**PSEG**
P.O. Box 236, Hancocks Bridge, NJ 08038-0236

PSEG
*Nuclear LLC*

10 CFR 50.54(q)
10 CFR 50.4(b)(5)

LR-N12-0068
February 23, 2012

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Salem Nuclear Generating Station, Units 1 and 2
Renewed Facility Operating License Nos. DPR-70 and DPR-75
NRC Docket Nos. 50-272 and 50-311

Hope Creek Generating Station
Renewed Facility Operating License No. NPF-57
NRC Docket No. 50-354

**Subject: Emergency Plan Document Revisions Implemented January 25, 2012**

Pursuant to 10 CFR 50.54(q) and 10 CFR 50.4(b)(5), PSEG Nuclear LLC (PSEG) hereby submits a summary of Emergency Plan Document revisions implemented January 25, 2012 (Attachment) and copies of the revised documents in their entirety (Enclosure) associated with the PSEG Nuclear LLC Emergency Plan that did not require prior NRC approval. There are no regulatory commitments contained in this letter. This letter, the attachment and the enclosure do not contain any personal privacy, proprietary, or safeguards information for which protection is requested under the provisions for 10 CFR 2.390.

If you have any questions or require additional information, please contact Lee Marabella, Senior Licensing Engineer, at 856-339-1208 or Craig Banner, Emergency Preparedness, at 856-339-1157.

Respectfully,

Robert L. Vondrasek

ROBERT L. VONDRASEK FOR
David Burgin
Manager - Emergency Preparedness

Attachment
Enclosure

C: W. Dean, Administrator, Region I, NRC
R. Ennis, Project Manager - USNRC
NRC Senior Resident Inspector - Salem
NRC Senior Resident Inspector - Hope Creek
P. Mulligan, Manager IV, NJBNE
T. Cachaza - Commitment Tracking Coordinator - Salem
K. Yearwood - Commitment Tracking Coordinator - Hope Creek
L. Marabella - Corporate Commitment Tracking Coordinator

**Summary of Emergency Plan Document Revisions Implemented January 25, 2012**

The following Emergency Plan document revisions were reviewed in accordance with 10CFR50.54(q) and determined to not require prior NRC approval:

**Revision Summary:**

**Summary:** Emergency Plan Section 1, Revision 15, – Introduction
**Editorial:** For improved clarity, proper balance and technical completeness of Table 1–1 on page 1.10. Added the following towns/townships, approximate distance to the site and associated emergency response planning area (ERPA) to Table 1–1 on Page 1.10 ... Elsinboro Township 2.5 (NNE), Mannington 8.4 (NNE), Pennsville 7.5 (N), Greenwich 7.2 (ESE) and Stow Creek 6.6 (E)
**Note:** Table only displayed 3 of the 8 New Jersey EPZ towns. These towns have been part of the ten mile EPZ since prior to commercial operation of any unit on Artificial Island. Distances to the site and EPZ associations were verified by KLD Engineering on 10/19/11.

**Summary:** Emergency Plan Section 2, Revision 20 – Assignment of Responsibilities
**Editorial:** This is an editorial change as it is being made to reflect a change to the PSEG Organizational Structure as indicated in the FSAR. This E-plan change is being made to reflect the approved FSAR change. See 50.54Q #2011-15 for FSAR change justification.
The responsibility for overall management and oversight of the PSEG Nuclear Corporate Emergency Preparedness Program is being moved from the Director – Regulatory Affairs to a new position titled, Director – Emergency Services. The Director – Emergency Services will also have responsibility for overall management and oversight of the PSEG Nuclear's Security Department.

**Summary:** Emergency Plan Section 4, Revision 13 – Emergency Response Support and Resources
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**Summary:** Emergency Plan Section 17, Revision 21 – Emergency Plan Administration
**Editorial:** Revised Figure 17-1 to reflect that Assisting offsite agencies with 44CFR350 Certification fall under the Emergency Facilities area of responsibility and not under Offsite Planning

**Emergency Plan Document Revisions Implemented January 25, 2012**

The following revised documents are enclosed:

- AIEP – TOC, Revision 68, - Emergency Plan Table Of Contents
- Emergency Plan Section 1, Revision 15, – Introduction
- Emergency Plan Section 2, Revision 20 – Assignment of Responsibilities
- Emergency Plan Section 4, Revision 13 – Emergency Response Support and Resources
- Emergency Plan Section 6, Revision 16 – Notification Methods - Response Organizations
- Emergency Plan Section 9, Revision 22, – Emergency Facilities and Equipment
- Emergency Plan Section 16, Revision 22 – Radiological Emergency Response Training
- Emergency Plan Section 17, Revision 21 – Emergency Plan Administration

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| 1.a | Section 2 & 4 |
| 1.b | Section 2 |
| 1.c | Section 2 Figures |
| 1.d | Section 3 |
| 1.e | Section 3,4 |
| 2.a | N/A |
| 2.b | N/A |
| 3 | Att 2 |
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| 3 | Section 3 |
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| 1 | Section 5.0, Att 5 |
| 2 | Section 5.0, Att 5 |
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| 4 | N/A |

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| 6 | Section 1 | | |
| 7 | TOC, Att 1 | | |
| 8 | TOC, List of NUREG Cross Ref. | | |
| 9 | Section 17 | | |
| 10 | Section 17 | | |

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## SECTION 1

## INTRODUCTION

1.0 Purpose

This plan has as its fundamental purpose the protection of health and safety of the general public and site personnel from the potential hazards of a radiological emergency.

2.0 Background

This plan is submitted in accordance with the requirements of 10 CFR 50.54(q), 10 CFR 50 Appendix E and the objectives of NUREG 0654 (November 1980).

3.0 Scope

This plan identifies the normal and emergency operating organizations, the emergency facilities available, and the overall program for managing and recovering from an emergency situation. The plan shows which federal, state, and local authorities and agencies are available for assistance, and that liaison with such authorities and agencies can be and is established in order to obtain assistance and implement protective actions if necessary. In this manner, the plan reflects the combined efforts and coordination of all responsible organizations, and addresses the general criteria and organization for managing an emergency.

4.0 Planning Basis

In developing this plan, the following reference documents were used as the planning basis:

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

(2) "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants" NUREG-0396, EPA 510/1-78-016 (December 1978).

The overall objective of this plan is to prevent or reduce radiation exposures to the public resulting from an accident at Salem and Hope Creek Generating Stations or Spent Fuel Storage. The actual or potential exposures considered in the development of this plan are due to the two principal pathways (plume and ingestion). Although the selected planning basis is independent of specific accident sequences, a number of accident descriptions were considered in the development of this plan, including the core melt accident release categories of the Reactor Safety Study (WASH 1400).

The planning basis used two predominant Emergency Planning Zones (EPZs).

(1) Plume exposure pathway EPZ -- The principal exposure sources from this pathway are: (a) whole body external exposure to gamma radiation from the plume and from deposited material; and (b) inhalation exposure from the passing radioactive plume.

(2) Ingestion exposure pathway EPZ -- The principal exposure from this pathway is the ingestion of contaminated milk. The planning effort for this pathway involves the identification of potential sources of contaminated milk and associated control points and mechanisms that prevent it from entering the human food chain. Ingestion pathway exposures in general would represent a problem in the days or weeks following an accident, although some early protective actions to minimize subsequent contamination of milk are provided in the state plans. Additionally, the secondary exposure pathway of ingestion of contaminated foods (either human or animal) was considered in the planning effort.

The EPZs are the areas for which planning is performed to assure that prompt effective actions can be taken to protect the public in the event of an accident. The state's response organizations, rather than local, have taken principal responsibility for the planning associated with the ingestion exposure pathway. This plan uses a radius of about 10 miles for the plume exposure pathway and a radius of about 50 miles for the ingestion exposure pathway. The EPZs for Salem and Hope Creek Generating Stations are shown in Figure 1-1. The principal townships, towns, cities, and ERPA populations within ten miles of the site are listed in Table 1-1.

The following definitions are used in the plan:

(1) **Accident**

An unforeseen and unintentional event that may result in an emergency.

(2) **Action Steps**

Those steps listed in the Emergency Plan Implementing Procedures which are used to provide direction to appropriate individuals to reduce risk to the health and safety of the public, site personnel and emergency workers in the event an emergency occurs.

(3) **Affected Station**

Distinguishes the station, either Hope Creek or Salem Generating Station, which experiences a specific emergency event. The designation of the affected station determines the leadership sequences for the emergency response organization for PSEG Nuclear.

(4) **Artificial Island**

The area encompassing both the Salem and Hope Creek Generating Stations' protected areas, as well as an owner controlled area immediately adjacent to the protected area, as described in the Salem and Hope Creek Stations' Final Safety Analysis Reports.

(5) **Assessment Actions**

Those actions taken during or after an accident to obtain and process information necessary to make decisions to implement specific emergency measures.

(6) **Committed Effective Dose Equivalent (CEDE)**

The sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to these organs or tissues.

(7) **Contamination**

The presence of radioactive material in undesirable locations.

(8) **Curie (Ci)**

A unit of radioactivity; 1 Curie is that amount of radioactive material in which 3.7 x $10^{10}$ disintegrations occur per second. The millicurie and microcurie are respectively one thousandth and one millionth of a Curie.

(9) **Deep Dose Equivalent (DDE)**

Applies to external whole body exposure. It is the dose equivalent at a tissue depth of 1 cm (1000 $mg/cm^2$).

(10) **Decontamination**

The removal of radioactive contaminants from surfaces or equipment, by cleaning or washing with water or a decontamination solution, if required.

(11) **Drill**

The supervised instruction period aimed at testing, developing and maintaining skills in a particular operation of emergency preparedness. A drill is often a component of an exercise.

(12) **Emergency**

That situation or condition which may lead to undue risk to the health and safety of the public or to site personnel. The emergency action levels that are used to identify these emergencies are described in the Event Classification Guide (as discussed in Section 5 of this plan).

(13) **Emergency Action Levels (EAL)**

A predetermined, site-specific, observable threshold used to define when the generic initiating condition has been met, placing the plant in a given emergency class. An EAL can be an instrument reading, an equipment status indicator, a measurable parameter, a discrete observable event, analysis results, entry into specific EOPs, or another phenomenon that indicates the need for classification of an emergency.

(14) **Emergency Coordinator (EC)**

That person who has the authority and responsibility to immediately and unilaterally initiate any emergency action including the decision to notify and provide protective action recommendations to authorities responsible for implementing offsite emergency measures.

(15) **Emergency News Center/Joint Information Center (ENC/JIC)**

A facility operated by PSEG NUCLEAR for the purpose of disseminating accurate information to the news media.

(16) **Emergency Operations Center (EOC)**

A state or local government's command and communication center which is activated to evaluate the radiological emergency and coordinate the protective actions that may need to be implemented.

(17) **Emergency Operations Facility (EOF)**

A facility operated by PSEG NUCLEAR for the coordination of decisions affecting accident mitigation and public safety. The EOF is described in Section 9.0 of this plan.

(18) **Emergency Plan Implementing Procedures**

Specific procedures defining in detail the actions to be taken in the event of an accident by the emergency response organization. The procedures are separate from, but may incorporate and refer to, normal plant operating procedures and instructions.

(19) **Emergency Response Planning Area (ERPA)**

A subdivision of the plume exposure emergency planning zone (10 mile).

(20) **Exercise**

An exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency plans of the principal response organizations.

(21) **Fixed Nuclear Facility (FNF)**

A site where nuclear materials are employed in commercial power generating operations.(This term is used extensively in the offsite emergency plans.)

(22) **Mitigating Actions**

Those emergency measures taken to reduce the consequences of or terminate an emergency situation in order to prevent an uncontrolled release of radioactive material or to reduce the magnitude of a release, e.g., shutting down equipment, fire fighting, repair and damage control.

(23) **Offsite**

That area outside of the Protected Area.

(24) **Onsite**

That area inside the Protected Area.

(25) **Operations Support Center**

An onsite emergency response facility which functions to coordinate the corrective and protective action activities of site personnel outside of the Control Room. These activities include repairs, fire fighting, damage control, search and rescue, medical response, bomb searches, and local plant system lineup changes.

(26) **Owner Controlled Area**

This refers to that area within the PSEG NUCLEAR property line (700 acre site).

(27) **Population at Risk**

Those persons for whom protective actions are being or would be taken.

(28) **Protective Actions**

Those emergency measures taken after a release of radioactive material has occurred, or before a release which is expected to occur which would exceed a Protective Action Guide (PAG), for the purpose of preventing or minimizing radiological exposures to persons and the public.

(29) **Protective Action Guides (PAG)**

Projected radiological dose or dose commitment values to individuals in the general population which would warrant protective action following a release of radioactive material. Protective actions would be warranted only when the reduction in individual dose expected to be received is not offset by excessive risks to individual safety should the protective action be taken. The PAG does not include the dose that has unavoidably occurred prior to the assessment (under no circumstances will a PAG dose be considered an acceptable dose).

(30) **Protected Area**

That area within the boundaries of the Security fence.

(31) **Rad**

Acronym for radiation absorbed dose, basic unit of absorbed dose of radiation. Technically, a dose of one rad means the absorption of 100 ergs of radiation energy per gram of absorbing material (refer to SI units).

(32) **Radiation (as referred to in this plan)**

Any or all of the following: a form of energy which includes gamma rays, x-rays, neutrons, high-speed electrons, positrons, and other atomic particles which occur from radioactive decay or nuclear fission.

(33) **Radiation Accident**

Any unexpected event, occurrence or circumstance involving an actual or potential radiation exposure or radioactive contamination in excess of federal regulations and/or the facility technical specifications.

(34) **Radiological Control Area (RCA)**

That portion of each plant where exposure to nuclear radiation, radioactive material or radioactive contamination is a concern.

(35) **Recovery Actions**

Those actions taken after the emergency to restore the plant as nearly as possible to its pre-emergency condition.

(36) **Release of Radioactive Material**

Plant effluent greater than tech spec limits.

(37) **Rem**

Acronym for Roentgen Equivalent Man, a measure of the dose equivalence of any ionizing radiation to body tissue in terms of its estimated biological effect relative to a dose of one roentgen of X - rays or gamma radiation (refer to SI units).

(38) **Roentgen**

A unit of radioactive exposure; the amount of X-radiation or gamma radiation that will provide one electrostatic unit of charge (positive or negative) in one cubic centimeter of dry air at standard pressure and temperature conditions ($2.58 \times 10^4$ coulombs per Kilogram of air).

(39) **Sector**

$22\frac{1}{2}^0$ division of the Emergency Planning Zones (EPZs). The sector (N) is bisected by a line from the Salem and Hope Creek Generating Stations directly north.

(40) **Technical Support Center (TSC)**

This emergency response facility provides a location outside of the Control Room area, where technical support of operations, accident assessment, and initial augmentation of emergency plan implementation may be conducted.

(41) **Utility**

PSEG Nuclear LLC, the operator of Salem and Hope Creek Generating Stations.

(42) **Total Effective Dose Equivalent (TEDE)**

Term used in conjunction with 10CFR20 and EPA 400 summarizing total dose to the individual which includes exposure from all sources both internal and external to the body.

## 5.0 State Government Emergency Planning for Contiguous Jurisdictions

### 5.1 Principal Government Jurisdiction in the EPZs

The States of Delaware and New Jersey are the principal offsite authorities for emergency planning and response for both EPZs. This plan outlines the activities of the states and their response capabilities and includes the agreement between the utility and the states but does not include the states' plans. A list of all supporting emergency plans is provided as Table 1-2.

### 5.2 Secondary Government Jurisdictions in the EPZs

The secondary jurisdictions in the EPZs include the affected counties within New Jersey and Delaware and the contiguous States of Pennsylvania and Maryland. These governmental entities have agreements with the States of New Jersey *or* Delaware. The arrangements are outlined in this plan but are not included as part of this plan since they are a part of the appropriate state's plan.

6.0 Integrated Guidance and Criteria

NRC and FEMA have consolidated the guidance intended for use by the licensees, state and local governments in NUREG-0654 FEMA-REP-1, Rev. 1. Should an accident occur, the public can be best protected when the response by all parties is fully integrated. Each party involved must have a clear understanding of what the overall level of preparedness must be and what role it will play in the event of an accident. This understanding can be best achieved if there is an integrated development and evaluation of plans. There must also be an acceptance by the parties and a clear recognition of the responsibility they share for safeguarding public health and safety. This plan has been developed to meet these goals.

Although NUREG-0654 indicates that the criteria are applicable to one or more specific organizations, the intention throughout NUREG-0654 is to provide for an adequate state of emergency preparedness around the facility. To meet this intent this plan has been developed to complement the emergency plans of the States of New Jersey and Delaware.

7.0 Technical Assistance

The planning for response to the offsite consequences of an accident at Artificial Island and implementation of protective actions resulting from that accident are the responsibility of the States. This plan provides for cooperation with and assistance to the States of New Jersey and Delaware.

8.0 Emergency Response Organization (ERO)

PSEG Nuclear LLC has established an organization to respond to emergencies at Salem and Hope Creek Generating Stations. This organization consists of PSEG Nuclear response personnel. These response organizations and their method of notification, resources, initiation and limitations are detailed in the appropriate sections of this plan.

9.0 Form and Content of Plans

This plan has been written following the outline of NUREG-0654 (November 1980) to minimize the need for cross referencing and to aid the review process.

10.0 Emergency Plan Implementing Procedures

Emergency plan implementing procedures provide directions for implementation of the Emergency Plan. Each Table of Contents to the procedure volumes is considered the controlled listing of procedures and revisions. Emergency Plan Procedures, including Salem and Hope Creek Event Classification and Notification Procedures, are also listed in the Emergency Plan attachment volume.

## TABLE 1-1

## LIST OF EMERGENCY RESPONSE PLANNING AREAS AND TOWNS WITHIN 10 MILES OF HOPE CREEK AND SALEM GENERATING STATIONS AND ERPA POPULATIONS

| DELAWARE TOWNS | DISTANCE FROM SITE (miles) | NEW JERSEY TOWNS | DISTANCE FROM SITE (miles) |
|---|---|---|---|
| Bay View Beach | 3.4 (WNW) | LAC Township | 0.0 (E) |
| Delaware City | 7.5 (WNW) | Quinton Township | 8.5 (NE) |
| Middletown | 9.5 (W) | Salem | 8.0 (NNE) |
| Odessa | 6.2 (W) | Elsinboro Township | 2.5 (NNE) |
| Port Penn | 4.2 (NNW) | Mannington | 8.4 (NNE) |
| St. Georges | 9.5 (WSW) | Pennsville | 7.5 (N) |
| Townsend | 9.5 (WSW) | Greenwich | 7.2 (ESE) |
| Woodland Beach | 9.7 (SSE) | Stow Creek | 6.6 (E) |

### DELAWARE

| ERPA | POPULATION |
|---|---|
| A | 5142 |
| B | 8562 |
| C | 11272 |
| D (River) | 0 |
| DE TOTAL | 24976 |

### NEW JERSEY

| ERPA | POPULATION |
|---|---|
| 1 | 836 |
| 2 | 3008 |
| 3 | 6847 |
| 4 | 346 |
| 5 | 630 |
| 6 | 703 |
| 7 | 610 |
| 8 (River) | 0 |
| NJ TOTAL | 12980 |
| | |
| DELAWARE & NEW JERSEY TOTAL | 37956 |

## TABLE 1-2

## OFFSITE EMERGENCY PLANS SUPPORTING PSEG NUCLEAR EMERGENCY PLAN

| Plan | Responsible Agency |
|---|---|
| **Plume Exposure Pathway** | |
| New Jersey Radiological Emergency Response Plan | Office of Emergency Management, New Jersey State Police |
| Salem County Radiological Emergency Response Plan | Salem County Office of Emergency Management |
| Elsinboro Township Radiological Emergency Response Plan | Elsinboro Township Office of Emergency Management |
| Lower Alloways Creek Township Radiological Emergency Response Plan | Lower Alloways Creek Office of Emergency Management |
| Mannington Township Radiological Emergency Response Plan | Mannington Township Office of Emergency Management |
| Pennsville Township Radiological Emergency Response Plan | Pennsville Township Office of Emergency Management |
| Quinton Township Radiological Response Plan | Quinton Township Office of Emergency Management |
| Salem City Radiological Emergency Response Plan | Salem City Office of Emergency Management |
| Cumberland County Radiological Emergency Response Plan | Cumberland County Office of Emergency Management |
| Greenwich Township Radiological Emergency Response Plan | Greenwich Township Office of Emergency Management |

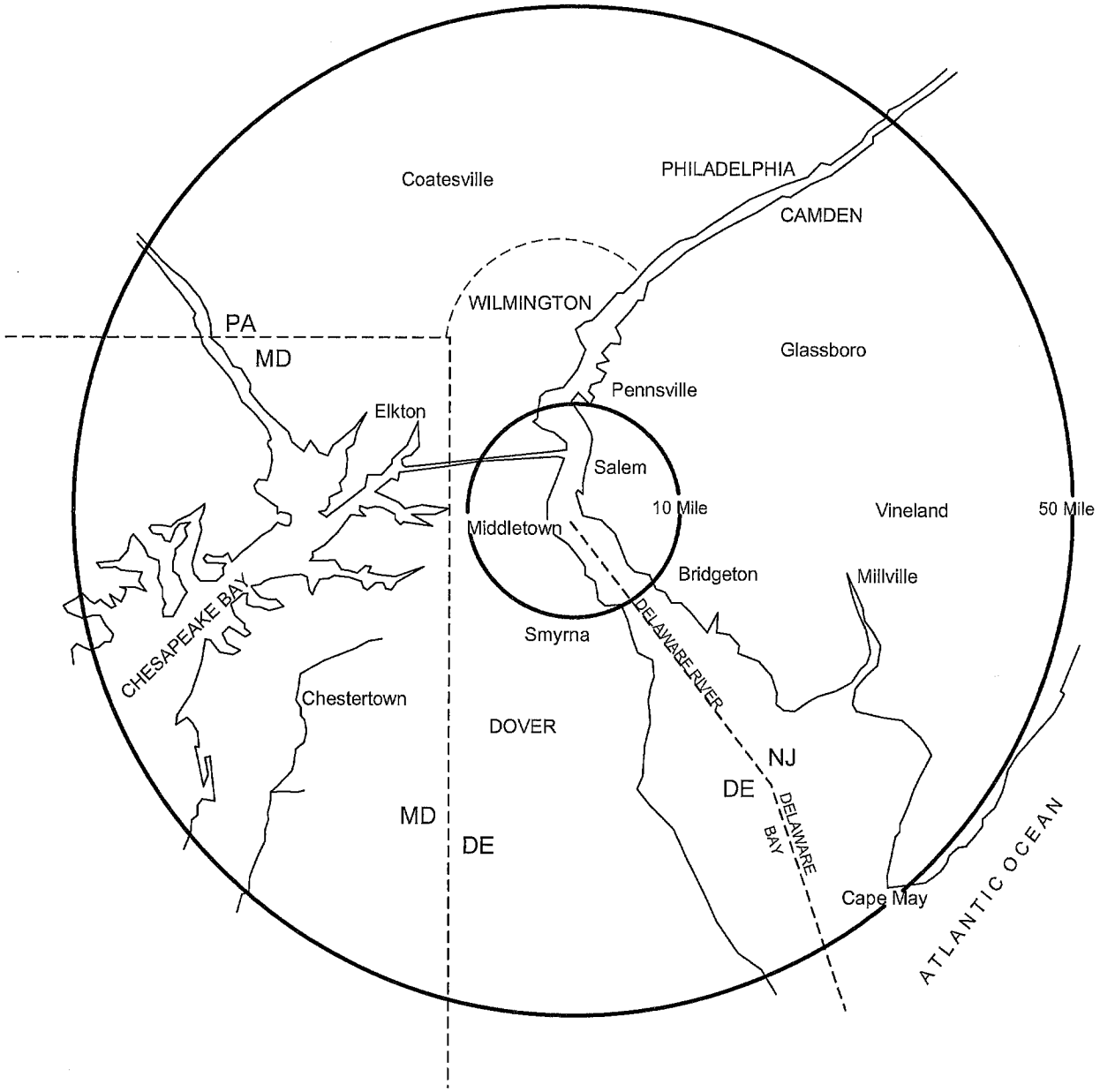
TABLE 1-2 (cont)

## OFFSITE EMERGENCY PLANS SUPPORTING PSEG NUCLEAR EMERGENCY PLAN

| Plan | Responsible Agency |
|---|---|
| **Plume Exposure Pathway** | |
| Stow Creek Township Radiological - Emergency Response Plan | Stow Creek Township Office of Emergency Management |
| Delaware Radiological Plan | Delaware Emergency Management Agency |
| New Castle County Radiological Emergency Plan | New Castle County Department of Public Safety |
| Kent County Radiological Emergency Plan | Kent County Emergency Planning and Operations |
| **Ingestion Pathway** | |
| Maryland Disaster Assistance Plan, Annex O, Radiological Emergency Response Plan | Maryland Civil Defense & Disaster Preparedness Agency |
| Pennsylvania Disaster Operations Plan, Annex E, Fixed Nuclear Facility Incidents | Pennsylvania Emergency Management Agency |

## FIGURE 1-1

## 10 AND 50 MILE RADII FROM SALEM AND HOPE CREEK GENERATING STATIONS



## SECTION 2

## ASSIGNMENT OF RESPONSIBILITY

1.0 PSEG Nuclear LLC

1.1 Internal Responsibility

PSEG Nuclear LLC, operator of Salem and Hope Creek Generating Stations, has the primary responsibility for planning and implementing emergency measures within the site boundary. In addition to accident mitigation, this responsibility includes accident assessment and the evaluation of any real or potential risk to the public health and safety. Based upon this evaluation, appropriate offsite agencies are promptly notified of the Protective Action Recommendations (PAR) for the affected population areas.

