III. Insufficient Numbers of Busses ... Unacceptable LOA's

Long before this task force held its first meeting here in Plymouth, I told it and the NRC that there are not enough busses to successfully evacuate the children, let alone others who are transportation dependent. This statement is still true today.

The task force determined that 361 busses are needed to evacuate the school children, and that another 140 busses (making a total of 501) are required to evacuate the entire EP2 transportation dependent population.

The task force draft report says that 518 busses are available. Reality is that, at present, the maximum number of busses that can be counted on is only 298. This translates into a shortfall of 203 - 63 for the schools alone, and no busses for the rest of those who require them.

The principle reasons for the chasm between the draft report and the real world are as follows:

Barnstable: LOA dated 11/16/89 - 4 busses assigned to nursery schools - Busy Bee, Kidder Kollege, Tiny Town, Kinder Haus.

Problem - This is a Cape Cod Company. Plans call for the Sagamore Bridge to be closed and only one lane of the Bourne Bridge to be open. Under these conditions, traffic will be gridlocked for hours. For example, on the Tuesday am following Memorial Day, there was a seventeen mile backup, and both bridges were open.

Canning: LOA dated 11/16/89 - 9 busses unassigned

Problem - This is another Cape Cod Company. And even if they were amphibious and could get across without using a bridge, they still wouldn't know where to go.

A. L. Crowell: LOA dated 11/15/89 - 25 busses assigned to schools and camps - Indian Brook, Mt. Pleasant, South Elementary

Problem - No drivers committed

Foxborough: LOA dated 11/2/89; see also 9/11/90 - 10 busses assigned to Transportation Staging Area ("TSA") Martinson

Problem - No drivers committed

C. A. Phillips: No LOA - 12 busses for the Gov. Winslow School

Problem - There is no LOA. The Town of Marshfield wrote C.A. Phillips and requested 12 busses, but the bus company has never responded to the request. The task force referred to this as a "reverse LOA"; in reality, it's nothing.

Reliable: LOA dated 11/16/89 - 10 busses assigned to Sagamore/Scusett TSA

Problem - 3 hour EMT, and thereafter a 1 1/2 hour commute from New Bedford; total ETA is 4 1/2 hours

Mederios: LOA dated 11/16/89 - 85 busses assigned, to all 3 TSA's

Problem - All 85 busses have a 1 1/2 hour commute from New Bedford/Fairhaven. For 65 of the 85, the EMT is 3 hours, making a total ETA of 4 1/2 hours.

For the remaining 20, the EMT is only hour, making a marginally acceptable total ETA of 2 1/2 hours.

Tremblay: LOA dated 11/15/89 - 85 busses assigned to the Sagamore/Scusett TSA, Carver High, and Gov. John Carver School

Problem - Same as Mederios; only 20 of the 85 will arrive in less than 4 1/2 hours.

Overall Assessment - The above list identifies 200 busses that, by any reasonable assessment, simply will not be available to take part in an evacuation. The task force also included 30 privately owned busses in its "available" count; however these aren't covered by any LOA, there has not been any investigation into the conditions under which they will in fact be available.

In short, the number of busses that can be counted on is not enough to evacuate even the schools.

Moreover, the task force's assessment essentially ignores that many of the busses it is counting on will be effective only if the nuclear accident occurs between about 7:00 and 10:00 am. Before 7:00, no one is at school. If an accident occurs after 10:00, the 4 1/2 ETA busses are an irrelevancy; they won't even arrive until after school is dismissed at 2:30. By the time the busses arrive, the kids will be home; many will be latch key children; and we all know that the problem of latch key children has not even been considered.

IV. New Format LOA's

Although it never reviewed the new LOA format (Draft Report, pg. 2-131), the task force somehow concluded that the new format would ensure uniformity and clarity of commitments. Had they reviewed the new format, the task force would have reached a quite different conclusion.

The new LOA's seriously diminish the effective of evacuation planning. Their effect is to delay evacuation by at least 3 hours, and to add a new "smoke-and-mirrors" quality to the transportation provider issues.

Section II.A.3 of NUREG 0654 requires that

"Each plan shall include written agreements ... between Federal, State, and local agencies and other support organizations having an emergency response role within the Emergency Planning Zones."

But the "new format" of the LOA's means that they are not really "agreements" at all. Rather, they are nothing more than what is normally called a "Letter of Intent". A "Letter of Intent" is not a contract; but, as the courts have often observed, is simply "an expression of tentative intentions of the parties." See 330 F.Supp. 22, 25.

In addition, the content of the "new format" is such that it cannot possibly act as an effective agreement. Unlike the old LOA's, there is no longer anything to indicate (or more important to commit to) the number of drivers expected to be available. Without committing to drivers, the "new format" can provide no assurance that an adequate number of busses will arrive. The Task Force noted that many of the old LOA's did not provide an adequate number of drivers, and properly eliminated busses without drivers from its calculations. BECo did not solve the "no drivers" problem by simply eliminating both firm commitments and the necessary information. The information - how many drivers - that BECo's "new format" manages hide must be considered in assessing the extent to which the problem exists.

Those of us who live in the EPZ aren't "reasonably assured" by "an expression of tentative intentions." Our fear that there will not be an adequate number of busses is not dispelled by a "new format" that forgets BECo has not yet advanced technology to the point that bus drivers are no longer necessary.

The "new format" also allows all buses to use three hours even to mobilize. This helps BECo's with numbers, but delays actual evacuation by three to five hours. A NeSHP report on evacuation time stated that, within the ten mile EPZ, decreasing evacuation delay time from 5 to 0 hours will decrease whole body radiation doses by an approximate factors of 75. The new format increases "delay time" by 3 to 5 hours, and thus increases contamination by about the same factor.

The new format may, as the task force noted, insure "uniformity and clarity of commitments", but because of it the entire process is moving backward rather than improving.

On Wednesday, January 30, 1991, I identified the problem of the new LOA format to the task force. (January 30 transcript, pg 78, line 20 through pg 89 line 4). In response, the task force assured me that they would find the answers because they could ask the person who write it. (Id., pg 83, lines 10-11, pg 84, line 22. "Okay. We will find out.")

Did they find out? The unfortunate answer is "NO". Instead, the NRC decided not to deal with the issue, and turned it over to FEMA. Jack Dolan of FEMA was at the January meeting during this discussion. True to form, FEMA has yet to address the issue. From three years of experience with him, I've learned that Jack does not like to address transportation problems.

The one thing that the "new format" does "reasonably assure" is that real efforts to address our transportation needs will be greatly diminished, delay evacuation time will increase, and no one will have any idea how many busses will really arrive because they won't know how many drivers are committed by each company. We can be assured that a bus without a driver will not arrive.

The "new format" is simply not acceptable. I ask the task force again to look at this problem, assess it honestly, and insist that the State (and I have already spoken with David Rodman of MCDA) and BECO use a LOA format that will provide real contracts that require that real busses with drivers will arrive in the EPZ in time to effectively evacuate the public.

