

Attachment 1

10 CFR 50.54(q)(5) Procedure Change Summary Analysis

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Procedures/Titles

Exelon Generation Company, LLC (Exelon) is submitting the following Emergency Plan Annex revisions for Limerick Generating Station (LGS), Peach Bottom Atomic Power Station (PBAPS), and R. E. Ginna Nuclear Power Plant (Ginna):

- EP-AA-1007, Revision 33, *"Exelon Nuclear Radiological Emergency Plan Annex for Peach Bottom Atomic Power Station"*
- EP-AA-1008, Revision 30, *"Exelon Nuclear Radiological Emergency Plan Annex for Limerick Generating Station"*
- EP-AA-1012, Revision 4, *"Exelon Nuclear Radiological Emergency Plan Annex for Ginna Station"*

Description of Procedures

The Emergency Plan Annexes (i.e., EP-AA-1007 for PBAPS, EP-AA-1008 for LGS, and EP-AA-1012 for Ginna) contain emergency planning information and guidance unique to the cited stations. This includes facility geography, emergency response facility locations, and process and radiation monitoring instrumentation that provides a description of the station's emergency response capabilities, as well as any station unique commitments.

In conjunction with Emergency Plan Annexes, Exelon maintains a Nuclear Standardized Radiological Emergency Plan (i.e., EP-AA-1000) that outlines the basis for the response actions that would be implemented during an emergency. The planning efforts common to other Exelon nuclear stations are encompassed within the Standard Plan.

Description of Changes

1. This revision to EP-AA-1007 for PBAPS incorporates the following changes:

- In Table PBAPS 5-1, *"Emergency Supplies and Equipment,"* the name of Location 13, *"Health Physics,"* was revised to read Location 13, *"Radiation Protection Muster Area."*
- In Appendix 2, the name for *Harford Memorial Hospital* was changed to *University of Maryland Harford Memorial Hospital*.
- The older Seismic Monitoring System (SMS) has been replaced by a newer design. The new SMS was installed under a site-approved design change modification that meets applicable regulatory requirements, guidance, and standards related to seismic monitoring. The SMS consists of accelerometers located throughout the plant, a free-field sensor located on the site property away from buildings, and

strong-motion recorders. The SMS provides the capability of generating a Cumulative Absolute Velocity (CAV) output. The site seismic response design spectra along with CAV measurements determine if the earthquake motions applied to the plant structures exceed the two-unit site seismic response spectra such that a plant shutdown would be required.

2. This revision to EP-AA-1008 for LGS incorporates the following changes:

- Step 2.1 states: "The Normal Shift Organization will be augmented, in an emergency, with designated/additional Emergency Response Organization (ERO) personnel within 60 minutes of notification as specified under Table 2-1." The wording in the EP-AA-1000, "*Exelon Nuclear Standardized Radiological Emergency Plan*," Step H.4, provides 60 minutes for augmentation following the declaration of an Alert or higher emergency classification for the Emergency Response Organization (ERO) personnel responding to the station Emergency Response Facilities (ERFs) and the offsite Emergency Operations Facility (EOF). This change aligns the wording for augmentation of the ERO as listed in the station's Annex with that in the Exelon Standard Plan. There is no change in the augmentation time for LGS.
- The older Seismic Monitoring System (SMS) has been replaced by a newer design. The new SMS was installed under a site-approved design change and meets applicable regulatory requirements, guidance, and standards related to seismic monitoring. The SMS consists of accelerometers located throughout the plant, a free-field sensor located on the site property away from buildings, and strong-motion recorders. The SMS provides the capability of generating a Cumulative Absolute Velocity (CAV) output. The site seismic response design spectra along with CAV measurements determine if the earthquake motions applied to the plant structures exceed the two-unit site seismic response spectra such that a plant shutdown would be required.
- The station has abandoned the fixed CO₂ fire protection system, removed the exciter CO₂ piping for Units 1 and 2 and removed manual CO₂ hose reels, and is replacing them with portable fire extinguishers in the 13.2 kV switchgear compartment, outside both Control Room entrances, and along the north side of the Turbine Enclosure operating deck. This work was completed under a site-approved design change modification.
- Exelon has changed the environmental sampling collection vendor. Normandeau Associates, which was the previous vendor, has been replaced by Exelon Industrial Services. The new vendor meets applicable regulatory requirements and guidance established in NUREG-0654 related to environmental sampling and monitoring.
- The description in a Letter of Agreement was updated to replace the old airport name with the party cited in the lease agreement.
- The name of the local airport has been changed. It is now named *Heritage Field*.

3. This revision to EP-AA-1012 for Ginna incorporates the following administrative-related changes:

- Implemented the use of the term "Alternative Facility."
- Corrected a numerical error in a reference to Section 5.1.7 that should be Section 5.1.8.

- Changed a reference from an implementing procedure to an environmental chemistry procedure.
- Replaced the term "decontamination kits" with the term "decontamination supplies."
- Replaced the term "self-reading pocket dosimeters" with the term "dosimeters" that are located in the Operations Support Center (OSC) locker.
- Removed the Letters of Agreement between Ginna, James A. Fitzpatrick, and Nine Mile Point Stations now that they are all owned/operated by Exelon and no longer needed.

Description of How the Changes Still Comply with Regulations

The changes described above supporting the upgrades to the LGS and PBAPS SMSs meet applicable regulatory requirements, guidance, and standards related to seismic monitoring. The new systems have equivalent or greater capability than the equipment it is replacing. The new systems improve the accuracy for determining an Operating Basis Earthquake (OBE), but do not change the Emergency Action Level (EAL) threshold values for the OBE.

The changes at LGS related to the CO₂ system as described above improve personnel safety and continue to meet the fire suppression requirements. The removal of the CO₂ hose reels does not violate applicable regulatory requirements since the areas covered by the CO₂ hose reels are also protected by water-based hose stations. Portable CO₂ extinguishers are also used to replace CO₂ hose reels. Fire Safe Shutdown capability is still maintained.

The other changes described above to the Emergency Plan Annexes for LGS, PBAPS, and Ginna are administrative in nature. These administrative changes do not alter the meaning or intent of the basis of the NRC-approved Emergency Plans, and applicable regulations and commitments continue to be met.

Therefore, the changes discussed continue to satisfy applicable Emergency Planning requirements established in 10 CFR 50.47, 10 CFR 50, Appendix E and the program element guidance of NUREG-0654.

Description of Why the Changes are Not a Reduction in Effectiveness (RIE)

No existing emergency preparedness requirements have been deleted or minimized, and applicable regulations and commitments continue to be met. Emergency response capabilities are maintained and not adversely impacted by the changes. Therefore, the changes described above do not constitute a reduction in effectiveness of the LGS, PBAPS, and Ginna Emergency Plans.

Attachment 2

**EP-AA-1007, Revision 33, "*Exelon Nuclear Radiological Emergency Plan
Annex for Peach Bottom Atomic Power Station*"**

Emergency Plan Annex Revision

EXELON NUCLEAR

RADIOLOGICAL EMERGENCY PLAN ANNEX

FOR

PEACH BOTTOM ATOMIC POWER STATION

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| <u>REVISION</u> | <u>REVISION DATE</u> |
|-----------------|----------------------|
| 0 | August 2002 |
| 1 | September 2002 |
| 2 | November 2002 |
| 3 | January 2003 |
| 4 | February 2003 |
| 5 | February 2003 |
| 6 | April 2003 |
| 7 | May 2003 |
| 8 | September 2003 |
| 9 | October 2003 |
| 10 | December 2004 |
| 11 | May 2005 |
| 12 | September 2005 |
| 13 | January 2006 |
| 14 | May 2007 |
| 15 | September 2007 |
| 16 | November 2007 |
| 17 | September 2008 |
| 18 | May 2009 |
| 19 | March 2010 |
| 20 | December 2010 |
| 21 | March 2011 |
| 22 | September 2011 |
| 23 | February 2012 |
| 24 | November 2012 |
| 25 | November 2012 |
| 26 | December 2012 |
| 27 | June 2013 |
| 28 | September 2013 |
| 29 | June 2014 |
| 30 | December 2014 |
| 31 | March 2015 |
| 32 | January 2017 |
| 33 | December 2017 |

Section 1: Introduction

As required in the conditions set forth by the Nuclear Regulatory Commission (NRC) for the operating licenses for the Exelon Nuclear Stations, the management of Exelon recognizes its responsibility and authority to operate and maintain the nuclear power stations in such a manner as to provide for the safety of the general public.

The Exelon Emergency Preparedness Program consists of the Exelon Nuclear Standardized Radiological Emergency Plan, Station Annexes, emergency plan implementing procedures, and associated program administrative documents. The Exelon Nuclear Standardized Radiological Emergency Plan outlines the basis for response actions that would be implemented in an emergency. Planning efforts common to all Exelon Nuclear stations are encompassed within the Emergency Plan.

This document serves as the Peach Bottom Atomic Power Station Annex and contains information and guidance that is unique to the station. This includes facility geography and location for a full understanding and representation of the station's emergency response capabilities. The Station Annex is subject to the same review and audit requirements as the Exelon Nuclear Standardized Radiological Emergency Plan per EP-AA-120, "Emergency Plan Administration".

1.1 Facility Description

The Peach Bottom Atomic Power Station (PBAPS) is a fixed nuclear facility operated by Exelon Nuclear. The station consists of one High Temperature Gas Cooled Reactor designated as Unit 1, which is in the SAFSTOR status of decommissioning, two operating Boiling Water Reactors designated as Units 2 and 3, and an Independent Spent Fuel Storage Installation (ISFSI).

The PBAPS station is located partly in York County and partly in Lancaster County in southeastern Pennsylvania, on the west shore of Conowingo Pond, near the mouth of Rock Run Creek. The plant is about 38 miles NNE of Baltimore, MD; 65 miles WSW of Philadelphia, PA; 45 miles SE of Harrisburg, PA; and 20 miles SSE of Lancaster, PA. Conowingo Pond is a reservoir formed by the backwater of Conowingo Dam on the Susquehanna River; the dam is located about 9 miles downstream from PBAPS. The nearest communities are Delta, PA, and Cardiff, MD, located approximately 4 and 6 miles WSW of the site, respectively.

For more specific site location information, refer to the Updated Final Safety Analysis Report (UFSAR) for Peach Bottom Atomic Power Station.

1.2 Emergency Planning Zones

The Plume Exposure Emergency Planning Zone (EPZ) for Peach Bottom Atomic Power Station shall be an area surrounding the Station with a radius of about ten miles. The exact physical boundaries are determined by the Commonwealth of Pennsylvania, State of Maryland, and affected Counties). Refer to Figure PBAPS 1-1.

The Ingestion Pathway Emergency Planning Zone (EPZ) for Peach Bottom Atomic Power Station shall be an area surrounding the Station with a radius of about 50 miles. Refer to Figure PBAPS 1-2.

1.3 Participating Governmental Agencies

The overall responsibility for the management of the effects of accidental off-site releases of radioactivity resulting from either a nuclear power plant or a transportation accident rests with state and local governments.

The Commonwealth of Pennsylvania organizations having prime responsibility in matters of radiation hazards are the Pennsylvania Emergency Management Agency (PEMA) and the Bureau of Radiation Protection (BRP) of the Pennsylvania Department of Environmental Protection. State of Maryland organizations having primary responsibility in matters of radiation hazards are the Maryland Emergency Management Agency (MEMA) and the Technical Support Program of the Maryland Department of the Environment (MDE).

County and local governments are responsible for the protection of public health and safety within their jurisdiction. Similarly, organizations in the Commonwealth of Pennsylvania and States of Maryland, Delaware, and New Jersey are responsible for the protection of the public in their states. Cooperation with the States of Delaware and New Jersey is necessary because these states are within the Ingestion Pathway EPZ.

These civil agencies will respond to provide support in the event of an emergency in the areas indicated below.

1.3.1 Pennsylvania Emergency Management Agency (PEMA)

Responsibilities of PEMA are outlined in Annex E, "Radiological Emergency Response to Nuclear Power Plant Incidents" of the Commonwealth of Pennsylvania Emergency Operations Plan.

1.3.2 Department of Environmental Protection, Bureau of Radiation Protection (DEP/BRP)

Responsibilities of DEP/BRP are outlined in Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan.

1.3.3 Pennsylvania State Police

Responsibilities of the State Police are set forth in Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan.

1.3.4 Maryland Emergency Management Agency (MEMA)

MEMA responsibilities are outlined in Annex Q, "Fixed Nuclear Facility Radiological Emergency Plan".

1.3.5 Maryland Department of the Environment, Emergency Operations and Technical Support Program

Responsibilities of MDE Emergency Operations and Technical Support Program are outlined in Annex Q, "Fixed Nuclear Facility Radiological Emergency Plan".

1.3.6 Maryland State Police

Responsibilities of the State Police are set forth in Annex Q, "Fixed Nuclear Facility Radiological Emergency Plan".

1.3.7 State Of Delaware

The State of Delaware's border is located within the 50-mile Ingestion Pathway for PBAPS. The State would be notified if protective actions are required within that area. No direct support is provided to PBAPS.

1.3.8 State Of New Jersey

The State of New Jersey's border is located within the 50-mile Ingestion Pathway for PBAPS. The State would be notified if protective actions are required within that area. No direct support is provided to PBAPS.

1.3.9 County Governments

County government agencies have agreements regarding responsibilities for coping with emergencies. These agencies include three counties in Pennsylvania, York, Lancaster, and Chester; and two counties in Maryland, Cecil and Harford.

a. Pennsylvania Counties

Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan defines "risk counties" as those within a 10-mile radius of a fixed nuclear facility. For Peach Bottom, the risk counties are:

- York County
- Lancaster County
- Chester County

The responsibilities assigned to these counties are in Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan.

b. Maryland Counties

Harford and Cecil Counties in Maryland may potentially be affected by an incident at the Peach Bottom Atomic Power Station. Responsibilities assigned to these counties are outlined in Annex Q, "Fixed Nuclear Facility Radiological Emergency Plan".

Refer to Table PBAPS 1-1 for a list of offsite radiological emergency response organizations and response plans in support of the Peach Bottom Atomic Power Station's Emergency Preparedness Program.

Table PBAPS 1-1: Offsite Radiological Emergency Response Organizations and Response Plans

The following state, local and emergency plans are available and filed under separate cover.

- Annex E - "Radiological Emergency Response to Nuclear Power Plant Incidents" - to Commonwealth of Pennsylvania Emergency Operations Plan.
- Chester County Radiological Emergency Response Plan for Incidents at Peach Bottom Atomic Power Station:

Municipality

West Nottingham Township

School District

Oxford

- State of Maryland Disaster Assistance Plan, Annex Q, Radiological Emergency Plan.
- Lancaster County Emergency Operations Plan, Annex E, Part 2 - PBAPS

Municipalities

Fulton Township

Drumore Township

Martic Township

Quarryville Borough

Little Britain Township

Providence Township

East Drumore Township

School District

Solanco

Penn Manor

Table PBAPS 1-1: Offsite Radiological Emergency Response Organizations and Response Plans (Cont'd)

- York County Emergency Operations Plan, Annex E, Part 2 - PBAPS

Municipalities

Lower Chanceford Township

Fawn Township

Fawn Grove Borough

Delta Borough

Peach Bottom Township

School Districts

Red Lion

South Eastern

- Harford County Emergency Operations Plan - PBAPS

School District

Harford County

- Cecil County Emergency Operations Plan - PBAPS

School

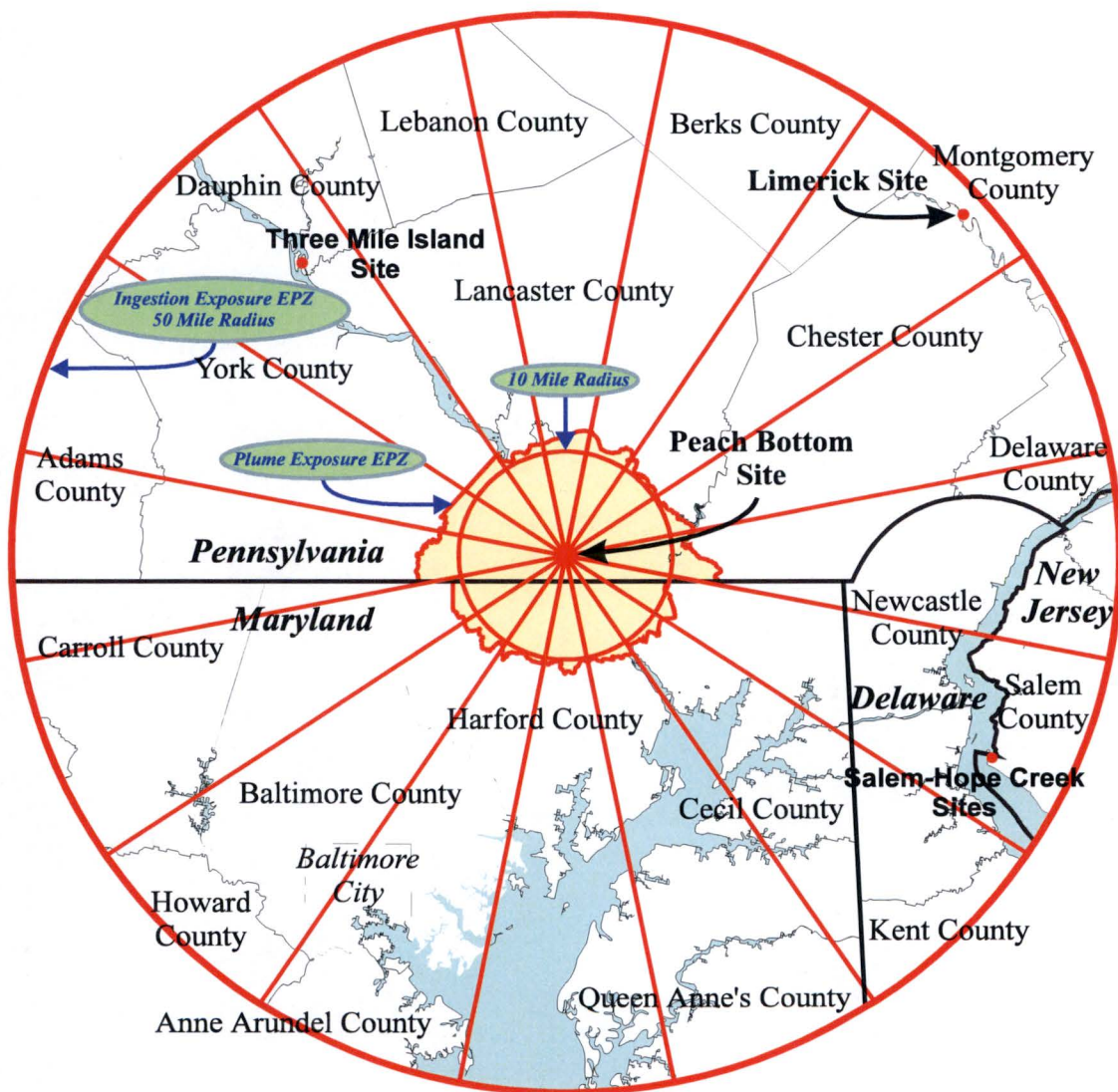
Conowingo Elementary

- State of Delaware Emergency Plan
- State of New Jersey Emergency Plan

Figure PBAPS 1-1: 10-Mile Plume Exposure Pathway EPZ



Figure PBAPS 1-2: 50-Mile Ingestion Pathway EPZ



Section 2: Organizational Control of Emergencies

This section describes the Emergency Response Organization (ERO) and its key positions. It outlines the staffing requirements which provide initial emergency response actions and provisions for timely augmentation of on-shift personnel when required. It also describes interfaces among Exelon Nuclear emergency response personnel and specifies the offsite support available to respond to the nuclear generating stations.

2.1 Shift Organization Staffing

Initial response to any emergency is by the normal plant organization present at the site. This organization includes positions that are onsite 24 hours per day and is described in Section B.1 of the Exelon Nuclear Standardized Radiological Emergency Plan. ERO activation is described in Section H.4 of the Exelon Nuclear Standardized Radiological Emergency Plan.

Table PBAPS 2-1 outlines ERO positions required to meet minimum staffing and full augmentation of the on-shift complement at an Alert or higher classification, and the major tasks assigned to each position. Responsibilities for each position are described in Section B.5 of the Exelon Nuclear Standardized Radiological Emergency Plan.

2.1.1 Shift Dose Assessment

The on-shift dose assessment function will be performed by a shift Radiation Protection Technician (RPT) at Limerick Generating Station. However, Peach Bottom Atomic Power Station will maintain the capability to perform a shift dose assessment, if necessary.

2.1.2 Shift Emergency Communicators

The Shift Communicator performs notifications to the State and County organizations until relieved by the TSC, and assists in the initiation of the ERO Callout System as directed. The Communicator position is staffed by a designated on-shift individual capable of responding to the Control Room immediately in support of the initiation of offsite notifications within 15 minutes of event classification.

A 2nd on-shift individual will be designated to support communications with the NRC over the Emergency Notification System (ENS) until relieved by the TSC.

2.1.3 Shift Technical Advisor (STA) / Incident Assessor

Section B.1 of the Exelon Nuclear Standardized Radiological Emergency Plan outlines the On-Shift Emergency Response Organization Assignment of the STA. Peach Bottom Atomic Power Station has deemed the following as an acceptable method of implementing Section B.1 in reference to the STA.

The responsibilities of the STA are delineated on OP-AA-101-111, "Roles and Responsibilities of On-Shift Personnel." If the STA is the Shift Manager or Unit Supervisor, then another Senior Reactor Operator (SRO) shall assist as Incident Assessor during unexpected conditions and transients. Per Table PBAP-1, the on-shift STA or Incident Assessor shall also provide core/thermal hydraulics support to Control Room staff.

2.2 **Emergency Response Organization (ERO) Staffing**

Refer to Table PBAPS 2-1 of the PBAPS Annex, "Minimum Staffing Requirements", for a comparison against the Exelon Nuclear Standardized Radiological Emergency Plan of 60-minute and full augmentation commitments.

2.2.1 Emergency Onsite Organization (Figure PBAPS 2-2)

No changes in augmentation positions or staffing levels for the Technical Support Center (TSC), Operations Support Center (OSC) and Control Room from that specified in the Exelon Nuclear Standardized Radiological Emergency Plan.

2.2.2 Emergency Offsite Organization (Figure PBAPS 2-3)

Based on existing interface and staffing agreements, representatives from the Commonwealth of Pennsylvania and State of Maryland will respond to the Emergency Operations Facility (EOF), allowing direct face-to-face communications. As such, the State Environs Communicator position, listed under the Exelon Nuclear Standardized Radiological Emergency Plan, is not staffed at the Coatesville EOF. Rather the EOF Environmental Coordinator will interface directly with State representatives present in the EOF.

2.2.3 Emergency Public Information Organization (Figure PBAPS 2-4)

No changes in augmentation positions or staffing levels for the Joint Information Center (JIC)) and Emergency News Center (ENC) from that specified in the Exelon Nuclear Standardized Radiological Emergency Plan.

2.3 Emergency Response Organization (ERO) Training

Training is conducted in accordance with Section O.5 of the Exelon Nuclear Standardized Radiological Emergency Plan per TQ-AA-113, "ERO Training and Qualification." Retraining is performed on an annual basis, which is defined as once per calendar year not to exceed 18 months between training sessions.

2.4 Non-Exelon Nuclear Support Groups

Agreements exist on file with or are verified current annually by the MA Region Corporate Emergency Preparedness Group for the following support agencies listed in Appendix 2 of the Exelon Nuclear Radiological Emergency Plan Annex for PBAPS.

Additionally, Exelon Nuclear has contractual agreements common within Exelon Nuclear with several companies whose services would be available in the event of a radiological emergency. These agencies are listed in Appendix 3 of the Exelon Nuclear Standardized Radiological Emergency Plan. Emergency response coordination with governmental agencies and other support organizations is discussed in Section A of the Standard Plan.

2.5 Nuclear Steam Systems Supplier (NSSS)

General Electric Company maintains an Emergency Response Organization, which can provide technical assistance from their home office or at the site.