The Manager - Emergency Preparedness (Manager EP) is the individual who is responsible for maintaining emergency preparedness for PSEG Nuclear LLC. The Manager EP reports to the Director - Emergency Services, who reports to the President and Chief Nuclear Officer. Organization charts showing reporting relationships for emergency preparedness within both the corporate structure and PSEG Nuclear LLC are presented in Figures 2-1 and 2-2.

Throughout the duration of an emergency, accident mitigation is the responsibility of the Shift Manager (SM). The Technical Support Center (TSC) staff under the direction of the Emergency Duty Officer (EDO) supplies support. Protective Action Recommendations are made from the TSC following its activation. Additional support is available from the Emergency Operations Facility (EOF), which is staffed and may be activated for Alerts and always activate at a Site Area Emergency. Protective Action Recommendations are made from the EOF following its activation.

The Emergency Response Organization at each level of response is described in Section 3. Each emergency manager/supervisor is responsible for maintaining and ensuring the continuity of personnel and resources.

1.2 External Agreements

PSEG Nuclear has entered into agreements with the appropriate emergency response organizations which would provide onsite and offsite support in the event of an emergency at Hope Creek or Salem Generating Stations. These agreements are provided in the Emergency Plan Attachment Book, Attachment 3. Figures 2-3 and 2-4 show how these organizations interface with PSEG Nuclear. Figure 2-5 show how these organizations interface for protective action decision making.

## 2.0 Principal Government Jurisdictions in the EPZs

### 2.1 The State of Delaware

The Delaware Emergency Management Agency (DEMA), Department of Public Safety, has developed the Delaware Radiological Emergency Preparedness (REP) Plan and serves as the lead agency for coordinating state emergency actions as authorized in the Delaware Code Annotated Title 20, Chapter 31.

The Delaware Department of Natural Resources and Environmental Control (DNREC), as authorized by the Delaware Code Annotated Title 7, Chapter 60 is responsible for protecting the environment to include participation in accident assessment, mitigation and recovery efforts in the event of a radiological incident.

The Delaware Department of Health and Social Services (DHSS), as authorized by the Delaware Code Annotated, Title 16, Chapter 1, has the overall responsibility for protecting health and safety of the general public to include accident assessment, social services mitigation and recovery efforts in the event of radiological incident.

The Delaware Department of Agriculture (DDA), as authorized by the Delaware Code Annotated Title 29, Chapter 81, is responsible for protection of agriculture in the interest of health and safety of the public.

The Technical Assessment Center (TAC) develops Delaware's accident assessment and protective action response. The TAC comprises members of the DNREC, DHSS with the Deputy Director of the Division of Public Health (DPH) and Division of Water Resources (DWR) Senior Science Advisor serving as the Co-Chairperson of the TAC. Protective Action Recommendations are developed and provided to the DEMA Director, by the TAC Chairperson.

The resources and response organization of the State of Delaware are described in the Delaware Radiological Emergency Plan. The response organization for the State of Delaware is provided as Figure 2-6. The development of protective actions is performed as outlined in Figure 2 - 5 and discussed in detail in Sections 10 and 11 of this plan.

### 2.2 The State of New Jersey

The Office of Emergency Management (OEM) of New Jersey State Police (NJSP) is granted the authority to assist in supervising and coordinating the emergency response activities of the state government and of all of the political subdivisions as outlined in the New Jersey Civil Defense Act of 1942, Chapter 251, as amended.

The New Jersey Department of Environmental Protection (DEP) is empowered by NJ Radiation Accident Response Act (N.J.S.A. 26:2D-37 et.seq.), to take/recommend radiological protective actions as necessary to protect the public health or welfare.

The Superintendent of NJSP is the agency head that acts as New Jersey's emergency coordinator responsible for directing and/or coordinating all emergency response by New Jersey state agencies. The response organization for the State of New Jersey is provided as Figure 2-7.

The New Jersey Department of Environmental Protection is the lead agency for New Jersey's assessment of radiological emergencies. The Commissioner of the DEP is the agency head responsible for the response of that organization. The actions taken by DEP are coordinated through and parallel with the actions of the NJSP.

The resources and response organizations of the State of New Jersey are described in the New Jersey Radiological Emergency Response Plan. The development of protective actions is performed as outlined in Figure 2-5 and is discussed in detail in Sections 10 and 11.

2.2.1 Local Governments

The County Emergency Management Coordinators for Salem and Cumberland Counties in New Jersey and the County Emergency Preparedness Coordinators for New Castle and Kent Counties in Delaware are the local government representatives who act as the county emergency coordinators. The response organizations for the counties are provided in Figures 2-8 through 2-11.

3.0 Contiguous (Ingestion Pathway) States

The States of Pennsylvania and Maryland are contiguous (Ingestion pathway) states. The ingestion exposure pathway planning area is shown in Emergency Plan Section 1, Figure 1-1. The State of New Jersey has taken the primary responsibility for notification and communications with the contiguous (ingestion pathway) States of Pennsylvania and Maryland.

The Memoranda of Understanding between the State of New Jersey and the States of Pennsylvania and Maryland are available for review and located in the Emergency Plan attachment volume. Should the accident cause conditions offsite that justify monitoring of the ingestion pathway, the utility's emergency coordinator function verifies with the States of New Jersey and Delaware that the ingestion pathway is being monitored. Additionally, the individual acting in the emergency coordinator function verifies with the State of New Jersey that the States of Pennsylvania and Maryland have been notified. The State of Delaware also has agreements in force with the States of Maryland and Pennsylvania regarding emergency notifications. The criteria for recommending ingestion pathway monitoring is that radionuclide concentrations in excess of 10CFR20 Appendix B limits could potentially exist *or* are verified to exist offsite.

FIGURE 2-1
PSEG CORPORATE ORGANIZATION

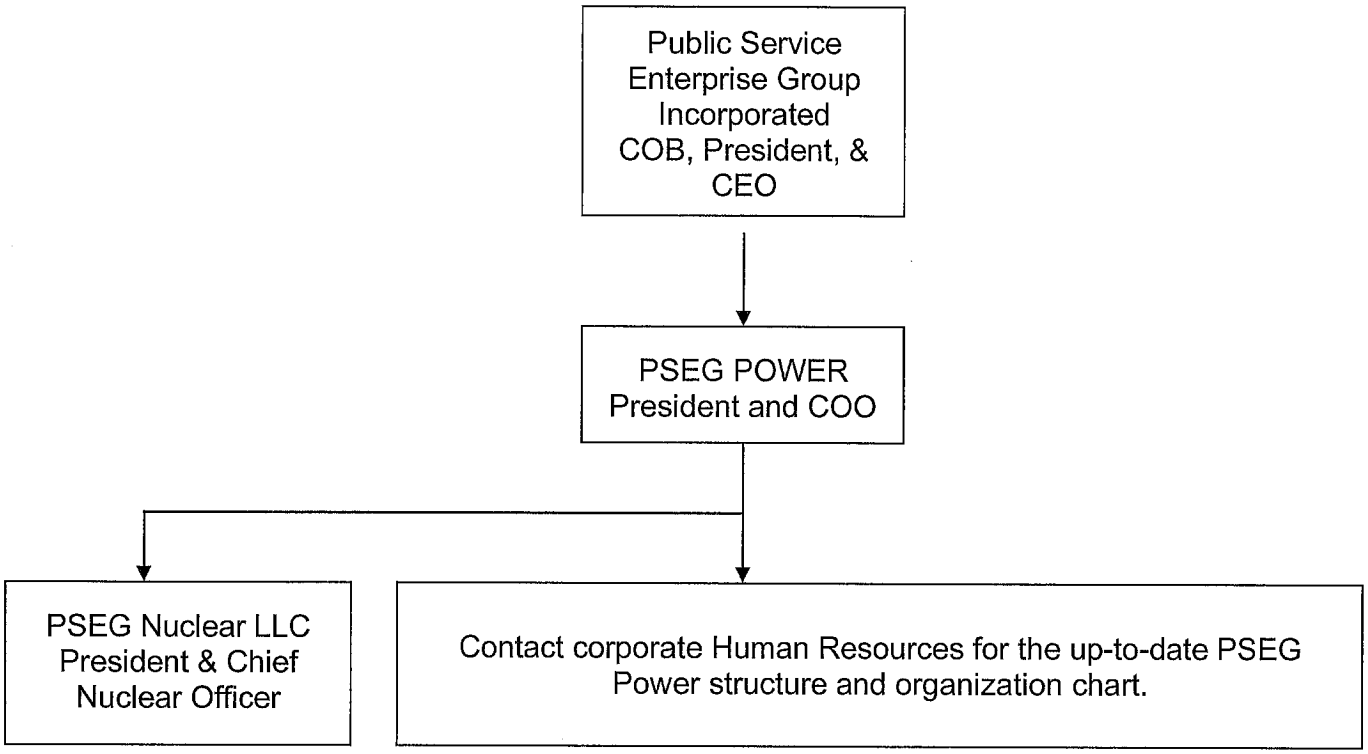


FIGURE 2-2
PSEG NUCLEAR ORGANIZATION

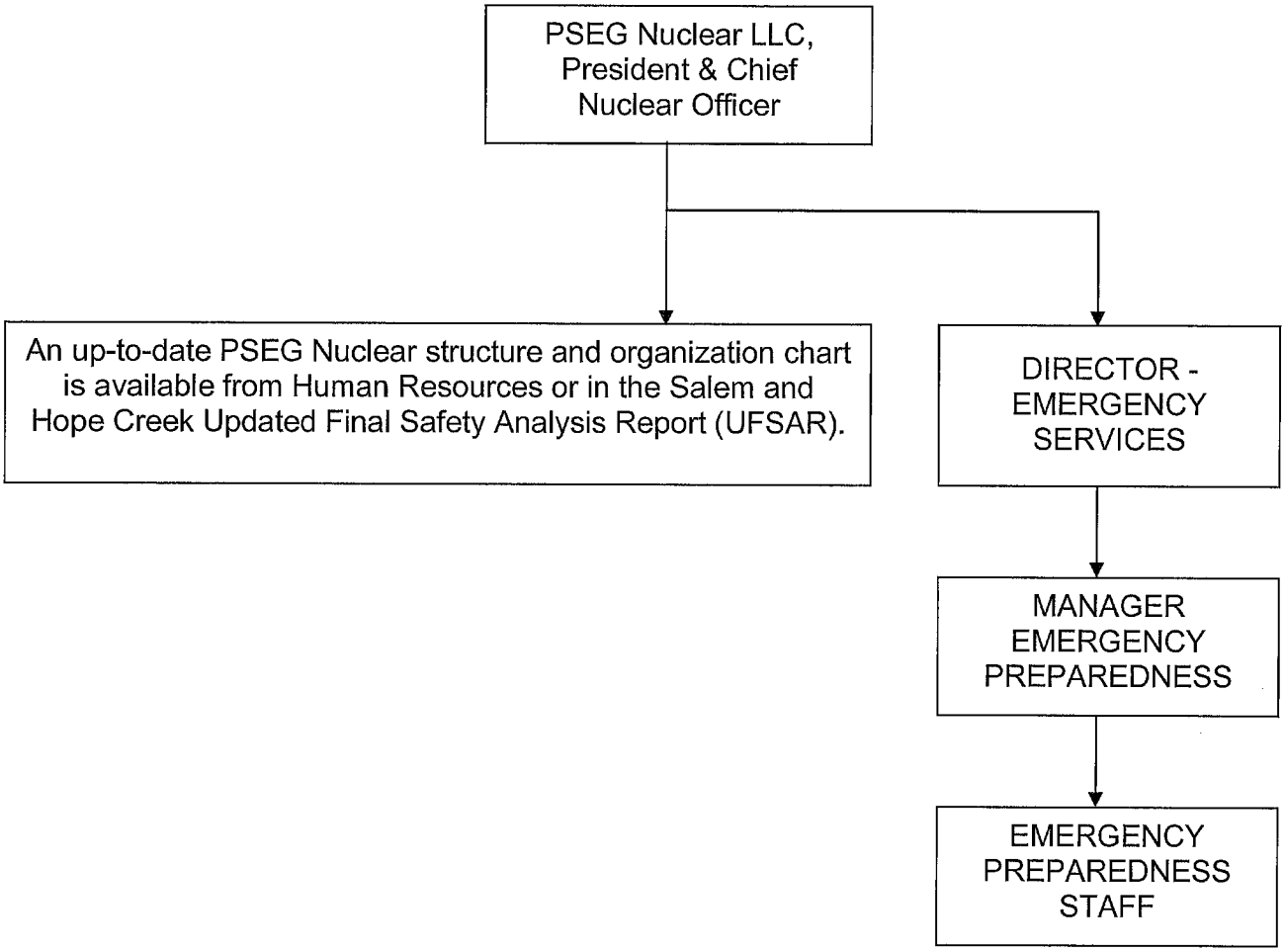
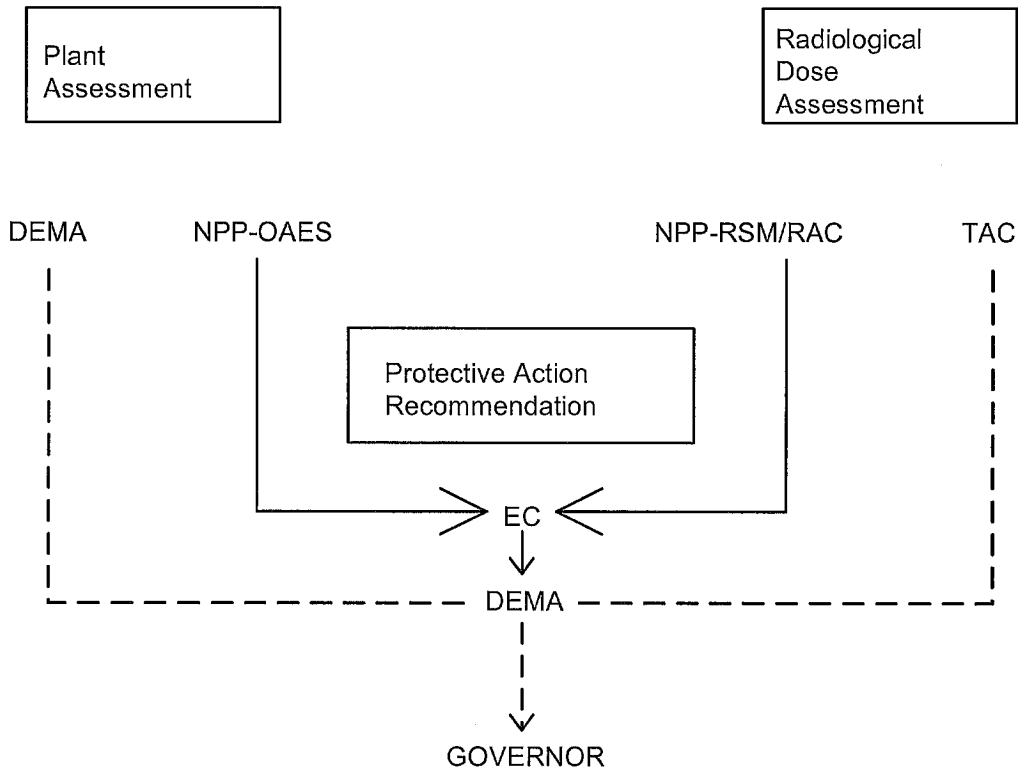


FIGURE 2-3
DELAWARE STATE INTERFACE

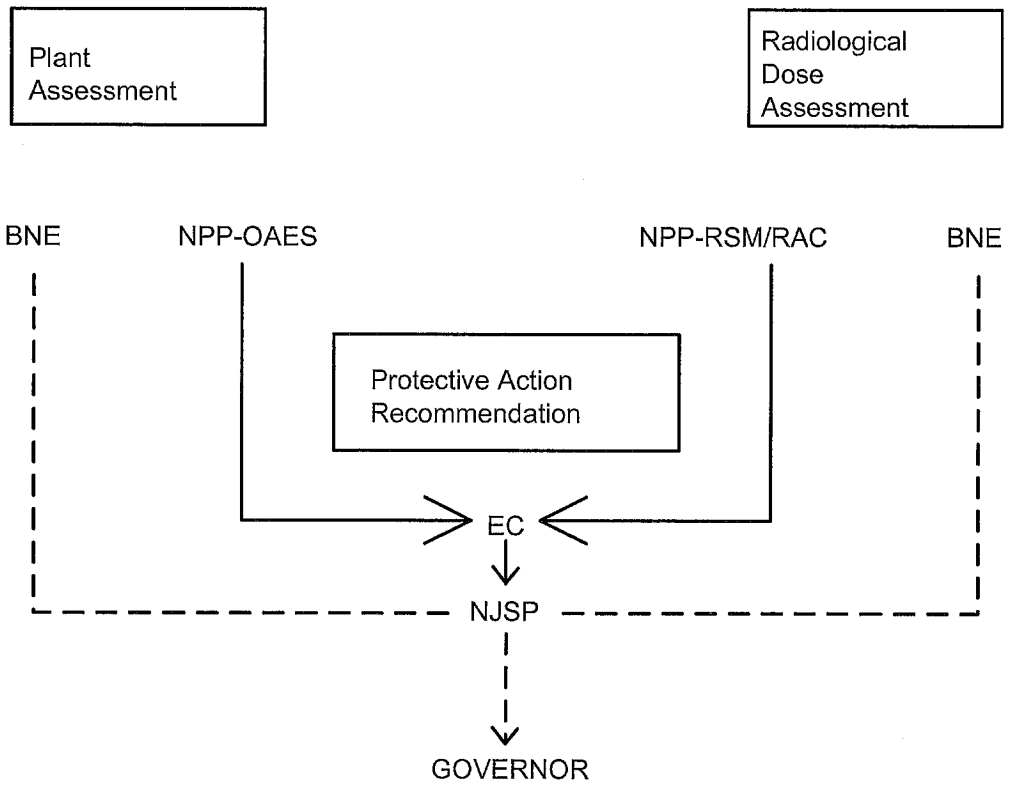



Key to Abbreviations/Symbols

- - - - - state communication
——— utility communication

EC Emergency Coordinator (Sift Manager, Emergency Duty Officer, Emergency Response Manager)
NPP Nuclear Power Plant (Fixed Nuclear Facility)
RAC Radiological Assessment Coordinator
RSM Radiological Support Manager
OAES Operations Assessment and Engineering Staff
TAC TECHNICAL ASSESSMENT CENTER, State of Delaware
DEMA Delaware Emergency Management Agency, State of Delaware