DUXBURY SCHOOL PROBLEMS

Planning for the Duxbury Schools is still plagued with problems. The majority were created by mistakes in Area II planning, or by a failure to integrate Area II plans with local plans. The statement that "no man is an island" is particularly pertinent when applied to planning. It is not enough for each individual to do its own job to insure that the small section for which he is responsible reflects the outstanding needs for that particular portion of the overall plans. Real success comes only when all of the co-dependent individual aspects are examined and the necessary dovetailing or integration is then accomplished so that all the different pieces can be brought together.

Here, many of the the needed individual plans have not been properly developed, and very few of the individual pieces have been fit together.

I. Lack of Monitoring - Perhaps the most critical shortcoming for the schools is the lack of any plan for effective monitoring.

NUREG 0654 j.12. provides, in pertinent part:

"Each organization shall describe the means for registering and monitoring of evacuees at relocation centers in host areas. The personnel and equipment should be capable of monitoring within about a 12 hour period all residents and transients in the plume exposure EPZ arriving at relocation centers."

In the Draft Report the Task Force finds the concept of monitoring school children at reception centers (relocation center) acceptable. In concept, I agree; but once again the task force missed the real point. The student relocation centers - the so-called "host schools" have no monitoring capabilities. It would be difficult to imagine a more unique, and clear, violation of the just-cited NUREG provision.

As an aside, I should note that, contrary to what is said in the task force draft report, the idea of "host schools" for the school population was not an option first presented or developed by the state. Rather it was another of BECO's ideas - "Let's keep numbers down at reception centers to hell with the kids."

Let's dispel some of the myths that BECO has presented to justify this blatant violation of the NUREG monitoring requirement.

A. Precautionary Transfer of School Children -

BECO has attempted to convince the world that the children will be moved out before any release occurs. As might be expected, there are a number of flaws in this BECO "thinking" -

1. As I've already discussed, there are not enough buses to evacuate the entire school population [See Buses or Lack Thereof]; and the "new LOA format" allows, and in many cases actually creates, and creates a 3-5 hour delay time before any evacuation will even begin.
2. Yet, according to NUREG 0654 a release from Pilgrim could occur in 0-30 minutes.

B. If the children leave the schools and pass through a radioactive plume, while riding on one of the supposed buses, the buses will be contacted by radio and told to go to Wellesley.

1. Given the length of time it will take to get the children on the busses in the first place, the likelihood of the busses passing through a plume is far greater than it should be. If they do, it is not a laughing matter - The buses offer less than 1% dose reduction, meaning that they might as well be standing out in the open.
2. What is worth at least a chuckle is BECO's apparent confidence that the busses will be contacted. During the only recent "almost full scale" exercise in October of 1989, the town of Duxbury lost all communication with the buses very early in the game. Since neither FEMA nor the NRC acknowledge this failure in the FEMA report reviewing the exercise, there is no way of knowing if the communication void has been or will be corrected. By the way William Russell of the NRC was in Duxbury's EOC during the time the entire EOC was trying to "find" the buses. Bill neither noticed nor reported this problem, although the busses weren't officially "found" until the next day.

C. If the children have been contaminated they will be sent to Wellesley to be monitored.

Here, again, there is a wide variance between reality and the BECO "truth". Again as already discussed, Wellesley simply does not have the capability to monitor the school population within the proscribed 12 hour time. The reception center can't even handle the non-school population within that time period. The new suggestion that school monitoring will be solved by providing some "express line" ignores (i) that there aren't monitors to use in such a line, (ii) that the "QUICK FIX" doesn't provide any people to operate the "express" monitor even if one should be found, and (iii) that monitoring Duxbury's students and staff will take 10 hours, not including the Marshfield students and staff who will be in the same express line.

As an aside, this is probably an appropriate time to raise a related question. Given the obvious length of time it would take to monitor children in Wellesley even if Wellesley had monitoring capabilities, why does the plan both with separate "host school" student relocation centers at all? The "take-the-children-to-the-Needham_host-schools-after-they're-monitored-in-Wellesley" concept will result in chaos. Parents will be arriving in Needham to find their children are still at Wellesley. Then, with their pre- or post-school children, they'll arrive at Wellesley overloading a system that already is not equipped to handle the minimum population percentage (20%) requirements.

This can only result in bedlam - foreseeable to all. On whom do we pin the blame? BECO? MCDA? The state? FEMA? Or the NRC? They all know; they are all aware; and they have all been personally informed.

CAN THIS FLAW BE FIXED? YES !!!

On June 3, 1991, the Duxbury School Committee June 3rd 1991 voted:

That in the event of a radiological accident at Pilgrim Nuclear Power Station, all Duxbury students and staff relocated from Duxbury to Needham (the current relocation center for Duxbury student) will be monitored by portal monitors at the Needham Relocation Center (also sometimes referred to as the "host school")

The School Committee also voted:

1. That Boston Edison Company provide two portal monitors to be kept at the Needham High School or at any other "host school" that may hereafter be designated for Duxbury students or staff;
2. That the Massachusetts Civil Defense Agency assign and train the appropriate personnel in a number sufficient to operate the portal monitors at the Host School; and,
3. That all appropriate I.P.'s be corrected and redrafted as required to reflect, and provide, that the Duxbury school population will be monitored at the host school relocation sites.

As a hidden "bonus" these two additional monitors could also be used to monitor parent and siblings who arrive in Needham to pick-up their children, and provide some needed relief to the overloaded monitoring system in Wellesley.

I discussed this "monitor-the school-children-in-Needham" procedure with Chairman Carr, and his response to it was favorable. Dave Rodham of MCDA has told me that to monitor the school children at the Needham host school was feasible and realistic, and has given his word he will put the procedure in place.

If the Task Force will face up to the inadequacy of the present plan, and support the relatively simple solution, this is one area in which "reasonable assurance" may actually be provided.

II. Other problems for Duxbury Schools - Unfortunately, the current lack of monitoring plans or facilities is not the only problem with the proposed emergency planning for the Duxbury Public Schools. For example:

1. Hand-held monitors: BECo has not delivered the handle-held monitors it promised the School Superintendent. Among other things these are needed to back-up portal monitors in Needham.
2. Training of teachers: Less than 50% of the teachers have been trained. Perhaps this is an indication that the teachers meant it when, in response to a poll, they said that

they would not participate.

3. Interim assignment of Transportation Officers: This is another part of the QUICK FIX. As noted in the letter that the School Committee has submitted to the Task Force,

The Committee "is seriously concerned with the proposed "interim" assignment of BECO personnel employees as Area II Transportation Officers. (Draft report, page 2-144) Trained transportation officers are essential to the successful evacuation of the Duxbury school population. We do not believe that this critical need is met by "BECO volunteers ... on an interim basis and ... not ... for more than a 4- to 6-month period." We request that whatever personnel are required be assigned on a permanent basis.

4. Dose Reduction: As the School Committee said, a dose reduction study should be performed on each school building that has been designated as an emergency shelter. In the event of a fast breaking accident, current plans call for sheltering, not evacuating, the school children. A dose reduction study is necessary (i) to provide guidance to those who must decide whether to shelter or evacuate, and (ii) if sheltering is the choice, to permit the Duxbury school staff to move the student body to the areas of each building that offer the greatest shielding factor.

5. The "new LOA format": The new format, which the Task Force did not review, severely diminishes the level of effective evacuation planning for the schools. The extended mobilization time delays evacuation to such an extent that the concept of "Precautionary Transfer of School Children" is a joke.