2.6 Architect/Engineer

Bechtel or other contractors may be involved in the technical analysis or construction activities associated with the emergency response or recovery operation. Each such organization will designate a lead representative who will have the same responsibilities, within their scope of work, as described for the NSSS Contractor.

Table PBAPS 2-1: Minimum Staffing Requirements

| Functional Area | Major Tasks | Emergency Positions | Minimum Shift Size | ^(a) 60 Minute Augmentation | Full Augmentation |
|--|---|---|--------------------------------------|---|---|
| 1. Plant Operations/Safe Shutdown and Assessment of Operational Aspects | Control Room Staff | Shift Manager Control Room Supervisor Reactor Operator Equipment Operator | 1 1 3 3 | | |
| 2. Emergency Direction and Control | Command and Control / Emergency Operations | Shift Emergency Director (CR) Station Emergency Director (TSC) Corporate Emergency Director (EOF) | 1 ^(d) | 1 1 | |
| 3. Notification & Communication | Emergency Communications Plant Status In-Plant Team Control Technical Activities Governmental | Shift Personnel ^(b) TSC Director (TSC) EOF Director (EOF) State/Local Communicator ENS Communicator HPN Communicator Operations Communicator (CR/TSC) Damage Control Comm. (CR/TSC/OSC) Technical Communicator (TSC) EOC Communicator (EOF) State EOC Liaison ^(f) (PEMA/MEMA) Regulatory Liaison (EOF) | 2 | 1 1 1 (EOF) 1 (TSC) 1 (EOF) | 1 (TSC) 1 (EOF) 1 (TSC) 2 3 1 1 2 1 |
| 4. Radiological Accident Assessment and Support of Operational Accident Assessment | Offsite Dose Assessment Offsite Surveys Onsite Surveys In-plant Surveys Chemistry RP Supervisory | Radiation Protection Personnel ^(c) Dose Assessment Coordinator (EOF) Dose Assessor (EOF) Radiation Controls Coordinator (TSC) Environmental Coordinator (EOF) Field Team Communicator (EOF) Off-Site Field Team Personnel ⁽ⁱ⁾ RP Personnel RP Technicians Chemistry Personnel Radiation Protection Manager(TSC/EOF) | 1 2 1 1 | 1 1 2 2 2 1 2 | 1 1 1 (e) (e) (e) (e) |

Table PBAPS 2-1: Minimum Staffing Requirements (Cont'd)

| Functional Area | Major Tasks | Emergency Positions | Minimum Shift Size | ^(a) 60 Minute Augmentation | Full Augmentation | | | |
|--|-------------------------------|---|--|--|-----------------------------|-------------------------|-------------------------|-----|
| 5. Plant System Engineering, Repair and Corrective Actions | Technical Support | STA / Incident Assessor ^(k) (CR) Technical Manager (TSC) Core/Thermal Hydraulics Engineer(TSC) Mechanical Engineer (TSC) Electrical Engineer (TSC) SAMG Decision Maker (TSC) SAMG Evaluator (TSC) Operations Manager (TSC) Radiation Controls Engineer (TSC) | 1 | 1 1 1 1 1 1 ^(d) 2 ^(d) 1 | | | | |
| | Repair and Corrective Actions | Mechanical Maintenance (OSC) Rad Waste Operator Electrical Maintenance (OSC) Instrument & Control (I&C) (OSC) Maintenance Manager (TSC) OSC Director (OSC) Assistant OSC Director (OSC) | 1 ^(d) 1 1 ^(d) 1 | 2 2 1 1 | 1 (e) (e) (e) | | | |
| | | Accident Analysis | OPs Lead & Support Personnel (OSC) Technical Support Manager (EOF) Operations Advisor (EOF) Technical Advisor (EOF) | | | 1 (e) 1 1 1 | | |
| | | | 6. In-Plant Protective Actions | Radiation Protection | RP Personnel ^(c) | 2 ^(d) | 4 | (e) |
| | | | 7. Fire Fighting | -- | Fire Brigade ^(g) | 5 | | |
| | | 8. First Aid and Rescue Operations | -- | Plant Personnel | 2 ^(d) | | (e) | |
| | | 9. Site Access Control and Personnel Accountability | Security & Accountability EOF Security | Security Team Personnel Security Coordinator ^(l) (TSC/ EOF) | (h) | (h) | 2 | |
| | | 10. Resource Allocation and Administration | Logistics / Administration | Logistics Manager (EOF) Logistics Coordinator (TSC) Administrative Coordinator (EOF) Clerical Staff (TSC/OSC/EOF) Events Recorder (EOF) Computer Specialist (EOF) | | 1 | 1 1 (e) 1 1 | |
| | SUB-TOTAL: | | | 23 | 34 | 27+ | | |

Table PBAPS 2-1: Minimum Staffing Requirements (Cont'd)

| Functional Area | Major Tasks | Emergency Positions | Minimum Shift Size | (a)60 Minute Augmentation | Full Augmentation |
|------------------------|---|---|--------------------|---------------------------|-------------------------|
| 11. Public Information | Media Interface | Corporate Spokesperson (JIC) Rad Protection Spokesperson (JIC) Technical Spokesperson (JIC) | | 1 | 1 1 |
| | Information Development Media Monitoring and Rumor Control | Public Information Director (JIC) News Writer (JIC) Communications Department (JIC) | | 1 | 1 (e) |
| | Facility Operation and Control | JIC Director (JIC) JIC Coordinator (JIC) Administrative Coordinator (JIC) Events Recorder (EOF) Clerical Staff (JIC) Access Controls (JIC) | | 1 | 1 1 1 (e) 1 |
| SUB-TOTAL: | | | 0 | 3 ⁽ⁱ⁾ | 7+ |
| | | | Minimum Shift Size | Total Minimum Staff | Total Full Augmentation |
| TOTAL: | | | 23 | 37 | 34+ |

(a) Response time is based on optimum travel conditions.

(b) Refer to Section 2.1.2 for a description of shift emergency communication staffing.

(c) Refer to Section 2.1.1 for description of on-shift dose assessment staffing.

(d) May be provided by personnel assigned other functions. Personnel can fulfill multiple functions.

(e) Personnel numbers depend on the type and extent of the emergency.

(f) Staffing of the County EOC Liaison position is not required based on agreements with offsite agencies; however, every effort will be made to dispatch an Exelon Nuclear representative upon request from County EOC Director.

(g) Fire Brigade per UFSAR / TRM, as applicable.

(h) Function performed by on-shift security personnel.

(i) The following Emergency Public Information Organization personnel will be designated "minimum staffing" (on-call) positions but are not subject to the 60-minute response time requirement: Corporate Spokesperson, Public Information Director and JIC Director.

(j) One member of each Field Survey Team is a Driver.

(k) Refer to Section 2.1.3 for description of on-shift STA/Incident Assessor staffing requirements.

(l) TSC Security Coordinator position will be staffed by PBAPS Security personnel. The EOF Security Coordinator position will be staffed by Corporate personnel.

Figure PBAPS 2-1: Exelon Overall ERO Command Structure

Bolded Boxes indicate minimum staffing positions.

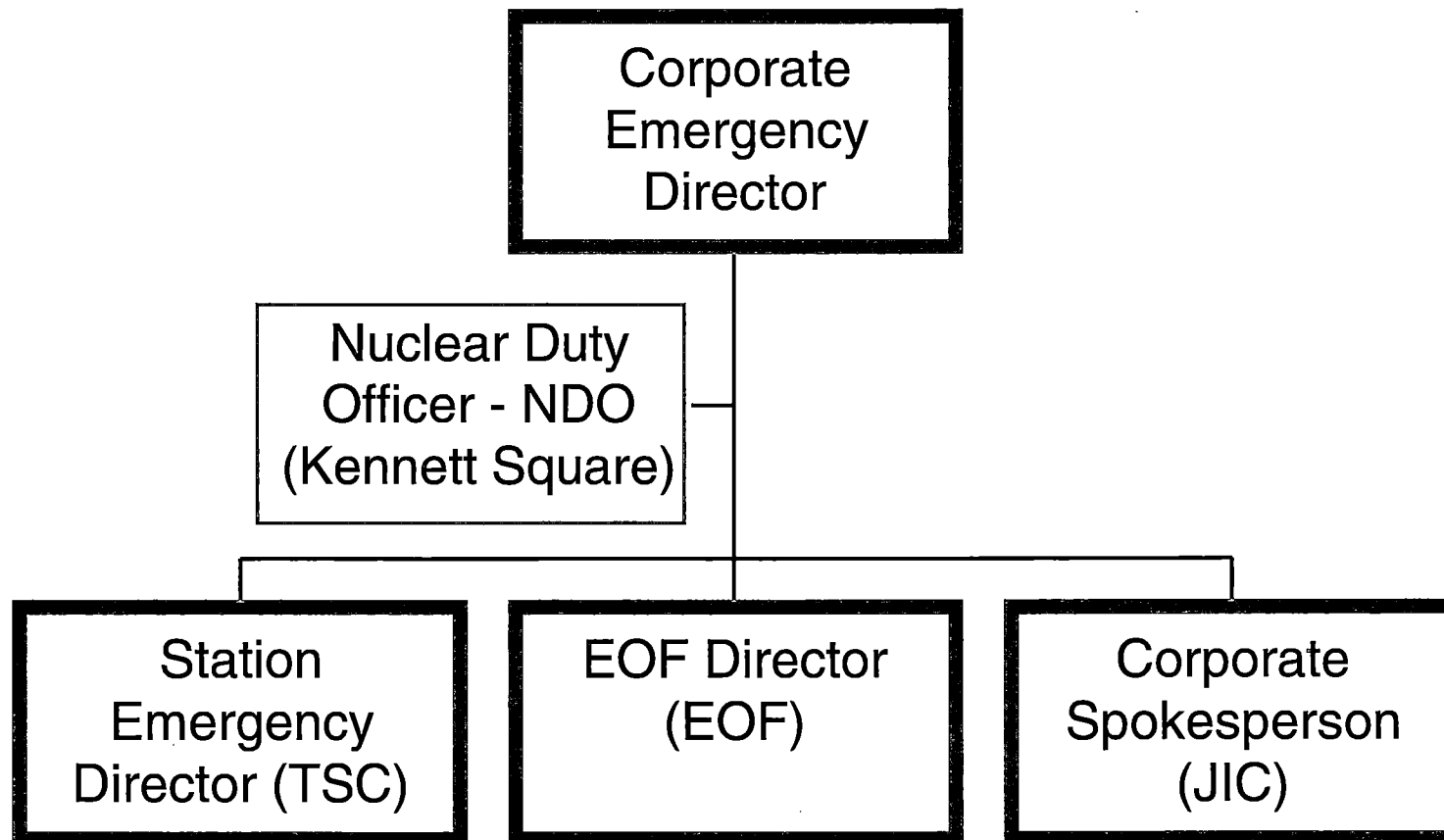
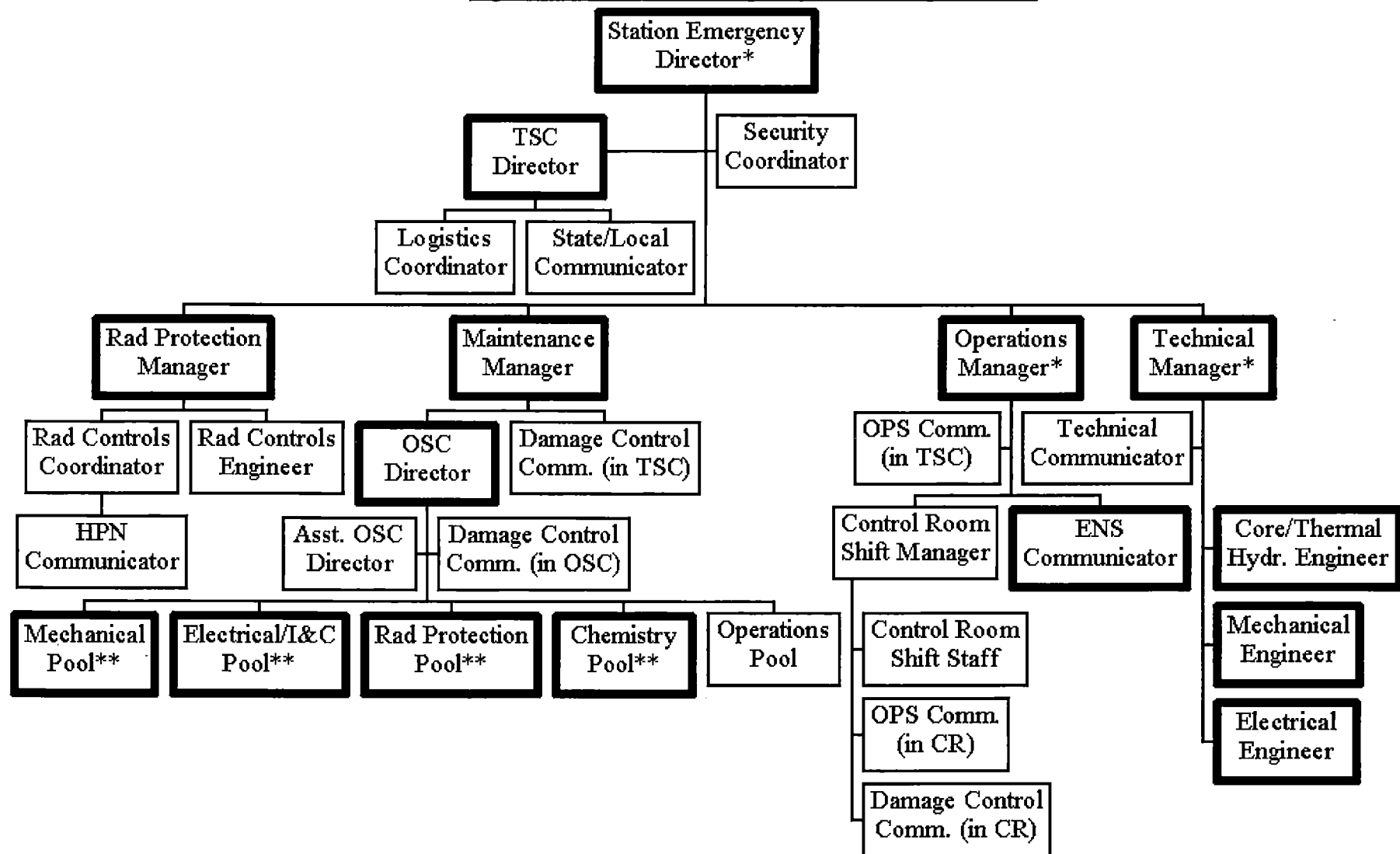


Figure PBAPS 2-2: Emergency Onsite Organization

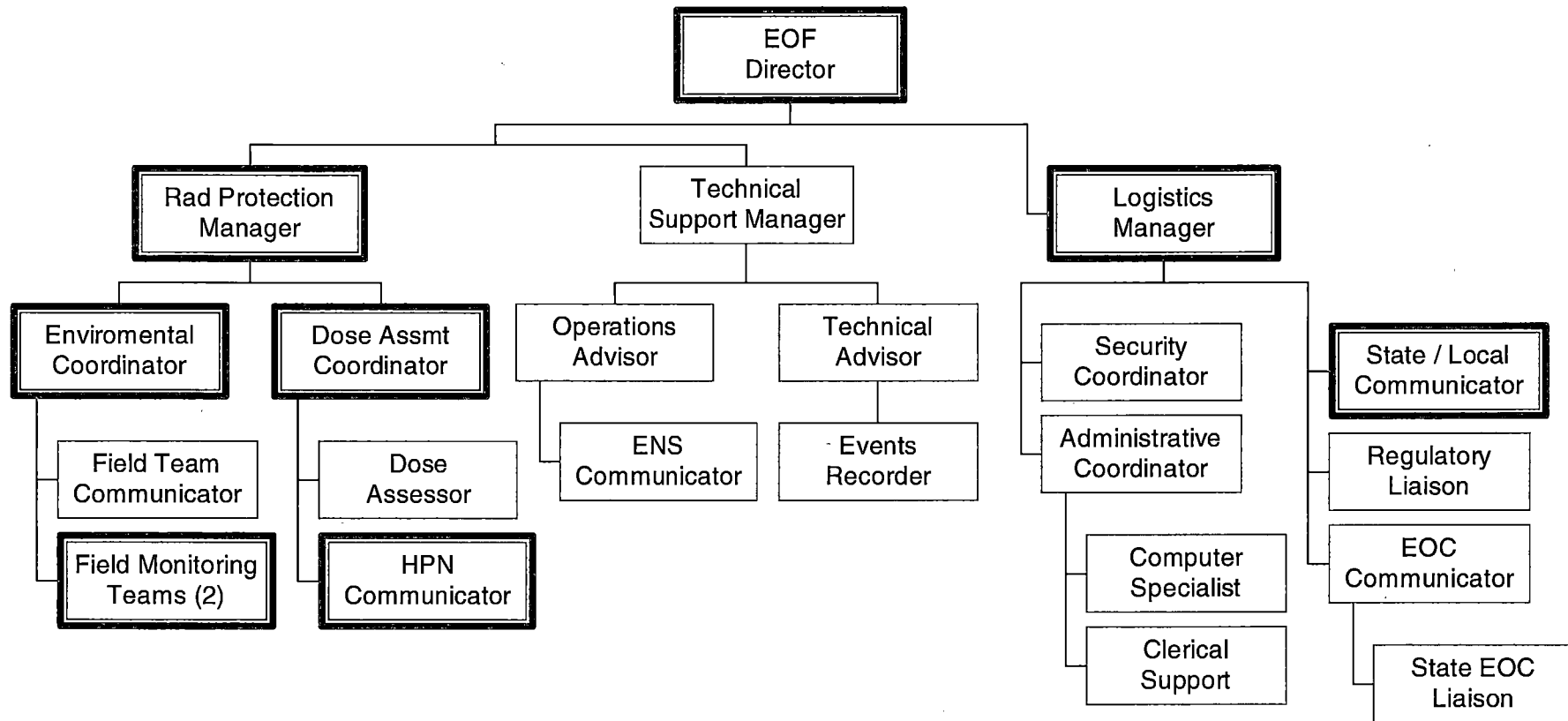


Bolded Boxes indicate minimum staffing positions.

* SAMG functions may be assigned to other qualified personnel. Minimum staffing requires 1 Decision Maker and 2 Evaluators.

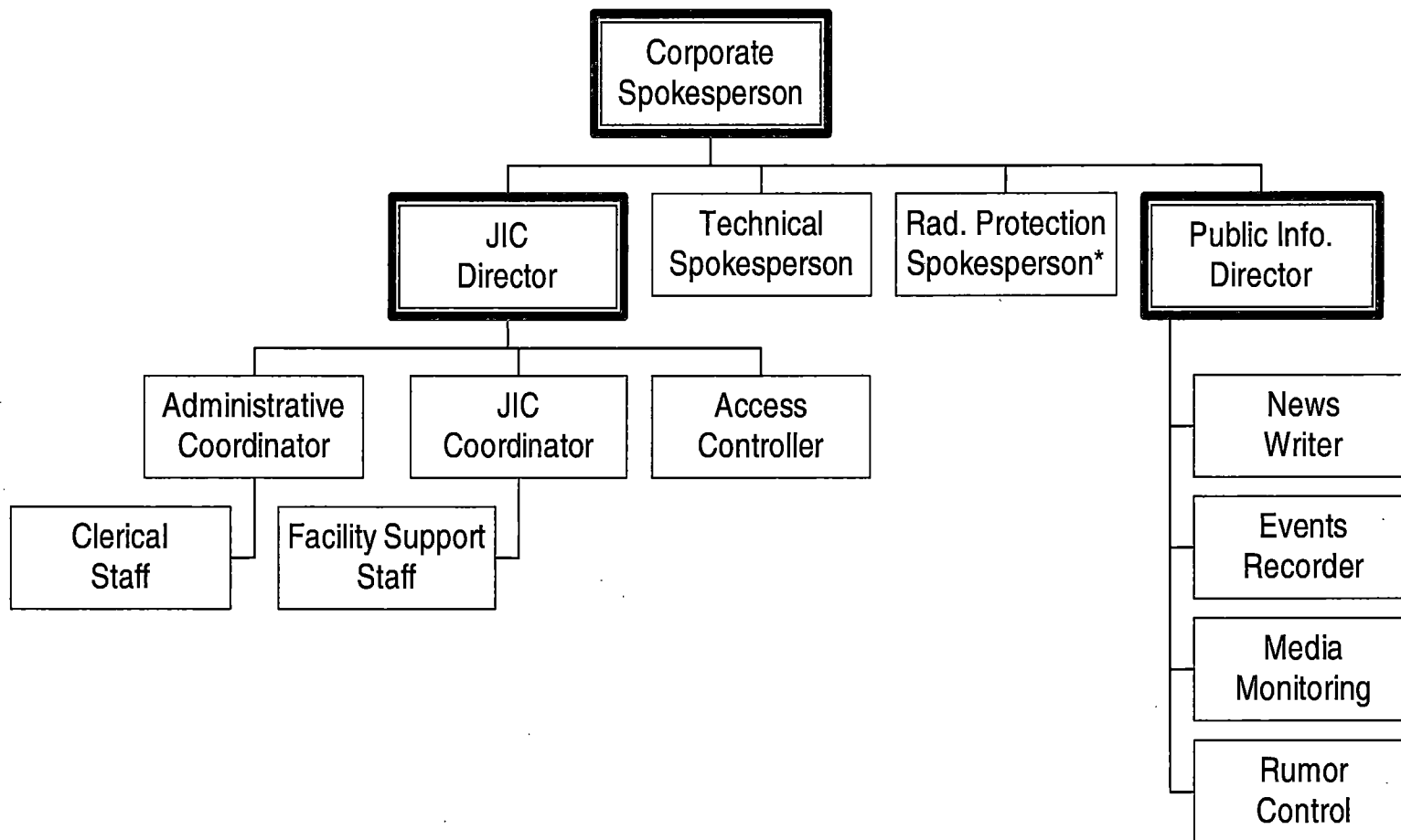
** Refer to Table PBAPS 2-1 for required staffing levels

Figure PBAPS 2-3: Emergency Offsite Organization



Bolded Boxes indicate minimum staffing positions.

Figure PBAPS 2-4: Emergency Public Information Organization



Bolded Boxes indicate minimum staffing positions.

* Radiation Protection Spokesperson may be staffed by a qualified consultant.

Section 3: Classification of Emergencies

**The PBAPS Emergency Action Levels and supporting information
are re-located to EP-AA-1007, Addendum 3**

Section 4: Emergency Measures**4.1 Notification of the Emergency Organization**

Notifications for the Peach Bottom Atomic Power Station are made to the following additional State and local agencies in accordance with Section E.3 of the Exelon Nuclear Standardized Radiological Emergency Plan:

- Maryland Emergency Management Agency (MEMA)
- Pennsylvania Emergency Management Agency (PEMA)
- Cecil County Emergency Management & Civil Defense Agency
- Chester County Department of Emergency Services
- Harford County Division of Emergency Operations
- Lancaster County Emergency Management Agency
- York County Emergency Services

Notification of PEMA and the risk counties will be directed by the Emergency Director within 15 minutes of initial event classification, reclassification, or a change in a protective action recommendation (PAR) due to plant conditions or meteorological changes per Section E.3 of the Exelon Nuclear Standardized Radiological Emergency Plan. In addition, once the EOF is activated, the Corporate Emergency Director will contact the Senior Pennsylvania State Official as designated by PEMA following the decision to recommend a protective action for the general public.

Upon notification of an emergency at Peach Bottom Atomic Power Station, the Pennsylvania Bureau of Radiation Protection (BRP) and Maryland Department of the Environment (MDE) will contact the appropriate station to verify that an emergency exists and to obtain technical information, and then makes recommendations to PEMA and MEMA respectively, regarding protective actions for the public. The BRP/MDE Support Plan For Fixed Nuclear Facility Incidents utilizes the Protective Action Guidelines in the U.S. Environmental Protection Agency (EPA) 400-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents".

Exelon Nuclear will provide follow-up information to the BRP/MDE or other off-site authorities. The follow-up information will keep these authorities apprised of existing or potential radiological releases, meteorological conditions, projected doses and contamination levels, licensee actions, recommend protective actions and other information pertinent to the authorities responsibilities. The information may be provided over open communication paths or in person to BRP/MDE personnel.