FIGURE 2-4
NEW JERSEY STATE INTERFACE



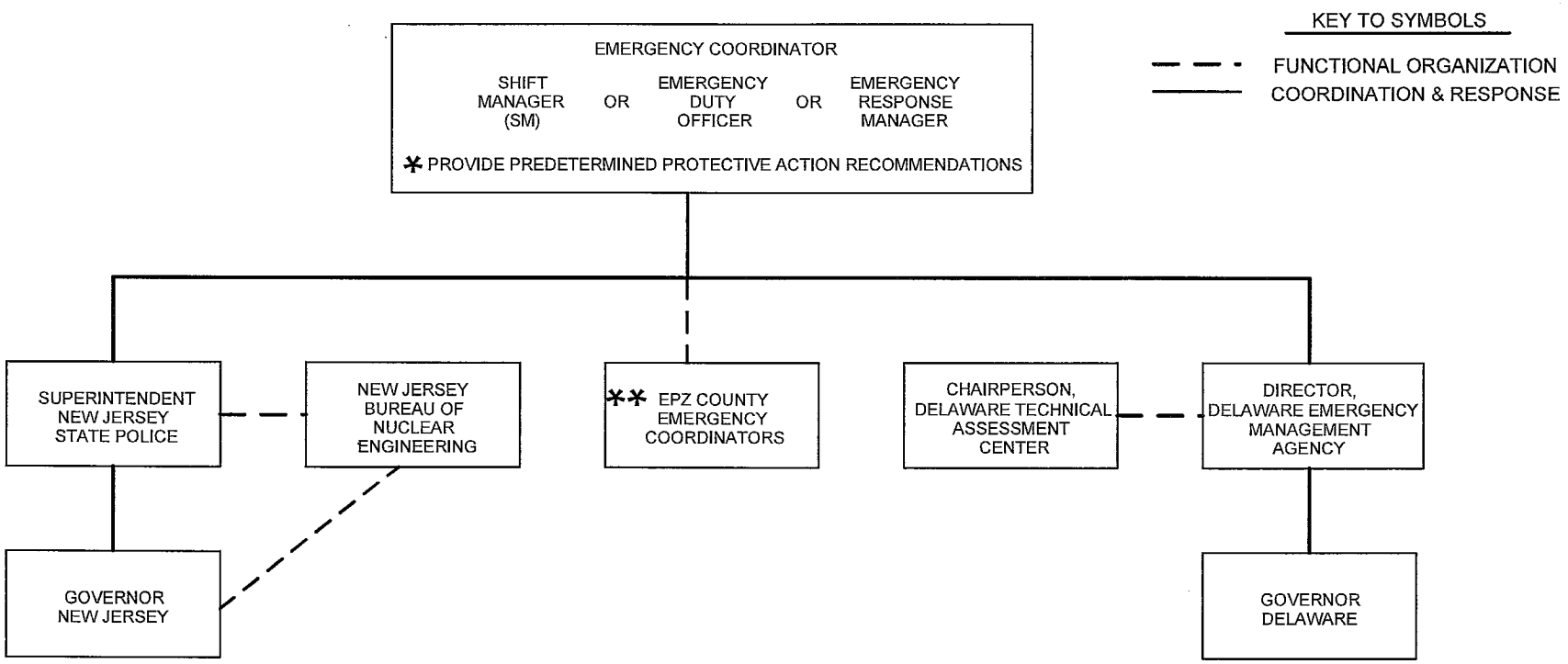

Key to Abbreviations/Symbols

- - - - - state communication
——— utility communication

EC Emergency Coordinator (Shift Manager, Emergency Duty Officer, Emergency Response Manager)
NPP Nuclear Power Plant (Fixed Nuclear Facility)
RAC Radiological Assessment Coordinator
RSM Radiological Support Manager
OAES Operations Assessment and Engineering Staff
BNE New Jersey Bureau of Nuclear Engineering, Department of Environmental Protection
NJSP New Jersey State Police

FIGURE 2-5

DECISION CHAIN
PROTECTIVE ACTIONS
FOR
EVENTS CLASSIFIED AS GENERAL EMERGENCY




* PREDETERMINED PROTECTIVE ACTION RECOMMENDATIONS ARE DEVELOPED IN ACCORDANCE WITH IE INFORMATION NOTICE 83-28 AND NUREG - 0654, REV. 1. RELEASE ASSESSMENT WILL THEN BE PERFORMED TO ENSURE APPROPRIATE PROTECTIVE ACTIONS HAVE BEEN DEVELOPED.

** COUNTY EMERGENCY COORDINATORS ARE SHOWN HERE BECAUSE THEY ARE NOTIFIED DIRECTLY IF THE STATE(S) CANNOT BE CONTACTED AT A GENERAL EMERGENCY.

FIGURE 2-6

STATE OF DELAWARE
RADIOLOGICAL EMERGENCY RESPONSE
STATE ORGANIZATION

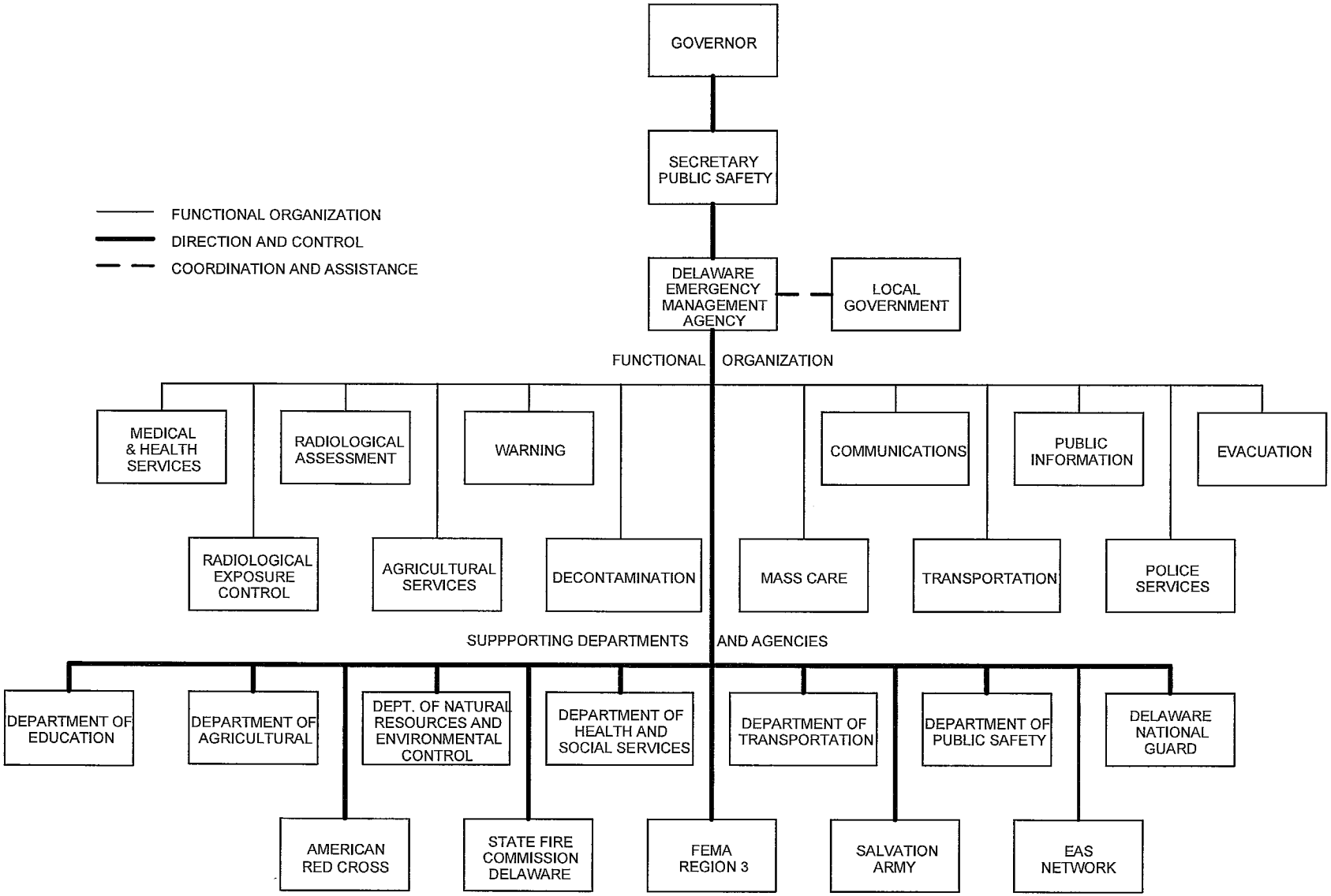


FIGURE 2-7

STATE OF NEW JERSEY
RADIOLOGICAL EMERGENCY RESPONSE
STATE ORGANIZATION

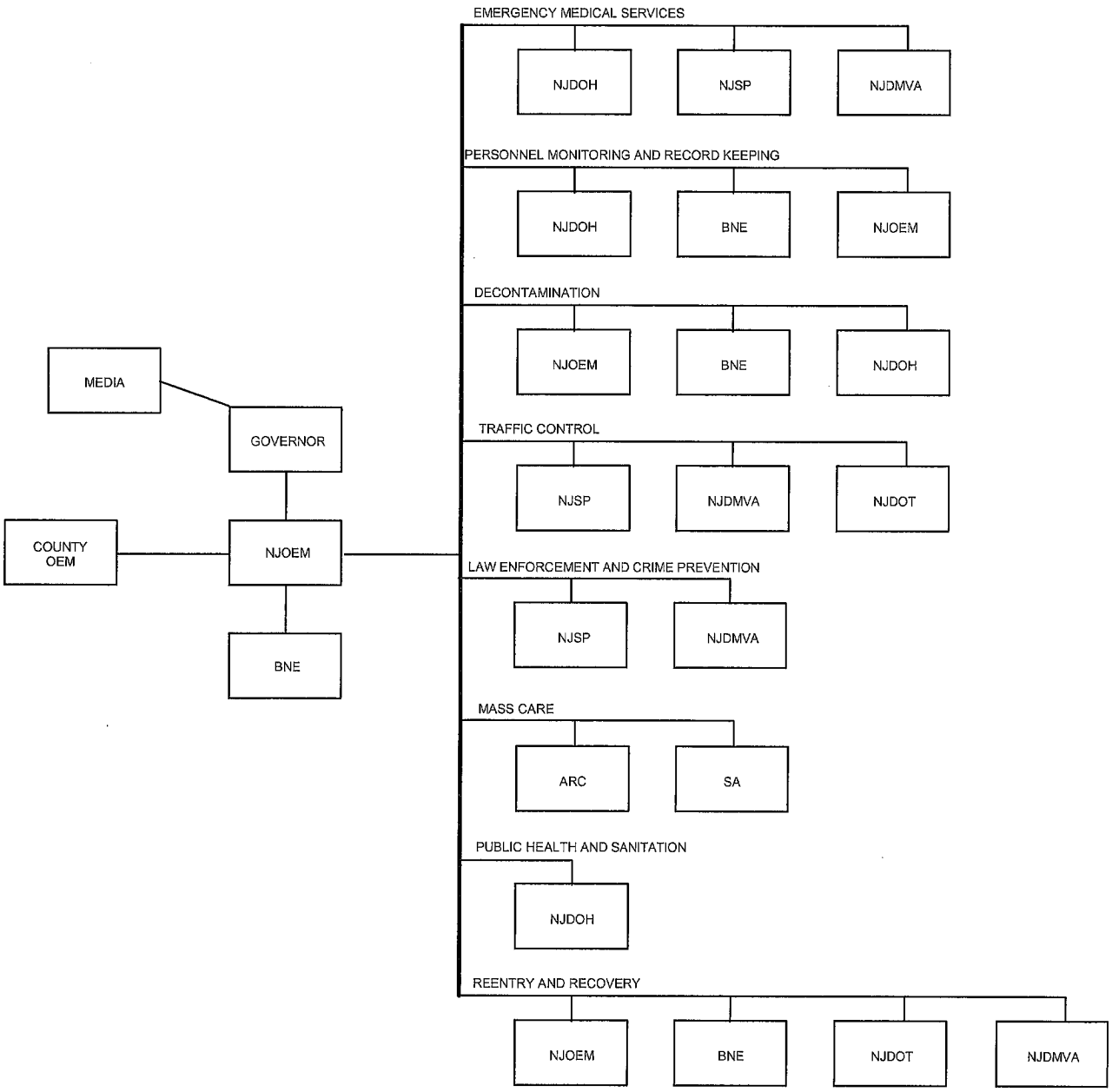


FIGURE 2-8

SALEM COUNTY
COUNTY EMERGENCY ORGANIZATION

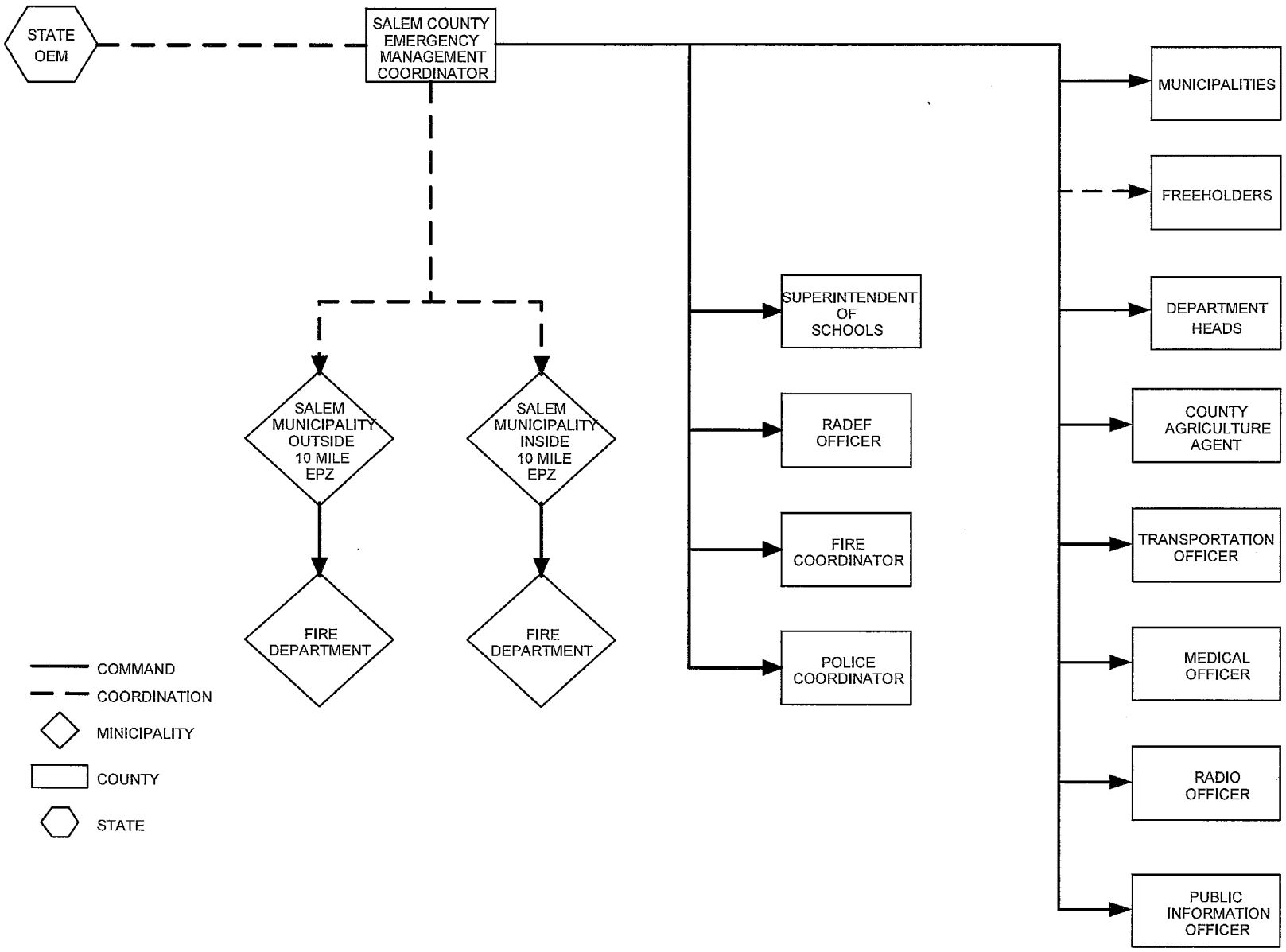


FIGURE 2-9

CUMBERLAND COUNTY
COUNTY EMERGENCY ORGANIZATION

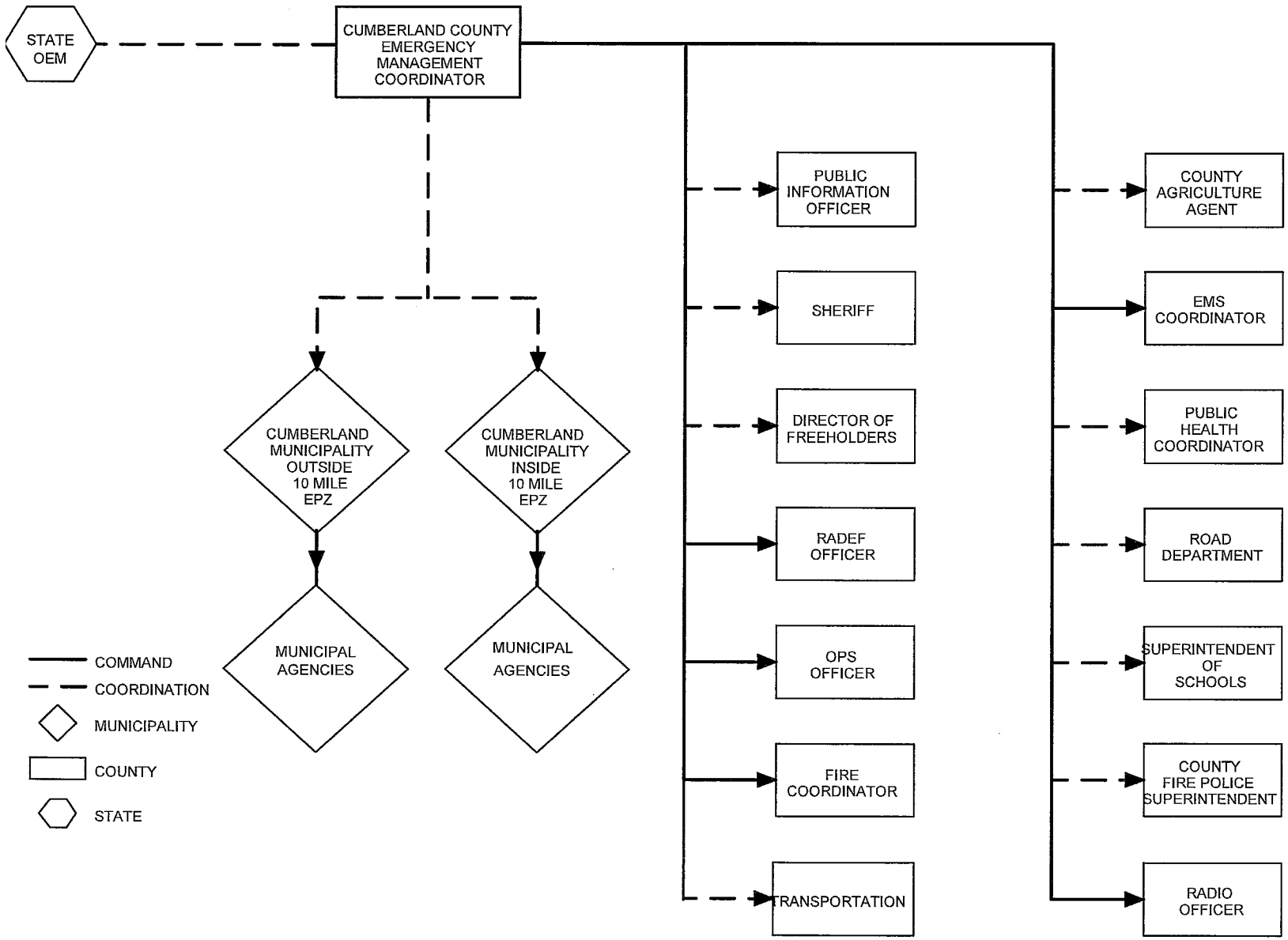
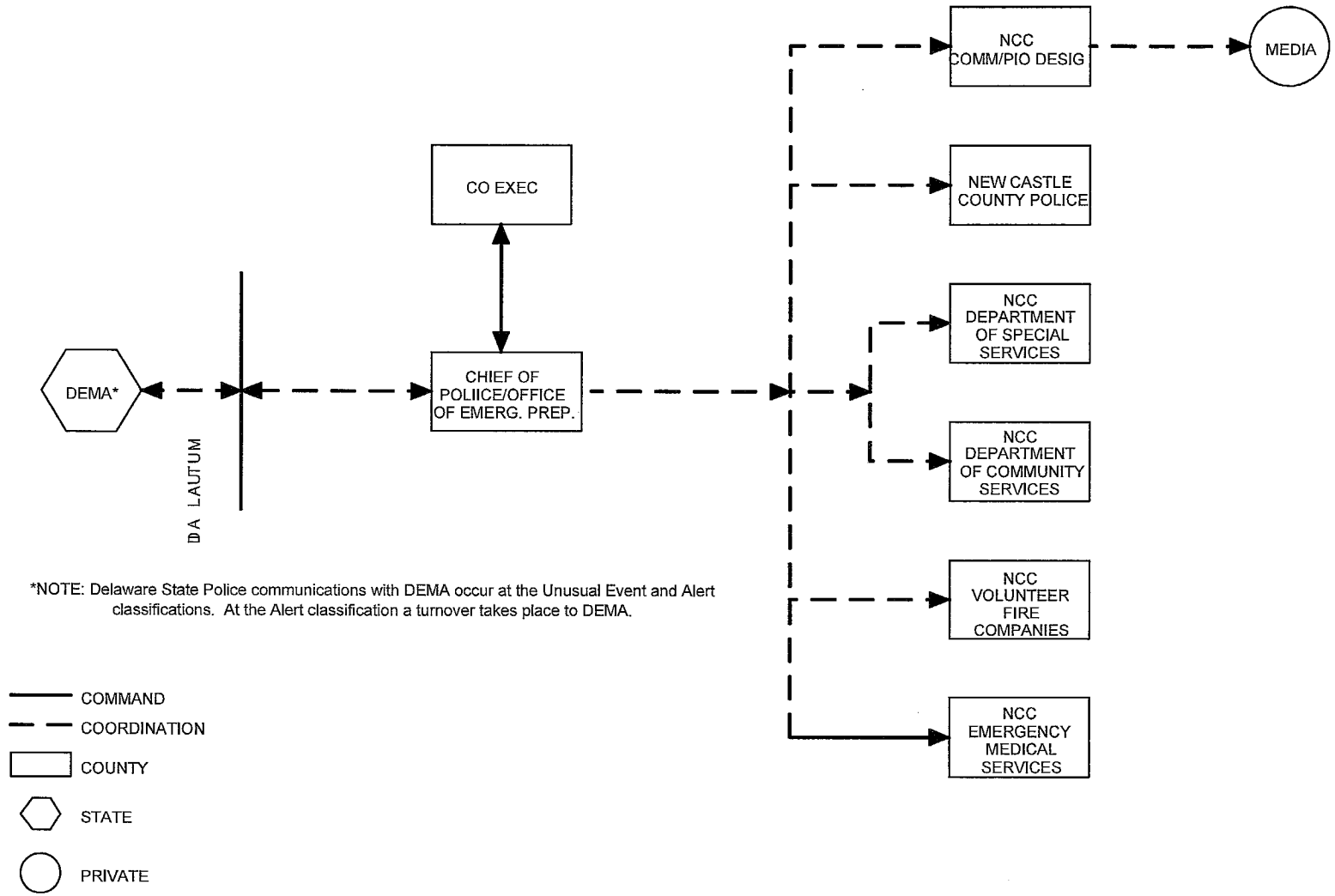