6. Misrepresentations of Host Schools: The Task Force draft report refers somewhat obliquely to the fact that, just before the October 1989 exercise, it was discovered that BECO had misrepresented to the NRC that Framingham and Newton were the "host schools" for Duxbury. The Task Force treatment of this is another interesting example of its habit of relying on BECO for factual information, and avoiding public statements embarrassing to BECO. The fact is BECO LIED to the State, to Duxbury, to FEMA, and to the NRC. Did you, the Task Force identify this violation of Title 18 Sec. 1001 to Mr. James Taylor, EDO as you were supposed to?

7. Camp Squanto: Dr Kennedy and the Task Force again missed the point. This is not a training problem; it is a problem in planning. The children to which the Task Force draft report refers, including my son, fell through the cracks because BECo's planners, as they admitted in their Oct. 4, 1990 response to the NRC, could not comprehend that school and camps might run simultaneously. Under BECo's plans, when schools are open, Camp I.P.'s will not be activated. The reverse is also true, as was apparent in Duxbury, last summer when the School were not notified of an unusual event. BECo planners have not yet figured out that all schools and all camps must be notified anytime that Emergency Planning is activated.

Remember, as NRC officials have taught me over the last four years, **planning is simply "get them out and get them monitored"**. Those two key issues have not yet been satisfactorily resolved for Duxbury's School Children.

What can the TASK FORCE do? Recommend setting the 120 day clock - so the State will have the time, and BECo will finally have a real incentive, to fix the problems.

COMMENTS FROM GEORGE W. DAVIS,
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BOSTON EDISON

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June 6, 1991
BECo Ltr. 91-075

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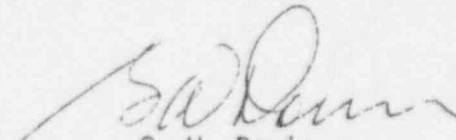
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DRAFT REPORT FOR COMMENT, "FINDINGS ON ISSUES OF
OFFSITE EMERGENCY PREPAREDNESS FOR
PILGRIM NUCLEAR POWER STATION" - NUREG-1438

Boston Edison has reviewed the draft NRC Task Force report entitled "Findings on Issues of Offsite Emergency Preparedness for Pilgrim Nuclear Power Station" - NUREG-1438. Enclosed is a report containing Boston Edison's comments on NUREG-1438. The enclosed report represents the results of our initial reviews. It does not contain all of our comments on, or responses to the Task Force Report as explained more fully in the introductory section of the text.

I will continue my personal involvement in resolving all legitimate issues in accordance with the commitment of Boston Edison's Board of Directors and senior management.

If you have any questions, please feel free to call me or Ron Varley at 508-747-9464.



G. W. Davis

EOF3809

Enclosure

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June 6, 1991
Page Two

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BOSTON EDISON COMPANY COMMENTS
ON NUREG-1438 (DRAFT REPORT FOR
COMMENT) "FINDINGS ON ISSUES OF
OFFSITE EMERGENCY PREPAREDNESS
FOR PILGRIM NUCLEAR POWER STATION"

I. Introduction

On May 28, 1991, the NRC Task Force on Pilgrim Offsite Emergency Preparedness (Task Force) released NUREG-1438 (Draft Report for Comment) -- the report containing the results of the Task Force's exhaustive seven month investigation into the current status of the offsite emergency response program for the Pilgrim Nuclear Power Station (Pilgrim). The Task Force's charter was to review "issues in dispute" raised at the NRC's September 6, 1990 public meeting in Plymouth, Massachusetts and identified through other sources, determine the factual status of the issues, identify and assess the significance of any problems with the offsite emergency response program, and recommend whether the NRC should reconsider its existing finding 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 at Pilgrim. Task Force Report at p. 1-2.

Provided below are Boston Edison Company's comments on draft NUREG-1438. This report represents the results of our initial reviews of the draft Task Force Report. It does not contain all of our comments on, or responses to, the Report. For example, as discussed in more detail below, draft NUREG-1438 contains numerous recommendations for action that could be taken

to further improve the offsite emergency response program for Pilgrim. Boston Edison is examining the Task Force's recommendations carefully and will assist the Commonwealth and the local communities to address, as appropriate, those recommendations. 1/ This report does not identify the specific actions to be taken to achieve that objective, except in certain, identified instances.

The purposes of this document are to: (1) present Boston Edison's general views on the overall content of the Task Force Report; and (2) respond, in particular, to the key findings contained in the Report. As discussed below, Boston Edison believes that the Task Force's review was exhaustive and that its report is comprehensive and well documented. Draft NUREG-1438 authoritatively addresses numerous longstanding issues. Furthermore, it validates Boston Edison's view that the issues identified in the Federal Emergency Management Agency's (FEMA) August, 1987 "Self-Initiated Review" (SIR) have been thoroughly addressed. The Task Force's findings clearly confirm that the offsite radiological emergency response program for Pilgrim provides reasonable assurance that adequate protective measures

1/ One of the Task Force's recommendations addresses Boston Edison's procedure for emergency classification, offsite notification and use of the direct torus vent. Task Force Report at p. 2-165. Although Boston Edison believes that existing controls are adequate to ensure that emergency classification and offsite notification will precede use of the direct torus vent, we will discuss this issue further with the NRC Staff.

can and will be taken in the event of a radiological emergency at Pilgrim.

As Boston Edison has stated on many occasions in the past, the views expressed in this document do not necessarily reflect those of the Commonwealth or the local communities. We appreciate the opportunity to comment on the draft Task Force Report and look forward to utilizing the Task Force's input in further improving the offsite program for Pilgrim.

II. General Comments on the Draft Report

A. Scope of the Review

NUREG-1438 represents the culmination of an intensive, seven month investigative effort in which Commonwealth and local officials and interested local citizens were interviewed, numerous site visits were made to emergency operations centers (EOCs), reception centers, and other facilities, and extensive information was collected. During this time, the offsite emergency response program for Pilgrim was subjected to unprecedented scrutiny.

For example, the Task Force spent considerable effort evaluating the detailed mobilization time data contained in transportation provider letters of agreement (LOAs), assessing the results of the Chadwick, Martin, Bailey survey of the special needs population, and evaluating the adequacy of emergency facilities and equipment. To the best of our knowledge, collection and documentation of detailed mobilization time data

for individual transportation providers is an atypical, if not unique, aspect of the Pilgrim offsite emergency response program. Such data (which is not required by applicable federal regulations but which serves to provide a more comprehensive planning basis) would not even be available for review in many other offsite emergency response programs.

Similarly, the Task Force examined in detail the Chadwick, Martin, Bailey special needs survey. That survey, commissioned by the Commonwealth of Massachusetts and funded by Boston Edison, involved a state-of-the-art assessment of the size and characteristics of the special needs population specific to the Pilgrim Emergency Planning Zone (EPZ). We are not aware of another study of its kind in the country in which detailed statistics were compiled on the special needs characteristics of a particular EPZ population.