4.2 Assessment Actions

The effluent radiation monitoring system provides indications of gross releases of gaseous and liquid radioactivity. By applying calibration factors, meteorological data, or river flow, the gross indications are used to calculate approximate release rates in $\mu\text{Ci/sec}$ and dose rates at specific distances along the release pathways. Particulate and iodine analysis depends on collecting installed filter papers and charcoal cartridges for analysis in the counting room. Similar calculation procedures are applied to approximate release rates and dose rates due to iodine.

Detectors are strategically located throughout the plant. These detectors indicate and alarm locally and in the Control Room. They serve the purpose of indicating current dose rates in those areas and are used for local evacuation action levels and re-entry operations.

Certain plant operating systems contain radiation monitors. These systems are described in the PBAPS UFSAR.

Portable monitoring instruments and sampling equipment consist of such items that are utilized and maintained on-site by the Chemistry and Health Physics sections for normal day-to-day plant operations and are thus available for emergency operations.

4.2.1 Core Damage Assessment Methodology

Core damage information is used to refine dose assessments and confirm or extend initial protective action recommendations. Peach Bottom Atomic Power Station utilizes NEDC-33045P-A, "Methods of Estimating Core Damage in BWRs" (Revision 0, July 2001), as the basis for the methodology for post-accident core damage assessment. This methodology utilizes real-time plant indications. In addition, PBAPS may use samples of plant fluids and atmospheres as inputs to the CDAM (Core Damage Assessment Methodology) program for core damage estimation.

4.3 Protective Actions for the Offsite Public

For incidents at PBAPS, PEMA coordinates with MEMA and contacts York, Lancaster and Chester County Emergency Management Agencies to assure that local plans have been implemented. MEMA likewise contacts Cecil and Harford Counties in the event of emergency at PBAPS to assure that all plans have been implemented. County and local governments have primary responsibilities for implementing protective measures for the public following a nuclear incident.

The BRP and MDE serve as lead State agency, in Pennsylvania and Maryland respectively, for technical assistance to other state agencies, county, and local governments regarding radiological health and accident assessment. In the absence of communications with the state, recommendations for protective actions shall be made directly to county emergency operations centers from the station.

4.3.1 Alert and Notification System (ANS) Sirens

Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan and Annex Q of the Maryland Radiological Emergency Plan address notification to the general public and others regarding protective actions. An Alert Notification System, which is intended for use by the counties, in conjunction with the Emergency Alert System (EAS) to provide notification to the general public, has been installed.

Alerting of the EPZ population is provided by a siren system that was installed and is maintained by Exelon Nuclear. The system consists of high-powered rotating electro-mechanical sirens mounted on Class 1 utility poles throughout the Plume Exposure Pathway (10-Mile EPZ). Personnel at the risk county communication centers operate the sirens. The Pennsylvania Emergency Management Agency (PEMA), in conjunction with Maryland and the risk counties, coordinates the activation of the siren system for Peach Bottom Atomic Power Station.

The siren system meets or exceeds the acoustic coverage requirements outlined in NUREG-0654/FEMA-REP-1 and FEMA-REP-10. The location of each siren site was determined by a computer-based sound propagation model.

The sirens are controlled by digitally encoded radio signals transmitted by a transceiver at the station. Each risk county has control of the sirens that are physically located in that county. The sirens can be activated on an individual, municipal, county, or EPZ-wide basis. A controller located at the station serves as a backup to the county controllers. After the system is activated, each siren reports the result of its activation back to the respective county controller and the controller at the station. The siren system is tested regularly to ensure its operability.

Annex E (to the PA Emergency Operations Plan) and Annex Q (to the Maryland REP) delineate risk counties as responsible to:

- Develop a system for rapid notification (in priority order) of county and local government heads, key staff, emergency forces, volunteer organizations, schools, hospitals, nursing homes, business, and industry;
- Ensure that the alert and notification system is operable on an around-the-clock basis;
- Prepare and disseminate public information material on protective actions to provide clear instructions to the population at risk;
- Prepare and maintain material current for dissemination through the EAS; and
- Include provisions in the alert plan for notification of transients.

PEMA/MEMA will notify other states within the Ingestion Pathway EPZ should such action be necessary.

Annex E (to the PA Emergency Operations Plan) and Annex Q (to the Maryland REP) also call for each risk county to promptly activate their alert notification system, when appropriate. EAS radio stations will be activated and instructed as to which prepared message to use. Detailed messages with specific instructions to the public will be provided to the EAS stations by state and county public information officers on a timely basis. Various state agencies will assist the counties in assuring notifications of transients.

Backup means of notification is achieved through Route Alerting, which is contained within the State and respective counties' Radiological Emergency Response Plans and procedures. The means consists of utilizing vehicles with public address (PA) systems in the event the primary method of alerting and notification is unavailable. The backup method has the capability to alert and notify the public within the plume exposure pathway EPZ within a reasonable time, but does not need to meet the 15-minute design objective for the primary prompt public alert and notification system.

4.3.2 Evacuation Time Estimates

The ETE study used population data from the 2010 census which includes parts of three counties in Pennsylvania (Chester, Lancaster and York) and two counties in Maryland (Harford and Cecil). The evacuation times are based on a detailed consideration of the EPZ roadway network and population distribution. The ETE Study, contained in EP-AA-1007 Addendum 2, Evacuation Time Estimates for the Peach Bottom Station Plume Exposure Pathway Emergency Planning Zone, presents evacuation times for daytime and nighttime scenarios under various weather conditions for the evacuation of various areas around the Peach Bottom Atomic Power Station, once a decision has been made to evacuate.

4.3.3 Potassium Iodide (KI)

The Department of Health, Commonwealth of Pennsylvania, is responsible for providing advice to PEMA on the planning for the use, stockpiling and distribution of Potassium Iodide (KI) or other thyroid blocking agents and such other radiological health materials as may be required for the protection of the general public. Their decision shall also be based on U.S. FDA guidance.

The use of KI in the State of Maryland will be in accordance with state health laws and under the direction of State and County Medical Officials.

Based on agreement with the Commonwealth of Pennsylvania and State of Maryland, PBAPS will recommend to government officials that the general public be notified to take KI at a General Emergency classification in those sectors where an evacuation or shelter has been recommended. This notification will be approved by the Emergency Director in Command and Control of PAR decision-making and off-site notifications, and performed as part of the State / local notifications described under Sections II.B.4 and II.E.3 of the Exelon Nuclear Standardized Radiological Emergency Plan.

4.3.4 Public Information

a. Publications

Public information on protective actions is prepared and disseminated annually to provide clear instructions to the population-at-risk. Exelon Nuclear assists PEMA/MEMA and risk counties in the preparation and distribution of their respective public information..

Pamphlets outlining public education response actions are readily available for transients in the 10-Mile EPZ. In addition, emergency information is provided to the operators of other recreational areas in the 10-Mile EPZ, as defined by the Commonwealth of Pennsylvania, State of Maryland and risk counties.

These public information publications (including telephone book emergency information, etc.) instruct the public to go indoors and turn on their radios when they hear the ANS sirens operating. These publications identify the local radio stations to which the public should tune in for information related to the emergency. Additional materials (e.g., such as rumor control numbers, evacuation routes, information on inadvertent siren soundings, etc.) may also be included in these publications based on agreements with responsible State and risk county agencies.

b. News Media Education

Information kits are available to news media personnel. These kits include information on a variety of nuclear power plant related subjects.

4.3.5 Protective Action Recommendations (PARs) for the General Public

To aid the Emergency Response Organization during a developing emergency situation, EP-AA-111, "Emergency Classification and Protective Action Recommendations" has been developed based on Section J.10.m of the Emergency Plan.

4.4 Protective Actions for Onsite Personnel**4.4.1 Plant Evacuation**

Exelon Nuclear personnel and contractors filling emergency response organization positions are considered essential personnel. As such, they will report to their emergency response locations. They will not evacuate unless specifically directed by the Emergency Director. All other personnel are considered non-essential.

In-plant evacuation is initiated primarily by area radiation monitor alarms and continuous air monitor alarms, but is also applicable for fire alarms, explosions, toxic material conditions, as well as radiation, contamination, and airborne radioactivity surveys which indicate conditions above applicable limits. Notification for personnel to proceed with in-plant evacuation will be via a local alarm or an announcement on the plant PA system. The affected area and evacuation assembly areas (if appropriate) will be announced. The immediate response by individuals in the vicinity of such an alarm or announcement is evacuation to an unaffected area or designed assembly area. In the absence of readily available radiological survey information or other logical assessment of conditions, evacuation will be, at least, to a point where other area radiation monitors, continuous air monitors, or observation of local conditions show that the area is not affected.

Assigned plant personnel report to the scene to evaluate conditions, to provide information to the Control Room, and to perform other emergency functions such as personnel accountability, decontamination, medical assistance, and control of the hazard.

Notification of a Site Evacuation is accomplished by activating the Evacuation Alarm System followed by an announcement over the plant PA system. The evacuation assembly area(s) are announced. Evacuation assembly areas are illustrated in Figure PBAPS 4-1. Non-essential personnel will exit via the security exit points and will proceed to the parking lot for transportation. Evacuees are expected to use their personal vehicles in evacuating to the designated evacuation assembly area(s). Designated evacuation assembly areas are located outside the protected area. Plant access roads are maintained clear during the winter months, travel on these roads is expected to be possible at all times.

Plant visitors who have not completed the required training program are escorted at all times. This ensures proper response under emergency conditions. Visitors at the station shall follow the lead of their escorts to the assembly areas.

4.4.2 Personnel Accountability

The Security personnel shall follow security procedures for personnel accountability. For evacuations, information from evacuees is an important means of accounting for plant personnel. For Site Evacuations, non-essential personnel and those ERO members whose facility is located outside the Protected Area are accounted for at the security exit point. Emergency response personnel responding to the OSC within the Protected Area are accounted for by badging into designated card readers.

4.4.3 Monitoring of Evacuees

Evacuees from the Peach Bottom Site are checked for contamination. Necessary personnel and vehicle decontamination efforts are initiated at the evacuation assembly area using in-plant equipment or emergency kit supplies. Priority for decontamination shall be given to personnel found to have the highest levels of contamination. Any personnel suspected, or known, to have ingested or inhaled radioactive material shall be given a whole body count, as soon as conditions permit, to assess their internal exposure.

The registering and monitoring of the general public evacuating from the Plume Exposure Pathway EPZ, as described in Section II.J.12 of the Exelon Nuclear Standardized Radiological Emergency Plan, will occur at designated facilities per the respective State and County Radiological Emergency Response Plans.

4.5 **Severe Accident Management**

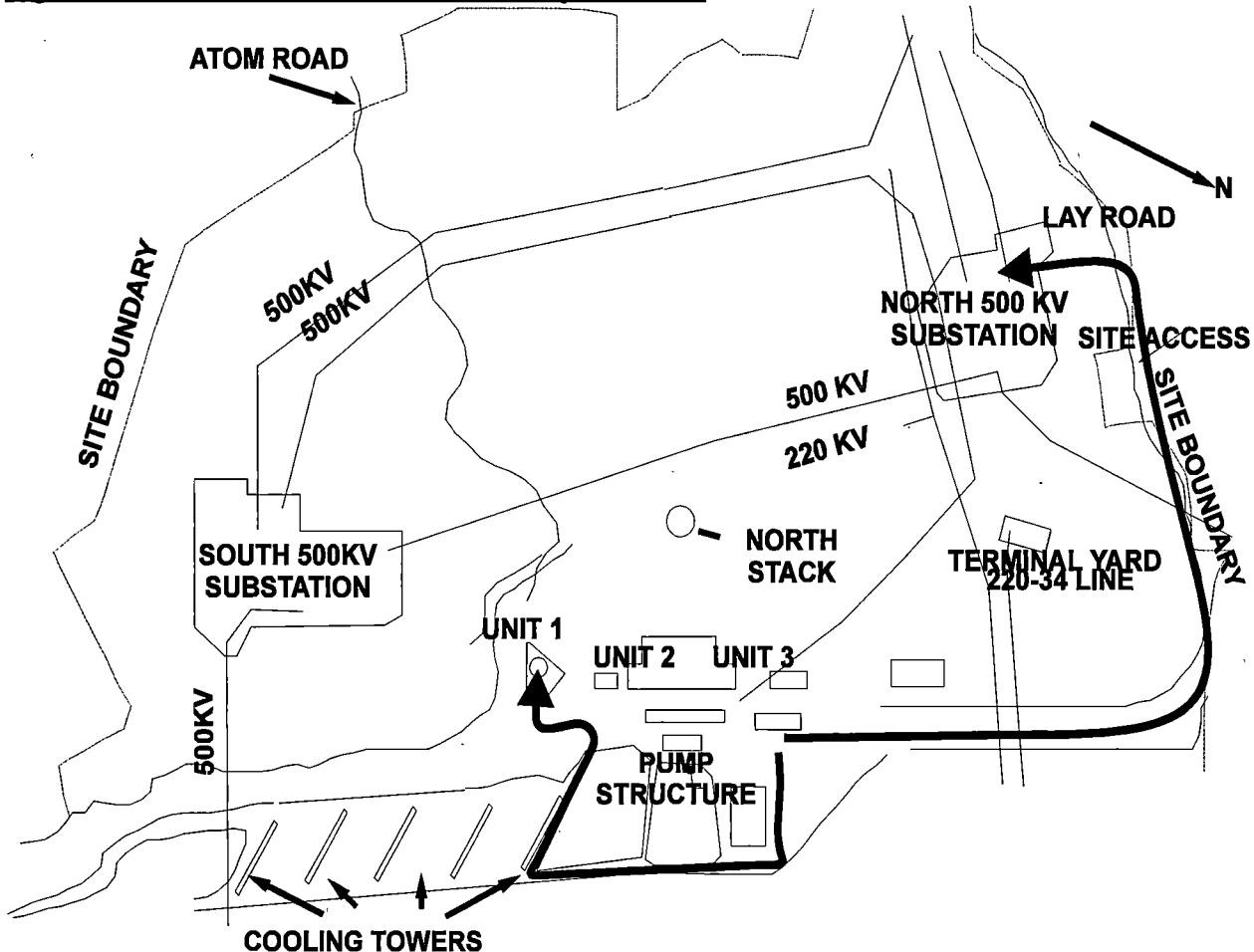
Accident management consists of those actions taken during the course of an accident, by the Emergency Response Organization (ERO), specifically: plant operations, technical support, and plant management staff in order to:

- Prevent the accident from progressing to core damage;
- Terminate core damage once it begins;
- Maintain the capability of the containment as long as possible; and
- Minimize on-site and off-site releases and their effects.

The later three actions constitute a subset of accident management, referred to as Severe Accident Management (SAM) or severe accident mitigation. The Severe Accident Management Plan (SAMP) procedures provide sound technical strategies for maximizing the effectiveness of equipment and personnel in preventing, mitigating and terminating severe accidents.

Implementation of SAMP procedures is a collaborative effort between the Shift Manager and the Station Emergency Director in the TSC (once activated). The Station Emergency Director maintains ultimate responsibility for direction of mitigating strategies. Designated TSC Technical and Operations Support personnel are also trained to assist with decision-making by evaluating plant conditions using the SAM Technical Support Guidelines (TSG).

Figure PBAPS 4-1: Off – Site Assembly Location



TYPE OF EVACUATION
LOCAL EVACUATION
SITE EVACUATION

EVACUATION ASSEMBLY AREAS
Announced on PA System
Peach Bottom Atomic Power Station
Unit 1, North Sub-Station

Section 5: Emergency Facilities and Equipment**5.1 Emergency Response Facilities****5.1.1 Station Control Room**

The Peach Bottom Atomic Power Station Control Room shall be the initial onsite center of emergency control. The Control Room is located on the 165' elevation of the Turbine Building (Control Structure). The ventilation system, shielding, and structural integrity are designed and built to permit continuous occupancy during the postulated design basis accident.

5.1.2 Technical Support Center (TSC)

Peach Bottom Atomic Power Station has established a Technical Support Center (TSC) located on the 3rd floor of the Training Center. The TSC fully meets the requirements of Section H.1.b of the Exelon Nuclear Standardized Radiological Emergency Plan and conforms to Section 8.2.1 of Supp. 1, NUREG-0737.

5.1.3 Operational Support Center (OSC)

Peach Bottom Atomic Power Station has designated an Operational Support Center (OSC). The OSC is located in a 2nd floor conference room at the Site Administrative Building. The OSC conforms to the requirements of Section H.1.c of the Exelon Nuclear Standardized Radiological Emergency Plan, and is the location to which operations support personnel will report during an emergency and from which they will be dispatched for assignments in support of emergency operations.

In the event the OSC is not habitable, personnel report to backup facilities that can be designated based upon specific event conditions.

5.1.4 Emergency Operations Facility (EOF)

The dedicated Emergency Operations Facility (EOF) is located on Exelon property at 175 North Caln Road, Coatesville, PA. The EOF supports Three Mile Island, Peach Bottom and Limerick, and is located approximately 31 miles from Peach Bottom Atomic Power Station. Separate offices are provided for Exelon Nuclear, NRC, Maryland and Pennsylvania representatives and other emergency personnel.

Plant Monitoring System data is available through the Emergency Preparedness Data System (EPDS) at the EOF. The EOF equipment includes:

- a. Supplies and equipment for EOF personnel, and
- b. Sanitary and food preparation facilities.

5.1.5 Joint Information Center (JIC)

The Joint Information Center (JIC) is the facility in which media personnel gather to receive information related to the emergency event. The JIC is co-located with the EOF at 175 North Caln Road, Coatesville, Pennsylvania.

5.1.6 Alternative Facility

The Alternative Facility maintains the capability for staging the TSC/OSC emergency response organization personnel in the event of a hostile action. This alternative facility has the capability for communications with the emergency operations facility, control room, and plant security and the capability for engineering assessment activities, including damage control team planning and preparation. Consistent with NRC EPFAQ No. 2013-005, the EOF will satisfy the offsite notification responsibilities for the Alternative Facility. The Alternative Facility is located at Muddy Run Information Center 172 Bethesda Church Rd, PA 17532. **(CM-1, ref. AR 1362747.44)**

5.2 **Assessment Resources**

5.2.1 Geophysical Monitors

a. Onsite Meteorological Monitoring Program

The Onsite Meteorological Monitoring Program is covered in the contractor specification and vendor procedures of the meteorological monitoring contractor. These data are used to generate wind roses W, Holtwood and to provide estimates of airborne concentrations of gaseous effluents. Meteorological data is provided to the station Control Room from Meteorological Towers. Data include wind speed, wind direction, and temperature. Meteorological monitoring is described in the PBAPS UFSAR.

b. Seismic Monitoring

Seismic instrumentation includes time-history strong motion pressure triaxial seismic monitor accelerographs located in secondary containment and a free-field sensor located outside of the Protected Area. Peak recording accelerographs and seismic switches are discussed in the PBAPS UFSAR.

5.2.2 Radiation Monitoring Equipment

For radiological assessments, instrumentation includes area radiation monitors (ARMs), ventilation effluent radiation monitors, liquid effluent radiation monitors, stack effluent monitors, primary containment radiation monitors and miscellaneous process radiation monitors (Refer to PBAPS UFSAR Section 7 for additional information). Data from these sources would be augmented by plant and field surveys for radiation and airborne levels.

a. Radiological Effluent Gaseous Monitoring

PBAPS has five points of release of radioactive material to the atmosphere. These are the Main Off-Gas Stack, Units 2 and 3 Roof Vents and Torus Hardened Vents. Sample systems are installed for three pathways, Main Stack and two Roof Vents. The sample systems consist of isokinetic sample lines containing particulate/iodine filters, and separate sample lines to shielded gas chambers. Detector outputs associated with the gas chambers are recorded in the Control Room. Roof Vent and Main Stack flow rates are also recorded in the Control Room.

The roof vent radiation monitoring system continuously monitors the noble gas being discharged from the Peach Bottom Unit 2 and Unit 3 roof vents. Each unit has two independent monitoring stations. The monitoring stations use scintillation detectors, which read out digitally in the Control Room.

A representative sample of the Torus Hardened Vent (THV) effluent can be obtained by utilizing the Post Accident Sampling System (PASS). The PASS is capable of sampling containment atmosphere prior to and during the use of the Torus Hardened Vent. The THV radiation monitoring system consists of GM type radiation detectors. One monitor is externally mounted to the vent. Both monitors readout in cpm, and are displayed on a digital monitor in the Control Room.

The refuel floor exhaust is combined with other building exhaust streams and is monitored by the Ventilation Stack Radiation Monitoring system for each unit. All alarm functions and readouts are in the Main Control Room. There are also several Area Radiation Monitors on the refuel floors that provide both local and Main Control Room alarm and readout.

Peach Bottoms' gas chamber detector recorder readouts are converted to uCi/sec of noble gas using calibration data and effluent flow rates for each point of release. The uCi/sec Iodine and particulates are determined from the filter and charcoal cartridge samples. The dose projection system then relates meteorological and radiological data to project dose rates along the plume pathway for selected distances. Appropriate atmospheric distribution coefficients are selected for distances of interest from the point of release. Dose rates at these distances are calculated using this data.

b. Radiological Effluent Liquid Monitoring

Liquid releases are made on a batch basis from waste sample tanks. The contents of these tanks are circulated prior to sampling and analysis and release in the discharge canal. Release forms are prepared to authorize releases to the discharge canal. Potentially, plant system leaks could cause discharge to the canal directly. Radiation monitors are located on certain process water systems that indicate abnormal radioactivity levels. A point of release sampling system is located at the end of the discharge canal.

c. Laboratory Facilities

Chemical laboratories are in the Plant Entrance and Radiochemistry Laboratory (PEARL) at PBAPS. A radiochemistry section is provided. The laboratories are adjacent to the counting room for convenience in transporting prepared samples for counting.

5.2.3 Data Acquisition Methods

a. Plant Monitoring System (PMS)

The PBAPS Main Control Room (MCR) and Technical Support Center (TSC) use an emergency facility data system to aid in assessing plant response and status during emergencies. PMS is a computer-based real-time data acquisition and display system, which gathers and records, selected plant parameters for display.

The system displays are designed to aid the Control Room operator in the performance of emergency response procedures. These displays provide information pertinent to reactor core cooling, reactor coolant system integrity, reactivity control, containment integrity, and power system status. These displays are also available to personnel in the TSC.

PMS also provides concise displays of parameters selected for post-accident monitoring. These displays are designed to aid TSC personnel in assessing plant conditions and in assisting Main Control Room personnel in recovering from abnormal or accident conditions and in mitigating their consequences. The displays include parameter versus time and parameter versus parameter trending.

PMS utilizes high-speed data recording, long-term data storage and a transient analysis program package to aid the Technical Support Center staff in reconstructing the accident sequence as well as tracking the plant steady state and dynamic behavior prior to and through the course of an event. PMS displays are available in the Main Control Room and TSC, and EOF through EPDS interactive color graphic display consoles. Hardcopy output devices are available at each location. Provisions have been made to share data with State Liaisons located in the EOF.

b. Emergency Preparedness Data System (EPDS)

The Emergency Preparedness Data System (EPDS) is an emergency facility data system to aid in assessing plant response and status during emergencies. EPDS is a computer based real-time data acquisition and display system, which acquires, stores and re-packages data from PMS for display in the Technical Support Center and Emergency Operations Facility.

5.2.4 Onsite Fire Detection Instrumentation

PBAPS is afforded fire protection from various systems, selected for their applicability in coping with the several possible types of fires. These systems include an extensive fire water system, carbon dioxide system, air foam system, dry chemical system, heat and smoke detectors as well as portable fire extinguishers located throughout the plant. These systems have alarm outputs located in the Control Room. Fire protection systems are described in the PBAPS UFSAR.

5.2.5 Facilities and Equipment for Offsite Monitoring

Off-site Radiological Environmental Monitoring Program is described in the Offsite Dose Calculations Manual (ODCM). Installed radiological monitoring equipment and facilities, including process, area, and effluent, are described in the PBAPS UFSAR. Sets of instruments are available for emergency use by field survey teams. The field survey teams perform field surveys to locate and track the plume and to determine depositing of activity on the ground.