FIGURE 2-10

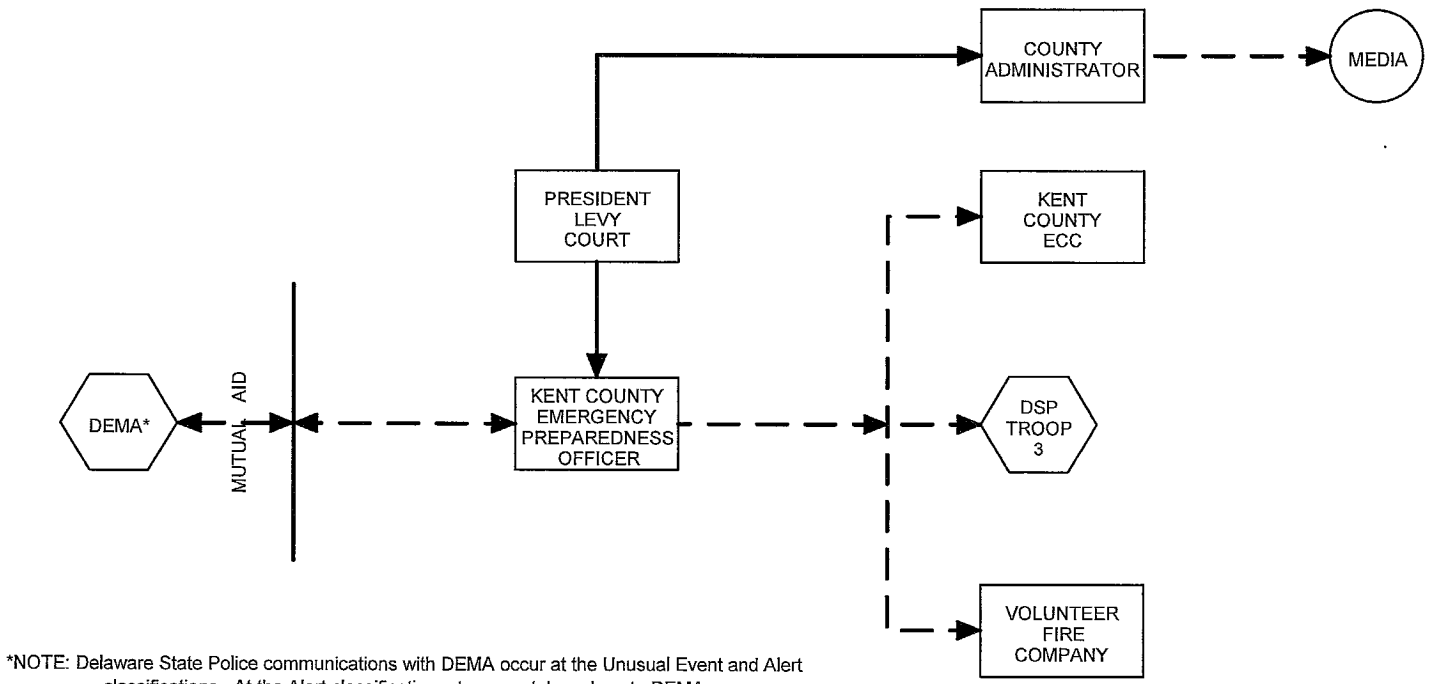
NEW CASTLE COUNTY (NCC)
COUNTY EMERGENCY ORGANIZATION



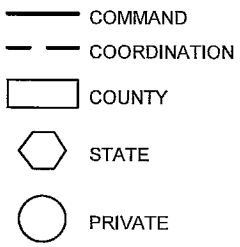

*NOTE: Delaware State Police communications with DEMA occur at the Unusual Event and Alert classifications. At the Alert classification a turnover takes place to DEMA.

FIGURE 2-11

KENT COUNTY
COUNTY EMERGENCY ORGANIZATION




*NOTE: Delaware State Police communications with DEMA occur at the Unusual Event and Alert classifications. At the Alert classification a turnover takes place to DEMA.



## SECTION 4

## EMERGENCY RESPONSE SUPPORT AND RESOURCES

1.0 Local Services Support

The local services support to be relied on in the event of an emergency is classified into two general categories: Medical and Fire Protection.

1.1 Medical Support

Medical support is provided by the Memorial Hospital of Salem County. The specific resources and capabilities of medical support are provided in Section 13.0 of this Plan.

1.2 Fire Protection

Fire protection support is provided for Salem and Hope Creek Generating Stations in accordance with station technical specifications. The resources are provided at the request of the Shift Manager (SM) of the affected unit or Emergency Duty Officer (EDO). Additionally, local fire companies respond (in accordance with appropriate agreements) to fires at Salem and Hope Creek Generating Stations. While these personnel are onsite they will be under the direction and control of the SM or Control Room Supervisor (CRS) of the affected unit prior to OSC activation and under the direction and control of the initial OSC coordinator/for theOSC coordinator after the OSC is activated.

2.0 State and County (Local) Government Response

For events classified as an Unusual Event, Alert or Site Area Emergency, the contact with the local governments and states is provided through the states. Following this initial contact, the states will be responsible for assessing the information provided, activating their response organization (as required) notifying the local governments, the U.S. Coast Guard and the public. If the states cannot be contacted within fifteen minutes, the affected station notifies the local governments (counties) and the U.S. Coast Guard directly.

For events classified as a General Emergency, Salem and Hope Creek Generating Stations make direct contact with the States of New Jersey and Delaware. If the states cannot be contacted within fifteen minutes, the affected station notifies the local governments (counties) and the Coast Guard. Following this initial contact the states, or if the states could not be contacted the counties, will be responsible for assessing the information provided, activating their response organization (as required), notifying appropriate local governments, and the public.

Following contact by the state, or PSEG Nuclear, LLC, each county and the U.S. Coast Guard are responsible for assessing the information provided and activating their response organizations.

The Plan provides the appropriate space and facilities to the principal State and Federal response organizations at the Emergency Operations Facility (EOF). PSEG Nuclear assigns a person to assist the States of New Jersey and Delaware in accordance with the Memorandum of Understanding with each State. This allows state response personnel to have immediate access to all station radiological and operational data. Additionally, PSEG Nuclear, LLC is prepared to provide representatives to the state EOCs to assist the state (at their request) in answering questions and contacting the appropriate utility personnel.

## 3.0 Federal Response

The federal response is expected to consist primarily of representatives from the U.S. Department of Energy (U.S. DOE), U.S. Nuclear Regulatory Commission (NRC), and U.S. Coast Guard (USCG). PSEG Nuclear, LLC provides space in the EOF as required. Since the federal response (other than NRC) is primarily related to offsite protective actions and radiological assessment, it is implemented at the request of the States of New Jersey and/or Delaware. The Federal Emergency Management Agency (FEMA) acts as coordinator of the federal response. Emergency Management from New Jersey and Delaware provides information and assistance to FEMA as required to assist it in coordinating the federal response.

### 3.1 U.S. Nuclear Regulatory Commission

The NRC is notified via a dedicated telephone line (ENS) from the Control Room, Technical Support Center (TSC) or Emergency Operations Facility (EOF), to the Rockville, Maryland Operations Center within one hour after identifying the existence of an emergency condition. The NRC is responsible for the coordination of the federal government's technical response activities. Response support is initially supplied by the Office of Inspection and Enforcement, Region I, King of Prussia, Pennsylvania.

### 3.2 U.S. Coast Guard (USCG)

The U.S. Coast Guard is notified of all emergency events at Salem and Hope Creek Generating Stations. At the request of the States of New Jersey or Delaware they will provide rescue and/or notification operations on the Delaware River and associated waterways.

### 3.3 U.S. Department of Energy (DOE)

Radiological assistance teams are provided by Brookhaven National Laboratories, Brookhaven Area Office in Upton, New York. This assistance generally is requested by the States of New Jersey and Delaware. DOE is responsible for coordinating the offsite radiological monitoring and evaluation activities of the federal government.

3.4 Federal Emergency Management Agency (FEMA)

FEMA has the responsibility for coordinating all offsite non-technical response activities of the federal government. They serve as the primary point of contact for requests for federal assistance from state and local officials, and other federal agencies.

3.5 National Weather Service

When requested, the National Weather Service provides backup meteorological data for Salem and Hope Creek Generating Stations.

4.0 Federal Resources

The resources of the Federal government through the implementation of the National Response Plan (NRP) Nuclear/Radiological Incident Annex may be used to supplement the onsite surveys or relieve utility offsite survey teams. This Plan does not use NRP resources for making protective action assessments or recommendations.

The individual assigned the emergency coordinator function is the utility individual who is authorized to request NRP resources. The NRP teams are instructed to go to the EOF and report to the Radiological Support Manager. Survey team efforts offsite are managed and survey data are assembled and analyzed at the EOF.

The EOF is also the location where the Federal response coordination will be conducted. Desks and phones are available at the EOF to support the Federal response by the lead federal agency - NRC. Figure 4-I provides information on airports near the site.

5.0 Other Organizations

Other organizations that are available for emergency support duties are called upon and report to the Technical Support Center (TSC) or Emergency Operations Facility (EOF).

5.1 Environmental Sampling, Analysis and Meteorology Consultation

The PSEG Maplewood Testing Services (MTS) is a wholly owned research subsidiary of PSEG. MTS provides environmental sampling services for the station's Radiological Environmental Monitoring Program (REMP) during normal station operations. During an emergency involving a release of radioactivity and upon request, MTS provides personnel who normally collect routine environmental samples to assist in emergency environmental sample collection. PSEG Nuclear LLC also maintains a service contract with an independent certified laboratory to provide analysis of environmental samples for both normal and emergency operations. The contracted laboratory maintains the ability and equipment to perform beta-gamma gross counting, alpha gross counting, alpha spectroscopy, gamma spectroscopy and beta scintillation analysis. As needed for meteorology consultation, PSEG Nuclear maintains a contract with a meteorology evaluation contractor as well as a MOU with the National Weather Service. After a radiological release, environmental sample collection and analysis would be coordinated through the PSEG Nuclear Emergency Response Organization as requested by the Emergency Coordinator (or designee) in accordance with Emergency Plan Implementing Procedures.

5.2 Reactor Vendor

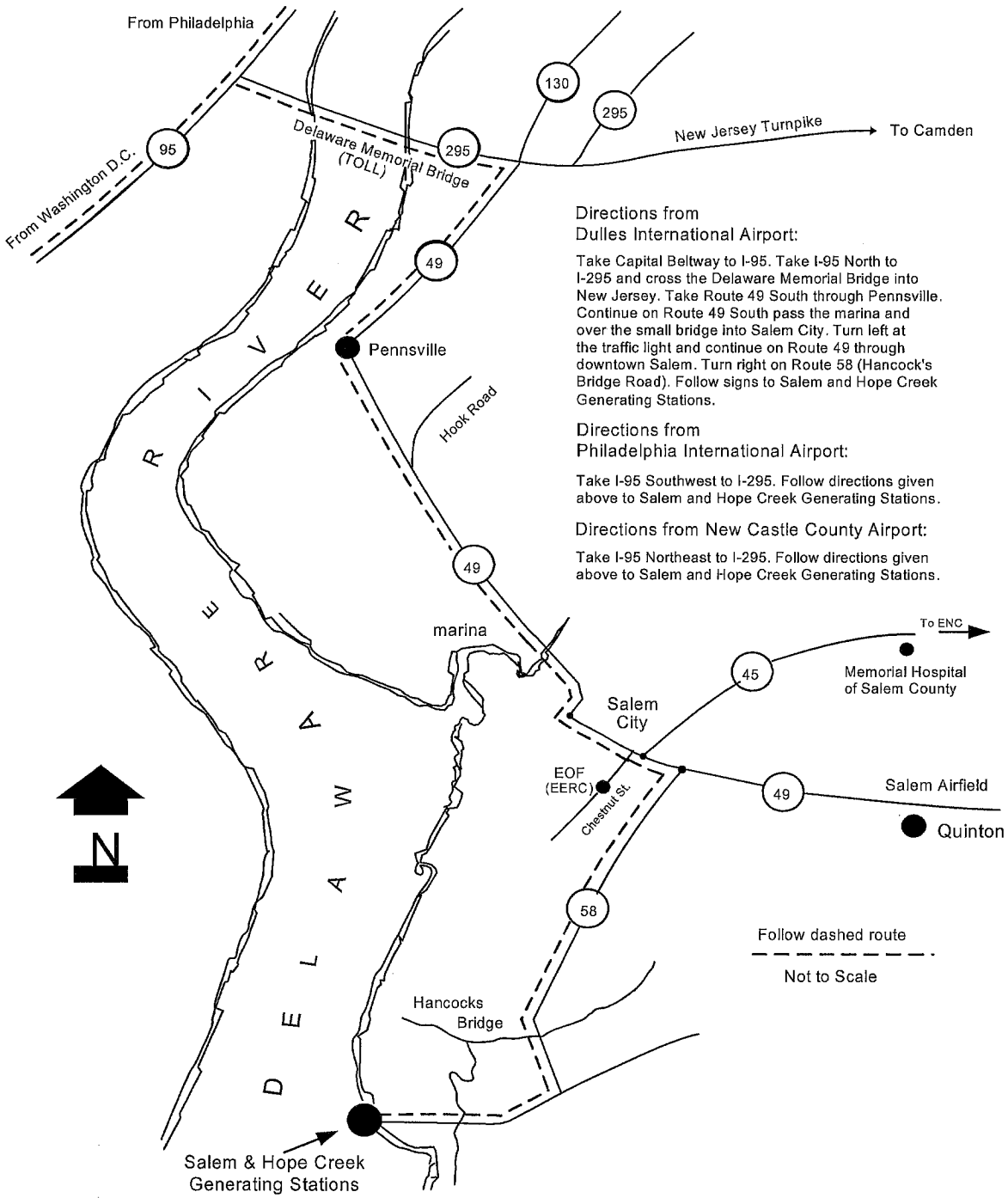
The emergency response capabilities of both Nuclear Steam Supply System (NSSS) vendors in support of Salem and Hope Creek Generating Stations are provided in supplements to the Plan listed in Emergency Plan attachment document.

5.3 Institute of Nuclear Power Operations (INPO)

INPO requested that all utilities with nuclear generating stations provide INPO with information concerning material and personnel resources. This information is available in their "Emergency Resources Manual," to which PSEG Nuclear is a signatory. This source of information, available on-line at the INPO website, is used by the emergency coordinator function in requesting assistance from other Utility Companies.

Supplementing this Plan in the Emergency Plan attachment document is the letter of agreement from INPO that outlines INPO's role in assisting a member utility during an emergency.

FIGURE 4-1
SALEM and HOPE CREEK GENERATING STATIONS
ACCESS FROM AREA AIRPORTS



## SECTION 6

## NOTIFICATION METHODS - RESPONSE ORGANIZATIONS

### 1.0 INITIAL NOTIFICATION

### 1.1 PSEG NUCLEAR LLC EMERGENCY RESPONSE ORGANIZATION

The initial notification of an emergency or a change in emergency classification is in accordance with Figure 6-1. Table 6-1 provides an initial notification and action summary as discussed in NUREG-0654. The station plant paging systems are utilized to notify onsite personnel of emergency conditions and that activation of emergency response facilities may be required.

An automated Emergency Outdial System computer is utilized to callout the balance of emergency response personnel for full organizational augmentation and activation of emergency response facilities. The system activates the appropriate digital group pagers while simultaneously calling other personnel on the telephone. The system is interactive and recognizes emergency response personnel by their employee identification numbers.

Additional PSEG Nuclear LLC telephone notifications are made in accordance with applicable Event Classification Guide Attachments and Emergency Plan Implementing Procedures.

### 1.2 INITIAL NOTIFICATION - STATES

The initial notification to the states of an emergency or a change in emergency classification is made to the State Police Headquarters of New Jersey and Delaware. Upon completion of the initial message, each State Police Headquarters verifies the call by performing a callback check and then makes the notifications indicated in Figures 6-2 and 6-3.

The procedures for initial notifications to the State of New Jersey and Delaware are identical for all emergency classes. Once activated however, the Delaware Emergency Management Agency (DEMA) will take initial notifications instead of the Delaware State Police. This notification is made promptly following the declaration of the emergency (within 15 minutes). An example of the message format for this initial notification used in the emergency procedures is provided as Figure 6-4. These notifications meet the requirements of NUREG-0654, Element E-3. Appropriate forms are utilized for each emergency classification.

### 1.3 INITIAL NOTIFICATION - LOCAL

For events classified as an Unusual Event, Alert or Site Area Emergency classifications, each state, following notification by the utility, initially notifies the local authorities. If, however, the utility has not been able to contact a state, the utility directly notifies the local (county) authorities.

All initial notifications must be accomplished within 15 minutes. Accident assessment, protective action recommendations, and other information normally provided to the state are communicated to the local authorities (or other agencies as provided in the Memorandum of Understanding with the state) until the state assessment agency assumes its communications and assessment responsibilities.

For events classified as a General Emergency, Salem and Hope Creek Generating Stations make direct contact with the States of New Jersey and Delaware. If the states cannot be contacted within fifteen minutes, the affected station notifies the local governments (counties) and the Coast Guard. Following this initial contact the states, or if the states could not be contacted the counties, will be responsible for assessing the information provided, activating their response organization (as required), notifying appropriate local governments, and the public.

Following contact by the state, or PSEG Nuclear, each county and the U.S. Coast Guard are responsible for assessing the information provided and activating their response organizations.

## 1.4 FOLLOWUP COMMUNICATION - STATES

The followup communication with the states is initiated by a return call from the authorized state agency. For the State of Delaware, the Delaware Emergency Management Agency is responsible for followup communications. For the State of New Jersey, the Department of Environmental Protection, Bureau of Nuclear Engineering and/or the New Jersey State Police Office of Emergency Management is responsible for followup communications.

The procedures for followup communications with the States of New Jersey and Delaware are identical for all emergency classes. An example message format for followup communications used in the emergency plan procedures is provided as Figure 6-5. These notifications meet the requirements of NUREG-0654, Element E-4. Appropriate forms are utilized for each emergency classification.

## 1.5 FOLLOWUP COMMUNICATIONS - LOCAL

Followup communications with the local authorities are provided by the appropriate state agency for all emergency classifications.

## 1.6 NOTIFICATION OF THE NRC

This plan provides for appropriate notification of the NRC for the events described in the Event Classification Guide.

## 2.0 PROMPT ALERTING AND NOTIFICATION OF THE PUBLIC

Following initial notification, the states make a determination on protective actions and activation of the Prompt Alerting and Notification System. This system can be activated directly by Salem County in New Jersey and by the Delaware State Police in Delaware for a rapidly developing emergency.

Land use within Salem and Hope Creek Nuclear Generating Stations plume exposure Emergency Planning Zone (EPZ) is principally rural. The area within five miles of the stations is largely water and marsh land. This area attracts only a limited number of hunters and trappers, most of whom are local residents. The towns and city within ten miles of Salem and Hope Creek Nuclear Generating Stations are listed in Table 1-1.

## 2.1 SIREN SYSTEM AS THE FIRST PROMPT ALERTING SYSTEM

The Prompt Alerting and Notification System (operated by the states) (Figure 6-6) consists of subsystems which meet the criteria of FEMA REP-10. The system provides notification of the population within zero to five miles of the stations in 15 minutes and notification of the population within five to ten miles in 45 minutes. The first Prompt Alerting and Notification subsystem consists of a siren system controlled from a continuously (24 hour) staffed location in New Jersey and Delaware. Within zero to ten miles of Salem and Hope Creek Nuclear Generating Stations this system is designed to provide siren coverage for essentially 100% of the permanent resident population. In addition, it provides siren coverage of population centers throughout the plume exposure EPZ and selected coverage for the areas known to have recreational or transient populations. An area map showing this system is provided as Figure 6-7. Figure 6-7 includes a listing of siren locations. This system is as represented in the Alert and Notification System Report submitted by New Jersey, Delaware, and PSE&G to FEMA Region 2 on January 31, 1986 and tested on December 10, 1986; as amended by the Final Design Review Report approved and issued by FEMA in April 2007 for the updated Alert and Notification System.

## 2.2 PUBLIC ADDRESS SYSTEMS AS THE SECOND PROMPT ALERTING SYSTEM

The second prompt alerting and notification subsystem combines alerting, notification, and information into a single system. This system, which is used for waterborne transient boaters within the plume exposure EPZ, consists of a radio alert and notification system coordinated by the United States Coast Guard (USCG) on Marine Channel 16 and supplemented by broadcasts via Emergency Alert System (EAS) and National Oceanographic and Atmospheric Administration (NOAA) Weather Radio. The USCG and states also dispatch boats and helicopters to make direct contact with boaters.

## 2.3 TRANSIENT ALERTING AND NOTIFICATION SYSTEM

Prompt alerting and notification of the transient population within the plume exposure EPZ utilizes the prompt alerting and notification system for the permanent resident population. The States of Delaware, New Jersey and the USCG have established methods for augmenting the prompt alerting and notification system that provides additional assurance that transients are notified in the event of an emergency requiring implementation of protective actions for the public. In general, the agencies in charge of parks and recreation, the Delaware National Guard, the marine police and the state police assist in the notification of transients within their jurisdictions. The alerting and notification of transients may utilize motor vehicles, aircraft, boats or road blocks. The methods used inform/educate the transient population of the prompt alerting system and their required response is provided in Section 8.0 of this plan. These subsystems are augmented by the use of route alerting by police and fire personnel.

## 2.4 ROUTE ALERTING AS A BACK-UP ALERTING SYSTEM

The prompt alerting subsystems described previously are all augmented by the use of public address systems used by police and fire personnel.

## 2.5 ALERT NOTIFICATION SYSTEM REPORT

The Alert Notification System Report for Salem and Hope Creek Generating Stations, submitted to FEMA to meet REP 10 requirements, provides appropriate reports on the design, hardware, and other applicable components of the systems, including specific letters of agreement, plans and procedures.