The Task Force spent considerable time evaluating the adequacy of emergency facilities and equipment. Over the last several years, Boston Edison has expended close to \$20 million in support of the offsite program, a portion of which has gone to renovate or construct new EOCs and reception centers in the local communities and Massachusetts Civil Defense Agency (MCDA) Area II, and to purchase considerable amounts of emergency equipment. The pre-existing capabilities of local response organizations have been dramatically upgraded. Boston Edison has, in addition, clearly demonstrated its long term commitment to the offsite program through binding agreements for the life of the plant to

purchase and maintain large amounts of equipment. We believe that the level of Boston Edison's financial support for the offsite program is unprecedented. More importantly, that support coupled with the pre-existing resources available to the Commonwealth and local communities, provides a strong and effective emergency response capability.

B. Resolution of Issues

Overall, draft NUREG-1438 is comprehensive and well documented. The Report states that "[m]any issues were clarified and dispelled as a result of information gathered by the task force." Task Force Report at p. 1-6. Boston Edison agrees. In particular, the Report concludes that most of the matters raised at the September 6, 1990 public meeting and through other sources have been adequately addressed in the existing offsite emergency response program. For example, the Report concludes that:

- ° Current plans for monitoring, as necessary, Duxbury school children at the reception center are acceptable (Task Force Report at p. 2-42);
- ° Current plans are adequate and provide practical and feasible measures for protecting the public on Saquish Neck, Gurnet Point and Clark's Island (Task Force Report at pp. 2-74 and 2-82);
- ° The Pilgrim Station Evacuation Time Estimates (ETE) meet the standards of NUREG-0654 (Task Force Report at p. 2-84);

- ° Adequate programs are in place for identifying and assisting the special needs population (Task Force Report at p. 2-119 and 2-122);
- ° Adequate transportation resources are available to evacuate the transportation dependent population (Task Force Report at p. 2-146);
- ° The 1991 Public Information Calendar satisfies applicable regulatory requirements and guidance (Task Force Report at p. 2-149); and
- ° The Pilgrim plume exposure EPZ meets the requirements of applicable NRC regulations (Task Force Report at p. 2-153).

These and many other aspects of the Report demonstrate that numerous longstanding issues have been addressed in the existing offsite emergency response program. These issues include, among others, those identified by FEMA in its August, 1987 SIR. The SIR identified the following six areas of major concern:

- ° Lack of evacuation plans for public and private schools and daycare centers.
- ° Lack of a reception center for people evacuating to the north.
- ° Lack of identifiable public shelters for the beach population.
- ° Inadequate planning for the evacuation of the special needs population.
- ° Inadequate planning for the evacuation of the transport dependent population.

- ° Overall lack of progress in planning and apparent diminution in emergency preparedness.

(SIR Report at p. 1). As briefly summarized below, the Task Force Report demonstrates that these concerns have been adequately addressed.

1. Lack of Evacuation Plans for Public and Private Schools and Day Care Centers

The Task Force examined the status of planning for schools in each of the EPZ communities including issues associated with applicable procedures, transportation resources, and equipment. Although the Task Force recommends various actions to achieve program improvements, the following statements are representative of the Task Force's basic conclusions:

- ° "[N]o serious shortcomings were found" in the Plymouth school procedures (Task Force Report at p. 2-14);
- ° "[T]he issue of lack of an approved plan for Carver school children has been resolved . . ." (Task Force Report at p. 2-23);
- ° "[T]he current [Kingston] school procedure . . . is not inconsistent with any existing planning standards or guidance criteria" (Task Force Report at p. 2-29); 2/
- ° "The Town of Needham has agreed [to provide Needham High School as a host school for Duxbury students], the training of Duxbury and Needham school personnel has

2/ See Task Force Report at pp. 2-26 and 2-27 which discusses the Task Force's findings regarding a backup communication system for the Kingston School Department.

begun, and the State, Needham, and BECo have signed a letter of agreement" (Task Force Report at p. 2-42); and

- ° "MCDA's acceptance of Furnace Brook School as a host school for Marshfield schools supports the resolution of the Marshfield host-school issue" (Task Force Report at p. 2-53). 3/

2. Lack of a Reception Center for People Evacuating to the North

The Task Force evaluated the Wellesley reception center and its associated EOC, including facilities, equipment and staffing. It found that the reception center and EOC are in place and functionally equipped, and stated that they will be evaluated further in the next exercise. The Task Force recommended that an additional portal monitor be moved to the Wellesley facility. That has been accomplished. The Task Force also found that the reception center is accessible to the handicapped. Task Force Report at pp. 2-95 and 2-96.

Furthermore, staffing is adequate to enable the facility to monitor 20% of the evacuating population in about 12 hours, in accordance with existing FEMA guidance. Task Force Report at p. 2-99.

3/ See Task Force Report at p. 2-47 discussing the Task Force's findings regarding an additional CB radio for one of the Marshfield schools.

3. Lack of Identifiable Public Shelters for the Beach Population

The Task Force found that the local communities "have planned for the option of sheltering the population including beach population and other transient summer populations," and that procedures "provide for the implementation of" a sheltering recommendation. . . . (Task Force Report at p. 2-150). 4/

4. Inadequate Planning for the Evacuation of the Special Needs Population

The Task Force Report concludes that:

The enhanced self-identification program, coupled with the provision in the plan calling for persons with special needs to contact their town's emergency operations center should they need assistance during an emergency, is sufficient to adequately identify persons with special needs as called for in the Federal guidance in NUREG-0654 and FEMA GM-24.

Task Force Report at p. 2-119. It also found that:

adequate transportation sources had been identified for persons with special needs on the basis of the Chadwick, Martin and Bailey study and the old [special needs] lists [and that] [p]ersons confined to institutions within the EPZ are adequately defined and their needs adequately assessed by town planners.

4/ The Task Force does recommend that additional guidance be incorporated into Commonwealth procedures to assist in selecting the most appropriate protective action recommendation (i.e., sheltering or evacuation). Task Force Report at p. 2-151. This is discussed further at p. 33 below.

Task Force Report at p. 2-122. 5/

5. Inadequate Planning for the Evacuation
of the Transport Dependent Population

The Task Force Report states, among other things, that:

the total number of buses, vans, lift vans, ambulances, and drivers that would be needed to evacuate the identified transportation-dependent populations would be available from among those committed in letters of agreement. The task force also found that the total number of buses, vans, lift vans, and drivers needed for a precautionary evacuation of the schools and day care centers located within the Pilgrim EPZ had been identified in sufficient numbers. The above conclusion is true for both operating hours and non-operating hours of the transportation providers.

Task Force Report at p. 2-146.

6. Overall Lack of Progress and Apparent
Diminution in Emergency Preparedness

The August 1987 SIR criticized the Commonwealth for lack of progress in maintaining the offsite program. Since that time, there have been dramatic program improvements. Both the Task Force review and the most recent exercises demonstrate that those improvements have been achieved.

5/ See pp. 30-32 below regarding the Task Force's findings on incorporation of the Self-Identification Program results into local special needs lists.