Emergency kits contain radiation survey equipment, which enables the Field Survey Teams to obtain dose rates, surface contamination, and airborne contamination including radioiodine measurements to supplement calculations based on effluent data. These emergency kits are located at facilities outside the plant for ready accessibility. The equipment in these kits is dedicated for emergency use only.

Concurrent field sampling and analysis for radioiodine provides the capability to detect 10^{-7} $\mu\text{Ci/cc}$ I-131, per NUREG-0654, FEMA-REP-1.

Exelon shall provide for the collection of environmental media samples (e.g., water, grass vegetation, etc.) under emergency conditions and transport to an offsite laboratory for analysis in accordance with NUREG-0654, FEMA-REP-1 criterion I.7 and I.8.

5.2.6 Site Hydrological Characteristics

A list of downstream users is maintained to ensure that they are notified. Should contamination of site drinking water sources be suspected, water samples shall be analyzed.

There are river water level indicators in the PBAPS Control Room. These level indicators continuously indicate river levels, which are also input to the process computer for periodic logging, and high and low level alarms. In addition to the river water indicators in the PBAPS Control Room, river levels at Conowingo Dam (downstream) and Muddy Run Pump Storage Station (upstream) are recorded in the Conowingo Control Room. Conowingo Station engineers receive upstream river stages and weather information, which are used to predict river levels and flow rates up to four days in advance. This information is available to the PBAPS Control Room personnel.

5.3 Protective Facilities and Equipment

a. Emergency Supplies

Refer to Table PBAPS 5-1 for a listing of Emergency Supplies and Equipment.

b. Maintenance Equipment

Maintenance equipment consists of normal and special purpose tools and devices utilized in the course of maintenance functions throughout the station. Maintenance and Radiation Protection personnel responding to the OSC are cognizant of the locations of equipment, which may normally be required in an emergency condition. The Maintenance supervision has access to keys for tool storage, shops, and other locations where maintenance equipment may be stored.

5.4 First Aid and Medical Facilities

First Aid kits are located in designated areas and are checked and replenished as necessary. Stretchers are also provided at designated locations.

5.4.1 Decontamination and Medical Response

On-site personnel decontamination facilities for emergency conditions include showers and sinks, which drain to the liquid radioactive, waste processing system, at the primary health physics decontamination area in the plant. Special decontamination materials and personnel decontamination procedures are available in the area for use under the direction of health physics supervision. Provisions are made for medical decontamination when personnel are transported to hospitals.

5.4.2 Emergency Medical Assistance

Medical treatment given to injured persons at the station is of a "first aid" nature. When more professional care is needed, injured persons are transported to a local hospital. Letters of Agreement are established with primary and backup hospitals. Hospital facilities are listed in Appendix 2.

Both hospitals agree in the event of a Radiological Event, including a hostile action based event, they are adequately prepared to handle contaminated individuals and capable of providing medical support for any contaminated injured individual.

5.4.3 Medical Transportation

A Letter of Agreement is established for local Emergency Medical Services to provide Emergency Medical Services to a Radiological Event, including a Hostile Action Based event, to the Peach Bottom Atomic Power Station.

This includes transportation of patients from PBAPS including those who may have been exposed to radiation or may have injuries complicated by radioactive contamination to the York Hospital or University of Maryland Harford Memorial Hospital upon dispatch by the York County Emergency Dispatch Service.

5.5 Communications

Refer to Section F.1 of the Exelon Nuclear Standardized Radiological Emergency Plan for a description of dedicated communications lines to support both offsite and inter-facility communications.

5.5.1 Intra-Plant Public Address (PA) System

Peach Bottom utilizes a 3-channel system permitting simultaneous use of one page line and two party lines. Loudspeakers powered by individual amplifiers are located throughout the plant and in remote structures. The in-plant system and several remote buildings are powered from two separate emergency busses through automatic transfer switches. Other remote buildings are provided with local power.

The Peach Bottom Public Address system has also been equipped with an advanced page line control system for the enhancement of page announcements throughout the site. This control system provides improved sound quality for emergency announcements made to and from the main control room. It is also capable of screening out page announcements that do not originate from designated page announcement control points such as the control room, TSC, OSC, security locations, etc.

Local area PA announcements can still be conducted by the use of the emergency page button, and the entire system can be reverted back to allow announcements from all locations as required during emergency conditions. The primary purpose of the screening function is to reduce the number of locations where site wide page announcements can originate.

The Peach Bottom PA stations in the plant can only make pages (loudspeaker announcements) to key/central locations (Main Control Room, security station and TSC). General PA announcements over all the plant speakers can only be made from the Main Control Room, Security CAS & SAS stations, OSC, and TSC areas. This system of controlling the PA page announcements dedicates the PA system to reporting emergencies and communications to the Main Control Room.

Capability exists to warn individuals in the vicinity of the river through the river warning system utilizing the plant PA system.

Peach Bottom's Main Control Room has priority page abilities that allow the MCR announcements to override normal plant page announcements.

5.5.2 Private Branch Exchange (PBX) Telephone System

The PBAPS main commercial telephone system (PBX) provides telephone communications capabilities throughout the plant, remote structures, and with off-site parties. Extensions are located in the Main Control Room, the TSC, and the OSC. The power supply for this system consists of one on-site source with an 8-hour battery backup.

The PECO Energy Main Office and Exelon Nuclear headquarters are also served by separate commercial telephone systems (PBX's). All PECO Energy and Exelon Nuclear's PBX's are networked together to create a fully-integrated voice network, providing call management and network redundancy.

5.5.3 Dedicated Emergency PBX Telephone System

The PBAPS dedicated emergency PBX telephone system provides rapid and reliable communications in the event of an emergency. It is independent of the main PBX switch. The dedicated emergency PBX allows rapid dialing and conferencing of emergency response personnel. Extensions are located in the Control Room, the TSC, the OSC, the EOF, and the JIC. The communications system provides dedicated emergency PBX tie line access capability with the Limerick dedicated emergency PBX switch. The system is powered by the Conowingo underwater line and has a battery backup.

Dedicated lines are provided between the PBAPS Control Room, PBAPS substations, and Exelon Nuclear System Operations located at the Corporate Headquarters.

5.5.4 Intra-Plant Maintenance Telephone System

The intra-plant maintenance telephone system is a part of the PBX system and consists of telephone jacks into which telephone sets may be plugged. The telephone jacks are in various plant locations (predominantly in areas of high maintenance activity) and have the effect of expanding the PBX capability.

5.5.5 EOF/JIC Private Branch Exchange (PBX)

A dedicated PBX is installed at the Coatesville EOF/JIC. This switch will control telephone communications in and between the facility, other Exelon locations, and non-Exelon locations. In the event of a PBX failure, outside dial capability is available through trunk lines from the Coatesville Service Building.

The EOF/JIC PBX switch is powered by a source that is backed by a 4-hour uninterruptible power supply and an emergency diesel generator. The UPS is designed to allow sufficient time to bridge any power interruption caused by switching to diesel-supplied power.

5.5.6 Data and Facsimile Transmission Lines

Various data lines are provided to interface computer systems and facsimile machines located at Peach Bottom, Limerick, EOF/JIC.

5.5.7 Trunk Lines

Incoming and outgoing central office trunk lines are provided from the local telephone company. These lines are used to access the Public Switched Telephone Network.

5.5.8 Tie Lines

Communications are provided between PBAPS, LGS, Corporate Main Office, Exelon Nuclear, and the EOF via the Exelon data network. A redundant backup communications path is provided by the commercial communications vendor's network. This communications path allows emergency personnel to communicate between the sites and Exelon Nuclear locations supporting the emergency. Communication lines are maintained between PBAPS and Conowingo Dam. These can be used if conditions warrant securing of the plant in the event of a flood or failure at Conowingo Dam.

Company tie lines are utilized to route NRC communications (e.g., ENS, HPN and counterpart circuits) from between Exelon Nuclear emergency response facilities for Peach Bottom Atomic Power Station.

5.5.9 Emergency PBX T-1 Circuit Lines

Two dedicated T-1 circuits between the Limerick Generating Station and Peach Bottom Atomic Power Station emergency PBX telephone systems are provided for calls within and outside the Exelon voice network. This linkage also allows the continuation of 2-way commercial telephone service in the event that one of the two main commercial telephone system PBX's becomes inoperable or unavailable.

5.5.10 Fiber Optic / Microwave Tie Lines

Dedicated Fiber Optic lines exist between LGS, the Nuclear Group Headquarters (Kennett Square) and Berwyn. Also, dedicated microwave tie lines exist between PBAPS, the EOF/JIC, and Berwyn, where they are linked to the Fiber Optic lines. The microwave system is backed up by at least eight hours of battery. In addition, communication lines exist between LGS, PBAPS, Main Office, the Nuclear Group Headquarters, and the EOF/JIC.

5.5.11 Radio Equipment

A fixed base radio system with multiple channels provides primary/backup outside communication capability as shown in Figure PBAPS 5-1, "Emergency Radio Links."

A separate group of fixed radio channels provides primary/backup communications between in-plant user groups. These channels function through a distributed antenna system located on-site to ensure proper coverage of the area.

The fixed base radio repeaters, antenna system, and radio consoles are powered from a variety of emergency AC buses (diesel backup) and dedicated alternate battery supplies.

A supplementary radio communication system at PBAPS operating on the "ACS/Fire" channel is installed at the six alternate shutdown control stations in the plant. This system is battery backed up for a minimum of 16 hours. The radio channels for this system are designed to survive an automatic isolation on any line faults produced by a Control Room fire.

5.5.12 Evacuation Alarm System

The Evacuation Alarm System consists of a siren tone generator, PA system speakers, a roof siren, and evacuation alarm beacons. The siren tone generator injects an audible evacuation alarm in the PA system, which is broadcast over the PA system speakers. The evacuation alarm beacons provide an audible and visual alarm through two mechanical sirens and flashing red beacon on each beacon unit. The evacuation alarm beacons are installed in all high noise areas of the plant and in areas not covered by the PA system. A selector switch in the Control Room manually initiates the evacuation alarm.

5.6 Independent Spent Fuel Storage (ISFS)

Accidents associated with dry cask storage system include natural and man-made events that are postulated to affect the storage system. The limiting impacts to the system include: (1) loss of shielding capability, and (2) loss of confinement to the system. The loss of shielding results in higher direct radiation from the cask to the environment while the loss of confinement results in a release of materials from within the cask to the environment at a postulated leak rate.

Monitoring of the fuel storage system would provide the means to detect the accident condition and initiate corrective actions. Continued assessment would be provided to the Emergency Director by in-field radiological monitoring. Emergency response procedures include guidance for performing dose projections and may be supplemented by data obtained from ERO dose assessment and environmental monitoring personnel.

5.7 Law Enforcement Agencies

A Letter of Agreement is established for Local Law Enforcement to support Peach Bottom Atomic Power Station to respond to a Radiological Event including a Hostile Action Based Event, in conjunction with the National Incident Management System, upon notification by the station in accordance with the established communications protocol.

5.8 Fire Fighting Organizations

A Letter of Agreement is established for the local volunteer fire department to respond to a Radiological Event including a Hostile Action Based Event, to support Peach Bottom Atomic Power Station's Radiological Emergency Plan in conjunction with the Mutual Aid System as requested by the York County Emergency Dispatch Service System.

Table PBAPS 5-1: Emergency Supplies and Equipment

The following is a listing of typical equipment available for use during emergencies. While specific equipment designations and items may be subject to change, equivalent emergency activity capabilities will be maintained. Procedures define the specific locations, types, and amounts of equipment for emergency use and define requirements for applicable surveillance, testing, maintenance, and inventory activities to ensure that the equipment is in a state of readiness.

| 1.0 | <u>PROTECTIVE</u> | <u>LOCATIONS STORED OR AVAIL</u> |
|------------|------------------------------------|---|
| | Anti-C Clothing | 2, 7, 8, 10 |
| | Dosimetry | 2, 4, 9, 10 |
| | Respirator/Filters | 2, 4, 10, 13 |
| | Self-Contained Breathing Apparatus | 1, 2, 10, 13 |
| | Radiation signs, rope and tape | 2, 7, 8, 13 |
| | Potassium Iodide | 2, 7, 8, 10 |
| 2.0 | <u>RADIATION MONITORING</u> | <u>LOCATIONS STORED OR AVAIL</u> |
| | Air Sampler | 2, 4, 7, 8, 10, 13 |
| | Geiger Counter | 1, 2, 4, 7, 8, 10, 13 |
| | Ion Chamber | 1, 2, 4, 7, 8, 10, 13 |
| | Frisker | 3 |
| | Radiation Survey Forms | 2, 7, 8, 10, 13 |
| | Smears | 2, 7, 8, 10, 13 |
| | Swipes | 2, 7, 8, 10, 13 |
| 3.0 | <u>SEARCH AND RESCUE</u> | <u>LOCATIONS STORED OR AVAIL</u> |
| | Flashlight | 3 |
| | Blanket | 3 |
| | Stretcher | 3 |
| | Rope | 3 |
| 4.0 | <u>DECISION AIDS</u> | <u>LOCATIONS STORED OR AVAIL</u> |
| | Nuclear Emergency Plan | 1, 2, 4, 5, 13, 15 |
| | PBAPS EP Procedures | 1, 2, 4, 5, 6, 7, 8, 13, 14, 15 |
| | Maps | 2, 4, 5, 7 |
| | Prints | 1, 4 |
| | Drawings | 1, 4 |

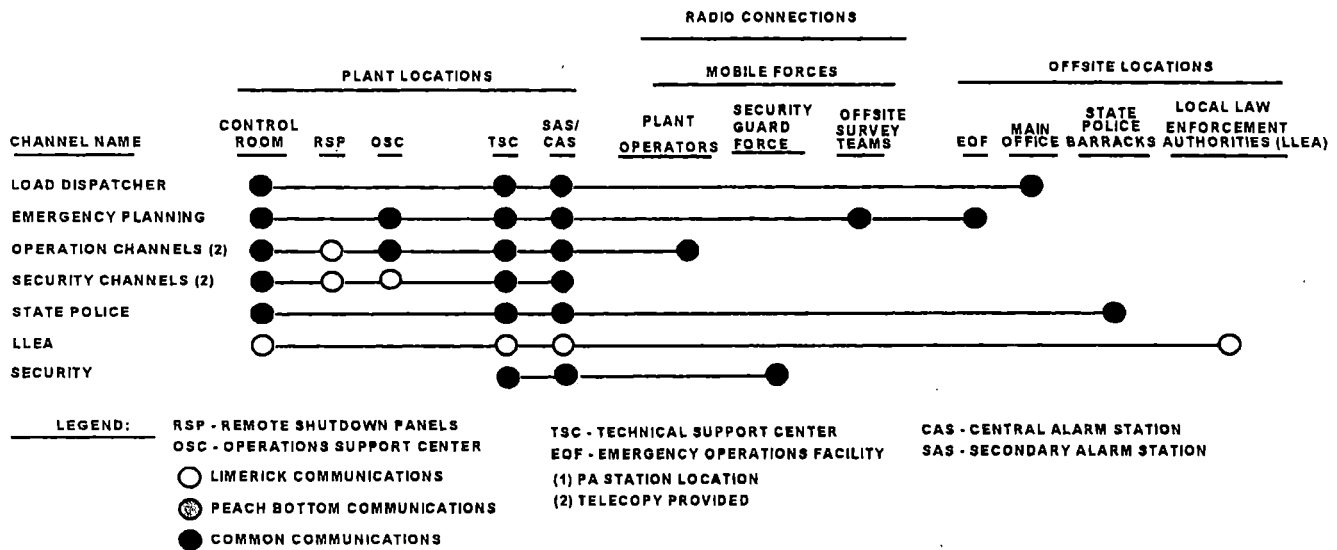
Table PBAPS 5-1: Emergency Supplies and Equipment (Cont'd)

| | | |
|-----|------------------------|----------------------------------|
| 5.0 | <u>COMMUNICATIONS</u> | <u>LOCATIONS STORED OR AVAIL</u> |
| | Base Stations | 1, 2, 4, 5, 14 |
| | Mobile Radios | 1, 2, 5, 7, 14 |
| 6.0 | <u>DECONTAMINATION</u> | <u>LOCATIONS STORED OR AVAIL</u> |
| | Soap | 8, 16 |
| | Detergent | 8, 16 |
| | Hose | 8 |
| | Brushes | 8, 16 |
| | Sponges | 8, 16 |
| | Buckets | 8 |

LOCATION KEY

- 1 Control Room Area
- 2 Operations Support Center
- 3 Strategically located throughout Station
- 4 Technical Support Center
- 5 Emergency Operations Facility
- 6 Alternate Chemistry Laboratory
- 7 Field Monitoring Kits
- 8 Evacuation Assembly Area Kits
- 9 Personnel Dosimetry Office
- 10 Peach Bottom Unit 1
- 13 Radiation Protection Muster Area
- 14 Security Building
- 15 Joint Information Center
- 16 Decontamination Room

Figure PBAPS 5-1: Emergency Radio Links



APPENDIX 1: NUREG-0654 CROSS-REFERENCE

| <u>Annex Section</u> | <u>NUREG-0654</u> |
|-----------------------------|-------------------------------------|
| 1.0 | Part I, Section A |
| 1.1 | Part I, Section B |
| 1.2 | Part I, Section D |
| 1.3 | Part I, Section F |
| Table PBAPS 1-1 | Part I, Section F |
| Figure PBAPS 1-1 | Part II, Section J.10 |
| Figure PBAPS 1-2 | Part II, Section J.11 |
| 2.0 | Part II, Section B.1 |
| 2.1 | Part II, Section B.5 |
| 2.2 | Part II, Section A.3 |
| 2.3 | Part II, Section C.3 |
| 2.4 | Part II, Section C.3 |
| 3.0 | Part II, Section D |
| 4.1 | Part II, Section E.1 & J.7 |
| 4.2 | Part II, Section I.2 & 3 |
| 4.3 | Part II, Section J.10.f |
| 4.3.1 | Part II, Section E.6 |
| 4.3.2 | Part II, Section J.8 |
| 4.3.3 | Part II, Section J.6.c |
| 4.3.4a | Part II, Section G.1 & 2 |
| 4.3.4b | Part II, Section G.5 |
| 4.3.5 | Part II, Section J.7 |
| 4.4.1 | Part II, Sections I.2 & 3.a |
| 4.4.2 | Part II, Section J.5 |
| 4.4.3 | Part II, Section J.3 |
| EP-AA-111 | Part II, Section J.7 |
| Figure PBAPS 4-1 | Part II, Section J.4 |
| 5.1 | Part II, Section H.1-2, & G.3.a |
| 5.2.1 | Part II, Section H.5.a & 8 |
| 5.2.2 | Part II, Section H.5.b, H.6.c & I.2 |
| 5.2.3 | Part II, Section H.5.c |
| 5.2.4 | Part II, Section H.5.d |
| 5.2.5 | Part II, Section H.6.b & 7, I.9-10 |
| 5.2.6 | Part II, Section H.5.a & 6.a |
| 5.3 | Part II, Section H.9-10 |
| 5.4 | Part II, Section L.1 & 2 |
| 5.5 | Part II, Section F.1 |
| Table PBAPS 5-1 | Part II, Section H.11 |
| Figure PBAPS 5-1 | Part II, Section F.1.d |
| Appendix 1 | Part II, Section P.8 |
| Addendum 2 | Part II, Section J.8 |

APPENDIX 2: SITE-SPECIFIC LETTERS OF AGREEMENT

The following is a listing of letters of agreement and contracts specific to emergency response activities in support of Peach Bottom Atomic Power Station. Letters of agreement and contracts common to the multiple Exelon Nuclear stations are listed under Appendix 3 to the Exelon Nuclear Standardized Radiological Emergency Plan.

- Pennsylvania Emergency Management Agency Memorandum of Understanding (MOU) (Letter on File)

NOTE: Documentation of agreement for Lancaster, Chester, and York counties are contained as part of the agreement with PEMA.

- Pennsylvania State Police #
- Memo of Understanding (Letter on File) with Maryland Emergency Management Agency (MEMA), which includes the following support agencies:
 - Maryland Department of the Environment / Radiological Health Program,
 - Harford County Division of Emergency Operations, and
 - Cecil County Emergency Management Agency
- Delta-Cardiff Volunteer Fire / Ambulance Company (Letter on File)
- University of Maryland Harford Memorial Hospital (Letter on File)
- York Hospital (Letter on File)

Agreements with State and local law enforcement agencies maintained by Station Security under the Nuclear Station Security Plan.

Attachment 3

**EP-AA-1008, Revision 30, "Exelon Nuclear Radiological Emergency Plan
Annex for Limerick Generating Station"**

Emergency Plan Annex Revision



Exelon Generation®

EP-AA-1008
Revision 30

EXELON NUCLEAR

RADIOLOGICAL EMERGENCY PLAN ANNEX
FOR
LIMERICK GENERATING STATION

Section 1: Introduction

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| 1.2 Emergency Planning Zones..... | LGS 1-1 |
| 1.3 Participating Governmental Agencies..... | LGS 1-2 |
| Table LGS 1-1: Offsite Radiological Emergency Response Organizations and Response Plans..... | LGS 1-4 |
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APPENDICES

Appendix 1: NUREG-0654 Cross-Reference

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ADDENDUMS

Addendum 1: On- Shift Staffing Technical Basis

Addendum 2: Evacuation Time Estimates for Limerick Station Plume Exposure
Pathway Emergency Planning Zone

Addendum 3: Emergency Action Levels for Limerick Station

REVISION HISTORY

| <u>REVISION</u> | <u>REVISION DATE</u> |
|-----------------|----------------------|
| 0 | August 2002 |
| 1 | October 2002 |
| 2 | November 2002 |
| 3 | February 2003 |
| 4 | September 2003 |
| 5 | October 2003 |
| 6 | December 2004 |
| 7 | May 2005 |
| 8 | September 2005 |
| 9 | January 2006 |
| 10 | December 2006 |
| 11 | May 2007 |
| 12 | September 2007 |
| 13 | November 2007 |
| 14 | July 2008 |
| 15 | December 2008 |
| 16 | August 2009 |
| 17 | March 2010 |
| 18 | July 2010 |
| 19 | December 2010 |
| 20 | May 2011 |
| 21 | February 2012 |
| 22 | February 2012 |
| 23 | March 2012 |
| 24 | November 2012 |
| 25 | December 2012 |
| 26 | June 2013 |
| 27 | June 2014 |
| 28 | December 2014 |
| 29 | March 2015 |
| 30 | December 2017 |

Section 1: Introduction

As required in the conditions set forth by the Nuclear Regulatory Commission (NRC) for the operating licenses for the Exelon Nuclear Stations, the management of Exelon recognizes its responsibility and authority to operate and maintain the nuclear power stations in such a manner as to provide for the safety of the general public.

The Exelon Emergency Preparedness Program consists of the Exelon Nuclear Standardized Radiological Emergency Plan, Station Annexes, emergency plan implementing procedures, and associated program administrative documents. The Exelon Nuclear Standardized Radiological Emergency Plan outlines the basis for response actions that would be implemented in an emergency. Planning efforts common to all Exelon Nuclear stations are encompassed within the Emergency Plan.

This document serves as the Limerick Generating Station Annex and contains information and guidance that is unique to the station. This includes facility geography and location for a full understanding and representation of the station's emergency response capabilities. The Station Annex is subject to the same review and audit requirements as the Exelon Nuclear Standardized Radiological Emergency Plan per EP-AA-120, "Emergency Plan Administration".

1.1 Facility Description

The Limerick Generating Station (LGS) is a fixed nuclear electrical generating facility operated by Exelon Nuclear and licensed by the USNRC. The station includes two boiling water reactor (BWR) electrical generating units.

The Limerick station is located partly in Montgomery County and partly in Chester County Pennsylvania on the Schuylkill River about 1.7 miles southeast of the limits of the Borough of Pottstown. The Schuylkill River passes through the site and separates the western portion, which is located in East Coventry Township, Chester County, from the eastern portion, which is partly in Limerick Township and partly in Lower Pottsgrove Township, both in Montgomery County. Major plant structures are in Limerick Township.