## TABLE 6-1

## NOTIFICATION AND ACTION SUMMARY

A. Unusual Event

| Class/Condition | Licensee Actions | Offsite |
|---|---|---|
| 1. Potential degradation of the level of safety of the plant<br>OR<br>Security threat to facility protection. | 1. Promptly inform DE DSP/DEMA and NJ OEM authorities. | 1. Verify event classification/status. |
| 2. No radiological release requiring offsite response or monitoring is expected. | 2. Assess event conditions and initiate corrective actions. | 2. Notify key personnel. |
| | 3. Augment on-shift resources as needed. | 3. Provide assistance if requested. |
| | 4. Escalate emergency level or terminate the event. | 4. Standby until event termination or emergency level escalation. |

**TABLE 6-1 (cont)**

**NOTIFICATION AND ACTION SUMMARY**

B. Alert

| Class/Condition | Licensee Actions | Offsite |
|---|---|---|
| 1. Potential/actual safety system degradation<br>OR<br>Security event that involves probable life threatening risk to site personnel or damage to site equipment because of hostile action. | 1. Promptly inform DE DSP/DEMA and NJ OEM authorities. | 1. Alert state response personnel & key county personnel. |
| 2. Potential/actual radiological release is fraction of EPA PAG. | 2. Activate the OSC | 2. Activate state EOC. Alert to standby/ activate Kent County, Cumberland County, New Castle County, and Salem County Emergency Coordinators. |
| | 3. Mobilize additional personnel to activate TSC. Emergency Duty Officer assumes control as Emergency Coordinator. Provide periodic plant status updates to the states. | 3. Initiate field monitoring, if appropriate. |
| | 4. Assess event conditions & initiate corrective actions. | 4. Escalate emergency level or terminate event. |
| | 5. Dispatch field monitoring teams as applicable. | |
| | 6. Provide states with escalated emergency level or terminate event. | |

**TABLE 6-1 (cont)**

**NOTIFICATION AND ACTION SUMMARY**

C. Site Area Emergency

| Class/Condition | Licensee Actions | Offsite |
|---|---|---|
| 1. Actual/likely major failure of plant function needed to protect public<br><br>OR<br><br>Hostile action that results in intentional damage or malicious acts toward site personnel or equipment that could lead to likely failure of, or that prevents effective access to, equipment needed for protection of the public. | 1. Promptly inform DE DSP/DEMA and NJ OEM authorities. | 1. Initiate prompt notification and activate EAS and keep public informed. |
| 2. Radiological release may exceed EPA PAG at site boundary. | 2. Augment all resources to activate EOF. Emergency Response Manager assumes control as emergency coordinator. | 2. Alert all emergency response personnel and activate specific functions. Activate state, county and local EOCs. |
| 3. Possible degraded core. | 3. Assess event conditions and initiate corrective actions. | 3. Monitor appropriate locations. |
| 4. Imminent loss of physical control of plant. | 4. Conduct accountability and release nonessential personnel. | 4. Alert contiguous and ingestion pathway states. |
| | 5. Dispatch radiological monitoring teams. | 5. Provide assistance to the site, if required. |
| | 6. Provide states with: On/offsite radiological data, plant conditions, and meteorological data. | 6. Escalate or deescalate emergency class. |
| | 7. Provide state with dose projections and recommend protective actions. | |
| | 8. Escalate or deescalate emergency class. | |

**TABLE 6-1 (cont)**

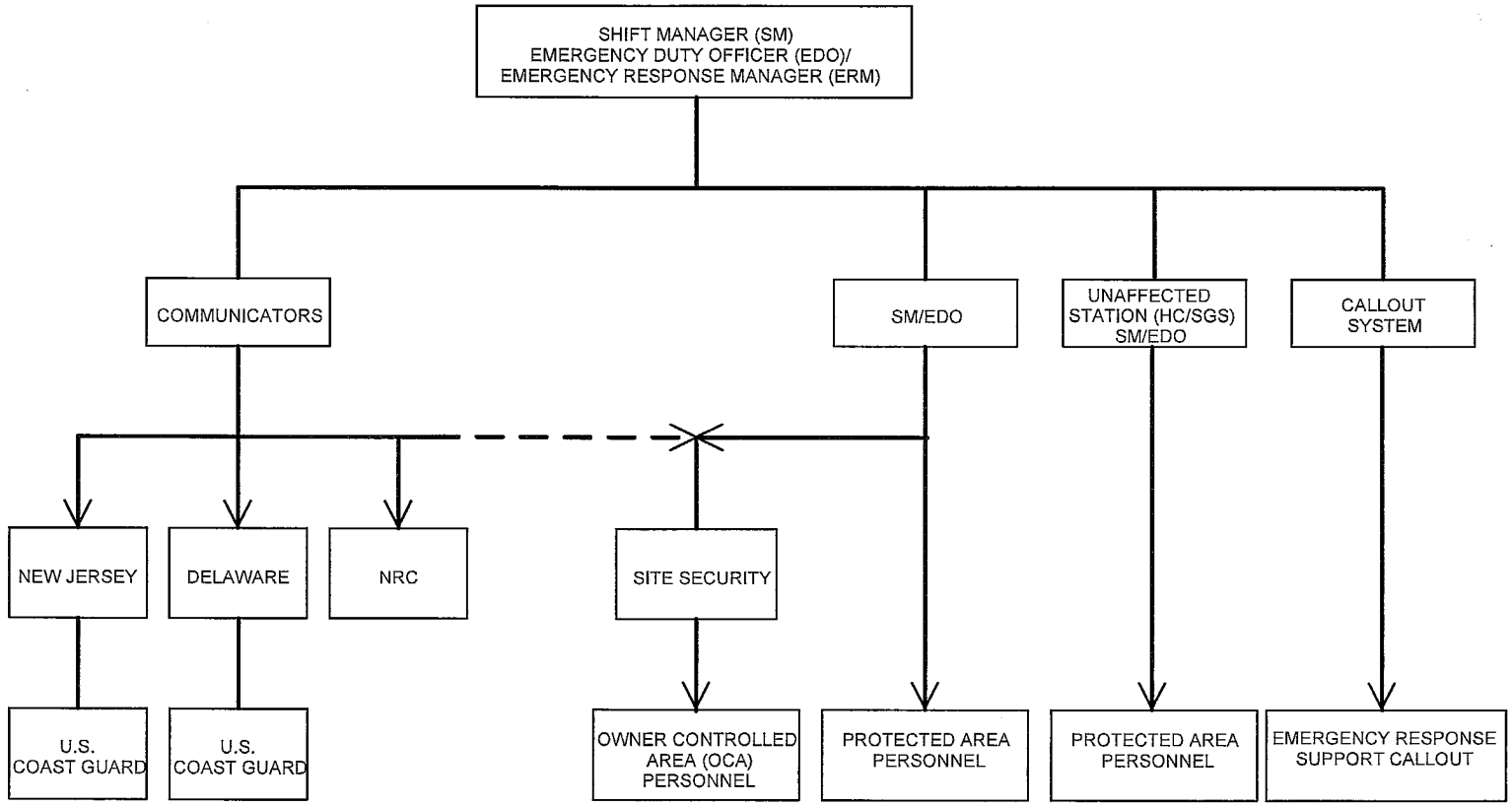
**NOTIFICATION AND ACTION SUMMARY**

D. General Emergency

| Class/Condition | Licensee Actions | Offsite |
|---|---|---|
| 1. Actual/imminent core degradation or melting with potential containment failure<br>OR<br>Hostile actions that result in an actual loss of physical control of the facility. | 1. Promptly inform DE DSP/DEMA and NJ OEM authorities. Provide pre-determined (based on plant condition) protective action recommendations. | 1. Activate emergency and protective action functions. |
| 2. Actual/potential radiological release exceeding EPA PAG offsite. | 2. Assess event conditions and initiate corrective actions. | 2. Make and implement protective actions, including pathway measures. |
| 3. Loss of two fission Product barriers and Potential loss of the third. | 3. Augment all Resources. | 3. Regularly inform the public of Emergency status. |
| | 4. Keep federal and state authorities informed of event status and developments. | 4. Coordinate field monitoring with federal, offsite and onsite teams. |
| | 5. Regularly provide radiological and meteorological data to the States. | 5. Continuously assess event effects upon the public. |
| | 6. Initiate actions, mitigate the incident and terminate any radiological releases. | 6. Reduce emergency and initiate recovery action. |
| | 7. Initiate recovery action and reduce emergency class. | |

FIGURE 6-1

NOTIFICATION METHOD - PSE&G




LEGEND

– – – – – COMMUNICATOR NOTIFIES SITE SECURITY OF CLASSIFICATION ONLY, TO PREPARE THEM FOR PROTECTIVE ACTION DECISIONS COMING FROM THE OS/EDO.

FIGURE 6-2

NOTIFICATION METHOD - NEW JERSEY

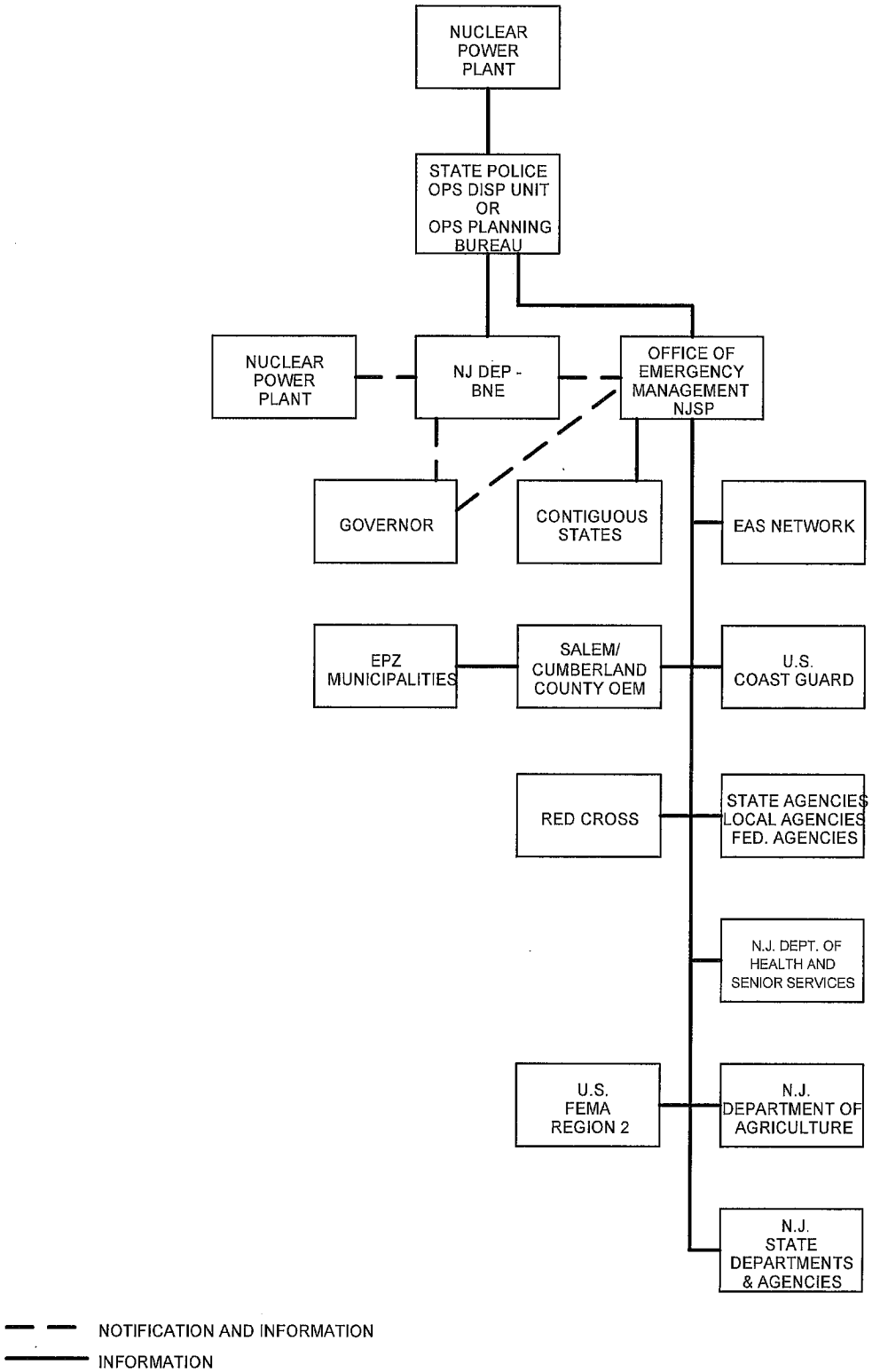


FIGURE 6-3

NOTIFICATION METHOD - DELAWARE

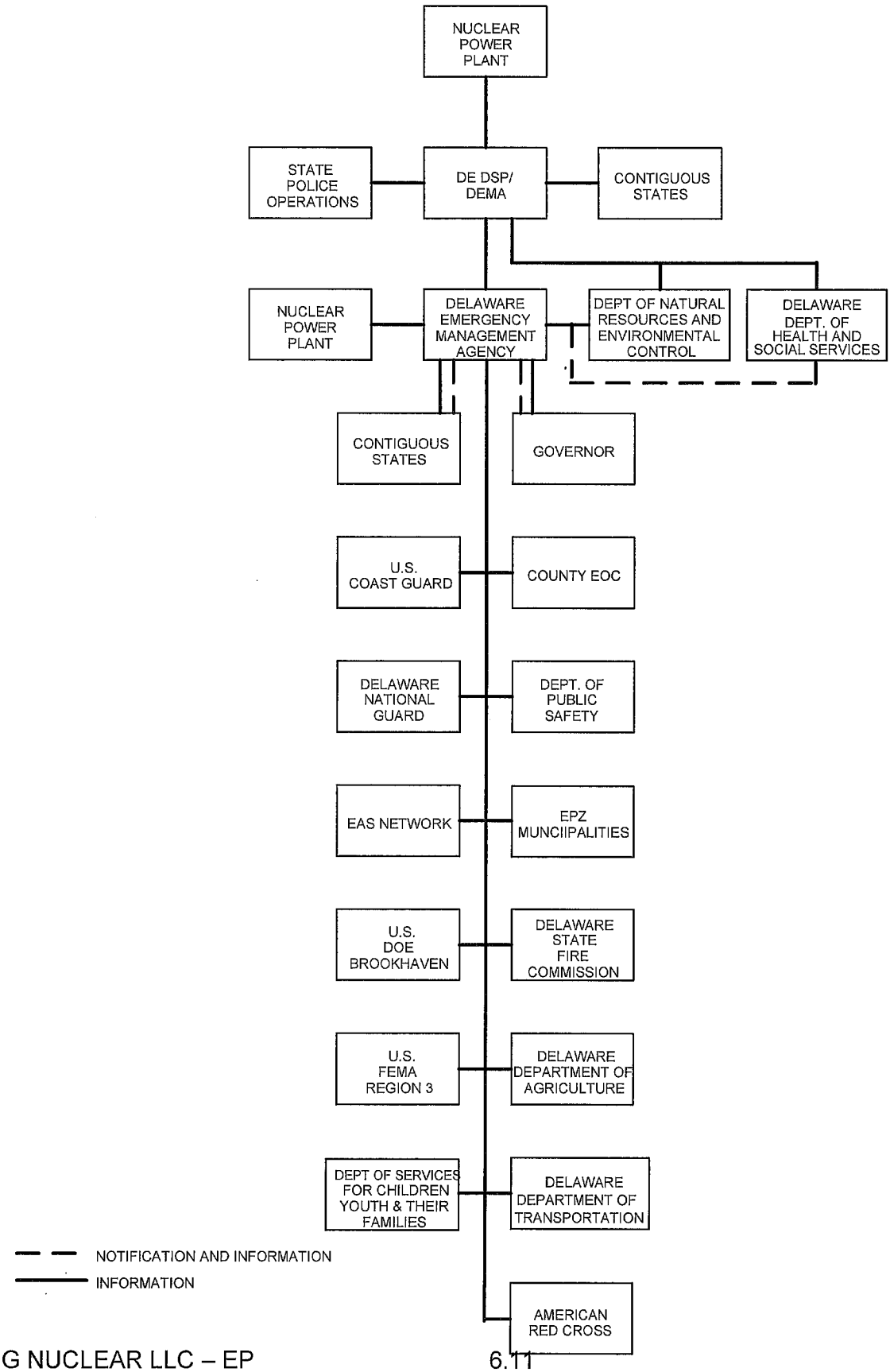


**FIGURE 6-4**
**TYPICAL INITIAL CONTACT MESSAGE FORM**

**INITIAL CONTACT MESSAGE FORM**

I. THIS IS _____ , COMMUNICATOR IN THE ☐ CONTROL ROOM
(NAME) ☐ TSC
☐ EOF
AT THE **SALEM** NUCLEAR GENERATING STATION, UNIT NO. _____.

---

II. ☐ THIS IS NOTIFICATION OF A **SITE AREA EMERGENCY** WHICH WAS

DECLARED AT _____ ON _____.
(TIME - 24 HOUR CLOCK) (DATE)

EAL #(s) _____, _____,
_____

DESCRIPTION OF EVENT: _____

_____
—

---

NOTE: Radiological Release is defined as: Plant Effluent > Tech Spec Limit of 2.42E+05 μCi/sec Noble Gas or 2.1E+01 μCi/sec I-131.

III. ☐ NO RADIOLOGICAL RELEASE IS IN PROGRESS. } see NOTE for release definition
☐ THERE IS A RADIOLOGICAL RELEASE IN PROGRESS.

---

IV. 33 FT. LEVEL WIND DIRECTION (From):_____ WIND SPEED: _____
(From MET Computer) (DEGREES) (MPH)

---

V. ☐ **NO PROTECTIVE ACTIONS ARE RECOMMENDED AT THIS TIME**

---

_____
EC Initials
(Approval to Transmit ICMF)

## FIGURE 6-5
## TYPICAL STATION STATUS CHECKLIST

SSCL

# STATION STATUS CHECKLIST

(Pg. 1 of 2)

Operational Information

SALEM GENERATING STATION Unit No.____ Message Date _____ Time _____

Transmitted By: Name _____ Position _____
(CR/TSC/EOF)

1. Date and Time Event Declared: Date _____ Time _____ (24 hr clock)

2. Event Classification: ☐ Unusual Event ☐ Site Area Emergency
☐ Alert ☐ General Emergency

3. Cause of Event: Primary Initiating Condition used for declaration

EAL #(s) _____

Description of the event _____

_____

_____

_____

4. Status of Reactor: ☐ Tripped Time of Trip _____
☐ At Power ☐ Startup ☐ Hot Standby ☐ Hot Shutdown ☐ Cold Shutdown ☐ Refuel

5. RZR/RCS Pressure _____ psig Core Exit TC _____ °F

6. Is offsite power available? ☐ YES ☐ NO

7. Are two or more diesel generators available? ☐ YES ☐ NO

8. Did any Emergency Core Cooling Systems actuate? ☐ YES ☐ NO

9. Is the Containment barrier failed? (Loss per EAL section 3.3) ☐ YES ☐ NO

10. Other pertinent information _____

_____

_____

_____

Approved: _____
EC or TSS or SSM

**FIGURE 6-5 (cont)**
**TYPICAL STATION STATUS CHECKLIST**

STATION STATUS CHECKLIST
( PAGE 2 OF 2 )
RADIOLOGICAL INFORMATION

SALEM GENERATING STATION UNIT NUMBER: ___ CALCULATION TIME: _____ DATE: _____

1. GASEOUS RELEASE>TECH SPEC (T/S) LIMITS:
(T/S LIMITS: 2.42 E+05 µCi/sec NG or 2.1E+01 µCi/sec IODINE)

YES: [ ] RELEASE START TIME: _____ DATE: _____
NO: [ ]

A. RELEASE TERMINATED: YES [ ] NO [ ] N/A [ ]
B. ANTICIPATED OR UNKNOWN DURATION OF RELEASE: _____ HOURS
C. TYPE OF RELEASE: GROUND [ ] ELEVATED: [ ]N/A [ ]
D. ADJUSTED WIND SPEED: _____(mph) _____(m/sec) WIND DIR (deg from) _____
E. STABILITY CLASS: _____ (A-G) DELTA T: _____(deg C)
F. VENT PATH OF RELEASE: R41 [ ] R45B/C [ ] R44 [ ] R46 [ ]
G. NG RELEASE RATE: R41_____R45B/C_____R44_____
R46_____(µCi/sec)
H. I-131 RELEASE RATE: R41_____R45B/C_____R44_____
R46_____ DEFAULT (µCi/sec) (circle if default)
I. TOTAL RELEASE RATE NOBLE GAS: _____(µCi/sec)
J. TOTAL RELEASE RATE IODINE-131: _____(µCi/sec)

2. PROJECTED OFFSITE DOSE RATE CALCULATIONS:

| DISTANCE FROM VENT (IN MILES) | XU/Q (1/M2) | TEDE RATE (MREM/HR) | TEDE DOSE (4 DAY) (MREM) | THYROID-CDE RATE (MREM/HR) | THYROID-CDE DOSE (MREM) |
|---|---|---|---|---|---|
| MEA 0.79 | _____ | _____ | _____ | _____ | _____ |
| 2.00 | _____ | _____ | _____ | _____ | _____ |
| LPZ 5.00 | _____ | _____ | _____ | _____ | _____ |
| EPZ 10.00 | _____ | _____ | _____ | _____ | _____ |