III. Boston Edison Response to Key Findings

Given the scope of the Task Force's review effort, and the fact that emergency preparedness is not static, but a fluid process, it is not surprising that some areas for further attention were identified and that other recommendations were made for program improvements. The Report identifies five general areas that "warrant attention before the next full participation exercise in December 1991," and contains other recommendations for action throughout the text. The five areas are:

- ° Emergency notification communications equipment (e.g., pagers and radios) for some emergency response personnel in some towns need improvement.
- ° Responsibility for maintenance of some emergency response equipment in some towns needs to be resolved.
- ° Participation in training for offsite emergency response personnel needs to be substantially increased.
- ° State and some town civil defense agencies need to incorporate results from the self-identification program survey into their lists of persons with special needs and provide for regular maintenance of those lists.
- ° Plans and implementing procedures for the Massachusetts Civil Defense Agency (MCDA) and the Department of Public Health and MCDA Area II need to be made consistent with those of the local communities.

- Transportation procedures need to be better coordinated among MCDA Area II, transportation providers, and the towns.
- State plans need specific procedures to guide officials who must make protective action decisions.

Task Force Report at p. 1-6.

Each of these five basic recommendations appears to be derived from more specific underlying factual findings contained in the Task Force Report. This section provides additional information on those underlying findings. Boston Edison's plans for assisting offsite authorities in addressing the five general areas are presently being developed. Boston Edison will work with and support Commonwealth and local officials to address, as appropriate, the five areas identified for attention as well as the Task Force's other recommendations. We have discussed this matter with MCDA and have agreed to work together to achieve that objective.

We believe that in several of these areas, cooperative efforts since the completion of the Task Force's investigations in the field have resulted in resolution of the issue or significant progress to that end. For example, additional communication equipment is being installed in Kingston and modifications will be completed in Marshfield. The administrative procedures which will assist in maintaining the program and coordinating the various efforts are in the review

process in the Commonwealth. We have met with Town officials to review outstanding requests and discuss solutions for the remaining issues; and we will continue to do so.

Before discussing the specific findings which appear to underlie the Task Force's five basic recommendations, Boston Edison has several general comments on the implications and significance of the Task Force's findings. First, several of the Task Force's findings discuss the provision or maintenance of certain specific pieces of emergency response equipment (e.g., radios, pagers). As a general matter, we do not believe that there has been a failure to meet the emergency planning standards embodied in NRC regulations. The pre-existing capabilities of the offsite authorities have been dramatically enhanced over the last several years. Overall, ample resources have been provided to support an effective emergency response. While additional resources may in some specific instances be desirable, it does not follow that sufficient equipment to support an effective emergency response has not been provided.

Second, to the extent that the Task Force has recommended actions which are not required of other offsite emergency response programs, it has, in effect, created new regulatory criteria specifically applicable to Pilgrim. For example, several of the Task Force's findings state that NUREG-0654, Evaluation Criterion F.1 (governing the provision of primary and backup means of communication for licensees and response organizations) has not been met due to the failure to

provide or maintain pagers for certain emergency response personnel. We do not believe that the criterion for primary and backup communications applies to individual emergency workers as opposed to communications among principal response organizations. NUREG-0654, Evaluation Criterion F.1 specifically states that "Each organization shall establish reliable primary and backup means of communication for licensees, local, and State response organizations." 6/

Finally, as the NRC is aware, radiological emergency planning programs are fluid and must continuously deal with changing circumstances. At any given time, it is inevitable that some program elements will require improvement, updating or modification. For example, equipment such as radios or pagers may require repair or replacement. The need for such changes, however, does not necessarily represent a failure to meet regulatory requirements. Furthermore, in many instances, various

6/ In Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-85-12, 21 NRC 644, 739, 991-92, aff'd, ALAB-818, 22 NRC 651 (1985), the Board examined a contention alleging that backup communications were required between EOCs and emergency field personnel (e.g., survey teams, traffic guides, staging area coordinators) and stated:

[W]e find no reference to the necessity for backup communications systems in NUREG-0654, II.F.1.... Reliance on that section may well be misplaced since we are unable to find a requirement even for a primary communications system to be used by rank-and-file emergency workers in the field.

The Board concludes that there is no regulatory basis for requiring backup channels for LILCO's emergency radio system.

options are available to address a perceived planning problem. Alternatives to the purchase of substantial amounts of new equipment may include procedural changes, reassigned responsibilities, additional training or other program changes.

The specific findings underlying the Task Force's five general recommendations are discussed below.

A. Replacement Batteries For Police Department Radios and Fire Department Pagers in Plymouth

According to the Task Force Report, in meetings between the Task Force and officials from the Town of Plymouth, the maintenance of portable Police Department radios and Fire Department pagers provided by Boston Edison was identified as an issue. Task Force Report at pp. 2-6 to 2-12. The Town of Plymouth (which uses this equipment on a day-to-day basis) has stated that it does not have the necessary funds to replace the batteries. While this equipment was provided to the Town by Boston Edison, it is not encompassed by the applicable Comprehensive Grant Agreement. As reflected in the attached letters (Attachments 1 and 2), with regard to the Fire Department pagers, the Plymouth Fire Chief previously agreed that his Department would be responsible for maintaining the pagers.

In its assessment of this issue, the Task Force stated that 10 CFR § 50.47(b)(8) will not be met until the issue involving the maintenance of the Police Department radios and the

Fire Department pagers has been satisfactorily resolved. Task Force Report at p. 2-10. Section 50.47(b)(8), states:

(8) Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

On May 3, 1991, Boston Edison Emergency Preparedness Department personnel met with officials from the Town of Plymouth to discuss, among other things, this issue. At this meeting it was agreed that the Plymouth Civil Defense Director would provide Boston Edison with more detailed information on what the Town views as its specific needs regarding the replacement batteries. Boston Edison will review the information upon receipt and anticipates that a mutually agreeable resolution of this issue can be achieved.

In any event, Boston Edison believes that the prospective need to replace batteries for police department radios and fire department pagers does not mean that adequate equipment is not presently being provided and maintained.

B. Additional Training Progress in the Towns of Plymouth, Kingston, and Duxbury

According to the Task Force Report, in meetings between officials from the Towns of Plymouth, Kingston, and Duxbury, and the Task Force, the percentage of emergency worker training completed was raised as an issue. Task Force Report at pp. 2-15, 2-30, and 2-44. The Task Force reviewed the training data contained in the Commonwealth's 1990 Annual Letter of

Certification (ALC) for the Pilgrim Nuclear Power Station, and concluded that Evaluation Criterion 0.5 of NUREG-0654 was not met in each of the three Towns for 1990. Task Force Report at pp. 2-16, 2-30, and 2-44. Evaluation Criterion 0.5 states that:

5. Each organization shall provide for the initial and annual retraining of personnel with emergency response responsibilities.

The Task Force's conclusion was based on a determination from information in the ALC that the overall percentage of training hours completed in each of the three Towns was low. This overall percentage is based on the number of training hours assigned versus the number of training hours completed. As discussed below, Boston Edison believes that the summary data contained in the ALC does not provide a full picture of the status of training progress, ^{1/} and that NUREG-0654, Evaluation Criterion 0.5 was met in 1990.