For more specific site location information, refer to the Updated Final Safety Analysis Report (UFSAR) for Limerick Generating Station.

1.2 Emergency Planning Zones

The Plume Exposure Emergency Planning Zone (EPZ) for Limerick Generating Station shall be an area surrounding the Station with a radius of about ten miles. The exact physical boundaries are determined by the Commonwealth of Pennsylvania and affected Counties. Refer to Figure LGS 1-1.

The Ingestion Pathway Emergency Planning Zone (EPZ) for Limerick Generating Station shall be an area surrounding the Station with a radius of about 50 miles. Refer to Figure LGS 1-2.

1.3 Participating Governmental Agencies

The overall responsibility for the management of the effects of accidental off-site releases of radioactivity resulting from either a nuclear power plant or a transportation accident rests with state and local governments.

The Commonwealth organizations having prime responsibility in matters of radiation hazards are the Pennsylvania Emergency Management Agency and the Bureau of Radiation Protection (BRP) of the Pennsylvania Department of Environmental Protection. County and local governments are responsible for the protection of public health and safety within their jurisdiction. Similarly, organizations in the Commonwealth of Pennsylvania and States of Maryland, Delaware, and New Jersey are responsible for the protection of the public in their states. Cooperation with the States of Maryland, Delaware and New Jersey is necessary because these states are within the Ingestion Pathway EPZ.

These civil agencies will respond to provide support in the event of an emergency in the areas indicated below.

1.3.1 Pennsylvania Emergency Management Agency (PEMA)

Responsibilities of PEMA are outlined in Annex E, "Radiological Emergency Response to Nuclear Power Plant Incidents" of the Commonwealth of Pennsylvania Emergency Operations Plan.

1.3.2 Department of Environmental Protection, Bureau of Radiation Protection (DEP/BRP)

Responsibilities of DEP/BRP are outlined in Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan.

1.3.3 Pennsylvania State Police

Responsibilities of the State Police are set forth in Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan.

1.3.4 County Governments

Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan defines "risk counties" as those within a 10-mile radius of a fixed nuclear facility. For LGS, the risk counties are:

- a. Montgomery County
- b. Chester County
- c. Berks County

The responsibilities assigned to these Counties are outlined in Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan.

1.3.5 State Of Maryland

The State of Maryland's border is located within the 50-mile Ingestion Pathway for LGS. The State would be notified if protective actions were required within that area. No direct support is provided to LGS.

1.3.6 State Of New Jersey

The State of New Jersey's border is located within the 50-mile Ingestion Pathway for LGS. The State would be notified if protective actions were required within that area. No direct support is provided to LGS.

1.3.7 State Of Delaware

The State of Delaware's border is located within the 50-mile Ingestion Pathway for LGS. The State would be notified if protective actions were required within that area. No direct support is provided to LGS.

Refer to Table LGS 1-1 for a list of offsite radiological emergency response organizations and response plans in support of the Limerick Generating Station's Emergency Preparedness Program.

Table LGS 1-1: Offsite Radiological Emergency Response Organizations and Response Plans

The following state, local and emergency plans are available and filed under separate cover.

- Annex E - "Radiological Emergency Response to Nuclear Power Plant Incidents" - to Commonwealth of Pennsylvania Emergency Operations Plan.
- Montgomery County Radiological Emergency Response Plan for Incidents at LGS.

Municipalities

| | | |
|---------------------------|--------------------------|---------------------------|
| Collegeville Borough | Douglass Township | Green Lane Borough |
| Limerick Township | Marlborough Township | Lower Pottsgrove Township |
| Lower Frederick Township | Lower Salford Township | Lower Providence Township |
| Perkiomen Township | New Hanover Township | Royersford Borough |
| Pottstown Borough | Skippack Township | Schwenksville Borough |
| Upper Frederick Township | Trappe Borough | Upper Providence Township |
| Upper Pottsgrove Township | West Pottsgrove Township | Upper Salford Township |

School Districts

| | | |
|-----------------|------------------|-------------|
| Methacton | Perkiomen Valley | Pottsgrove |
| Souderton | Pottstown | Spring-Ford |
| Upper Perkiomen | | |

- Chester County Radiological Emergency Response Plan for Incidents at LGS.

Municipalities

| | | |
|------------------------|------------------------|-------------------------|
| Charlestown Township | East Pikeland Township | East Coventry Township |
| East Nantmeal Township | East Vincent Township | North Coventry Township |
| Phoenixville Borough | Schuylkill Township | South Coventry Township |
| Spring City Borough | Upper Uwchlan Township | Uwchlan Township |
| Warwick Township | West Pikeland Township | West Vincent Township |

School Districts

| | |
|-------------------|-----------------|
| Downingtown | Great Valley |
| Phoenixville Area | Owen J. Roberts |

- Berks County Radiological Emergency Response Plan for Incidents at LGS.

Municipalities

| | | |
|---------------------|-------------------|------------------------|
| Amity Township | Boyertown Borough | Colebrookdale Township |
| Douglass Township | Earl Township | Union Township |
| Washington Township | | |

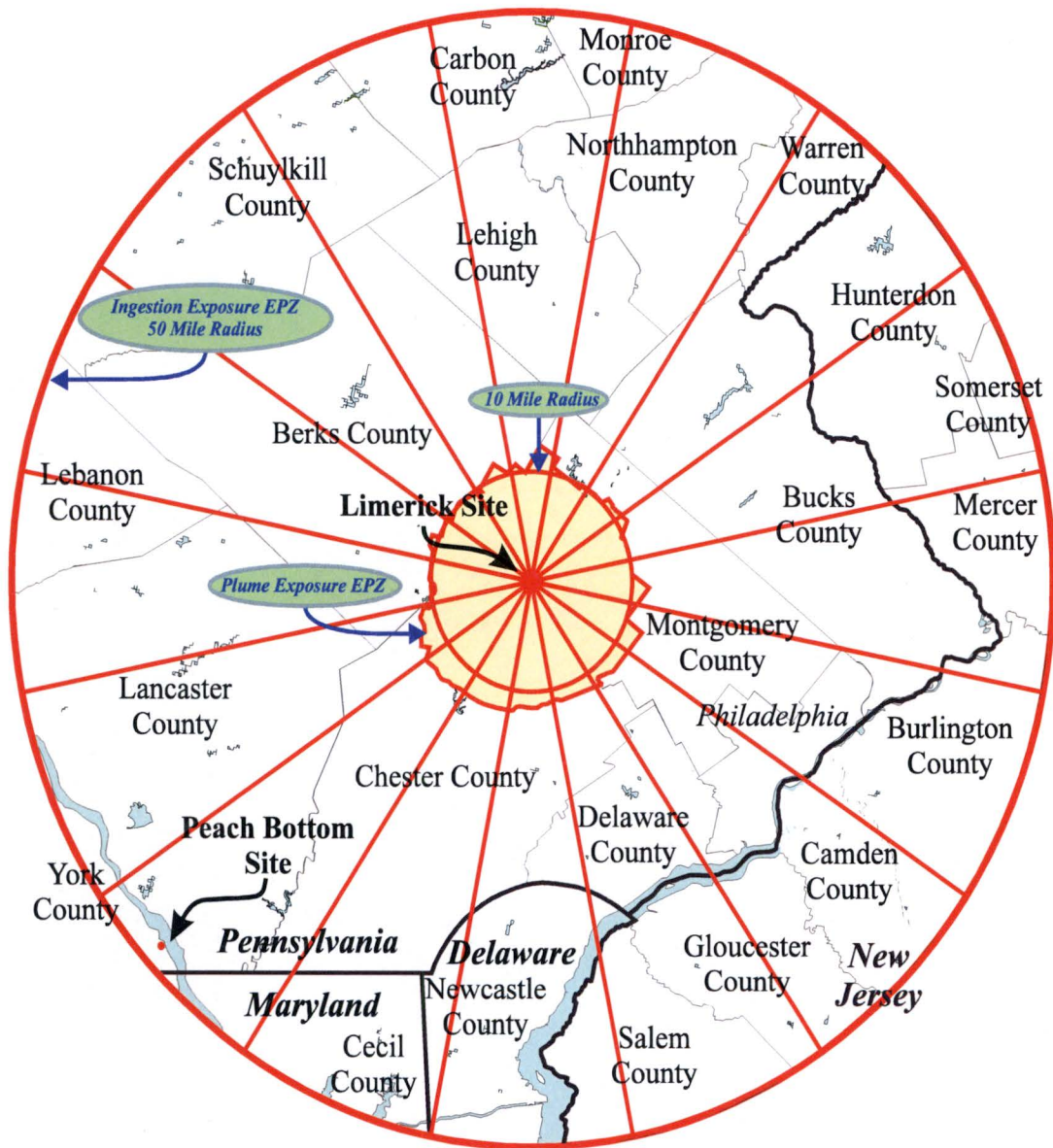
School Districts

| | |
|-----------|--------------|
| Boyertown | Daniel Boone |
|-----------|--------------|

- State of Delaware Emergency Plan
- State of New Jersey Emergency Plan
- State of Maryland Emergency Plan

Figure LGS 1-1: 10-Mile Plume Exposure Pathway EPZ



Figure LGS 1-2: 50-Mile Ingestion Pathway EPZ

Section 2: Organizational Control of Emergencies

This section describes the Emergency Response Organization (ERO) and its key positions. It outlines the staffing requirements which provide initial emergency response actions and provisions for timely augmentation of on-shift personnel when required. It also describes interfaces among Exelon Nuclear emergency response personnel and specifies the offsite support available to respond to the nuclear generating stations.

2.1 Shift Organization Staffing

Initial response to any emergency is by the normal plant organization present at the site. This organization includes positions that are onsite 24 hours per day and is described in Section B.1 of the Exelon Nuclear Standardized Radiological Emergency Plan. The Normal Shift Organization will be augmented, in an emergency, with designated/additional Emergency Response Organization (ERO) personnel within 60 minutes following the declaration of an Alert or higher emergency classification as specified under Table LGS 2-1. ERO activation is described in Section H.4 of the Exelon Nuclear Standardized Radiological Emergency Plan.

Table LGS 2-1 outlines ERO positions required to meet minimum staffing and full augmentation of the on-shift complement at an Alert or higher classification, and the major tasks assigned to each position. Responsibilities for each position are described in Section B.5 of the Exelon Nuclear Standardized Radiological Emergency Plan.

2.1.1 Shift Dose Assessment

The on-shift dose assessment function will be performed by a shift Radiation Protection Technician (RPT) at Peach Bottom Atomic Power Station. However, Limerick Generating Station will maintain the capability to perform a shift dose assessment, if necessary.

2.1.2 Shift Communicator

The Shift Communicator performs notifications to the State and County organizations until relieved by the TSC, and assists in the initiation of the ERO Callout System as directed. The Communicator position is staffed by a designated on-shift individual capable of responding to the Control Room immediately in support of the initiation of offsite notifications within 15 minutes of event classification.

A 2nd on-shift individual will be designated to support communications with the NRC over the Emergency Notification System (ENS) until relieved by the TSC.

2.1.3 Shift Technical Advisor (STA) / Incident Assessor

Section B.1 of the Exelon Nuclear Standardized Radiological Emergency Plan outlines the On-Shift Emergency Response Organization Assignment of the STA. Limerick Generating Station has deemed the following as an acceptable method of implementing Section B.1 in reference to the STA.

The responsibilities of the STA are delineated on OP-AA-101-111, "Roles and Responsibilities of On-Shift Personnel." If the STA is the Shift Manager or Unit Supervisor, then another Senior Reactor Operator (SRO) shall assist as Incident Assessor during unexpected conditions and transients. Per Table LGS 2-1, the on-shift STA or Incident Assessor shall also provide core/thermal hydraulics support to Control Room staff.

2.2 **Emergency Response Organization (ERO) Staffing**

Refer to Table LGS 2-1 of the LGS Annex, "Minimum Staffing Requirements", for a comparison against the Exelon Nuclear Standardized Radiological Emergency Plan of 60-minute and full augmentation commitments.

2.2.1 Emergency Onsite Organization (Figure LGS 2-2)

No changes in augmentation positions or staffing levels for the Technical Support Center (TSC), Operations Support Center (OSC) and Control Room from that specified in the Exelon Nuclear Standardized Radiological Emergency Plan.

2.2.2 Emergency Offsite Organization (Figure LGS 2-3)

Based on existing interface and staffing agreements, representatives from the Commonwealth of Pennsylvania will respond to the Emergency Operations Facility (EOF), allowing direct face-to-face communications. As such, the State Environs Communicator position, listed under the Exelon Nuclear Standardized Radiological Emergency Plan, is not staffed at the Coatesville EOF. Rather the EOF Environmental Coordinator will interface directly with State representatives present in the EOF.

2.2.3 Emergency Public Information Organization (Figure LGS 2-4)

No changes in augmentation positions or staffing levels for the Joint Information Center (JIC) and Emergency News Center (ENC) from that specified in the Exelon Nuclear Standardized Radiological Emergency Plan.

2.3 Emergency Response Organization (ERO) Training

Training is conducted in accordance with Section O.5 of the Exelon Nuclear Standardized Radiological Emergency Plan per TQ-AA-113, "ERO Training and Qualification." Retraining is performed on an annual basis, which is defined as once per calendar year not to exceed 18 months between training sessions.

2.4 Non-Exelon Nuclear Support Groups

Agreements exist on file with or are verified current annually by the MA Region Corporate Emergency Preparedness Group for the support agencies listed in Appendix 2 of the Exelon Nuclear Radiological Emergency Plan Annex for LGS.

Additionally, Exelon Nuclear has contractual agreements common within Exelon Nuclear with several companies whose services would be available in the event of a radiological emergency. These agencies are also listed in Appendix 3 of the Exelon Nuclear Standardized Radiological Emergency Plan.

Emergency response coordination with governmental agencies and other support organizations is discussed in Section A of the Exelon Nuclear Standardized Radiological Emergency Plan.

2.5 Nuclear Steam Systems Supplier (NSSS)

General Electric Company maintains an Emergency Response Organization, which can provide technical assistance from their home office or at the site.

2.6 Architect/Engineer

Bechtel or other contractors may be involved in the technical analysis or construction activities associated with the emergency response or recovery operation. Each such organization will designate a lead representative who will have the same responsibilities, within their scope of work, as described for the NSSS Contractor.

Table LGS 2-1: Minimum Staffing Requirements

| Functional Area | Major Tasks | Emergency Positions | Minimum Shift Size | (a)60 Minute Augmentation | Full Augmentation |
|--|---|---|--------------------------------------|---|---|
| 1. Plant Operations/Safe Shutdown and Assessment of Operational Aspects | Control Room Staff | Shift Manager Control Room Supervisor Reactor Operator Equipment Operator | 1 1 3 3 | | |
| 2. Emergency Direction and Control | Command and Control / Emergency Operations | Shift Emergency Director (CR) Station Emergency Director (TSC) Corporate Emergency Director (EOF) | 1 ^(d) | 1 1 | |
| 3. Notification & Communication | Emergency Communications Plant Status In-Plant Team Control Technical Activities Governmental | Shift Personnel ^(b) TSC Director (TSC) EOF Director (EOF) State/Local Communicator ENS Communicator HPN Communicator Operations Communicator (CR/TSC) Damage Control Comm. (CR/TSC/OSC) Technical Communicator (TSC) EOC Communicator (EOF) State EOC Liaison ^(f) (PEMA) Regulatory Liaison (EOF) | 2 | 1 1 1 (EOF) 1 (TSC) 1 (EOF) | 1 (TSC) 1 (EOF) 1 (TSC) 2 3 1 1 1 1 |
| 4. Radiological Accident Assessment and Support of Operational Accident Assessment | Offsite Dose Assessment Offsite Surveys Onsite Surveys In-plant Surveys Chemistry RP Supervisory | Radiation Protection Personnel ^(c) Dose Assessment Coordinator (EOF) Dose Assessor (EOF) Radiation Controls Coordinator (TSC) Environmental Coordinator (EOF) Field Team Communicator (EOF) Off-Site Field Team Personnel ⁽ⁱ⁾ RP Personnel RP Technicians Chemistry Personnel Radiation Protection Manager(TSC/EOF) | 1 2 1 1 | 1 1 2 2 2 1 2 | 1 1 1 (e) (e) (e) (e) |

Table LGS 2-1: Minimum Staffing Requirements (Cont'd)

| Functional Area | Major Tasks | Emergency Positions | Minimum Shift Size | (a)60 Minute Augmentation | Full Augmentation |
|--|--|---|---------------------------------|---------------------------|-------------------|
| 5. Plant System Engineering, Repair and Corrective Actions | Technical Support | STA / Incident Assessor ^(k) (CR) | 1 | | |
| | | Technical Manager (TSC) | | 1 | |
| | | Core/Thermal Hydraulics Engineer(TSC) | | 1 | |
| | | Mechanical Engineer (TSC) | | 1 | |
| | | Electrical Engineer (TSC) | | 1 | |
| | | SAMG Decision Maker (TSC) | | 1 ^(d) | |
| | | SAMG Evaluator (TSC) | | 2 ^(d) | |
| | | Operations Manager (TSC) | | 1 | |
| | | Radiation Controls Engineer (TSC) | | | 1 |
| | Repair and Corrective Actions | Mechanical Maintenance (OSC) | 1 ^(d) | 2 | (e) |
| | | Rad Waste Operator | 1 | | (e) |
| | | Electrical Maintenance (OSC) | 1 ^(d) | 2 | (e) |
| | | Instrument & Control (I&C) (OSC) | 1 | | |
| | | Maintenance Manager (TSC) | | 1 | |
| | | OSC Director (OSC) | | 1 | |
| | | Assistant OSC Director (OSC) | | | 1 |
| | | OPs Lead & Support Personnel (OSC) | | | (e) |
| | | Accident Analysis | Technical Support Manager (EOF) | | |
| | Operations Advisor (EOF) | | | | 1 |
| | Technical Advisor (EOF) | | | 1 | |
| 6. In-Plant Protective Actions | Radiation Protection | RP Personnel ^(c) | 2 ^(d) | 4 | (e) |
| 7. Fire Fighting | -- | Fire Brigade ^(g) | 5 | | |
| 8. First Aid and Rescue Operations | -- | Plant Personnel | 2 ^(d) | | (e) |
| 9. Site Access Control and Personnel Accountability | Security & Accountability EOF Security | Security Team Personnel Security Coordinator ^(l) (TSC/EOF) | (h) | (h) | 2 |
| 10. Resource Allocation and Administration | Logistics / Administration | Logistics Manager (EOF) | | 1 | |
| | | Logistics Coordinator (TSC) | | | 1 |
| | | Administrative Coordinator (EOF) | | | 1 |
| | | Clerical Staff (TSC/OSC/EOF) | | | (e) |
| | | Events Recorder (EOF) | | | 1 |
| | | Computer Specialist (EOF) | | | 1 |
| SUB-TOTAL: | | | 23 | 34 | 26+ |

Table LGS 2-1: Minimum Staffing Requirements (Cont'd)

| Functional Area | Major Tasks | Emergency Positions | Minimum Shift Size | (a)60 Minute Augmentation | Full Augmentation | |
|------------------------|--|-----------------------------------|--------------------|---------------------------|-------------------------|-----|
| 11. Public Information | Media Interface | Corporate Spokesperson (JIC) | | 1 | 1 | |
| | | Rad Protection Spokesperson (JIC) | | | | 1 |
| | | Technical Spokesperson (JIC) | | | | 1 |
| | Information Development | Public Information Director (JIC) | | 1 | 1 | |
| | | News Writer (JIC) | | | | (e) |
| | | Communications Department (JIC) | | | | |
| | Media Monitoring and Rumor Control Facility Operation and Control | JIC Director (JIC) | | 1 | 1 | |
| | | JIC Coordinator (JIC) | | | | 1 |
| | | Administrative Coordinator (JIC) | | | | 1 |
| | | Events Recorder (JIC) | | | | (e) |
| | | Clerical Support (JIC) | | | | 1 |
| | | Access Control (JIC) | | | | |
| | | | | | | |
| SUB-TOTAL: | | | 0 | 3 ⁽ⁱ⁾ | 7+ | |
| | | | Minimum Shift Size | Total Minimum Staff | Total Full Augmentation | |
| TOTAL: | | | 23 | 37 | 33+ | |

(a) Response time is based on optimum travel conditions.

(b) Refer to Section 2.1.2 for a description of shift communicator staffing.

(c) Refer to Section 2.1.1 for description of on-shift dose assessment staffing.

(d) May be provided by personnel assigned other functions. Personnel can fulfill multiple functions.

(e) Personnel numbers depend on the type and extent of the emergency.

(f) Staffing of the County EOC Liaison position is not required based on agreements with offsite agencies; however, every effort will be made to dispatch an Exelon Nuclear representative upon request from County EOC Director.

(g) Fire Brigade per FSAR / TRM, as applicable.

(h) Function performed by on-shift security personnel.

(i) The following Emergency Public Information Organization personnel will be designated "minimum staffing" (on-call) positions, but are not subject to the 60-minute response time requirement: Corporate Spokesperson, Public Information Director and JIC Director.

(j) One member of each Field Survey Team is a Driver.

(k) Refer to Section 2.1.3 for description of on-shift STA/Incident Assessor staffing requirements.

(l) TSC Security Coordinator position will be staffed by LGS Security personnel. The EOF Security Coordinator position will be staffed by Corporate personnel.

Figure LGS 2-1: Exelon Overall ERO Command Structure

Bolded Boxes indicate minimum staffing positions.