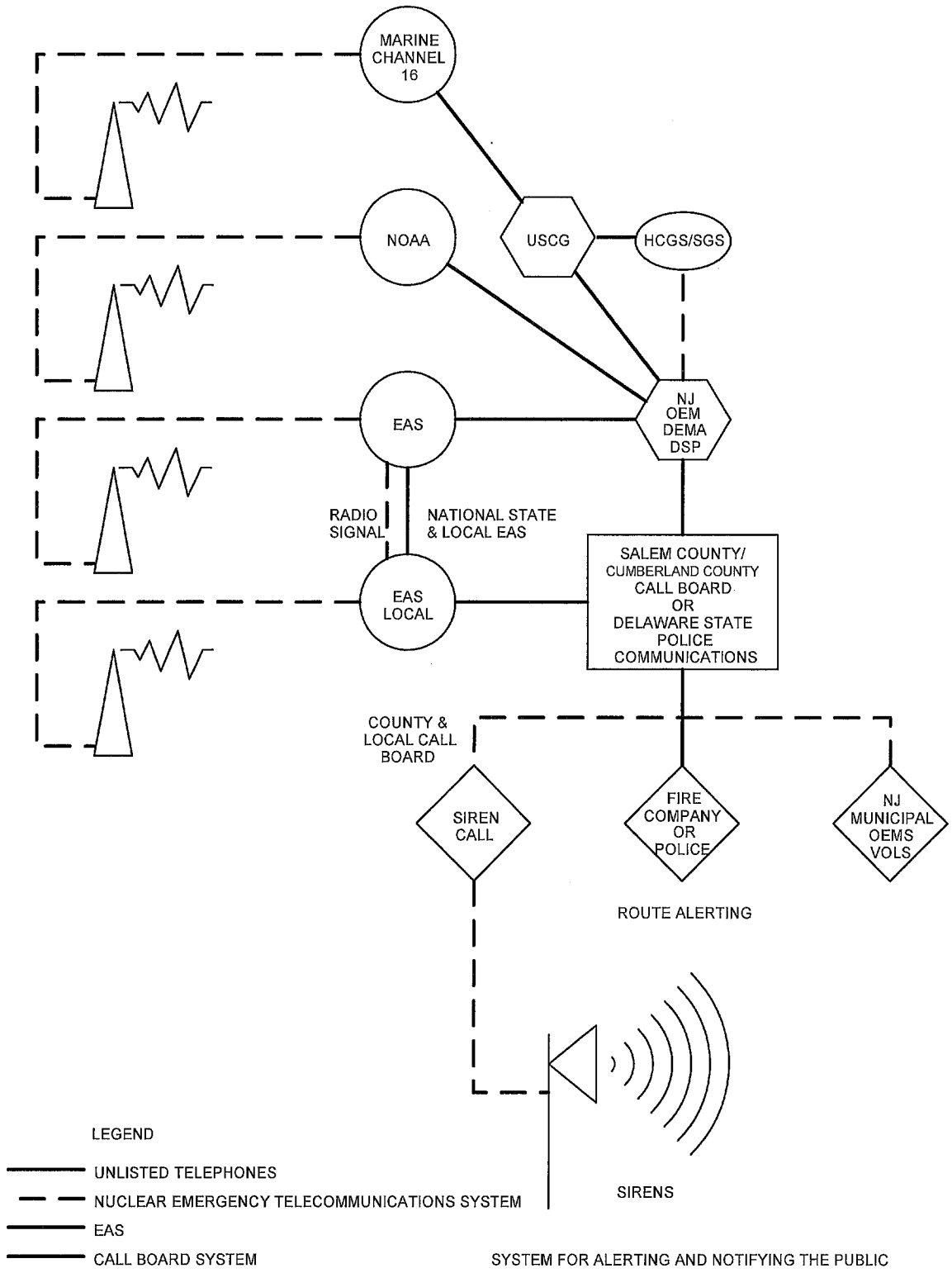
3. OTHER PERTINENT INFORMATION:
_____
_____
—

4. UPDATE TO STATES (IF VERBALLY TRASMITTED):

| | NAME | TIME | INITALS |
|---|---|---|---|
| STATE OF NEW JERSEY: | _____ | _____ | _____ |
| STATE OF DELAWARE : | _____ | _____ | _____ |
| AGENCY: | _____ | _____ | _____ |

APPROVED: _____
EC or RAC or RSM

FIGURE 6-6
PROMPT NOTIFICATION SYSTEM




SYSTEM FOR ALERTING AND NOTIFYING THE PUBLIC

FIGURE 6-7
APPROXIMATE AREA OF PROMPT NOTIFICATION SYSTEM COVERAGE

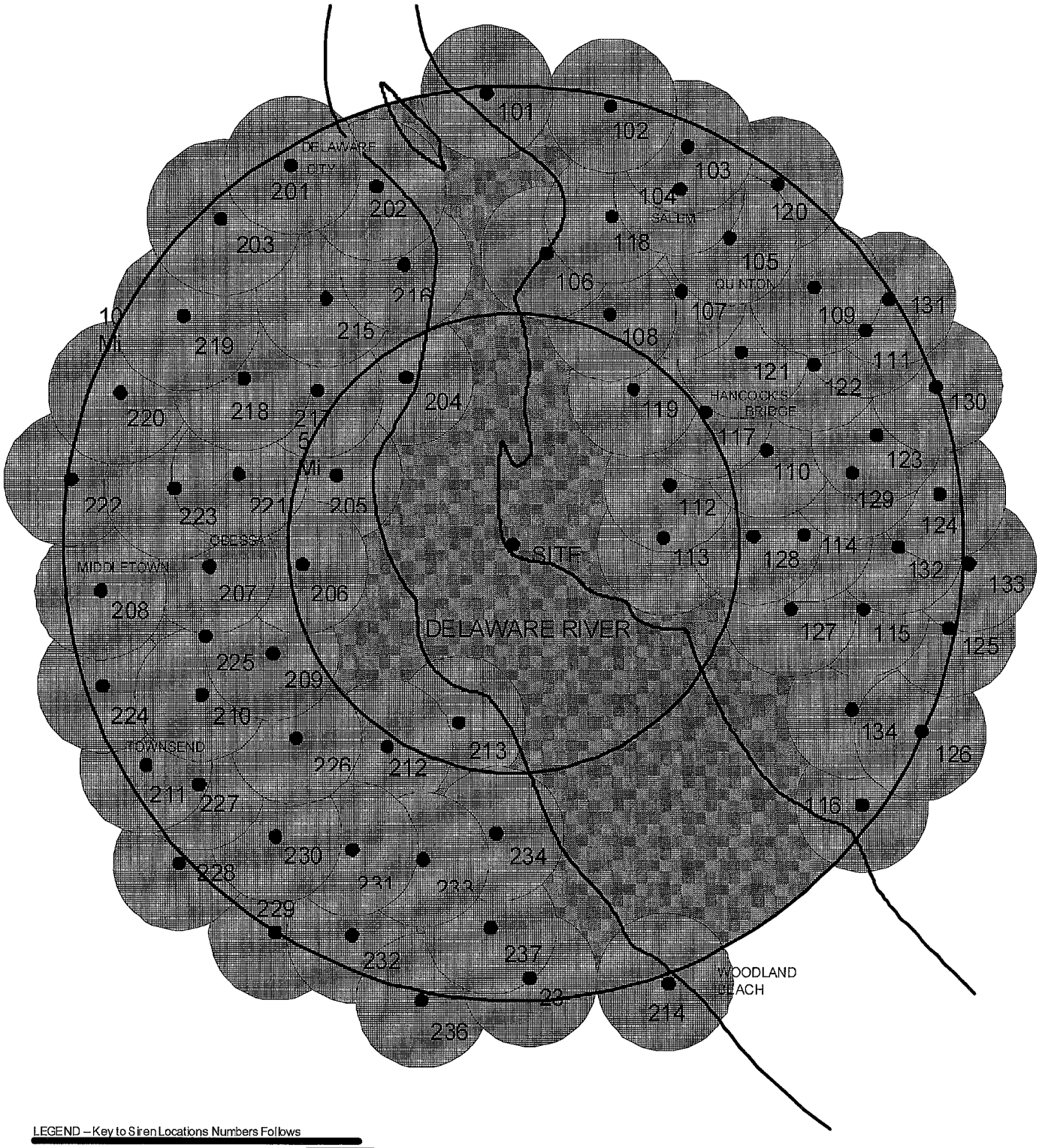


**FIGURE 6-7 (cont)**

**SIREN LOCATIONS**

| Siren No. | State/City & County | Location |
|---|---|---|
| | | **New Jersey** |
| 101 | NJ/Pennsville Salem Co. | Fort Mott Road, 0.1 mile south of Fort Mott Park |
| 102 | NJ/Pennsville Salem Co. | Route 49, 1000 ft. south of intersection with Harrisonville Lighthouse Road |
| 103 | NJ/Salem Salem Co. | Route 45, 0.2 mile east of intersection with Tide Mill Road |
| 104 | NJ/Salem Salem Co. | New Market Street at intersection with Belden Street |
| 105 | NJ/Salem Salem Co. | Quinton Road, 0.2 mile west of intersection with Harris Road |
| 106 | NJ/Elsinboro Salem Co. | Delaware Avenue, 0.1 mile east of intersection with Locust Avenue |
| 107 | NJ/Hagerville Salem Co. | Salem-Hancocks Bridge Road, 1 mile from intersection with Amwellbury Road |
| 108 | NJ/Elsinboro Salem Co. | Fort Elfsborg-Hancocks Bridge Road, 1200 feet southeast of intersection with Money Island Road |
| 109 | NJ/Quinton Salem Co. | Quinton Fire Department, at intersection of Route 49 with Robinson Road |
| 110 | NJ/Lower Alloways Creek Salem Co. | Harmersville-Pecks Corner-Cohansy Road, 2000 feet east of intersection with Mays Lane |
| 111 | NJ/Quinton Salem Co. | Burden Hill Road, 3000 feet southwest of intersection with Route 49 |

**FIGURE 6-7 (cont)**

| Siren No. | State/City & County | Location |
|---|---|---|
| 112 | NJ/Lower Alloways Creek Salem Co. | Alloway Creek Neck Road, 2000 feet south of intersection with Grosscup Road on Access Road to Artificial Island |
| 113 | NJ/Lower Alloways Creek Salem Co. | Alloway Creek Neck Road, 1.8 mile south of intersection with Grosscup Road on Access Road to Artificial Island |
| 114 | NJ/Lower Alloways Creek Salem Co. | Frog Ocean Road, 1800 feet east of intersection with Stow Neck Road |
| 115 | NJ/Stow Creek Cumberland Co. | Stow Creek Road, 0.1 mile west of intersection with Canton Road |
| 116 | NJ/Greenwich Cumberland Co. | Bay Side Road, 1.1 mile west of intersection with Tindale Island Road |
| 117 | NJ/Lower Alloways Creek Salem Co. | Buttonwood Road at the intersection with Cuff Road |
| 118 | NJ/Elsinboro Salem Co. | Tilbury Road, 1500 feet south of the intersection with Sinnickson Landing Road |
| 119 | NJ/Elsinboro Salem Co. | Abbott's Farm Road, 4300 feet south of intersection with Fort Elfsborg-Hancocks Bridge Road |
| 120 | NJ/Salem Salem Co. | Quaker Neck Road at intersection with Sandy Ridge Road |
| 121 | NJ/Lower Alloways Creek Salem Co. | Beasley Neck Road, 2000 feet north of intersection with Hogate Boulevard |

**FIGURE 6-7 (cont)**

| Siren No. | State/City & County | Location |
|---|---|---|
| 122 | NJ/Quinton Salem Co. | Cross Road, 500 feet south of intersection with Hogate Boulevard |
| 123 | NJ/Quinton Salem Co. | Quinton-Jericho Road at intersection with Mill Pond Road |
| 124 | NJ/Quinton Salem Co. | Quinton-Jericho Road, 500 feet northwest of inter section with Gravelly Hill Road |
| 125 | NJ/Stow Creek Cumberland Co. | Willis Road, 2500 feet east of Frank Davis Road South |
| 126 | NJ/Greenwich Cumberland Co. | Gum Tree Corner Road, 3250 feet south of intersection with Stathems Neck Road |
| 127 | NJ/Lower Alloways Creek Salem Co. | Frog Ocean Road at intersection with Frog Road |
| 128 | NJ/Lower Alloways Creek Salem Co. | Stow Neck Road, 0.5 mile south of intersection with Long Bridge Road |
| 129 | NJ/Lower Alloways Creek Salem Co. | Maskell's Mill Road at intersection with Batter Cake Lane |
| 130 | NJ/Quinton Salem Co. | Harmersville-Pecks Corner Cohansey Road, 3500 feet west of intersection with Route 49 |
| 131 | NJ/Quinton Salem Co. | Burden Hill Road, 2000 feet north of intersection with Route 49 |
| 132 | NJ/Lower Alloways Creek Salem Co. | Buckhorn Road, 8000 feet west of intersection with Macanippuck Road |

**FIGURE 6-7 (cont)**

| Siren No. | State/City & County | Location |
|---|---|---|
| 133 | NJ/Stow Creek Salem Co. | Macanippuck Road, 2000 feet south of intersection with Buckhorn Road |
| 134 | NJ/Greenwich Cumberland Co. | Stathems Neck Road, 5500 feet west of intersection with Gum Tree Road at the bend in the road |

**Delaware**

| | | |
|---|---|---|
| 201 | DE/Delaware City New Castle Co. | Route 72 at intersection with Clarks Corner Road |
| 202 | DE/Delaware City New Castle Co. | Clinton St. at intersection with Second Street |
| 203 | DE/St. Georges New Castle Co. | Route 13 at intersection with Coxs Neck Lane |
| 204 | DE/Port Penn New Castle Co. | Biddles Corner-Port Penn Road, 0.1 mile west of intersection with River Road |
| 205 | DE/Bayview New Castle Co. | McDonough Bayview Road, 0.2 mile west of intersection with Thomas Corner Road |
| 206 | DE/Thomas Landing New Castle Co. | Thomas Corner Road, 0.8 mile west of intersection with Old Corbit Road |
| 207 | DE/Odessa New Castle Co. | Marl Pitt Road at intersection with Fifth Street |
| 208 | DE/Middletown New Castle Co. | Main Street at intersection with New Road |
| 209 | DE/Mathews Corners New Castle Co. | Stump Corner Road, 0.6 mile south of intersection with Thomas Corner Road |

**FIGURE 6-7 (cont)**

| Siren No. | State/City & County | Location |
|---|---|---|
| 210 | DE/Fieldboro New Castle Co. | Noxontown Road, 0.1 mile west of intersection with Route 13 |
| 211 | DE/Townsend New Castle Co. | Townsend Pine Tree Corner Road, 0.1 mile west of intersection with Blackbird Middletown Road |
| 212 | DE/Taylors Bridge New Castle Co. | Flemings Landing Road, 1.8 mile east of intersection with Taylors Bridge Road |
| 213 | De/Taylors Bridge New Castle Co. | Cedar Swamp Road, 2 miles east of Route 9 |
| 214 | DE/Woodland Beach Kent Co. | Route 6, 2.8 miles east of intersection with Route 9 |
| 215 | DE/Port Penn New Castle Co. | Route 9, 200 feet south of intersection with Dutch Neck Road |
| 216 | DE/Port Penn New Castle Co. | Dutch Neck Road, 9000 feet northeast of intersection with Biddles Corner- Port Penn Road |
| 217 | DE/Port Penn New Castle Co. | Boyd's Corner Road, 2000 feet west of intersection with Biddles Corner-Port Penn Road |
| 218 | DE/St. Georges New Castle Co. | Route 13, 2500 feet south of intersection with Biddles Corner-Port Penn Road |
| 219 | DE/Biddles Corner New Castle Co. | Biddles Corner Grove Road, 2600 feet north of intersection with County Road 412A |
| 220 | DE/Mt. Pleasant New Castle Co. | Ratlidge Road, 1500 feet north of intersection with Mount Pleasant-Boyd's Corner Road |

**FIGURE 6-7 (cont)**

| Siren No. | State/City & County | Location |
|---|---|---|
| 221 | DE/McDonough New Castle Co. | Route 13, 1000 feet south of intersection with McDonough-Bayview Road |
| 222 | DE/Armstrong New Castle Co. | Route 301, 1500 feet north of intersection with Armstrong Corner Road |
| 223 | DE/Armstrong New Castle Co. | Shallcross Road, 5500 feet north of intersection with Armstrong Corner Road at bend in the road |
| 224 | DE/Middletown New Castle Co. | Blackbird-Middleton Road, 3000 feet south of intersection with Noxontown Road |
| 225 | DE/Fieldboro New Castle Co. | Route 13, 2000 feet north of intersection with Chestnut Lane |
| 226 | DE/Blackbird New Castle Co. | Taylors Bridge Road at intersection with Union Church Road |
| 227 | DE/Ginns Corner New Castle Co. | Route 13, 5000 feet north of intersection with Blackbird-Middletown Road |
| 228 | DE/Blackbird New Castle Co. | Blackbird Station Road, 800 feet west of Blackbird Creek |
| 229 | DE/Blackbird New Castle Co. | Route 13, 2950 feet south of intersection with Blackdiamond Road |
| 230 | DE/Blackbird New Castle Co. | Gum Bush Road, 2000 feet northeast of intersection with Blackbird Landing Road |
| 231 | DE/Walker New Castle Co. | Walker School Road at intersection with Gardner Road |

**FIGURE 6-7 (cont)**

| Siren No. | State/City & County | Location |
|---|---|---|
| 232 | DE/Walker New Castle Co. | Paddock Road, 1750 feet north of intersection with Black Diamond and Walker School Roads |
| 233 | DE/Taylors Bridge New Castle Co. | Paddock Road, 3500 feet west of intersection with Route 9 |
| 234 | DE/Taylors Bridge New Castle Co. | Thoroughfare Neck Road, 6000 feet east of intersection with Route 9 |
| 235 | DE/Brick Store Kent Co. | County Road 82, 1000 feet south of intersection with Route 9 |
| 236 | DE/Smyrna New Castle Co. | End of Brick Store Landing Road, 1500 feet east of intersection with County Road 503 |
| 237 | DE/Brickstore Kent Co. | Route 9, 2000 feet northwest of intersection with County Road 317 |

NOTE:

All sirens are omni-directional and each has a weighted average sound pressure level of 119.5 dB© at 100 feet to meet criteria of FEMA REP-10.

## SECTION 9

## EMERGENCY FACILITIES AND EQUIPMENT

1.0 PSEG Nuclear LLC - Emergency Facilities and Equipment

Emergency facilities and equipment are maintained for the PSEG Nuclear LLC both on and offsite. Equipment specifically for monitoring and assessment of operational, radiological, geophysical events, and similar instrumentation is described in Section 10, Accident Assessment. The Emergency Operations Facility and Emergency News Center are offsite facilities that serve the PSEG Nuclear LLC.

Although onsite facilities are described separately in paragraph Sections 2.0 and 3.0, to reflect station specifics, they have common functions, and fulfill the same organizational and operational commitments.

1.1 Control Rooms

Control Rooms continue their control functions during emergency response. Additional classification and notification responsibilities are met from the control room until other emergency facilities are activated. The radiological protection emergency equipment and communications support that are available to each control room are shown in Tables 9-1 and 7-1. The specific features of major communications systems are described in Section 7, Emergency Communications.

1.2 Operations Support Centers

Operations Support Centers (OSC) function as information relay stations, dispatching offices, assembly and assignment points, and also as accountability stations for teams assigned from the OSC. Radiological protection emergency equipment and communication systems that are available to the OSC are presented in Table 9-1 and Table 7-1, respectively. Specific features of the communications systems are described in Section 7, Emergency Communications.

1.3 Technical Support Centers

The Technical Support Centers (TSCs) also have common functions and similar equipment and support. The TSC provides a well equipped location onsite to support plant management during an emergency. The TSC functions as an augmented communication/analysis center of technical data to supplement the Control Room staff's technical analysis and to support plant operations personnel.

The TSC is used by members of the emergency response organization to relieve control room operators of (and remove from the control room) any plant specific duties not directly related to the direct handling of plant controls. Such duties include directing analysis and assessment of the emergency conditions and performing functions associated with the Emergency Operations Facility, when that is not activated.

The TSC is activated for Alert, Site Area Emergency, or General Emergency action levels. The TSC is used as the assembly point for utility personnel, onsite vendor support, NRC, or for the personnel who are directly involved in assessment of an accident and mitigation.

The TSC emergency response facility can be staffed and activated within 90 minutes of an Alert or higher emergency classification. This staffing and activation time could vary if severe weather conditions or acts of nature/terrorism were experienced at the same time as the ERO callout.

The Emergency Duty Officer (EDO) determines when the TSC is staffed based on requirements identified in the PSEG Nuclear LLC Emergency Organization Chart. The EDO's discretion may be used to declare the TSC activated with less than the staffing required in the organization chart based on extenuating circumstances and plant conditions. Efforts to staff all required positions shall continue until the positions are filled or the emergency is terminated.

Radiological protection emergency equipment and communications support that are available to the TSC are presented in Table 9-1 and Table 7-1, respectively. The specific features of the communications systems are described in Section 7, Emergency Communications.

### 1.4 Emergency Vehicles

An ambulance is available to transport injured or contaminated-injured personnel to Memorial Hospital of Salem County or another facility.

## 2.0 Onsite Emergency Facilities and Equipment - Salem

Emergency facilities and equipment were developed to meet the intent of NUREG-0737, Supplement 1, except as indicated.

### 2.1 Control Room Area

The Salem Control Rooms have been designed to meet the habitability requirements of the General Design Criteria 19 and Standard Review Plan Section 6.4. The radiological protection emergency equipment provided in the Control Rooms and Operations Support Center is shown in Table 9-1.

## 2.2 Operations Support Center (OSC)

The Salem Operations Support Center (OSC) is located in the Operations conference room adjacent to the Control Room. In the event of an emergency, operations personnel not on duty and other support personnel report to the OSC to form repair and corrective action teams. Additionally, an OSC Coordinator is designated to coordinate the teams' efforts. The Salem TSC will serve as a backup OSC if required.

## 2.3 Technical Support Center (TSC)

The Salem Technical Support Center (TSC) is located on the third floor of the Clean Facilities (B) Building isolated from the containment building. The TSC meets all habitability requirements outlined in NUREG-0737, Supplement 1. This center supplies technical support to the operations personnel in the Control Room area.

The analytical and assessment capabilities assigned to the Salem TSC include:

Safety Parameter Display System (SPDS)
Computerized Dose Assessment
Plant Engineering Support

Documentation available within the TSC supports emergency classification, procedures, and assessments. Document groups include:

Emergency Plans and Procedures
Operating Procedures (Emergency and Normal)
Departmental Support Documents
Technical Specifications
Engineering Support Material
Updated Final Safety Analysis Report
Technical Drawings

The Salem TSC is in proximity to the Technical Document Room (TDR), and has the capability to retrieve plant-specific documents or drawing groups as well as applicable codes, standards, and regulations utilizing the Document Control Records Management System (DCRMS). TDR has DCRMS work stations and printer available for use. The TSC Ventilation System services the TDR. The TSC is convenient to other support facilities within the B Building. Detailed information on the TSC can be obtained by reviewing the "Salem TSC Configuration Baseline Documentation" [DE-CB.BBD-0012 (Z)].

2.4 Control Point (CP)

During normal operations, this area serves Salem as the access control point for personnel entering or leaving the Radiological Controlled Area. The radiological protection emergency equipment provided at this location is shown in Table 9-1. Communications equipment is described in Section 7, Emergency Communications.

3.0 Onsite Emergency Facilities and Equipment - Hope Creek

Emergency facilities and equipment were developed to meet the intent of NUREG-0737, Supplement 1, except as indicated.

3.1 Control Room Area

The HCGS Control Room (CR) areas have been designed to meet the applicable habitability requirements. Typical radiological protection emergency equipment in the Control Room area and Operations Support Center (OSC) is shown in Table 9-1.