Training of the approximately 4,000 - 5,000 emergency workers, teachers and transportation providers is carried out pursuant to the Commonwealth's comprehensive training program which Boston Edison assisted in developing. The training program consists of training modules which contain one or more lesson plans. Lesson plans are tailored to relate to a particular emergency response action by an emergency worker using an implementing procedure. This might include hands-on training for the use of a particular piece of equipment like a dosimeter,

^{1/} The Task Force acknowledged the difficulty in interpreting the training data. (Task Force Report at p. 2-44).

survey meter, portal monitor, or a radio. It could also include training in such skills as how to fill out a form, read a map, or handle a contaminated injured individual. Training also includes classroom sessions which review implementing procedures and emergency response actions. Additionally, an emergency worker must receive training in "Introduction to Radiation" and "Introduction to Emergency Response." Exercise practicals and drills are also part of the training program. These enable individuals to practice the skills they have learned.

Also included as a part of the comprehensive training program is a program called "Instructor Certification Program" which includes a Train-the-Trainer program for instructors consisting of classroom training, classroom presentation and an evaluated field presentation. Candidates include personnel from the Commonwealth, local communities, and the Boston Edison Emergency Preparedness Department staff. All candidates must be approved by the MCDA Training Coordinator prior to instructing a training course.

Boston Edison also compensates emergency workers from the five EPZ towns, two reception center communities, as well as volunteers and teachers who receive training. Finally, the elements of the training program are reviewed and updated annually. Thus, a detailed and comprehensive training program has been established and is being implemented.

Classroom training under the above described training program was offered by the Commonwealth during 1990 to the

various organizations within the towns which play an emergency response role. The hours required to complete this classroom training appear in the "hours assigned" column in the ALC and were offered during 1990. However, another type of training which also is included in the "hours assigned" column of the ALC and was not offered during 1990 is the conduct of "practicals" and drills in preparation for the biennial exercise to be conducted in December 1991. As part of the regular training cycle, which is geared to the biennial exercise requirement, practicals and drills are offered in the year of an exercise and are typically conducted in the months leading up to the exercise. Therefore, the figures reflected in the ALC represent approximately the midpoint of the training cycle, and the fact that drills and practicals were not scheduled to be conducted until sometime in 1991 makes the overall percentage of training hours completed in 1990 appear somewhat lower.

Additionally, the percentage of training hours completed in 1990 appears lower because the towns assign and train more individuals than are necessary to support a response. A good example of this occurs in the Town of Duxbury. As reflected in the ALC, although the Duxbury emergency response organization requires 155 people, 195 personnel have been assigned and 142 of the personnel have been trained. Thus, the percentage of persons required to carry out the emergency response that have been trained is higher than the percentage of persons "assigned" that have been trained.

Furthermore, while the NRC regulations and guidelines establish that offsite workers be provided with training, they do not require that any particular percentage be trained at a given time or that the training organizations assure that such training is accepted by individual emergency workers. E.g. Shoreham, 21 NRC at 754-55 (1985). Therefore, based on the information provided above, Boston Edison believes that Evaluation Criterion 0.5 has been satisfied.

C. Maintenance of Carver Fire Department Pagers

According to the Task Force Report, in meetings between the Task Force and officials from the Town of Carver, the maintenance of Fire Department pagers provided by Boston Edison was identified as an issue. Task Force Report at pp. 2-17 and 2-18. In particular, the Carver Fire Chief stated that approximately 50 pagers provided by Boston Edison in 1982, (before the Comprehensive Grant Agreement went into effect) are outdated and unreliable, and that the Town will no longer be able to maintain the pagers at its own expense. Based on these statements, and Boston Edison's position that it is not responsible for their maintenance, the Task Force determined that "the maintenance aspect of 10 CFR § 50.47(b)(8) is not met." Task Force Report at p. 2-20.

As stated above, 10 CFR § 50.47(b)(8) provides that:

(8) Adequate emergency facilities and equipment to support

the emergency response are provided and maintained.

Boston Edison believes that this provision has been satisfied. The Task Force appears to have based its assessment on statements from Carver officials that the Town will not maintain the Fire Department pagers which it uses on a day-to-day basis for emergencies. However, as noted by the Task Force Report, in September 1989, the Town's Executive Secretary requested that the Comprehensive Grant Agreement be reopened because, due to budget constraints, Carver would not be able to maintain the Fire Department pagers. In a letter dated April 19, 1990, from the Fire Chief to the Executive Secretary, the Fire Chief stated that the pagers continued to be maintained since July 1989. Task Force Report at p. 2-17. Furthermore, as discussed above, provision of additional equipment is not necessarily the only means of addressing a perceived planning problem. In the case of the Carver Fire Department's responsibilities, use of a "call-tree" would be adequate. 8/ Boston Edison believes that the prospective need to maintain the pagers does not represent a failure to satisfy 10 CFR § 50.47(b)(8).

8/ Use of such systems has been found acceptable in other instances. E.g., Shoreham, 21 NRC at 714.

D. Radio Frequencies at the Kingston Transportation Staging Area

According to the Task Force Report, in discussions between the Task Force and officials from the Town of Kingston, the assignment of radio frequencies by MCDA to radios at the Kingston Transportation Staging Area (TSA) was identified as an issue. Task Force Report at p. 2-26. In its assessment of this issue, the Task Force noted that Boston Edison has provided the necessary radios to Kingston in order to establish communications between the TSA and the Kingston EOC. However, since MCDA representatives are contemplating the assignment of a separate radio frequency for each Town to communicate with its TSA, according to the Task Force Report, NUREG-0654, Evaluation Criterion F.1 will only be met when the new frequency in Kingston is assigned and incorporated into the radio network. Task Force Report at p. 2-27.

Evaluation Criterion F.1 in NUREG-0654 provides that:

1. The communication plans for emergencies shall include organizational titles and alternate for both ends of the communication links. Each organization shall establish reliable primary and backup means of communication for licensees, local, and State response organizations. Such systems should be selected to be compatible with one another . . .

Boston Edison believes that the offsite emergency preparedness program for Pilgrim currently satisfies Evaluation Criterion F.1 with respect to communications between the Kingston TSA and EOC. There is currently in place a radio system for use in communicating between the TSA and the EOC which was installed by

Boston Edison to address this concern. In addition, during the 1989 exercise, FEMA's Exercise Objective 4 for communications at the Kingston TSA was met.

Therefore, based on the above, Boston Edison believes that the communications system currently in place at the Kingston TSA for use in contacting the Kingston EOC is adequate and complies with Evaluation Criterion F.1.

E. Backup Communications for the Kingston School Department

According to the Task Force Report, in a meeting between the Task Force and officials from the Town of Kingston, an issue concerning backup communications for the Kingston School Department was discussed. Task Force Report at p. 2-26. In particular, the Task Force learned that the Town of Kingston and Boston Edison had reached an agreement under which Boston Edison would provide the Town with a backup communications system consisting of citizens band (CB) radios for the Kingston High School, Kingston Elementary School and Sacred Heart Parochial School, which will be tied to a base station in the Superintendent's office.

At the time the Task Force released its report, all of the CB radio equipment for this system had not yet been delivered. Therefore, the Task Force concluded that 10 CFR § 50.47(b)(6) and Evaluation Criterion F.1 in NUREG-0654 would be met when the radios were delivered. Boston Edison does not

believe that either Section 50.47(b)(6) or Evaluation Criterion F.1 contemplate provision of backup communications equipment among individual schools or other similar special facilities. In our view, these regulatory criteria apply only to response organizations. In any event, the last piece of equipment for the backup radio communications system for the Kingston School Department is being installed by Boston Edison as a program enhancement. Therefore, this issue has been resolved.