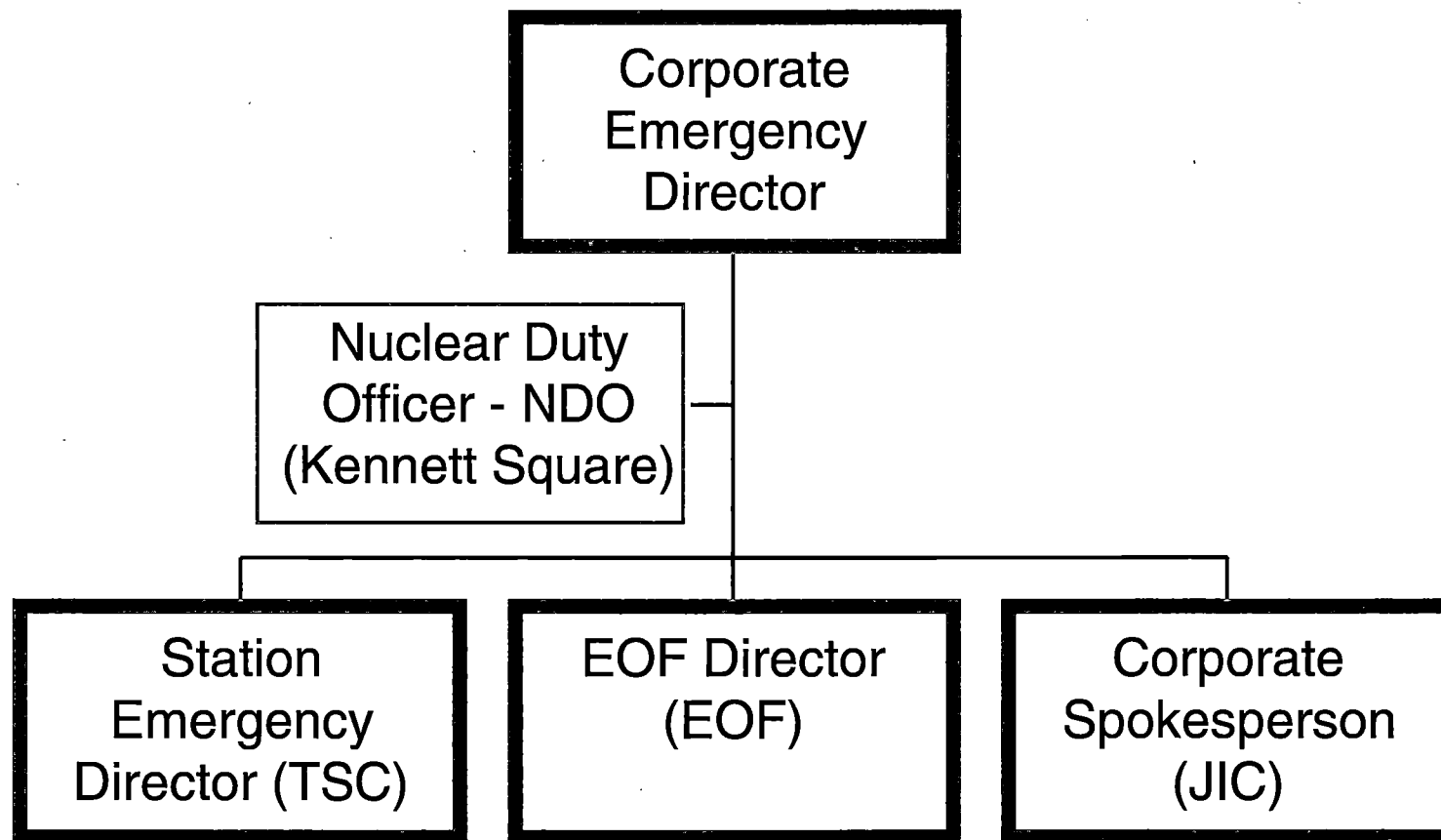
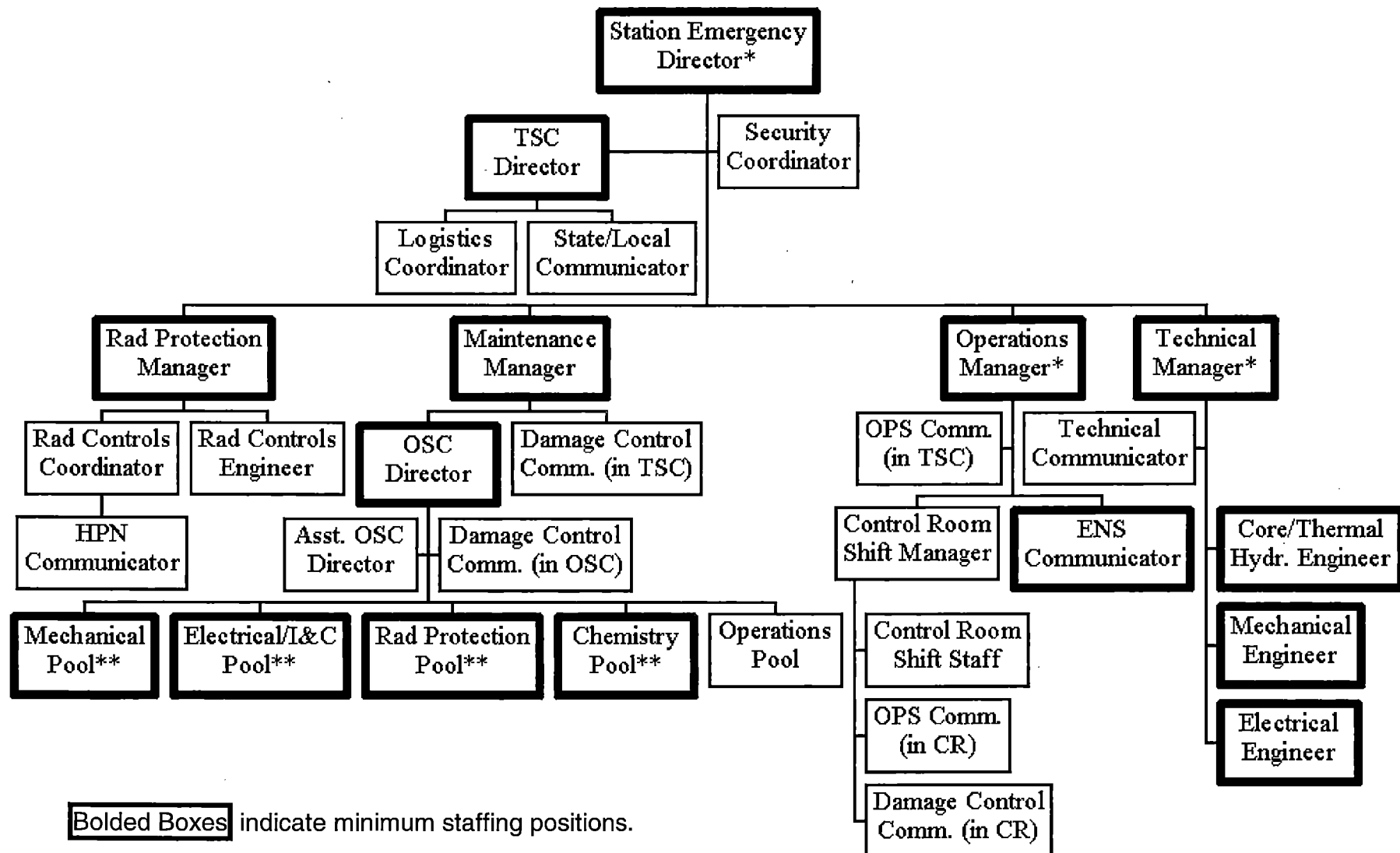


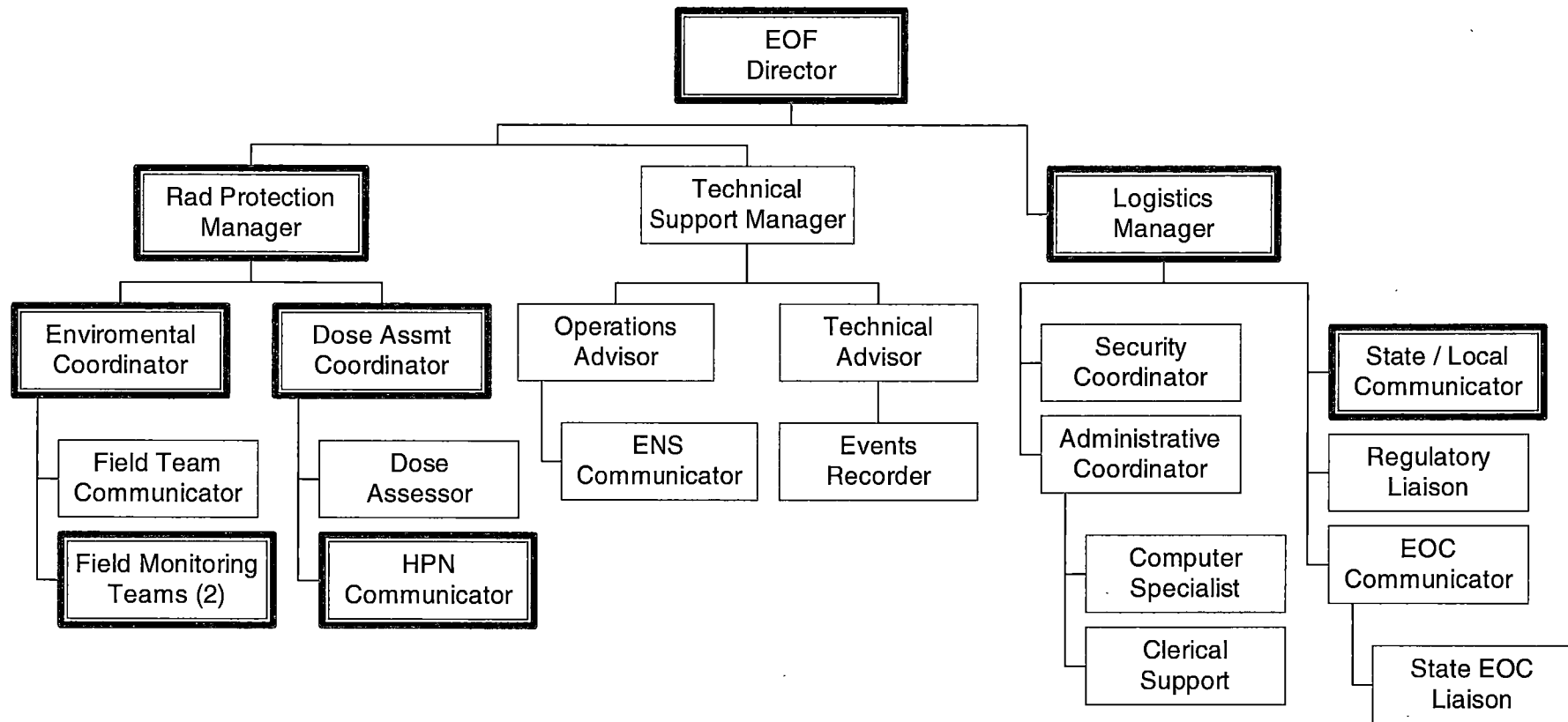
Figure LGS 2-2: Emergency Onsite Organization



* SAMG functions may be assigned to other qualified personnel. Minimum staffing requires 1 Decision Maker and 2 Evaluators.

** Refer to Table LGS 2-1 for required staffing levels

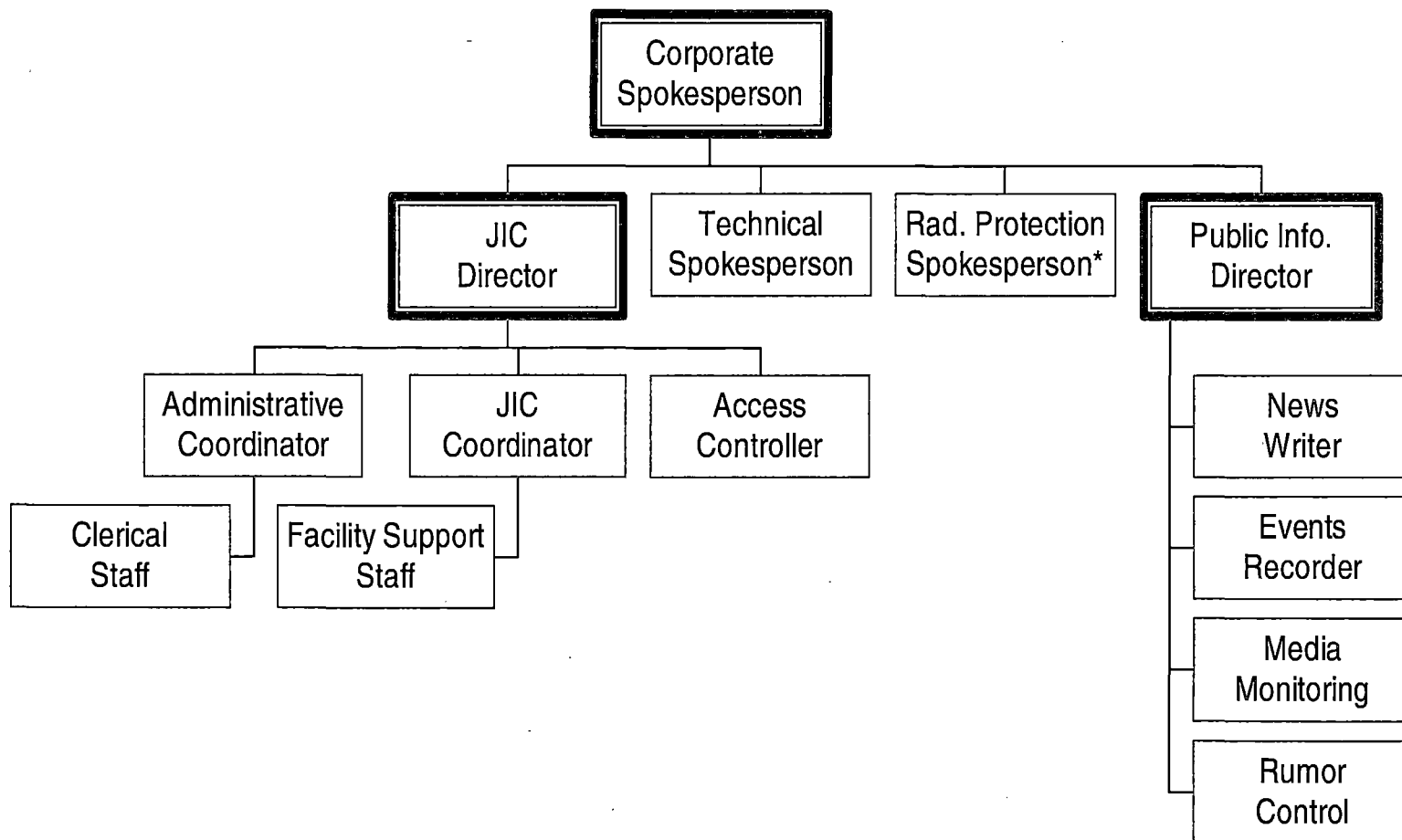
Figure LGS 2-3: Emergency Offsite Organization



Bolded Boxes indicate minimum staffing positions.

EOF Security Coordinator position staffed by Corporate personnel.

Figure LGS 2-4: Emergency Public Information Organization



Bolded Boxes indicate minimum staffing positions.

* Radiation Protection Spokesperson may be staffed by a qualified consultant.

Section 3: Classification of Emergencies

**The Limerick Emergency Action Levels and supporting information
are re-located in EP-AA-1008, Addendum 3.**

Section 4: Emergency Measures

4.1 Notification of the Emergency Organization

Notifications for the Limerick Generating Station are made to the following additional State and local agencies in accordance with Section E.3 of the Exelon Nuclear Standardized Radiological Emergency Plan:

- Pennsylvania Emergency Management Agency (PEMA)
- Berks County Emergency Management Agency
- Chester County Emergency Services
- Montgomery County Office of Emergency Preparedness

Notification of PEMA and the risk counties will be directed by the Emergency Director within 15 minutes of initial event classification, reclassification, or a change in a protective action recommendation (PAR) due to plant conditions or meteorological changes per Section E.3 of the Exelon Nuclear Standardized Radiological Emergency Plan. In addition, once the EOF is activated, the Corporate Emergency Director will contact the Senior Pennsylvania State Official as designated by PEMA following the decision to recommend a protective action for the general public.

Upon notification of an emergency at Limerick Generating Station, the Pennsylvania Bureau of Radiation Protection (BRP) will contact the appropriate station to verify that an emergency exists and to obtain technical information, and then makes recommendations to PEMA regarding protective actions for the public. The BRP Support Plan For Fixed Nuclear Facility Incidents utilizes the Protective Action Guidelines in the U.S. Environmental Protection Agency (EPA) 400-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents".

Exelon Nuclear will provide follow-up information to the BRP or other off-site authorities. The follow-up information will keep these authorities apprised of existing or potential radiological releases, meteorological conditions, projected doses and contamination levels, licensee actions, recommend protective actions and other information pertinent to the authorities' responsibilities. The information may be provided over open communication paths or in person to BRP personnel.

4.2 Assessment Actions

The effluent radiation monitoring system provides indications of gross releases of gaseous and liquid radioactivity. By applying calibration factors, meteorological data, or river flow, the gross indications are used to calculate approximate release rates in $\mu\text{Ci/sec}$ and dose rates at specific distances along the release pathways. Particulate and iodine analysis depends on collecting installed filter papers and charcoal cartridges for analysis in the counting room. Similar calculation procedures are applied to approximate release rates and dose rates due to iodine.

Detectors are strategically located throughout the plant. These detectors indicate and alarm locally and in the Control Room. They serve the purpose of indicating current dose rates in those areas and are used for local evacuation action levels and re-entry operations.

Certain plant operating systems contain radiation monitors. These systems are described in the LGS UFSAR.

Portable monitoring instruments and sampling equipment consist of such items that are utilized and maintained on-site by the Chemistry and Health Physics sections for normal day-to-day plant operations and are thus available for emergency operations.

4.2.1 Core Damage Assessment Methodology

Core damage information is used to refine dose assessments and confirm or extend initial protective action recommendations. Limerick Generating Station utilizes NEDC-33045P, "Methods of Estimating Core Damage in BWRs" (Revision 0, July 2001), as the basis for the methodology for post-accident core damage assessment. This methodology utilizes real-time plant indications. In addition, Limerick Generating Station may use samples of plant fluids and atmospheres as inputs to the CDAM (Core Damage Assessment Methodology) program for core damage estimation

4.3 **Protective Actions for the Offsite Public**

PEMA interface for incidents at Limerick Generating Station will be with Berks, Chester and Montgomery Counties. County and local governments have primary responsibilities for implementing protective measures for the public following a nuclear incident.

The BRP serves as lead Pennsylvania State agency for technical assistance to other state agencies, county, and local governments regarding radiological health and accident assessment. In the absence of communications with the state, recommendations for protective actions shall be made directly to county emergency operations centers from the station.

4.3.1 Alert and Notification System (ANS) Sirens

Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan addresses notification to the general public and others regarding protective actions. An Alert Notification System, which is intended for use by the counties, in conjunction with the Emergency Alert System (EAS) to provide notification to the general public, has been installed.

Alerting of the EPZ population is provided by a siren system that was installed and is maintained by Exelon Nuclear. The system consists of high-powered rotating electro-mechanical sirens mounted on Class 1 utility poles throughout the Plume Exposure Pathway (10-Mile EPZ). Personnel at the risk county communication centers operate the sirens. The Pennsylvania Emergency Management Agency (PEMA) coordinates the activation of the siren system for Limerick Generating Station.

The siren system meets or exceeds the acoustic coverage requirements outlined in NUREG-0654/FEMA-REP-1 and FEMA-REP-10. A computer-based sound propagation model determined the location of each siren site.

The sirens are controlled by digitally encoded radio signals transmitted by a transceiver at the station. Each risk county has control of the sirens that are physically located in that county. The sirens can be activated on an individual, municipal, county, or EPZ-wide basis.

A controller located at the station serves as a backup to the county controllers. After the system is activated, each siren reports the result of its activation back to the respective county controller and the controller at the station. The siren system is tested regularly to ensure its operability.

Annex E delineates risk counties as responsible to:

- Develop a system for rapid notification (in priority order) of county and local government heads, key staff, emergency forces, volunteer organizations, schools, hospitals, nursing homes, business, and industry;
- Ensure that the alert and notification system is operable on an around-the-clock basis;
- Prepare and disseminate public information material on protective actions to provide clear instructions to the population at risk;
- Prepare and maintain material current for dissemination through the EAS; and
- Include provisions in the alert plan for notification of transients.

PEMA will notify other states within the Ingestion Pathway EPZ should such action be necessary.

Annex E calls for each risk county to promptly activate their alert notification system, when appropriate. EAS radio stations will be activated and instructed as to which prepared message to use. Detailed messages with specific instructions to the public will be provided to the EAS stations by state and county public information officers on a timely basis. Various state agencies will assist the counties in assuring notifications of transients.

Backup means of notification is achieved through Route Alerting, which is contained within the State and respective counties' Radiological Emergency Response Plans and procedures. The means consists of utilizing vehicles with public address (PA) systems in the event the primary method of alerting and notification is unavailable. The backup method has the capability to alert and notify the public within the plume exposure pathway EPZ within a reasonable time, but does not need to meet the 15-minute design objective for the primary prompt public alert and notification system.

4.3.2 Evacuation Time Estimates

The ETE study used population data from the 2010 census which includes parts of three counties in Pennsylvania (Berks, Chester, and Montgomery). The evacuation times are based on a detailed consideration of the EPZ roadway network and population distribution. The ETE Study, contained in EP-AA-1008 Addendum 2, Evacuation Time Estimates for the Limerick Station Plume Exposure Pathway Emergency Planning Zone, presents evacuation times for daytime and nighttime scenarios under various weather conditions for the evacuation of various areas around the Limerick Generating Station, once a decision has been made to evacuate.

4.3.3 Potassium Iodide (KI)

The Department of Health, Commonwealth of Pennsylvania, is responsible for providing advice to PEMA on the planning for the use, stockpiling and distribution of Potassium Iodide (KI) or other thyroid blocking agents and such other radiological health materials as may be required for the protection of the general public. Their decision shall also be based on U.S. FDA guidance.

Based on the criteria established under the Appendix E of the Commonwealth of Pennsylvania Operations Plan, LGS will recommend to government officials that the general public be notified to take KI at a General Emergency classification in those sectors where an evacuation or shelter has been recommended. This notification will be approved by the Emergency Director in Command and Control of PAR decision-making and off-site notifications, and performed as part of the State / local notifications described under Sections II.B.4 and II.E.3 of the Exelon Nuclear Standardized Radiological Emergency Plan.

4.3.4 Public Information

a. Publications

Public information on protective actions is prepared and disseminated annually to provide clear instructions to the population-at-risk. Exelon Nuclear assists PEMA and risk counties in the preparation and distribution of their respective public information.

Pamphlets outlining public education response actions are readily available for transients in the 10-Mile EPZ. In addition, emergency information is provided to the operators of other recreational areas in the 10-Mile EPZ, as defined by the Commonwealth of Pennsylvania and risk counties.

These public information publications (including telephone book emergency information, etc.) instruct the public to go indoors and turn on their radios when they hear the ANS sirens operating. These publications identify the local radio stations to which the public should tune in for information related to the emergency. Additional materials (e.g., such as rumor control numbers, evacuation routes, information on inadvertent siren soundings, etc.) may also be included in these publications based on agreements with responsible State and risk county agencies.

b. News Media Education

Information kits are available to news media personnel. These kits include information on a variety of nuclear power plant related subjects.

4.3.5 Protective Action Recommendations (PARs) for the General Public

To aid the Emergency Response Organization during a developing emergency situation, EP-AA-111, "Emergency Classification and Protective Action Recommendations" has been developed based on Section J.10.m of the Emergency Plan.

4.4 Protective Actions for Onsite Personnel

4.4.1 Plant Evacuation

Exelon Nuclear personnel and contractors filling emergency response organization positions are considered essential personnel. As such, they will report to their emergency response locations. They will not evacuate unless specifically directed by the Emergency Director. All other personnel are considered non-essential.

In-plant evacuation is initiated primarily by area radiation monitor alarms and continuous air monitor alarms, but is also applicable for fire alarms, explosions, toxic material conditions, as well as radiation, contamination, and airborne radioactivity surveys which indicate conditions above applicable limits. Notification for personnel to proceed with in-plant evacuation will be via a local alarm or an announcement on the plant PA system. The affected area and evacuation assembly areas (if appropriate) will be announced. The immediate response by individuals in the vicinity of such an alarm or announcement is evacuation to an unaffected area or designed assembly area. In the absence of readily available radiological survey information or other logical assessment of conditions, evacuation will be, at least, to a point where other area radiation monitors, continuous air monitors, or observation of local conditions show that the area is not affected.

Assigned plant personnel report to the scene to evaluate conditions, to provide information to the Control Room, and to perform other emergency functions such as personnel accountability, decontamination, medical assistance, and control of the hazard.

Notification of a Site Evacuation is accomplished by activating the Evacuation Alarm System followed by an announcement over the plant PA system. The evacuation assembly area(s) are announced. Evacuation assembly areas are illustrated in Figure LGS 4-1. Non-essential personnel will exit via the security exit points and will proceed to the parking lot for transportation. Evacuees are expected to use their personal vehicles in evacuating to the designated evacuation assembly area(s). Designated evacuation assembly areas are located outside the protected area. Plant access roads are maintained clear during the winter months, travel on these roads is expected to be possible at all times.

Plant visitors who have not completed the required training program are escorted at all times. This ensures proper response under emergency conditions. Visitors at the station shall follow the lead of their escorts to the assembly areas.

4.4.2 Personnel Accountability

The Security personnel shall follow security procedures for personnel accountability. For evacuations, information from evacuees is an important means of accounting for plant personnel. For Site Evacuations, non-essential personnel are accounted for at the security exit point. Emergency response personnel are accounted for by badging into their assembly areas.

4.4.3 Monitoring of Evacuees

Evacuees from the Limerick Site are checked for contamination. Necessary personnel and vehicle decontamination efforts are initiated at the evacuation assembly area using in-plant equipment or emergency kit supplies. Priority for decontamination shall be given to personnel found to have the highest levels of contamination. Any personnel suspected, or

known, to have ingested or inhaled radioactive material shall be given a whole body count, as soon as conditions permit, to assess their internal exposure.

The registering and monitoring of the general public evacuating from the Plume Exposure Pathway EPZ, as described in Section II.J.12 of the Exelon Nuclear Standardized Radiological Emergency Plan, will occur at designated facilities per the respective State and County Radiological Emergency Response Plans.