3.2 Operations Support Center (OSC)

The Hope Creek Operations Support Center (OSC) is located in the Outage Control Center-adjacent to the Control Room. In the event of an emergency, operations personnel not on duty and other support personnel report to the OSC to form repair and corrective action teams. Additionally, an OSC Coordinator is designated to coordinate the teams' efforts. The office space above the Hope Creek TSC will serve as a back up OSC, if required.

3.3 Technical Support Center (TSC)

The Hope Creek TSC is located on Elevation 132' in the reactor building, but isolated and shielded from the rest of the reactor building. The TSC meets all habitability requirements outlined in NUREG-0737, Supplement 1.

The analytical and assessment capabilities assigned to the TSC include:

Radiological Monitoring System (RMS)
Control Room Integrated Display System (CRIDS)
Safety Parameter Display System (SPDS)
Computerized Dose Assessment
Plant Engineering Support

Documentation available within the TSC assists in a variety of analyses and assessments. Document groups include:

Emergency Plan Implementing Procedures.
Normal Operating Procedures.
(Emergency) Abnormal Operating Procedures.
Plant Technical Specifications.
Updated Final Safety Analysis Report.
Selected Vendor Manuals.
Technical Drawings.

Additional documentation is immediately available in the Technical Document Room.

The TSC is located within the protected area convenient to the Control Room, Operations Support Center and Control Point and is a dedicated emergency response Facility. Access is controlled through single entry access. Other entries and exits are maintained locked.

Habitability is controlled to meet the same habitability standards as required in the Control Room. The heating, ventilating, and air conditioning (HVAC) systems include the use of high efficiency particulate absorber (HEPA) and charcoal filtration, which prolongs habitability should in-plant conditions degrade.

Sufficient monitoring and protective equipment is kept in a secured area, the Radiation Protection Locker, of the TSC and available to the TSC staff.

3.4 Control Point (CP)

During normal operation, this area is located at the 137' elevation and serves as the regular Access Control Point for personnel entering or leaving the Radiological Controlled Area. Radiological protection emergency equipment is provided at the Control Point and is listed in Table 9-1.

4.0 Offsite Emergency Facilities and Equipment

4.1 Emergency Operations Facility - General Description

The Emergency Operations Facility (EOF) is controlled and operated by PSEG Nuclear LLC. It serves as the near site support center to form management of the aggregate response to a radiological emergency as defined by NUREG-0654, Revision 1, and Appendix 1. PSEG NUCLEAR commits to operating the EOF so as to fulfill the functional requirements of paragraph 4.1 of NUREG0737, Supplement 1. It should be noted that based on the backup EOF exemption granted for the Salem Generation Station Plan, and the fact that the location of Salem and Hope Creek Generating Stations is treated as a single site; the exemption is applicable to all EOF requirements for Salem and Hope Creek Generating Stations.

The EOF provides facilities and equipment to support staff performance of four major functions:

1. Management of overall emergency response activities.
2. Coordination of radiological and environmental assessment.
3. Development of recommendations for protective actions for the public.
4. Coordination of emergency response operations with Federal, state, and local agencies in accordance with the Emergency Plan.

The communications systems available at the EOF are presented in Table 7-1. Specific features of those systems are described in Section 7, Emergency Communications.

The EOF emergency response facility can be staffed and activated or ready to activate, within 90 minutes of an Alert or higher emergency classification. This staffing and activation time could vary if severe weather conditions or acts of nature/terrorism were experienced at the same time as the ERO callout.

Activation of the Emergency Operations Facility is at the option of PSEG Nuclear LLC at the Alert emergency classification. The option is exercised depending upon management's evaluation of the potential consequences of the situation based upon the nature of initiating conditions, trends subsequently perceived, and results of actions taken to mitigate potential consequences. EOF activation is mandatory in the event of declaration of a Site Area Emergency or General Emergency.

An individual who is designated as the Emergency Response Manager (ERM) manages the activated EOF. The ERM directs PSEG Nuclear LLC's offsite response activities and coordinates actions with and provides appropriate support to the Technical Support Center (Emergency Duty Officer). The EOF is staffed by PSEG Nuclear LLC and other (Federal, state, and support personnel, as required) emergency personnel designated by the PSEG Nuclear LLC Emergency Plan.

The ERM determines when the EOF is fully staffed based on manning requirements as identified in the PSEG Nuclear LLC Emergency Organization Chart. The ERM's discretion may be used to declare the EOF activated with less than the staffing required in the organization chart based on extenuating circumstances and plant conditions. Efforts to staff all required positions shall continue until the positions are filled or the emergency is terminated.

Equipment is provided in the EOF for acquisition, recording, display and evaluation of containment and operational conditions, radiological releases, and meteorological data. The data is analyzed and evaluated to determine the nature and scope of any protective measures, which may be recommended to state and local officials for protection of the public health and safety, if the magnitude and potential effects of a radioactive release dictate. The equipment includes a display of information collected by the Radiological Monitoring System (RMS). All equipment, displays, and instrumentation to be used to perform essential EOF functions are located in the EOF.

Facilities are provided in the EOF for NRC, FEMA, New Jersey, Delaware and local emergency response agency personnel responsible for implementing emergency response actions for protection of the general public. This arrangement enhances coordination of activities and exchange of information among participating agencies and the PSEG Nuclear LLC emergency response organization. The agencies also operate from other offsite control centers located at their respective agency facilities.

To ensure EOF activation readiness, PSEG Nuclear LLC provides normal industrial security for the EOF complex including lock and key control, a personnel identification system, exterior lighting, and a perimeter (building) security system providing offsite alarm notification and response by local police department. If the EOF is activated, access to the building and facility is restricted to authorized personnel by the industrial security system.

4.2 Location, Structure, and Habitability

The Emergency Operations Facility is located in PSEG Nuclear LLC Environmental & Energy Resource Center (EERC) on Chestnut Street in Salem, New Jersey. This site is located 7.5 miles from the Technical Support Center. The site location is judged to provide operational and logistical benefits with regard to its relationship to the areas transportation system. Salem is at the intersection of the two state highways (Routes 45 and 49). Three county highways, Routes 557, 540, and 581, connect to Routes 45 and 49. A freight only railroad and an airfield serve the city of Salem capable of accommodating small commercial aircraft. In addition, the offsite EERC has a helicopter-landing pad. There is also a landing pad located just outside of the Protected Area. This makes possible rapid movement of personnel between the station and the EOF.

This transportation network makes the EOF readily accessible by road and air to designated personnel of all agencies and activities assigned an emergency response role by the emergency plan.

The physical structure of the facility has been well engineered for the design life of the plant. The building is a 65,000 square foot structure on reinforced concrete footings and floor slab, with supporting steel columns, beams, and joists. The built up roofing material is supported on a steel deck.

The EOF conforms to all applicable building codes and has been designed to withstand winds and floods with 100 year recurrence frequency. The State of New Jersey Department of Environmental Protection identifies the 10 year and 100 year high water levels at the EOF site as 7.1 feet and 8.9 feet above mean sea level, respectively. The floor elevation of the EOF is 9.0 feet. The elevation of the road to the EOF is slightly over 4 feet. Thus, record high water levels would flood the access road and preclude access to the EOF by vehicle and could hamper activities of mobile monitoring teams in some areas. The EOF would continue to be accessible by helicopter. Internal EOF operations would continue without adverse impact.

The SGS Final Safety Analysis Report, Environmental Report, Operating License Stage, Appendix B Report, Site environmental studies, identifies high winds with a 100 year recurrence frequency as having a maximum velocity of 100 miles per hour. It is not anticipated that such winds will significantly affect self contained internal EOF operations. This is due to the strength of building construction and the availability of backup power.

However, activities of mobile monitoring teams would have to be suspended. Under such conditions, radiation exposures would be correspondingly low. Remote monitoring would continue to be available to the extent transmission lines survive. Similarly, data transmission could be adversely impacted by damage to microwave and radio antennae and transmission lines, particularly if winds were accompanied by electrical storms, which are often associated with squall lines, tornadoes and hurricanes. Under such circumstances, atmospheric conditions could be expected to intermittently affect data transmission and communications.

Protective clothing is maintained at the EOF, in accordance with the emergency plan. In addition, mutual support agreements with other utilities in the region include providing emergency equipment, including radiation survey devices and protective clothing. Potassium iodide for the staff is also stored in the EOF emergency equipment locker.

Additional supplies are available from Radiation Management Corporation, Philadelphia, Pennsylvania or other approved vendors. A description of the methodology to determine airborne I-131 concentrations is presented in Section 10 of the Emergency Plan. Detection limits for I-131 are less than 1E-7 uci/cc if not masked by noble gases. Masking is not expected to be a factor due to use of silver zeolite filter cartridges and adequate purge times in sample collections.

Full face respirators with charcoal filters are maintained in the EOF. However, airborne contamination is not expected to present a major problem at the EOF due to its location and the upgraded ventilation system.

4.3 Size

The EOF meets or exceeds the space requirements of paragraph 8.4.1c of NUREG-0737, Supplement 1. Approximately 5240 square feet of floor space in the PSEG Nuclear LLC Environmental & Energy Resource Center (EERC) is designated for use as the Emergency Operations Facility. This provides more than 75 square feet of workspace per person for a staff of up to 70 persons and 650 square feet for conference rooms.

Additional space is available in the building to accommodate another 100 persons in the unlikely event of a situation in which a greatly augmented staff would be required. Normal EOF occupancy by all concerned parties and agencies is not expected to exceed 80 persons.

The functional layout of the EOF depicts designated workspaces:

1. Space for EOF data system equipment for data transmission and reception (Data Center, Communications Center).
2. Space to repair, maintain and service equipment displays and instrumentation (in the PSEG Nuclear LLC Environmental & Energy Resource Center (EERC) workshops and labs).
3. Space to accommodate communications equipment and its use by EOF personnel to perform their assigned functions.
4. Space for ready access to functional displays of EOF data (Data Center, provisions for installation of remote terminal in the Dose Assessment Area).
5. Space for storage of plant records and historical data or space for the means to readily acquire and display the records.
6. Space for emergency response activities.
7. Office space for state, local and FEMA personnel.
8. Separate office space to accommodate a minimum of ten NRC personnel during emergency activation of the EOF (NRC offices).

Personnel are assigned to work areas in functional groups. Groups, which perform related tasks and therefore would have the most need for face to face interaction, are, in most cases, located adjacent to one another. Each workstation is assigned sufficient display space, equipped and staffed as appropriate to its function.

## 4.4 Radiological Monitoring

The EOF complies with the radiation protection provisions of paragraph 8.4.1B of NUREG-0737, Supplement 1 by providing radiological monitoring equipment in the facility. This equipment provides the capability to monitor airborne radioactivity (gross beta, gamma, iodine, and particulates) to ensure that EOF personnel are not subjected to adverse radiological conditions. Available equipment and a table in a Emergency Plan Implementing Procedure permits the detection of radioiodines at a concentration as low as 1.00E-07 uCi/cc using a field counting methodology (A portable continuous air sampler collects iodine in a silver zeolite cartridge. The cartridge is then counted using a count rate meter. The corrected counts per minute value are then compared to a graph to find the iodine concentration).

The continuous air monitor sampler may be moved to various points in the facility, is equipped with a strip chart recorder, an alarm light, and an alarm bell. The alarm setting is variable and will be set slightly above background to give an early warning of adverse conditions, which may affect EOF habitability. In addition, the alarm light provides visual warning of radiation levels. The air sampler is maintained and calibrated on a regular schedule by station personnel.

More detailed counting analysis is available at the station (emergency situation permitting) or any other licensed facility (i.e. Peach Bottom, Limerick, etc.).

Survey meters are available, which have sensitivity ranges up to 50 R/hr. Additional EOF radiation monitoring equipment includes high and low range self reading dosimeters (or equivalent electronic dosimeters), TLDs, and air samplers. Radiation monitoring equipment is stored in the radiological protection emergency equipment closet (Table 9-1). The radiological assessment staff performs habitability of the EOF, in accordance with procedure.

The Radiological Support Managers have a variety of radiological, health physics, and nuclear power plant experience.

4.5 Instrumentation, Data System Equipment, and Power Supplies

The EOF complies with the provisions of paragraph 8.4 1G NUREG-0737, Supplement 1 by providing an EOF data system consisting of a Radiological Monitoring System, an operational parameter data information system, which provides plant variables to a computer system that displays data and is capable of being printed out.

The EOF data system performs its functions independently of personnel actions in the Control Room and the TSC and will not degrade or interfere with Control Room and plant functions.

Backup power is provided to ensure data system availability. Backup power is supplied by a diesel generator in conjunction with an automatic transfer switch, which activates the generator upon loss of power. The generator provides electrical output sufficient to supply all facility lighting, the telephone system and all EOF data and communications systems described in this document. Electrical equipment load in the EOF does not affect any safety related power source. The data system has been designed to preclude loss of any stored data vital to EOF functions due to power supply failure or circuit transient.

4.6 Technical Data and Data System

The comprehensive EOF technical data system is capable of reliable collection, storage, analysis, display, and communication of information on containment conditions, radiological releases, and meteorology sufficient to determine site and regional status, determine changes in status, forecast status and take appropriate actions. Variables from the following categories that are essential to EOF functions are available in the EOF.

Appropriate variables from Table 1 of Regulatory Guide 1.97 (Rev. 2) and; the meteorological variables in Regulatory Guide 1.97 (Rev. 2) for site vicinity and regional data available via communication from the National Weather Service.

## 5.0 Emergency News Center/Joint Information Center (ENC/JIC)

Emergency News Center/Joint Information Center (ENC/JIC) facilities are at the Salem County 911 Center. The ENC/JIC provides space for media briefings; media work area, and telephone access. Separate work areas are maintained for PSEG Nuclear LLC, NRC, State and County personnel. The facility is convenient to major highways. Designed for public use, the building has sufficient facilities to support use by 100 or more media personnel.

If support for more then 100 media personnel is needed, PSEG Nuclear will coordinate the use of alternate media briefing locations with State and County officials. The communications equipment is described in Section 7 and summarized in Table 7-1. For media use, commercial telephone lines have been assigned from a physically distant exchange, which would reduce the load on local telephone services during an emergency.

Under appropriate circumstances, space for a limited number of press representatives may be made available at the EOF.

## 6.0 Additional Offsite Capabilities

### 6.1 Offsite Environmental Radiological Monitoring

Section 10, Accident Assessment presents a discussion of other assessment capabilities and instrumentation. The Stations are located on a man-made island, which, within four miles, is surrounded by tidal marshlands or river. The thermo luminescent dosimeter (TLD) points of the routine offsite environmental radiological monitoring program include TLDs in neighboring towns and cities and at schools and public assembly points, and at distances sufficiently close to the station to provide meaningful data in the event of an accident. No TLDs were deployed on marshlands where no serviceable roads existed. The Operational Radiological Monitoring program for the Station conforms to the NRC Radiological Assessment Branch Technical Position as described in Section 10 of the Emergency Plan.

### 6.2 Meteorological Monitoring

A meteorological program in accordance with the recommendation of NRC Regulatory Guide 1.23 "Onsite Meteorological Program" and Section 2.3.3 of NUREG 75/087 (Rev. 3) has been established. Monitoring and assessment capabilities are discussed in Section 10.

The dose calculation methodology of Section 10 of the Emergency Plan, concerning the transport and diffusion of gaseous effluents, is consistent with the characteristics of the Class A model outlines in NUREG-0654 (November 1980).

7.0 Field Assessment and Monitoring

The EOF, once activated, is the location for collection and assessment of all offsite radiological monitoring information from the survey teams. Periodically the information on doses calculated in accordance with Section 10 of the Plan is multiplied by the projected sector population data from Emergency Plan Attachment 6 to provide an estimated integrated dose to the affected population.

8.0 Administration and Maintenance of Emergency Facilities and Equipment

The emergency equipment listed in Table 9-1 is inventoried and operationally checked quarterly, and after each use to allow for replacement in the event of normal servicing and calibration. The instrument calibration frequency has been established in accordance with the appropriate technical guidance.

Table 9-1 is a generic listing of typical equipment maintained both on and offsite. Detailed listings are part of emergency preparedness inventory procedures.

**TABLE 9-1**
**EMERGENCY EQUIPMENT SUMMARY**
**(TYPICAL)**


| EQUIPMENT | CR/OSC | CP/Salem Field Team Kit | TSC/Hope Creek Field Team Kit | EOF/Field Team Kit |
|---|---|---|---|---|
| RO2A Survey Instrument * | L | L | L | E |
| RM14/EL14ON * | L | L | L | E |
| Teletector * | L | L | L | E |
| E520 Survey Instrument * | L | L | L | E |
| RO2 Survey Instrument * | L | L | L | E |
| High Range Dosimeters or Electronic Dosimeters * | L | L | L | E |
| Low Range Dosimeters or Electronic Dosimeters * | L | L | L | E |
| Dosimeter Charger (not needed for Electronic Dosimeters) | A | L | L | N/A |
| Air Sampler (A/S) | L | L | L | E |
| DC Powered A/S | A | A | A | N/A |
| Marinelli Beaker with A/S Head | A | L | N/A | N/A |
| Charcoal Cartridges for A/S | L | L | L | E |
| Silver Zeolite Cartridges for A/S (Sealed) | L | L | L | E |
| Particulate Filter Papers for A/S | L | L | L | E |
| Envelops for Particulate A/S | L | L | L | E |
| Flashlights with Batteries | L | L | A | E |
| Spare Batteries (replacement set for each instrument) | L | L | L | E |
| Sample Containers or Small Bags | L | L | L | E |
| Smears | L | L | L | E |
| Rad Info Signs | L | A | L | A |
| Barricade Rope or Ribbon and Stanchions | L | A | L | N/A |
| Tape | L | L | L | E |

**NOTES/LOCATION DESCRIPTIONS**

A = Accessible in general area of the Emergency Response Facility
L = Located at Salem and Hope Creek Emergency Response Facilities
E = Located in the EOF or EOF Field Team Kits
N/A = Not applicable in that specific Emergency Response Facility
* = or equivalent

**TABLE 9-1**
**EMERGENCY EQUIPMENT SUMMARY**
**(TYPICAL)**
**Page 2 of 2**

| EQUIPMENT | CR/OSC | CP/Salem Field Team Kit | TSC/Hope Creek Field Team Kit | EOF/Field Team Kit |
|---|---|---|---|---|
| Large Plastic Bags | L | L | L | E |
| Step-off Pads SOP) | L | A | L | A |
| Paper or Cloth Coveralls | L | L | L | E |
| Shoe Covers | A | L | L | E |
| Rubber Gloves | A | L | L | E |
| Hoods and Caps | A | L | L | E |
| Respirators and Charcoal/Participate Cartridges | A | A | A | A |
| Emergency Plan Procedures (as applicable) | L | L | L | E |
| SCBAs | L | A | N/A | N/A |
| Check Sources (button) * | L | L | L | E |
| KI Tablets | L | L | L | E |
| Absorbent Material | N/A | L | L | E |
| Calculator/Computer | N/A | L | L | E |
| Dosimeters of Legal Record | L | A | L | E |
| Logs, Paper Supplies, Pens, Clip Boards, etc. | L | L | L | E |
| Plastic Sheeting | N/A | A | A | A |
| First Aid Kit | L | L | L | E |

**NOTES/LOCATION DESCRIPTIONS**

A = Accessible in general area of the Emergency Response Facility
L = Located at Salem and Hope Creek Emergency Response Facilities
E = Located in the EOF or EOF Field Team Kits
N/A = Not applicable in that specific Emergency Response Facility
* = or equivalent

1. The Control Room/Operations Support Center (CR/OSC) area comprises adjacent hallways, lockers, and storage areas.
2. Control Point (CP) comprises adjacent and accessible area including lockers, equipment issue areas, and dress out areas.
3. Technical Support Centers (TSC) are dedicated facilities.
4. Emergency Operations Facility (EOF) includes the adjacent meeting rooms and Room 50.
5. The EOF Field Team Kits describes materials reserved for Field Monitoring.

## SECTION 16

## RADIOLOGICAL EMERGENCY RESPONSE TRAINING

Emergency response training is a shared responsibility between Site Access Training and the Emergency Preparedness Group. Emergency response training is divided into two major categories: (1) training for personnel who are not part of the emergency response organization (ERO) and (2) training for personnel assigned to the ERO.

### 1.0 General Employee Training Program

Personnel badged for unescorted access to the Protected Area receive a basic Emergency Plan overview as part of the General Employee Training (GET) program. Re-qualification is required annually to maintain unescorted access to the Protected Area. Individuals, who meet training/experience criteria established in the Access Training procedure, can take an examination based on the initial program objectives to maintain their access, if passed.

The Manager - Emergency Preparedness, or designee, periodically reviews the content of the GET program to ensure it contains adequate guidance for personnel not assigned an emergency response position. In addition, the Manager - Emergency Preparedness, or designee, is one of several disciplines that maintain approval authority over this lesson material to ensure it is maintained current and accurate.

### 1.1 Training of Assigned Emergency Response Personnel

All personnel assigned to emergency response positions are to receive annual emergency preparedness training as outline in Table 16-1, Emergency Plan Training Matrix. Annual emergency preparedness training is described in ERO position specific qualification guides. Training methods may include classroom instruction, computer based instruction, drill training, evaluation, individual knowledge discussions or evaluations, and are outlined in the position specific Qualification Guides.

The Emergency Preparedness Group has the primary responsibility for coordination of emergency preparedness training. The Emergency Preparedness Group is also responsible for conducting drills and exercises. Course content and qualification guides are created using position specific job task analysis (JTA), which describe the elements necessary to perform the job function.

1.1.1 Emergency Preparedness Training Instruction

Training and qualification requirements are based on the emergency response assignment duties. The codes for and the description of these assignments are contained in Section 3, Emergency Organization, Subsection 9 of the Emergency Plan.

The Manager - Emergency Preparedness, or designee, will approve lesson plans and qualification guides used for emergency preparedness training.

1.1.2 Emergency Plan Drills

Emergency Plan Drills are used as tools to practice, train, and demonstrate the skills learned in training and to exercise the interface between PSEG Nuclear and offsite agencies. All drills and exercises will be conducted in accordance with Section 15 of the Emergency Plan.

1.1.3 Deficiency Correction

If deficiencies are identified during drills, the following corrective measures will be taken:

1) Individual Deficiencies - on-the-spot correction by a qualified drill COACH or CONTROLLER (or during post-drill critique sessions).
2) Deficiencies identified in drills or exercises are tracked per the Corrective Action Program.
3) The NRC evaluated (graded) exercise results are rolled out to senior management at the NRC evaluated exercise exit meeting, through the evaluated exercise final critique, and through the station morning meetings.
4) The Manager - EP or designee reviews and approves all drill and exercise critique reports.