F. Range of Pagers for Duxbury Selectmen

According to the Task Force Report, in meetings between the Task Force and officials from the Town of Duxbury, an issue concerning the range of the pagers used by the Duxbury Selectmen was identified. Task Force Report at pp. 2-32 and 2-33. In particular, the Duxbury Civil Defense Director stated that the radio pagers provided by Boston Edison only have a range of 10-12 miles and are unable to reach the three Duxbury Selectmen when they are at their jobs outside of the Town. Task Force Report at p. 2-32.

In its assessment of this issue, the Task Force stated that:

Section II, Part E, paragraph 2.f of the Town of Duxbury Radiological Emergency Response Plan for the Pilgrim Nuclear Power Station, Rev. 7, dated December 1, 1989, states that individuals in the Town's emergency response organization will be contacted using commercial telephones and told to report to the EOC, that pagers or radio systems will be used as backup means of notification, and that all key members of the Civil Defense Agency

and their alternates should have pagers. Section I, Part A, paragraph 4.(a)1(a), of the plan states that the Board of Selectmen will provide overall supervision of the emergency response.

Task Force Report at p. 2-36.

The Task Force found that Boston Edison had provided radio pagers to emergency response personnel in Duxbury and that the pagers assigned to the three Selectmen and Health Officer did not have sufficient range. Task Force Report at p. 2-36. Next, the Task Force noted that NUREG-0654 Evaluation Criterion F.1 states that a primary and a backup means of communication are necessary and that Evaluation Criterion E.2 states that each organization shall establish procedures for alerting and mobilizing personnel. The Task Force concluded that "[t]he provisions of the plan and the regulatory guidance regarding a backup means for notifying the Selectmen and the Health Officer have not been met." Task Force Report at p. 2-36.

Only one Selectman and Health Officer is needed at the EOC during an emergency. If for some reason the first Selectman cannot be contacted by commercial telephone and does not respond to a page, the second or third Selectman could most likely be reached by telephone or pager. The same holds true for the Health Officer's position at the EOC, because there are two individuals trained for this position. If the first Health Officer cannot be reached by telephone or pager, then the second individual trained to fill the Health Officer's position (who works in the Town of Duxbury) could be contacted.

It should be noted that, the Duxbury Selectmen and Health Officer have for the past several months been leasing "commercial" pagers with a broader range and that, therefore, the Town has resolved this issue on its own.

G. Portable Radios for the Duxbury Lifeguards

According to the Task Force Report, in a meeting between the Task Force and officials from the Town of Duxbury, the need for portable radios for the Duxbury lifeguards was identified as an issue. Task Force Report at p. 2-34. In particular, the Town believes that since the lifeguards assist the Duxbury Conservation Department in conducting a precautionary clearing of the beaches at the Alert emergency classification level, the lifeguards need portable radios to carry out this task.

In examining this issue, the Task Force concluded that since "the lifeguards function as emergency workers, they should have communications to meet the intent or guidance in Evaluation Criterion E.2 and F.1." Task Force Report at p. 2-36.

Evaluation Criterion E.2 provides:

2. Each organization shall establish procedures for alerting, notifying, and mobilizing emergency response personnel.

and Evaluation Criterion F.1 provides:

1. The communication plans for emergencies shall include organizational titles and alternates for both ends of the communication links. Each organization shall establish reliable primary and backup means of communication for licensees,

local, and State response organizations. Such systems should be selected to be compatible with one another

Boston Edison believes that the guidance contained in Evaluation Criterion E.2 and F.1 has been met.

An examination of the function carried out by the lifeguards reveals that they do not require radios to assist the Duxbury Conservation Department in clearing the beaches. A precautionary closure of the beaches is performed at the Alert classification level, well before any potential threat of a radiological release would occur. As stated in the current "Beach Alerting Instruction Sheet" used by the Conservation Department, the Beach Alerting Teams are to first notify the lifeguards of the emergency condition and direct the lifeguards to assist them in clearing the beach. Then the Teams are to begin clearing the beaches by broadcasting the appropriate message contained in the "Beach Alerting Instruction Sheet." (See Town of Duxbury IP-15 (Draft-6, January 21, 1991), entitled "Conservation Department," Attachment 2. Thus, the lifeguards are notified of the emergency condition and directed to assist in clearing the beaches by the Conservation Department Beach Alerting Teams before any messages are broadcast to the general public.

Therefore, Boston Edison believes that the Duxbury lifeguards do not need portable radios to assist the Conservation Department in clearing the beaches and that adequate procedures

have been established in accordance with Evaluation Criterion E.2 and F.1 to notify and mobilize the lifeguards.

H. Marshfield School Department CB Radio and Antenna for the TSA

According to the Task Force Report, in meetings between the Task Force and officials from the Town of Marshfield, the need for a CB radio for one of the schools and an antenna at the transportation staging area were identified as issues. Task Force Report at p. 2-47. In assessing these issues, the Task Force stated that Boston Edison intends to provide this equipment to the Town. According to the Task Force, once this equipment has been provided, 10 CFR § 50.47(b)(6) and (8) will be met.

Boston Edison was first made aware of the desire for a CB radio at the school at the meetings between the Task Force and Town officials. Boston Edison intends to provide a CB radio for the school as a program enhancement.

With regard to the antenna at the TSA, Boston Edison has installed three antennas at the Marshfield TSA for use in emergency response. In addition, as a courtesy to the Town of Marshfield, Boston Edison relocated an existing Town antenna which is not used for Radiological Emergency Response Plan purposes on top of the TSA building. Therefore, these issues have been resolved.

I. Bridgewater Pagers

According to the Task Force Report, in meetings between the Task Force and officials from the Town of Bridgewater, an issue concerning pagers provided by Boston Edison to the Town was identified. In assessing this issue the Task Force noted that Implementing Procedure IP-07 for the Town of Bridgewater Fire Department (Draft 6, June 15, 1990) states that in the event of an emergency at Pilgrim, the fire dispatcher performs an "all call" page of the 26 names on the pager notification list. Task Force Report at p. 2-105. Apparently some of the individuals on the all call list may live or work outside the radio range of the pagers. Therefore, the Task Force determined that the provisions of the plan and the regulatory guidance regarding a primary means for notifying and mobilizing emergency response personnel are not met. Task Force Report at pp. 2-105 and 2-106.

For those individuals who for whatever reason do not respond to the "all call" page, the fire dispatcher has their work and home telephone numbers so that they can be contacted. In addition, as discussed above in the section examining the Duxbury pager issue, there is more than one individual slotted to fill each key position in the Bridgewater emergency response organization. If the first person to fill a particular position cannot be contacted for some reason, then the other individual slotted to fill that position could be contacted. The redundancy of personnel in place at the local EOCs serves as an additional backup. This issue could also be addressed by changing the

Town's procedures, to make the commercial telephone the primary means of alerting individuals.

Therefore, Boston Edison believes that adequate procedures are in place for alerting, notifying, and mobilizing emergency response personnel in Bridgewater.