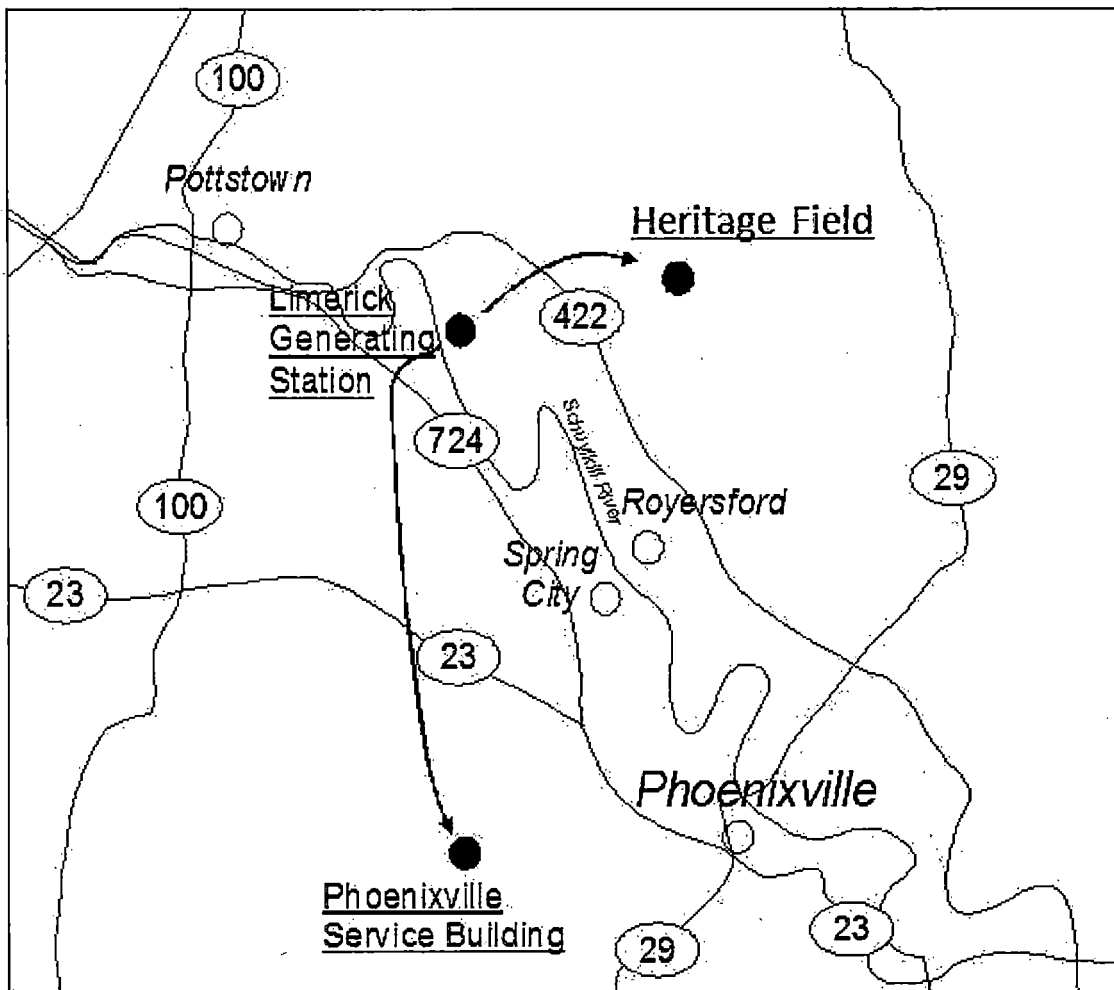
4.5 Severe Accident Management

Accident management consists of those actions taken during the course of an accident, by the Emergency response Organization (ERO), specifically: plant operations, technical support, and plant management staff in order to:

- Prevent the accident from progressing to core damage;
- Terminate core damage once it begins;
- Maintain the capability of the containment as long as possible; and
- Minimize on-site and off-site releases and their effects.

The later three actions constitute a subset of accident management, referred to as Severe Accident Management (SAM) or severe accident mitigation. The Severe Accident Management Plan Procedures (SAMPs) provide sound technical strategies for maximizing the effectiveness of equipment and personnel in preventing, mitigating and terminating severe accidents.

Implementation of SAMP procedures is a collaborative effort between the Shift Manager and the Station Emergency Director in the TSC (once activated). The Station Emergency Director maintains ultimate responsibility for direction of mitigating strategies. Designated TSC Technical and Operations Support personnel are also trained to assist with decision-making by evaluating plant conditions using the SAM Technical Support Guidelines (TSG).

Figure LGS 4-1: Off – Site Assembly Location**TYPE OF EVACUATION****LOCAL EVACUATION****SITE EVACUATION****EVACUATION ASSEMBLY AREAS**

Announced on PA System

Limerick Generating Station

Heritage Field, Phoenixville Service Building, Other Designated Area

Section 5: Emergency Facilities and Equipment

5.1 Emergency Response Facilities

5.1.1 Station Control Room

The Limerick Generating Station Control Room shall be the initial onsite center of emergency control. The Control Room is located on the 269' elevation of the Control Structure. The ventilation system, shielding, and structural integrity are designed and built to permit continuous occupancy during the postulated design basis accident.

5.1.2 Technical Support Center (TSC)

Limerick Generating Station has established a Technical Support Center (TSC) adjacent to the Protected Area Main Access Facility. The TSC fully meets the requirements of Section H.1.b of the Exelon Nuclear Standardized Radiological Emergency Plan and conforms to Section 8.2.1 of Supp. 1, NUREG-0737.

5.1.3 Operational Support Center (OSC)

Limerick Generating Station has designated an Operational Support Center (OSC). The OSC is located on the 217' elevation in the Health Physics Field Office, adjacent to the Turbine Enclosure. The OSC conforms to the requirements of Section H.1.c of the Exelon Nuclear Standardized Radiological Emergency Plan, and is the location to which operations support personnel will report during an emergency and from which they will be dispatched for assignments in support of emergency operations.

In the event the OSC is not habitable, personnel report to backup facilities that can be designated based upon specific event conditions.

5.1.4 Emergency Operations Facility (EOF)

The dedicated Emergency Operations Facility (EOF) is located on Exelon property at 175 North Caln Road, Coatesville, PA. The EOF supports Three Mile Island, Peach Bottom and Limerick, and is located approximately 20 miles from Limerick Generating Station. Separate offices are provided for Exelon Nuclear, NRC, Maryland and Pennsylvania representatives and other emergency personnel.

Plant Monitoring System data is available through the Emergency Preparedness Data System (EPDS) at the EOF.

The EOF equipment includes:

- a. Supplies and equipment for EOF personnel, and
- b. Sanitary and food preparation facilities.

5.1.5 Joint Information Center (JIC)

The Joint Information Center (JIC) is the facility in which media personnel gather to receive information related to the emergency event. The JIC is co-located with the EOF at 175 North Caln Road, Coatesville, Pennsylvania.

5.1.6 Alternative Facility

The Alternative Facility maintains the capability for staging the TSC/OSC emergency response organization personnel in the event of a hostile action. This alternative facility has the capability for communications with the emergency operations facility, control room, and plant security and the capability for engineering assessment activities, including damage control team planning and preparation. Consistent with NRC EPFAQ No. 2013-005, the EOF will satisfy the offsite notification responsibilities for the Alternative Facility. The Alternative Facility is located within Exelon Powerlabs Facility at 175 North Caln Road, Coatesville, Pennsylvania. (CM-1, ref. AR 1362747.44)

5.2 **Assessment Resources**

5.2.1 Geophysical Monitors

a. Onsite Meteorological Monitoring Program

The Onsite Meteorological Monitoring Program is covered in the contractor specification and vendor procedures of the meteorological monitoring contractor. These data are used to generate wind roses and to provide estimates of airborne concentrations of gaseous effluents. Meteorological data is provided to the station Control Room from Meteorological Towers. Data include wind speed, wind direction, and temperature. Meteorological monitoring is described in the LGS UFSAR.

b. Seismic Monitoring

Seismic instrumentation includes time-history strong motion pressure triaxial seismic monitor accelerographs located in secondary containment and a free-field sensor outside of the PPC. Peak recording accelerographs, and seismic switches are discussed in the LGS UFSAR.

5.2.2 Radiation Monitoring Equipment

For radiological assessments, instrumentation includes area radiation monitors (ARMs), ventilation effluent radiation monitors, liquid effluent radiation monitors, stack effluent monitors, primary containment radiation monitors and miscellaneous process radiation monitors (Refer to LGS UFSAR Sections 11, 12 and 15 for additional information). Data from these sources would be augmented by plant and field surveys for

radiation and airborne levels.

a. Radiological Effluent Gaseous Monitoring

LGS has four monitored points of release of radioactive material to the atmosphere. These are South Stack 1 and 2, Hot Maintenance Shop, and the North Stack. Sample systems are installed for these four pathways. The sample system consists of isokinetic sample lines containing particulate/iodine filters and separate sample lines to shielded gas chambers. Detector output data associated with the gas chambers are available in the Control Room.

The stacks radiation monitoring system continuously monitors the noble gas being discharged from Unit 1 and Unit 2. Each unit has two independent monitoring skid stations for its North and South stacks and a common North stack Wide Range Accident Monitor (WRAM). The monitoring stations use scintillation detectors which readout in the Main Control Room in uCi/sec and uCi/cc.

Gas chamber detectors readouts are in uCi/cc. The WRAM readout is in units of uCi/sec. The uCi/sec Iodine and particulate concentrations are determined from the filter and charcoal cartridge samples.

b. Radiological Effluent Liquid Monitoring

Liquid releases are made on a batch basis from waste sample tanks. The contents of these tanks are circulated prior to sampling and analysis. Permits are prepared to authorize releases to the cooling tower blowdown line. Radiation monitors are located on certain process water systems, which indicate abnormal radioactivity levels. Procedures describe the technique for determining consequences of an abnormal release.

c. Laboratory Facilities

Chemical laboratories are located adjacent to the radwaste enclosure at LGS. A radiochemistry section is provided. The laboratories are adjacent to the counting room for convenience in transporting prepared samples for counting.

5.2.3 Data Acquisition Methods

a. Plant Monitoring System (PMS)

The LGS Main Control Room (MCR) and Technical Support Center (TSC) use an emergency facility data system to aid in assessing plant response and status during emergencies. PMS is a computer-based real-time data acquisition and display system, which gathers and records, selected plant parameters for display.

The system displays are designed to aid the Control Room operator in the performance of emergency response procedures. These displays provide information pertinent to reactor core cooling, reactor coolant system integrity, reactivity control, containment integrity and power system status. These displays are also available to personnel in the TSC.

PMS also provides concise displays of parameters selected for post-accident monitoring. These displays are designed to aid TSC personnel in assessing plant conditions and in assisting Main Control Room personnel in recovering from abnormal or accident conditions and in mitigating their consequences. The displays include parameter versus time and parameter versus parameter trending.

PMS utilizes high-speed data recording, long-term data storage and a transient analysis program package to aid the Technical Support Center staff in reconstructing the accident sequence as well as tracking the plant steady state and dynamic behavior prior to and through the course of an event.

PMS displays are available in the Main Control Room and TSC, and EOF through EPDS interactive color graphic display consoles. Hardcopy output devices are available at each location. Provisions have been made to share data with State Liaisons located in the EOF.

b. Emergency Preparedness Data System (EPDS)

The Emergency Preparedness Data System (EPDS) is an emergency facility data system to aid in assessing plant response and status during emergencies. EPDS is a computer based real-time data acquisition and display system, which acquires, stores and re-packages data from PMS and RMMS plant parameters for display in the Technical Support Center and Emergency Operations Facility.

5.2.4 Onsite Fire Detection Instrumentation

LGS is afforded fire protection from various systems, selected for their applicability in coping with the several possible types of fires. These systems include an extensive fire water system, air foam system, dry chemical system, heat and smoke detectors as well as portable fire extinguishers located throughout the plant. These systems have alarm outputs located in the Control Room. Fire protection systems are described in the LGS UFSAR.

5.2.5 Facilities and Equipment for Offsite Monitoring

Off-site Radiological Environmental Monitoring Program is described in the Offsite Dose Calculations Manual (ODCM). Installed radiological

monitoring equipment and facilities, including process, area, and effluent, are described in the LGS UFSAR. Sets of instruments are available for emergency use by field survey teams. The field survey teams perform field surveys to locate and track the plume and to determine depositing of activity on the ground.

Emergency kits contain radiation survey equipment, which enables the Field Survey Teams to obtain dose rates, surface contamination, and airborne contamination including radio iodine measurements to supplement calculations based on effluent data. These emergency kits are located at facilities outside the plant for ready accessibility. The equipment in these kits is dedicated for emergency use only.

Concurrent field sampling and analysis for radio iodine provides the capability to detect 10^{-7} $\mu\text{Ci/cc}$ I-131, per NUREG-0654, FEMA-REP-1.

The services of Exelon Industrial Services (EIS) are contracted to provide for the collection of environmental media samples (e.g., water, grass vegetation, etc.) under emergency conditions and their transport to an offsite laboratory for analysis.

5.2.6 Site Hydrological Characteristics

A list of downstream users is maintained to ensure that they are notified. Should contamination of site drinking water sources be suspected, water samples shall be analyzed.

5.3 **Protective Facilities and Equipment**

5.3.1 Emergency Supplies

Refer to Table LGS 5-1 for a listing of Emergency Supplies and Equipment.

5.3.2 Maintenance Equipment

Maintenance equipment consists of normal and special purpose tools and devices utilized in the course of maintenance functions throughout the station. Maintenance and Radiation Protection personnel responding to the OSC are cognizant of the locations of equipment, which may normally be required in an emergency condition. The Maintenance supervision has access to keys for tool storage, shops, and other locations where maintenance equipment may be stored.

5.4 **First Aid and Medical Facilities**

First Aid kits are located in designated areas and are checked and replenished as necessary. Stretchers are also provided at designated locations.

5.4.1 Decontamination and Medical Response

An on-site personnel decontamination facility for emergency conditions include showers and sinks that drain to the liquid radioactive waste processing system, at the primary health physics decontamination area in

the plant. Special decontamination materials and personnel decontamination procedures are available in the area for use under the direction of health physics supervision. Provisions are made for medical decontamination when personnel are transported to hospitals.

5.4.2 Emergency Medical Assistance

Medical treatment given to injured persons at the station is of a "first aid" nature. When more professional care is needed, injured persons are transported to a local hospital. Letters of Agreement are established with primary and backup hospitals. Hospital facilities are listed in Appendix 2.

Both hospitals agree in the event of a Radiological Event, including a Hostile Action Based Event, to ensure the capability for the evaluation and treatment for victims of radiological accidents, including contaminated individuals from Limerick Generating Station.

5.4.3 Medical Transportation

Transportation of injured personnel, who may or may not be radioactively contaminated, to medical treatment facilities is provided by local ambulance services. (Refer to Section 2.4 of the Limerick Annex)

A Letter of Agreement is established for Local Ambulance Service to provide Emergency Medical Services in response to a Radiological Event, including a Hostile Action Based Event. This includes transportation of patients from the Limerick Generating Station, including those who may have been exposed to radiation or may have injuries complicated by radioactive contamination to either Pottstown Memorial Medical Center (PMMC) or Einstein Medical Center Montgomery (EMCM) upon dispatch by the Emergency Dispatch Service.

5.5 **Communications**

Refer to Section F.1 of the Exelon Nuclear Standardized Radiological Emergency Plan for a description of dedicated communications lines to support both offsite and inter-facility communications.

5.5.1 Intra-Plant Public Address (PA) System

The LGS PA system is a six-channel system powered from a Class IE bus permitting simultaneous use of one page line and five party lines. Loudspeakers powered by individual amplifiers are located throughout the plant and in remote structures.

The LGS Public Address system has also been equipped with an advanced page line control system for the enhancement of page announcements throughout the site. This control system provides improved sound quality for emergency announcements made to and from the main control room. It is also capable of screening out page announcements that do not originate from designated page

announcement control points such as the Control Room, TSC, OSC, security locations, etc.

Local area PA announcements can still be conducted by the use of the emergency page button, and the entire system can be reverted back to allow announcements from all locations as required during emergency conditions. The primary purpose of the screening function is to reduce the number of locations where site wide page announcements can originate.

The LGS Public Address stations within the plant are equipped with two page buttons. One is for normal plant pages, and the other is for emergency pages to the Control Room. When used, the emergency page button unlocks the PA speakers in the Control Room for the incoming message. The Control Room speakers are silent (muted) for all normal plant pages. This arrangement allows for a more orderly Control Room and emphasizes the emergency pages made to the Control Room. A PA station is located in the Main Control Room, Operations Support Center, and TSC. Capability exists to warn individuals in the vicinity of the river through the river warning system utilizing the plant PA system.

The Main Control Room has priority page abilities that allow the MCR announcements to override normal plant page announcements.

5.5.2 Private Branch Exchange (PBX) Telephone System

The LGS on-site commercial telephone system provides telephone communications capabilities throughout the plant, remote structures, and with off-site parties. Extensions are located in the Main Control Room, the TSC, and the OSC.

The power supply for this system consists of two separate on-site sources. Both the primary and backup sources are supplied from motor control centers. The backup source is powered from a Unit 1 Division 3 safeguard bus. The PBX Telephone System is automatically shed on a LOCA signal, but can be manually reset at the MCC. If both sources of power are unavailable, an uninterruptible power supply (UPS) with a minimum of two hours of emergency battery power will supply the telephone system. The 2-hour UPS is designed to allow sufficient time to restore the diesel-generator supplied power source, if necessary. This power configuration is designed to maintain this communication system during a total station blackout.

The PECO Energy Main Office and Exelon Nuclear headquarters are also served by separate commercial telephone systems (PBX's). All PECO Energy and Exelon Nuclear's PBX's are networked together to create a fully integrated voice network, providing call management and network redundancy.

5.5.3 Dedicated Emergency PBX Telephone System

The LGS dedicated emergency (PBX) telephone system provides rapid and reliable communications in the event of an emergency. It is independent of the main PBX switch. The dedicated emergency PBX allows rapid dialing and conferencing of emergency response personnel. Extensions are located in the Control Room, the TSC, the OSC, the EOF, and the JIC. The communications system provides tie line access capability with the Peach Bottom dedicated emergency PBX switch.

The power supply for this system consists of two separate on-site sources, which are different than the sources for the main PBX switch. The primary source is backed-up by an emergency diesel generator. The secondary source backup is a 15-minute Uninterruptible Power Supply (UPS). The power configuration is designed to maintain this communication system during a total station blackout.

5.5.4 Intra-Plant Maintenance Telephone System

The intra-plant maintenance telephone system is a part of the PBX system and consists of telephone jacks into which telephone sets may be plugged. The telephone jacks are in various plant locations (predominantly in areas of high maintenance activity) and have the effect of expanding the PBX capability.

5.5.5 EOF/JIC Private Branch Exchange (PBX)

A dedicated PBX is installed at the Coatesville EOF/JIC. This switch will control telephone communications in and between the facility, other Exelon locations, and non-Exelon locations. In the event of a PBX failure, outside dial capability is available through trunk lines from the Coatesville Service Building. The EOF/JIC PBX switch is powered by a source that is backed by a 4-hour uninterruptible power supply and an emergency diesel generator. The UPS is designed to allow sufficient time to bridge any power interruption caused by switching to diesel-supplied power.

5.5.6 Data and Facsimile Transmission Lines

Various data lines are provided to interface computer systems and facsimile machines located at Limerick, Peach Bottom, and EOF/JIC.

5.5.7 Trunk Lines

Incoming and outgoing central office trunk lines are provided from the local telephone company. These lines are used to access the Public Switched Telephone Network.

5.5.8 Tie Lines

Communications are provided between LGS, PBAPS, Corporate Main Office, Exelon Nuclear, and the EOF via the Exelon data network. A

redundant backup communications path is provided by the commercial network. This communications path allows emergency personnel to communicate between the sites and Exelon Nuclear locations supporting the emergency..

Company tie lines are utilized to route NRC communications (e.g., ENS, HPN and counterpart circuits) from between Exelon Nuclear emergency response facilities for Limerick Generating Station.

5.5.9 Emergency PBX T-1 Circuit Lines

Two dedicated T-1 circuits between the Limerick Generating Station and Peach Bottom Atomic Power Station emergency PBX telephone systems are provided for calls within and outside the Exelon voice network. This linkage also allows the continuation of 2-way commercial telephone service in the event that one of the two main commercial telephone system PBX's becomes inoperable or unavailable.

5.5.10 Fiber Optic / Microwave Tie Lines

Dedicated Fiber Optic lines exist between LGS, the Nuclear Group Headquarters (Kennett Square) and Berwyn. Also, dedicated microwave tie lines exist between PBAPS, the EOF/JIC, and Berwyn, where they are linked to the Fiber Optic lines. The microwave system is backed up by at least eight hours of battery. In addition, communication lines exist between LGS, PBAPS, Main Office, the Nuclear Group Headquarters, and the EOF/JIC.

5.5.11 Radio Equipment

A fixed base radio system with multiple channels provides primary/backup outside communication capability as shown in Figure LGS 5-1, "Emergency Radio Links".

A separate group of fixed radio channels provides primary/backup communications between in-plant user groups. These channels function through a distributed antenna system located on-site to ensure proper coverage of the area.

The fixed base radio repeaters, antenna system, and radio consoles are powered from a variety of emergency AC buses (diesel backup) and dedicated alternate battery supplies.

The LGS radio system was designed to maintain communications between facilities as described in the Fire Protection Evaluation Report, UFSAR.

5.5.12 Evacuation Alarm System

The Evacuation Alarm System consists of a siren tone generator, PA system speakers, a roof siren, and evacuation alarm beacons. The siren tone generator injects an audible evacuation alarm in the PA system,

which is broadcast over the PA system speakers. The evacuation alarm beacons provide an audible and visual alarm through two mechanical sirens and flashing red beacon on each beacon unit. The evacuation alarm beacons are installed in all high noise areas of the plant and in areas not covered by the PA system. A selector switch in the Control Room manually initiates the evacuation alarm.

5.6 Law Enforcement Agencies

A Letter of Agreement is established for Local Law Enforcement to support Limerick Generating Station to respond to a Radiological Event, including a Hostile Action Based Event, in conjunction with the National Incident Management System, upon notification by the station in accordance with the established communications protocol,

5.7 Fire Fighting Organizations

A Letter of Agreement is established for the local fire company to respond to a Radiological Event, including a Hostile Action Based Event, in conjunction with the Mutual Aid System at the Limerick Generating Station as requested via the Emergency Dispatch System.