2.0 Program Administration

The Emergency Preparedness Group is responsible for administering the Emergency Plan training program. Records will be maintained in accordance with the PSEG Nuclear training department procedures or guidance.

3.0 Offsite Support Training

Training is provided for the Lower Alloways Creek Fire and Rescue Company, Inc and the LAC EMS and Rescue, Inc. in the event they are needed onsite to supplement station manpower. PSEG training is conducted on station response procedures. Radiation protection techniques training is conducted in accordance with state plans and procedures. Dial 911 notification procedures are used, as in any emergency; therefore, no additional training is needed. Offsite ambulance squad personnel are trained and qualified in courses equivalent or superior to the Red Cross Multi-Media course. All other training and retraining given to offsite (including hospital staff), state, and municipal emergency response personnel will be provided in accordance with the appropriate state, county, and municipal emergency response plans.

4.0 Training of Emergency Preparedness Staff

Periodic training is provided to the emergency preparedness staff. Staff members are assigned to attend at least one training program, drill, conference, or seminar annually. Attendance is assigned on the basis of the individual responsibilities of staff members.

5.0 Emergency Plan Instruction for Untrained Personnel

All individuals entering the Protected Area, who are not badged for unescorted access, will be continuously escorted. This escort is responsible to ensure the untrained individual adheres to all station procedures and policies while within the protected area. During emergencies unbadged personnel will be escorted to the security center (by the escort or security personnel) and given directions to depart the facility.

**TABLE 16 – 1**
**EMERGENCY PLAN TRAINING MATRIX**
**Page 1 of 5**

| COURSE/QG[1,6] / POSITION/EP CODE | Qual Guide (QG) Number | EP MGMT | OPS | RSM | EOF RAD ASSESS | EOF DOSE ASSESS | OFFSITE MON | OTC/OFC | RAC | TECH DUTY | OSC | COMM | ENC | SECURITY | ADMIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emergency Response Manager (ERM) / A01 | 1 | X | | | | | | | | | | | | | |
| Site Support Manager (SSM) / A02 | 1 | X | | | | | | | | | | | | | |
| Emergency Duty Officer (EDO) / A03 | 1 | X | | | | | | | | | | | | | |
| Shift Manager (SM) / A04 | 2 | | X | | | | | | | | | | | | |
| Emergency Preparedness Coordinator (EPC) / A05 | 1 | X | | | | | | | | | | | | | |
| Nuclear Shift Technical Advisor (NSTA) / B01 | 2 | | X | | | | | | | | | | | | |
| Control Room Supervisor (CRS) / B02 | 2 | | X | | | | | | | | | | | | |
| Reactor Operator/Plant Operator (RO/PO) / B03 | 10 & 16 | | X | | | | | | | | | | | | |
| Control Room Communicators (CM1/CM2) / B04 | 16 | | | | | | | | | | | X | | | |
| Communicator - OPS Advisor (Hope Creek Only) / B04A | 16 | | | | | | | | | | | X | | | |
| Equipment Operators (EO) / B05 | 10 | | | | | | | | | | X | | | | |
| Operations Support Center Coordinator (OSCC) / C01 | 9 | | | | | | | | | | X | | | | |
| Shift Controls Technician (I&C) / C02 | 10 | | | | | | | | | | X | | | | |
| Shift Controls Technician Electrical / C03 | 10 | | | | | | | | | | X | | | | |
| OSC Operations Supervisor / C04A | 9 | | | | | | | | | | X | | | | |
| OSC Support Maintenance Supervisor / C04B | 9 | | | | | | | | | | X | | | | |
| OSC Shift Maintenance Supervisor / C04C | 9 | | | | | | | | | | X | | | | |
| OSC Radwaste Operator / C05A | 10 | | | | | | | | | | X | | | | |

**TABLE 16 – 1**
**EMERGENCY PLAN TRAINING MATRIX**
**Page 2 of 5**

| COURSE/QG[1,6] / POSITION/EP CODE | Qual Guide (QG) Number | EP MGMT | OPS | RSM | EOF RAD ASSESS | EOF DOSE ASSESS | OFFSITE MON | OTC/OFC | RAC | TECH DUTY | OSC | COMM | ENC | SECURITY | ADMIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nuclear Tech - Mechanical/ C05B | 10 | | | | | | | | | | X | | | | |
| Controls Tech Electrical / C05D | 10 | | | | | | | | | | X | | | | |
| Controls Tech - I&C / C05E | 10 | | | | | | | | | | X | | | | |
| Fire Brigade / C06 | 10 | | | | | | | | | | X | | | | |
| Planner / C08 | 10 | | | | | | | | | | X | | | | |
| OSC Clerk / C10 | 10 | | | | | | | | | | X | | | | |
| Radiological Support Manager (RSM) / D01 | 20 | X | | X | | | | | | | | | | | |
| Radiological Assessment Staff - EOF Duty / D02A | 22 | | | | | X | | | | | | | | | |
| Radiological Assessment Staff – EOF Supp / D02B | 23 | | | | X | | | | | | | | | | |
| Radiological Assessment Staff – EOF Supp /D02C | 23 | | | | X | | | | | | | | | | |
| Offsite Team Coordinator/Field Team Communicator (OTC/FTC) / D03 | 24 | | | | | | | X | | | | | | | |
| Offsite Team Monitor / D04A | 25 | | | | | | X | | | | | | | | |
| Offsite Team Driver / D04B | 25 | | | | | | X | | | | | | | | |
| Radiological Assessment Coordinator (RAC) / E01 | 21 | X | | | | | | | X | | | | | | |
| Radiation Protection Supervisor (Offsite) / E02A[2] | 19 | | | | | | | | | | | | | | |
| Radiation Protection Supervisor (Exp Cntrl) / E02B[2] | 19 | | | | | | | | | | | | | | |
| Shift Radiation Protection Technician (SRPT)/Onsite Radiation Protection Technician (ORPT) E03/E04[2] | 19 | | | | | | | | | | | | | | |
| Chemistry Supervisor - CP/TSC / E05[3] | 18 | | | | | | | | | | | | | | |
| Chemistry Technician (CT) / E06[3] | 18 | | | | | | | | | | | | | | |

**TABLE 16 – 1**
**EMERGENCY PLAN TRAINING MATRIX**
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| COURSE/QG[1,6] / POSITION/EP CODE | Qual Guide (QG) Number | EP MGMT | OPS | RSM | EOF RAD ASSESS | EOF DOSE ASSESS | OFFSITE MON | OTC/OFC | RAC | TECH DUTY | OSC | COMM | ENC | SECURITY | ADMIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Technical Support Supervisor (TSS) / F01[4] | 1 | X | | | | | | | | | | | | | |
| Technical Support Team Leader (TSTL) / F02 | 4 or 5 | | | | | | | | | X | | | | | |
| Engineer - Electrical / F03 | 4 or 5 | | | | | | | | | X | | | | | |
| Engineer - Mechanical / F04[4] | 4 or 5 | | | | | | | | | X | | | | | |
| Engineer – Controls | 4 or 5 | | | | | | | | | X | | | | | |
| Core-Thermal Hydraulics Engineer / F06A | 4 or 5 | | | | | | | | | X | | | | | |
| Emergency Preparedness Advisor (EPA) – TSC / F07 | 16 | | | | | | | | | | | X | | | |
| TSC Communicator / F08 | 16 | | | | | | | | | | | X | | | |
| Ops Advisor – TSC/F08B[4] | 16 | | | | | | | | | | | X | | | |
| Technical Support Manager (TSM) / F09 | 3 | | | | | | | | | X | | | | | |
| Company Spokesperson (CS) / G01[5] | 12 | | | | | | | | | | | | X | | |
| Emergency News Center Manager (ENCM) / G02[5] | 12 | | | | | | | | | | | | X | | |
| Industry/Government Affairs Coordinator (IGAC) / G05 | 11 | | | | | | | | | | | | X | | |
| Rumor Control Coordinator (RCC) / G06 | 11 | | | | | | | | | | | | X | | |
| Media Monitors / G07B | 11 | | | | | | | | | | | | X | | |
| Staff Writer Duty/ G08A | 11 | | | | | | | | | | | | X | | |
| Staff Writer Support / G08B | 11 | | | | | | | | | | | | X | | |
| Media Information Line Operator / G09B | 11 | | | | | | | | | | | | X | | |
| Lead Technical Advisor (LTA) / G10A | 11 | | | | | | | | | | | | X | | |

**TABLE 16 – 1**
**EMERGENCY PLAN TRAINING MATRIX**
**Page 4 of 5**

| COURSE/QG[1,6] / POSITION/EP CODE | Qual Guide (QG) Number | EP MGMT | OPS | RSM | EOF RAD ASSESS | EOF DOSE ASSESS | OFFSITE MON | OTC/OFC | RAC | TECH DUTY | OSC | COMM | ENC | SECURITY | ADMIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Media Technical Advisor (MTA) / G10B | 11 | | | | | | | | | | | | X | | |
| Communications Technical Advisor (CTA) / G10C | 11 | | | | | | | | | | | | X | | |
| ENC Operation Supervisor (ENCOS) / G11 | 11 | | | | | | | | | | | | X | | |
| Public Information Liaison (PIL) / G13 | 11 | | | | | | | | | | | | X | | |
| Security Liaison (TSC)/Security Operations Supervisor-Main Guard House (MGH) / I01 | 17 | | | | | | | | | | | | | X | |
| Site Security Coordinator / I-02 | 17 | | | | | | | | | | | | | X | |
| Security Force Member / I04 | 13 | | | | | | | | | | | | | X | |
| EOF Communicators EOF1/EOF2 / I05 | 16 | | | | | | | | | | | X | | | |
| Site Support Staff - OPS Advisor / I05A | 16 | | | | | | | | | | | X | | | |
| Administrative Support Manager (ASM) / J01 | 14 | | | | | | | | | | | | | | X |
| Admin Support Staff - Personnel Supv. / J02A | 15 | | | | | | | | | | | | | | X |
| Admin Support Staff - Purchasing / J02B | 15 | | | | | | | | | | | | | | X |
| Admin Support Staff - Administrative / J02D | 15 | | | | | | | | | | | | | | X |
| Admin Support Staff – Information Technology Support Supervisor / J02E | 15 | | | | | | | | | | | | | | X |
| Administrative Support Supervisor (ADMSS) / J03 | 14 | | | | | | | | | | | | | | X |
| TSC Administrative Staff / J04 | 15 | | | | | | | | | | | | | | X |
| ENC Administrative Support / J05 | 11 | | | | | | | | | | | | X | | |

**TABLE 16 – 1**
**EMERGENCY PLAN TRAINING MATRIX**
**Page 5 of 5**

| COURSE/QG[1,6] / POSITION/EP CODE | Qual Guide (QG) Number | EP MGMT | OPS | RSM | EOF RAD ASSESS | EOF DOSE ASSESS | OFFSITE MON | OTC/OFC | RAC | TECH DUTY | OSC | COMM | ENC | SECURITY | ADMIN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Audio/Visual Services Coordinator / J06 | 11 | | | | | | | | | | | | X | | |
| Delaware Offsite Representative / Z03 | 26 | X | | | | | | | | | | | | | |

**Notes:**
1 -Key to EP Training qualification guide and training course subject areas
2 -OJT/OJE in accordance with Radiation Protection Program.
3 -Routine system sampling training and high activity sampling is provided as job qualification training for Chemistry.
4 -These positions also require Severe Accident Management Evaluator Training coordinated by Operations Training Program
5 -These positions also require "ENC Company Spokesperson Training" coordinated by Nuclear Communications
6 - See next page for EP Training Course Content Descriptions and EP-AA-120-1010, EP Training Administration for Qual Guide Titles

**TABLE 16 - 2**
**EMERGENCY PLAN COURSE CONTENT DESCRIPTION**
**Page 1 of 2**

**EP Management Duties**
- Emergency Plan Overview
- Event Classification Guide
- Emergency Plan Implementing Procedures
- Core Damage Overview

**EP SRO Comm/OSC/SM Duties**
- Emergency Plan Overview
- Event Classification Guide
- Emergency Plan Implementing Procedures

**EOF Radiological Support Manager Duties**
- Emergency Plan Overview
- Event Classification Guide
- Emergency Plan Implementing Procedures
- Core Damage Overview

**EOF Radiological Assessment Duties**
- Emergency Plan Overview
- Emergency Plan Implementing Procedures

**EOF Dose Assessment Duties**
- Emergency Plan Overview
- Emergency Plan Implementing Procedures
  Use Of Dose Assessment Computer Program

**Offsite Field Monitoring Team**
- Emergency Plan Overview
- Emergency Plan Implementing Procedures

**Offsite Team Coordinator / Field Team Communicator Duties**
- Emergency Plan Overview
  Emergency Plan Implementing Procedures

**Radiological Assessment Coordinator (RAC) Duties**
- Emergency Plan Overview
- Event Classification Guide
- Emergency Plan Implementing Procedures
- Core Damage Overview

**Communicator Duties**
- Emergency Plan Overview
- Emergency Plan Implementing Procedures

**Operations Support Center Duties**
- Emergency Plan Overview
- Emergency Plan Implementing Procedures

**Emergency News Center (ENC) Duties**
- Emergency Plan Overview
- Emergency Plan Implementing Procedures

**Security Duties**
- Emergency Plan Overview
- Emergency Plan Implementing Procedures

**Administrative Support Duties**
- Emergency Plan Overview
- Emergency Plan Implementing Procedures

**Technical Duties (EOF or TSC)**
- Emergency Plan Overview
- Emergency Plan Implementing Procedures
- Abnormal and Emergency Operating Procedures Overview (TSC only)
- Core Damage (Only required for F06A position)
  Severe Accident Management Eval Training (Only required for F01, F04, and F08B positions)

## SECTION 17

## EMERGENCY PLAN ADMINISTRATION

1.0 Responsibility

1.1 General

The President and Chief Nuclear Officer - PSEG Nuclear LLC has the overall responsibility for the development and updating of emergency planning and coordination of the plans with other response organizations.

The Manager Emergency Preparedness (MEP) has been delegated the authority to approve Emergency Preparedness Documents (EPDs) and EP Forms for adequacy and consistency. The MEP is assigned the responsibility for ensuring that the EPDs and EP Forms are appropriately interfaced with the plans, procedures, and training of offsite support agencies as required maintaining suitable timely notifications and development of protective action recommendations. The organization for coordination and direction of emergency planning matters is shown in Figure 17-1.

1.2 Review and Approval of Emergency Preparedness Documents

The MEP and EP SFAM(s) approves all revisions to EPDs and EP Forms. The Salem/Hope Creek Plant Managers approve applicable non-editorial changes to EPDs and EP Forms. Non-editorial revisions to the EPDs and EP Forms require a 10CFR50.54(q) review. Plant Operations Review Committee (PORC) reviews non-editorial revisions to the Emergency Plan. PORC also reviews changes to other EPDs if a 10CFR50.54(q) review indicates a potential decrease in effectiveness of the emergency plan. The review and approval of the Emergency Plan and associated documents will be done in accordance with Table 17-1. **(EP96-004)**

1.3 Training Procedures/Lesson Plans

It is the responsibility of the MEP, or designee, to review and revise the Training Procedures/Lesson Plans in accordance with the Nuclear Emergency Preparedness Training Program. The Training Procedures/Lesson Plans are based on the approved Emergency Plan and Procedures.

2.0 Revisions

Revisions to the EPDs and EP Forms are made whenever such changes are necessary to ensure that the Emergency Plan can be implemented. The details are contained in the Emergency Preparedness Administrative Procedures.

Any holder of EPDs and EP Forms may prepare revision(s) to any document. Under normal circumstances, EPDs and EP Forms revisions (other then editorial only revisions) are reviewed by the "Responsible Manager per Table 17-1 for the given procedure.
The person requesting the revision, in accordance with appropriate PSEG Nuclear LLC procedures, should initiate a revision request via the corrective action program.

A list of each section or procedure is maintained in front of the Emergency Plan and Emergency Plan Implementing Procedures indicating the latest revision number and effective date.

3.0 Distribution

All revisions are distributed in accordance with current PSEG Nuclear procedures.

4.0 Annual Review

The Emergency Plan and associated documents are reviewed at least once each year. As part of the review, the Emergency Action Levels (EALs) in the Event Classification Guide are reviewed with the state and local governments. The Emergency Plan and associated documents are updated and procedures are improved, based upon training exercises/drills, and changes onsite or in the environs.

Agreement letters from offsite agencies and local support groups are verified or updated biennially or when changes/revisions to the Plan are implemented which could affect their responsibilities. Updating of telephone numbers is done quarterly and the Manager EP, or designee, coordinates this review.

5.0 Independent Review

The Emergency Plan and associated documents receive an independent review, at least once per 24 months in accordance with current requirements.

Management directives provide instructions for evaluation and correction of audit findings, training, readiness testing, and emergency equipment. The results of the review and actions taken are forwarded to PSEG Nuclear LLC senior management. The records of these reviews are retained for five (5) years **(EP96-004)**.

6.0 Maintenance of Documents

The persons holding controlled copies of EPDs and EP Forms are responsible for their maintenance, which consists of promptly incorporating all revisions, additions and deletions, replacing any lost or damaged portions. Replacements for any pages are supplied upon request.

Each such distribution shall be accompanied by instructions for insertion into the document indicating which pages are to be replaced, deleted or added. The distribution shall be mailed to copyholders in accordance with current PSEG Nuclear LLC procedural requirements. A file of master copies of each revision of the plan is retained either by EP, or on PSEG Nuclear LLC approved media.

7.0 References

7.1 **EP96-004**, Remove reference to Tech Specs and add clarification to Review and Approval of Emergency Plan Documents matrix.

# TABLE 17-1

## REVIEW AND APPROVAL OF EMERGENCY PLAN DOCUMENTS & EP FORMS

**NOTES**

Editorial changes to EPDs and EP Forms only require MEP approval.

As Required means, review is required if a 10CFR50.54(q) Effectiveness Review indicates a potential decrease in effectiveness of the Emergency Plan **(EP96-004).**

Editorial changes to EPDs and EP Forms DO NOT require review/approval by the listed Responsible Manager. If more than one Responsible Manager is listed for a series of procedures, the manager of the personnel performing the procedure becomes the Responsible Manager. For common procedures where a Salem and Hope Creek Manager exist, both managers become responsible for that procedure.

| Document | 50.54q | Responsible Manager (list on next page) | Manager EP and SFAM | NOS Manager | PORC | Salem/Hope Creek Plant Managers |
|---|---|---|---|---|---|---|
| Emergency Plan All Sections | Yes | MEP | Yes | Yes | Yes | Yes |
| SGS ECG-EALs & associated Atts | Yes | SOSM | Yes | As Required | As Required | Yes |
| HCGS ECG-EALs & associated Atts | Yes | HOSM | Yes | As Required | As Required | Yes |
| Common Implementing EPDs & Forms | | | | | | |
| 100 | Yes | HOSM; SOSM | Yes | As Required | As Required | Yes |
| 200 | Yes | HOSM; SOSM ED; MEP | Yes | As Required | As Required | Yes |
| 300 | Yes | RPM; CM | Yes | As Required | As Required | Yes |
| Salem Implementing EPDs & Forms | | | | | | |
| 200 | Yes | ED; REM; MEP | Yes | As Required | As Required | Yes |
| 300 | Yes | RPM; CM | Yes | As Required | As Required | Yes |
| Hope Creek Implementing EPDs & Forms | | | | | | |
| 200 | Yes | ED; REM; MEP | Yes | As Required | As Required | Yes |
| 300 | Yes | RPM; CM | Yes | As Required | As Required | Yes |
| EOF Implementing EPDs & Forms | | | | | | |
| 400 | Yes | MEP | Yes | As Required | As Required | Yes |
| 500 | Yes | ED | Yes | As Required | As Required | Yes |
| 600 | Yes | RPM | Yes | As Required | As Required | Yes |
| 700 | Yes | MEP | Yes | As Required | As Required | Yes |
| ENC Implementing EPDs & Forms EP-AA-112-600 | Yes | MNC | Yes | As Required | As Required | Yes |
| Security Implementing EPDs & Forms | | | | | | |
| 900 | Yes | SECM | Yes | As Required | As Required | Yes |
| EP Admin & Maintenance EPDs & Forms (Per EP-AA-120) | Yes | MEP | Yes | As Required | As Required | N/A |

## TABLE 17-1

## REVIEW AND APPROVAL OF EMERGENCY PLAN DOCUMENTS

| ACRONYM | RESPONSIBLE MANAGER TITLE |
|---|---|
| CM | Chemistry Radwaste and Environmental Manager (Salem or Hope Creek) |
| ED | Site Engineering Director (Salem or Hope Creek) |
| MEP | Manager Emergency Preparedness (EP CFAM) |
| HOSM | Hope Creek Operations Shift Manager |
| SECM | Manager - Security Operations |
| MNC | Manager Nuclear Communications |
| REM | Reactor Engineering Manager (Salem or Hope Creek) |
| RPM | Radiation Protection Manager (Salem or Hope Creek) |
| SOSM | Salem Operations Shift Manager |
| SFAM | EP Station Functional Area Manager (Salem EPM and/or Hope Creek EPM) |

# Figure 17-1
# ORGANIZATION FOR COORDINATION OF EMERGENCY PLANNING

**Manager Emergency Preparedness**

| **Onsite Planning, Facilities and Equipment** | | **Offsite Planning** |
|---|---|---|
| **Onsite Emergency Planning** | **Emergency Facilities** | **Offsite Emergency Planning and Liaison** |
| Develop and implement PSEG Nuclear Emergency Plan administrative procedures | Maintain the emergency response facilities program. | Maintain Emergency Preparedness agreements for offsite programs |
| Coordinate, develop and maintain the Emergency Plan procedures | Evaluate and coordinate facilities and equipment changes | Coordinate state, county, local and offsite agency interface. |
| Maintain Emergency Preparedness Administrative Programs | Conduct surveillance and maintenance of ERF documents | Conduct drill/exercise program and interface for offsite programs |
| Develop drill/exercise scenarios | Conduct communications system surveillance program | Assist offsite agencies with annual 44CFR350 certification |
| Conduct drill/exercise program and ensure readiness | Implement correction of identified facilities and equipment deficiencies | |
| Implement the overall deficiency identification and corrective action program | Maintain emergency response activation system | |
| Conduct EP self-assessment program | Maintain ANS program documentation | |
| Maintain EP training program | | |