J. Special Needs Self-Identification

The Task Force Report discusses the enhanced self-identification program (SIP) survey conducted by MCDA with Boston Edison support. The purpose of the SIP was to improve upon the existing methods of collecting data on the names, addresses and needs of the special needs population in the EPZ. Task Force Report at p. 2-115. Those existing methods relied primarily on mail-in cards attached to annual public information brochures -- a practice utilized throughout the country as the primary means of collecting such information. The Task Force Report notes the concerns of some local officials that special needs persons are reluctant to identify themselves and that not all such persons would respond to the mail-in card.

The Task Force found that:

The enhanced self-identification program, coupled with the provision in the plan calling for persons with special needs to contact their Town's emergency operations center should they need assistance during an emergency, is sufficient to adequately identify persons with special needs as called for in the Federal guidance in NUREG-0654 and FEMA GM-24. The mail-in card system is an accepted practice.

Task Force Report at p. 2-119. However, because the Towns of Plymouth and Duxbury had not completed incorporating the SIP results into their special needs lists, the Task Force recommends that such results be incorporated before the next exercise.

Boston Edison agrees that incorporation of the SIP results into all of the special needs lists should be promptly completed. In fact, Duxbury has completed the incorporation of the SIP results into its special needs list. In addition, Boston Edison has agreed to assist MCDA in meeting its commitment to incorporate the SIP results into the Plymouth special needs list by July 1, 1991.

However, the concerns expressed about the pre-existing lists (e.g., reluctance to self-identify) are not particular to the Pilgrim EPZ and should apply equally to any other special needs identification program. Furthermore, to the extent that particular individuals have not come forward and identified themselves prior to an emergency, as the Task Force noted, a system is in place for real-time self-identification (and provision of necessary resources) during an emergency. In addition, use of public information brochure mail-in cards as the primary means of pre-identifying persons with special needs is the common method utilized throughout the country and is recommended by FEMA guidance. The SIP was conducted to implement recommendations from the Chadwick, Martin, Bailey study and represents an enhancement of traditional industry practice.

The Task Force also recommends that Civil Defense officials should provide for regular maintenance of the special needs lists. Task Force Report at p. 1-6. Boston Edison agrees. As the Task Force acknowledged, an Administrative Procedure governing "Special Needs Program Maintenance" has been prepared to provide a uniform, effective maintenance system. Task Force Report at p. 2-117. The procedure is scheduled to be reviewed with MCDA on June 11.

K. Procedural Improvements

The Task Force Report discusses the need for improving the consistency between Commonwealth plans and procedures (MCDA, MDPH and Area II) and local plans and procedures in two areas: (1) better coordination of transportation procedures; and (2) incorporation of specific procedures to guide protective action decision-making into Commonwealth plans. Task Force Report at p. 1-6.

With respect to better coordination of transportation procedures, the Task Force's recommendation appears to be based upon various differences identified among Commonwealth and local procedures and planning documents regarding specific vehicle assignments. Task Force Report at pp. 2-133, 2-134, 2-143 and 2-146. Such differences resulted primarily from the fact that new and revised data cannot be simultaneously incorporated in all applicable Commonwealth and local procedures. Thus, this is essentially an administrative matter that can be addressed, to

some degree, by improved administrative controls. The applicable administrative procedure is scheduled to be reviewed with MCDA on June 11. In any event, the Task Force's fundamental conclusion on the adequacy of the transportation program for the Pilgrim EPZ is that adequate resources have been identified and are available.

The Task Force's recommendation that Commonwealth plans incorporate specific guidance for protective action decision-making addresses MDPH's procedures for responding to accidents at any of the nuclear power plants within its jurisdiction. Boston Edison will work with MDPH to address the Task Force's concern.

IV. Conclusion

As discussed above, the Task Force report is comprehensive and well-documented and authoritatively addresses numerous longstanding issues. The Task Force's findings clearly confirm that the offsite radiological emergency response program for Pilgrim provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at Pilgrim. Boston Edison is examining the Task Force's recommendations carefully and will assist the Commonwealth and the local communities in addressing, as appropriate, those recommendations. We appreciate the opportunity to present our views on the draft report.



BOSTON EDISON

Emergency Preparedness Department
59 Industrial Park Road
Plymouth, Massachusetts 02360

August 22, 1988

EP88-1011

Chief Eugene Rasori
Plymouth Fire Department
114 Sandwich Street
Plymouth, MA 02360

Dear Chief Rasori:

Boston Edison has evaluated and approved your request for pagers for the Plymouth Fire Department.

I understand the following items were agreed upon at the last meeting between Plymouth Fire Department and my staff, Albert Samano and Marion Gedutis.

1. Boston Edison agrees to purchase:
 - (135) "Minitor II" Alert Monitor Receivers with four call option
 - (135) Single Unit Chargers
 - 5 year Express Maintenance Plan
2. Plymouth Fire Department will own, operate and repair all equipment.
3. Plymouth Fire Department will be responsible for all union grievances.
4. Plymouth Fire Department is responsible for all licensing requirements.
5. Prior to purchase of equipment, Boston Edison agrees to meet with Plymouth Fire Department to finalize equipment specifications.
6. Upon receipt of order by the vendor, there is approximately a sixteen week waiting period.

I would appreciate a written response to ensure agreement with the terms listed above.

Sincerely,

R.A. Varley
Manager - Emergency Preparedness

cc: A. Thompson
D. Hadfield
A. Samano
M. Gedutis



PLYMOUTH FIRE DEPARTMENT

PLYMOUTH, MA 02360

TEL. 746 2212

August 25, 1988


Ronald A. Varley, Manager
Emergency Preparedness
Boston Edison
59 Industrial Park Road
Plymouth, MA 02360

Dear Mr. Varley:

This is to confirm that I have reviewed and agree to the conditions proposed by Boston Edison in your letter dated August 22, 1988, relating to the purchase of one hundred and thirty five (135) pagers for the Plymouth Fire Department.

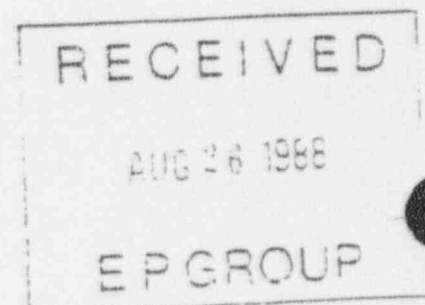
These pagers are being provided in conjunction with the Plymouth Fire Departments role in the proposed Radiological Emergency Response Procedure.

Respectfully,


Eugene J. Rasori
Chief of Department

EJR/1k

copies to: Alba Thompson
Douglas Hadfield



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10. SUPPLEMENTARY NOTES

11. ABSTRACT (200 words or less)

This final report presents the findings of the Pilgrim offsite emergency preparedness task force chartered to review approximately 20 issues raised in a public meeting held by the U.S. Nuclear Regulatory Commission (NRC) in Plymouth, Massachusetts, September 6, 1990. The task force consisted of staff from the NRC and the Federal Emergency Management Agency supported by contractors. Factual information for this review was obtained primarily by task force teams working with State and local officials responsible for emergency preparedness in the area of the Pilgrim Nuclear Power Station. This report includes comments received on the draft report at a public meeting on June 12, 1991, in Plymouth, Massachusetts, and a transcript of that meeting.

12. KEY WORDS/DESCRIPTORS (List words or phrases that will assist researchers in locating the report.)

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