Table LGS 5-1: Emergency Supplies and Equipment

The following is a listing of typical equipment available for use during emergencies. While specific equipment designations and items may be subject to change, equivalent emergency activity capabilities will be maintained. Procedures define the specific locations, types, and amounts of equipment for emergency use and define requirements for applicable surveillance, testing, maintenance, and inventory activities to ensure that the equipment is in a state of readiness.

| I. <u>PROTECTIVE</u> | <u>LOCATIONS STORED OR AVAILABLE</u> |
|------------------------------------|---|
| Anti-C Clothing | 2, 5 |
| Dosimeters | 2, 3, 6 |
| Dosimeter Charging Unit | 2, 3, 6 |
| Dosimeter of Legal Record (DLR) | 2 |
| Respirator/Filters | 2 |
| Self-Contained Breathing Apparatus | 1, 2, 3 |
| Radiation Signs, Rope & Tape | 2, 3, 7, 8 |
| Potassium Iodide | 3 |

NOTE: Equipment from the above list utilized by field survey personnel is stored in Field Survey Kits in the Site Management Building.

| II. <u>RADIATION MONITORING</u> | <u>LOCATIONS STORED OR AVAILABLE</u> |
|--|---|
| Air Sampler | 2, 3, 5 |
| G. M. Counter | 2, 3, 5, 6, 7, 8 |
| Ion Chamber | 2, 3, 5 |
| Frisker | 2, 3, 5, 6, 7, 8, 10 |
| Radiation Survey Forms | 2, 3, 5, 7, 8, 9, 10 |
| Smears | 2, 3, 5, 7, 8, 9, 10 |
| CAM | 3 |
| Area Monitors | 2, 3, 10 |

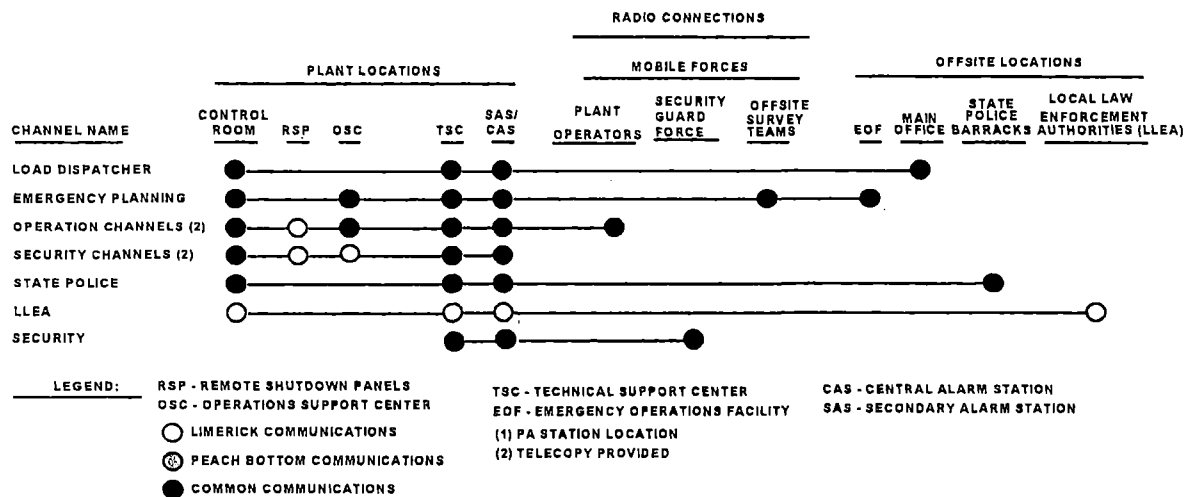
NOTE: Equipment from the above list utilized by field survey personnel is stored in Field Survey Kits in the Site Management Building.

Table LGS 5-1: Emergency Supplies and Equipment (Cont'd)

| | | |
|------|--------------------------|--------------------------------------|
| III. | <u>SEARCH AND RESCUE</u> | <u>LOCATIONS STORED OR AVAILABLE</u> |
| | Flashlight | 10 |
| | Blanket | 10 |
| | Stretcher | 10 |
| | Rope | 10 |
| | First Aid Kits | 10 |
| IV. | <u>DECISION AIDS</u> | <u>LOCATIONS STORED OR AVAILABLE</u> |
| | Nuclear Emergency Plan | 1, 3, 4, 11 |
| | LGS EP Procedures | 1, 2, 3, 4, 11 |
| | EP-Corporate Procedures | 3, 4, 11 |
| | Maps & Overlays | 3, 4 |
| | Prints | 3, 4 |
| | Drawings | 3, 4 |
| | P&ID | 1, 2, 3, 4 |
| V. | <u>COMMUNICATIONS</u> | <u>LOCATIONS STORED OR AVAILABLE</u> |
| | Base Stations | 1, 2, 3, 4, |
| | Mobile Radios | 1, 2, 3 |
| VI. | <u>DECONTAMINATION</u> | <u>LOCATIONS STORED OR AVAILABLE</u> |
| | Soap/Detergent | 3, 6, 7, 8, 9 |
| | Brushes or Sponges | 3, 6, 7, 8, 9 |

LOCATION KEY

| | | | |
|----|---|-----|---|
| 1. | Control Room Area | 9. | Decontamination Room |
| 2. | Operations Support Center/ Health Physics Office | 10. | Strategically located throughout Station |
| 3. | Technical Support Center | 11. | Joint Information Center |
| 4. | Emergency Operations Facility | | |
| 5. | Field Monitoring Kits | | |
| 6. | Support Hospitals | | |
| 7. | Phoenixville Service Building Station Kit | | |
| 8. | Heritage Field Kit | | |

Figure LGS 5-1: Emergency Radio Links

APPENDIX 1: NUREG-0654 CROSS-REFERENCE

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| 1.0 | Part I, Section A |
| 1.1 | Part I, Section B |
| 1.2 | Part I, Section D |
| 1.3 | Part I, Section F |
| Table LGS 1-1 | Part I, Section F |
| Figure LGS 1-1 | Part II, Section J.10 |
| Figure LGS 1-2 | Part II, Section J.11 |
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| 2.1 | Part II, Section B.5 |
| 2.2 | Part II, Section A.3 |
| 2.3 | Part II, Section C.3 |
| 2.4 | Part II, Section C.3 |
| 3.0 | Part II, Section D |
| 4.1 | Part II, Section E.1 & J.7 |
| 4.2 | Part II, Section I.2 & 3 |
| 4.3 | Part II, Section J.10.f |
| 4.3.1 | Part II, Section E.6 |
| 4.3.2 | Part II, Section J.8 |
| 4.3.3 | Part II, Section J.6.c |
| 4.3.4a | Part II, Section G.1 & 2 |
| 4.3.4b | Part II, Section G.5 |
| 4.3.5 | Part II, Section J.7 |
| 4.4.1 | Part II, Sections I.2 & 3.a |
| 4.4.2 | Part II, Section J.5 |
| 4.4.3 | Part II, Section J.3 |
| EP-AA-1008, Addendum 2 | Part II, Section J.10 & Appendix 4 |
| EP-AA-111 | Part II, Section J.7 |
| Figure LGS 4-1 | Part II, Section J.4 |
| 5.1 | Part II, Section H.1-2, & G.3.a |
| 5.2.1 | Part II, Section H.5.a & 8 |
| 5.2.2 | Part II, Section H.5.b, H.6.c & I.2 |
| 5.2.3 | Part II, Section H.5.c |
| 5.2.4 | Part II, Section H.5.d |
| 5.2.5 | Part II, Section H.6.b & 7, I.9-10 |
| 5.2.6 | Part II, Section H.5.a & 6.a |
| 5.3 | Part II, Section H.9-10 |
| 5.4 | Part II, Section L.1 & 2 |
| 5.5 | Part II, Section F.1 |
| Table LGS 5-1 | Part II, Section H.11 |
| Figure LGS 5-1 | Part II, Section F.1.d |
| Appendix 1 | Part II, Section P.8 |
| Addendum 2 | Part II, Section J.8 |

APPENDIX 2: SITE-SPECIFIC LETTERS OF AGREEMENT

The following is a listing of letters of agreement and contracts specific to emergency response activities in support of Limerick Generating Station. Letters of agreement and contracts common to the multiple Exelon Nuclear stations are listed under Appendix 3 to the Exelon Nuclear Standardized Radiological Emergency Plan.

- Pennsylvania Emergency Management Agency Memorandum of Understanding (MOU) (Letter on File)

NOTE: Documentation of agreement for Berks, Chester and Montgomery Counties are contained as part agreement with PEMA.

- Pennsylvania State Police#
- Limerick Township Police Dept.#
- Goodwill Ambulance Service (Letter on File)
- Linfield Fire Company (Letter on File)
- Limerick Fire Company (Letter on File)
- Einstein Medical Center Montgomery (Letter on File)
- Pottstown Memorial Medical Center (Letter on File)
- Trappe Fire Company Ambulance (Letter on File)
- Limerick Aviation LP (Lease Agreement)
- Phoenixville Service Building (Lease Agreement)
- Affidavit, PECO Bus Driver Pool* [T04510]

Agreements with State and local law enforcement agencies maintained by Station Security under the Nuclear Station Security Plan

* Refers to "Affidavit of Joseph W. Gallagher (VP, PECO Nuclear Operations) in Response to the Request in ALAB-857 for Confirmation of the Status of Licensee's Volunteer Employee Bus Driver Pool", dated January 12, 1987, to augment bus driver staffs for Spring-Ford Area School District and Owen J. Roberts School District. (NOTE: Bus driver pool was reduced from 200 to 100 under separate 10 CFR 50.54(q) and 10 CFR 50.59 evaluations approved by the LGS Plant Manager on 04/11/96 (PORC Mtg. #96-034, 04/04/96).

Cover Page

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Attachment 4

**EP-AA-1012, Revision 4, "*Exelon Nuclear Radiological Emergency Plan
Annex for Ginna Station*"**

Emergency Plan Annex Revision

EXELON NUCLEAR

RADIOLOGICAL EMERGENCY PLAN ANNEX FOR GINNA STATION

REVISION HISTORY

| | | |
|-------------------|--|--|
| Revision 0: 02/15 | | |
| Revision 1: 07/15 | | |
| Revision 2: 09/15 | | |
| Revision 3: 06/16 | | |
| Revision 4: 12/17 | | |
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Addendum 1, Ginna Station On-Shift Staffing Analysis Report

Addendum 2, Evacuation Time Estimates for the Ginna Station Emergency Planning Zone

Addendum 3, Emergency Action Levels for Ginna Station

Section 1: Introduction

As required in the conditions set forth by the Nuclear Regulatory Commission (NRC) for the operating licenses for the Exelon Nuclear Stations, the management of Exelon recognizes its responsibility and authority to operate and maintain the nuclear power stations in such a manner as to provide for the safety of the general public.

The Exelon Emergency Preparedness Program consists of the Exelon Nuclear Standardized Emergency Plan (E-Plan), Station Annexes, emergency plan implementing procedures, and associated program administrative documents. The Exelon E-Plan outlines the basis for response actions that would be implemented in an emergency. Planning efforts common to all Exelon Nuclear stations are encompassed within the E-Plan.

This document serves as the Radiological Emergency Plan Annex for Ginna Station and contains information and guidance that is unique to the station. This includes the facility geography location for a full understanding and representation of the station's emergency response capabilities. The Station Annex is subject to the same review and audit requirements as the Exelon Nuclear Standardized Emergency Plan.

1.1 Purpose

The Exelon Nuclear Standardized Emergency Plan and Ginna Station Annex describes the total preparedness program established, implemented and coordinated by R. E. Ginna Nuclear Power Plant LLC and the resources and capabilities available from Exelon, hereinafter referred to as "the Company", to ensure the capability and readiness for coping with and mitigating both onsite and offsite consequences of radiological emergencies at Ginna Station. The plan covers the spectrum of emergencies from minor localized incidents to major emergencies involving protective measures by offsite response organizations. Included are guidelines for immediate response, assessment of emergency situations, defined action criteria and delineation of support and recovery functions. Emergency Plan Implementing Procedures (EPIPs) and fleet procedures provide detailed information for individuals who may be involved with specific emergency response functions.

The Emergency Plan Annex provides for a graded scale of response for distinct classifications of emergency conditions, actions within those classifications, and criteria for escalating to a more severe classification. This classification system is identical to that used by the State of New York and the local (Wayne and Monroe County) emergency response agencies. The plans have four categories of emergencies: Unusual Event, Alert, Site Area Emergency and General Emergency. A fifth condition, Local Radiation Emergency, has been added. A Local Radiation Emergency is less severe than an Unusual Event and does not involve any offsite organization.

The Emergency Plan describes the activities and provisions other than engineered safety systems which are intended to limit exposures to the general

public as well as to plant personnel. The Emergency Plan covers the following conditions:

- 1) Major release to the atmosphere.
- 2) Major release to the lake.
- 3) Abnormally high radiation or airborne radioactivity in a particular area of the plant.
- 4) Plant conditions that may lead to potential releases.

NOTE: Offsite Transportation accidents are covered by Radiation Protection Procedures (RP Procedures) and do not require classification in this Plan.

The Company has the immediate and continuing responsibility for limiting the consequences of an incident at the Ginna Nuclear Power Plant. Limiting the consequences to public health and safety should take clear precedence over limiting financial loss or adverse publicity. During a radiological emergency, the Company should take whatever action is deemed necessary to limit the consequences to public health and safety, even if that action violates the Ginna Technical Specifications. Such actions would require prior approval, as a minimum, by a licensed Senior Reactor Operator and follow-up notification to the NRC in accordance with 10CFR50.54 (x) and (y).

The Company is responsible for keeping Federal, State and local authorities informed of the status of the emergency as it relates to protection of the public health and safety.

The Company will recommend to Federal, State and local authorities specific protective actions to limit the danger to the public, including evacuation.

The Company understands that it is the Nuclear Regulatory Commission's policy that the emergency should be managed by the licensee. The NRC Headquarters Staff is limited in its ability to provide detailed recommendations to plant personnel or plant managers at the site. The Company understands that the NRC Operations Center will be the primary location where this agency will monitor and evaluate licensee actions. During that time, the normal response roles for the NRC Operations Center will be to monitor, inform, and, upon request, advise licensees and other Federal, State and local authorities. The authority for managing the NRC's emergency response efforts will be transferred to a senior onsite NRC representative when the NRC Headquarters Staff is confident the onsite representatives are prepared to receive that authority. Their role will continue to be monitoring, informing, and advising plant and local authorities.

1.2 Management Oversight:

Management oversight of the Emergency Preparedness program is provided by the Emergency Preparedness Advisory Committee. The details of the board's activities are contained in EP-AA-120-1004, Emergency Preparedness Advisory Committee.

1.3 Summary of Emergency Plan

The primary objective of this plan is to protect the public and onsite personnel in the event of a radiation emergency. This plan describes in general the actions to be taken by Company personnel in coordination with Federal, State and local authorities.

Through an emergency organization which is described, the magnitude and impact of radioactive releases will be assessed and the need for the activation of a more extensive emergency response will be determined. The systems for notification of emergency personnel, Federal, State and local authorities, and the public are described along with the emergency facilities and equipment which are available for the trained emergency staff. The goal of the Ginna Station emergency organization is the safe shutdown and recovery of the Station and protection of the health and safety of the public and employees.

The general actions to be taken in the event of a radiation accident include the following:

- 1) Observation and determination of the classification of the occurrence.
- 2) Prevention or minimization of radiation hazards by the Emergency Director and the on-duty operators.
- 3) Evacuation of all non-essential personnel from the plant to the Ginna Training Center or other location, as appropriate.
- 4) Involvement of plant security personnel, supervisory personnel, Chemistry and Radiation Protection personnel, and other plant staff.
- 5) Notification of NRC Operations Center and State and local authorities, issuance of news releases, and emergency medical treatment.
- 6) Activation of Emergency Response Organization.
- 7) Recovery and restoration of the plant to normal operation.

The extent of response to an emergency situation is determined by the seriousness of potential consequences. With the potential for effects to the general public, the assistance of Federal, State and local agencies will be required. For situations which only affect onsite operations, the situation will be handled by the Company.

The awareness of an emergency situation will most likely originate in the Control Room. From an evaluation of plant parameters, the seriousness of the incident can be determined and the appropriate classification determined. The on-duty plant operators, under the direction of the Shift Emergency Director, in consultation with the Shift Technical Advisor, will take action to mitigate the incident and to obtain the assistance of other plant and Company personnel.

Personnel onsite will be alerted by a warning signal if evacuation is deemed advisable and off-duty personnel will be called in through an established call procedure. Federal, State and county officials will be notified so that they may begin to set up their response organizations. If the level of the incident requires

activation of the emergency organization, trained people will staff the Technical Support Center, Operations Support Center, Emergency Operations Facility and Joint Information Center. These centers will be activated, per procedure, by designated people who have been trained in the duties required to meet the incident. Sufficient individuals are trained so that the positions can be filled regardless of who is onsite or available for call-in.

Public officials will be kept informed of the situation as it progresses. For certain classes of events, the EOF will be activated for continuing management of the incident and to assist in restoring the plant to normal operation. A Joint Information Center will be activated to keep the public aware of the situation and news releases will be coordinated among the Company, New York State and other government agencies.

Section 2: Organizational Control of Emergencies

This section describes the Exelon Emergency Response Organization (ERO), its key positions and associated responsibilities. It outlines the staffing requirements which provide initial emergency response actions and provisions for timely augmentation of on-shift personnel when required. It also describes interfaces among emergency response personnel and specifies the offsite support available to respond to the nuclear generating stations. Figures 2.1 through 2.7 show the interfaces between and among the ERO functional areas.

2.1 On-Shift Emergency Response Organization Assignments

The initial phases of an emergency situation at a nuclear station will most likely involve a relatively small number of individuals. These individuals must be capable of (1) determining that an emergency exists; (2) providing initial classification and assessment; and (3) promptly notifying other groups and individuals in the emergency organization. The subsequent phases of the emergency situation may require an increasing augmentation of the emergency organization.

All Exelon Nuclear stations have the capability at all times to perform detection, mitigation, classification, and notification functions required in the early phases of an emergency.

2.2 Authority Over the Emergency Response Organization

The Emergency Director in Command and Control is the designated Exelon individual who has overall authority and responsibility, management ability, and technical knowledge for coordinating all emergency response activities at the nuclear power station. The Emergency Director will immediately and unilaterally initiate any emergency actions, including providing protective action recommendations to authorities responsible for implementing offsite emergency measures.

The Shift Manager is available at all times to assume the responsibilities of Emergency Director. A qualified individual is on-call to respond to the EOF and assume Command and Control. In accordance with the Ginna Emergency Plan, the TSC Emergency Director does not take Command and Control responsibilities.

2.3 Criteria for Assuming Command and Control (Succession)

The responsibility for initial assessment of and response to an emergency rests with the Shift Manager (Shift Emergency Director). Emergency personnel assume responsibility for their positions upon receiving notification to activate when an event has been declared.

The Emergency Director responsibilities are initially assumed by the Shift Manager. If the event is classified at an Alert or Higher level, or the Shift Emergency Director deems it appropriate, the Shift ERO will be augmented by the on-call ERO.

The Corporate Emergency Director will report to the EOF and assume the Emergency Director's responsibilities.

The Shift Emergency Director is relieved of Command and Control as soon as possible after the declaration of an Alert or higher classification. Command and Control does not transfer until the following criteria have been met:

- Adequate EOF staff levels are present in support of the non-delegable responsibilities.
- The staff has been fully briefed as to the status of the event and the currently proposed plan of action.
- A formal turnover between the Emergency Director relinquishing Command and Control and the Emergency Director assuming Command and Control has been made.

2.4 Non-Delegable Responsibilities

Functional responsibilities of the Emergency Director that may not be delegated include:

- Classify and declare emergencies.
- Direct and approve offsite emergency notifications to state and local authorities.
- Make Protective Action Recommendations to offsite authorities.
- Ensure appropriate evacuation actions for plant personnel.
- Approve emergency exposures and/or the issuance of KI.

2.5 Emergency Response Organization Positional Responsibilities

Table 2.1 outlines ERO positions required to meet minimum staffing (within 60 minutes) and full augmentation of the on-shift complement at an Alert or higher classification, and the major tasks assigned to each position. The full augmentation staffing levels are used as a planning basis to cover a wide range of possible events. For extended events (one which lasts for more than 24 hours), actual staffing will be established by the Corporate Emergency Director based on the event and personnel availability. However, additional staffing or reduced staffing will only occur after discussion concerning the impact on plant operations and emergency response.

The station's ERO consist of three major sub groups reporting to the Corporate Emergency Director:

- Onsite ERO, consisting of Control Room, TSC, OSC and Security personnel. The primary functions of the Onsite ERO is perform mitigative actions and ensure appropriate onsite protective actions are taken.
- Offsite ERO, consisting of EOF staff. The primary functions of the Offsite ERO is to interface with offsite authorities and perform offsite radiological assessment.
- Public Information ERO, consisting of JIC staff. The primary function of the Public information ERO is to provide accurate information to the public through News Media.

2.6 Emergency Response Organization Block Diagram

Figures 2.1 through 2.7 show the reporting chains and interfaces of the ERO.

2.7 Corporate Emergency Response Organization

In the event of a declared emergency at one of Exelon's Nuclear Stations, a Corporate Duty Officer is notified. The Duty Officer will notify senior company management personnel of the event. The Corporate Emergency Director will keep senior management informed of events and any need for assistance.

Specific departments of the company may be called on to assist as necessary to provide support for logistics, public information, finance, technical issues, etc.. Senior management may assist with interfacing government authorities and other outside organizations.

2.8 Augmentation of the Emergency Organization and Interface with Other Plans:

The Ginna emergency organization is augmented by a number of offsite services. Figure 2.6 shows the relationship of non-Company offsite organizations in emergency response. Letters of agreement are referenced in Appendix 2. These agreements are considered valid until changed by the author during the annual review of the Emergency Plan. The authors of the letters of agreement are contacted in person or by telephone and the content of the letters is verified.

Plant procedures contain the phone numbers and alternate means of contact needed to initiate emergency response actions. The communicator will initiate a call to New York State, Monroe County and Wayne County EOC, using the NYS Radiological Emergency Communication System (RECS). During working hours, the EOC staff will respond. During off hours, the County 911 Centers and the State Watch Center will respond for each Emergency Director to RECS calls.

The ERO is alerted by a call from an automated notification system or from the Ginna Control Room. Other offsite assistance, such as Department of Energy – Radiological Assistance Plan (DOE-RAP) team or Westinghouse, is alerted by a call from the Emergency Director or designee to their duty officer at the phone numbers listed in procedures.

2.8.1 State of New York, Wayne and Monroe Counties Emergency Actions:

The Company is responsible for promptly notifying State and county authorities when conditions affect, or may affect, safe plant operations.

It is the responsibility of these offsite agencies to provide prompt notification to their parent and support organizations if it is determined that conditions or circumstances, either onsite or offsite, have affected or may affect normal and safe plant operations or conditions in the environs.

Wayne and Monroe County's decision processes are based on EPA Protective Action Guidelines (PAG), current road and weather conditions, time requirements for implementing PAGs and accident diagnosis and prognosis received from the licensee, New York State, USNRC and DOE.

The NRC has established, and the State of New York has accepted, four Emergency Classification Levels for which the Company shall provide early and prompt notification to both State and County authorities. These Classification Levels are consistent with those described in Sections 3.2 through 3.5 in this plan.

The "Unusual Event" and "Alert" classifications provide early and prompt notification of minor events which could lead to more serious consequences or which might be indicative of more serious conditions which are not yet fully realized. A gradation is provided to assure more complete offsite response preparations for more serious indicators. At the Alert or higher classification, full mobilization of offsite emergency personnel is required.

The "Site Area Emergency" classification reflects conditions indicating significant releases are likely or are occurring but where a core-melt situation is not indicated.

The "General Emergency" classification involves actual or imminent substantial core degradation or melting with the potential for loss of containment.

The "General Emergency" classification requires immediate consideration of Protective Action Recommendations by the Company and communication of these recommendations to Wayne and Monroe Counties and New York State.

Although Protective Action considerations are mutually discussed by each county, the Chairman of the N.Y.S. Disaster Preparedness Commission and both County Executives may decide to take actions of different magnitude. Protective Actions are based on current and forecasted weather conditions, road construction and other possible impediments to evacuation.

2.8.2 Local Disaster Coordinator (Wayne County Emergency Management Office and Monroe County Office of Emergency Management):

In general, the responsibilities of the Local Emergency Preparedness Coordinator in each county include the following:

- a) On receipt of notification from the State of New York, or Ginna Station Control Room, alert local authorities and officials in accordance with established plans.
- b) Coordinate response of local authorities and provide for available local assistance to the Company and State authorities in accordance with established plans.

The participation of the counties, upon notification of an event involving the general public, is outlined in their Radiological Emergency Plans, which are reviewed in Appendix 5.

The Office of Emergency Management in each county consists of small administrative staffs and a pool of reserve personnel located throughout the county. Members receive training in monitoring, establishing relocation centers and providing medical attention, food, and lodging for evacuees. Extensive communication resources are available for use by the Local Disaster Coordinators and staff, including a number of radios for contacting the county fire coordinator, the police forces, public works and commercial radio stations. A

roster of telephone numbers and contacts is maintained to communicate with agencies on State and local levels. Monitoring teams are available and radiological kits are maintained in shelters and firehouses located throughout the counties.

2.8.3 United States Coast Guard (USCG):

The USCG provides emergency support upon request by Wayne and Monroe Counties, in accordance with the Wayne County Radiological Emergency Preparedness Plan and Monroe County Radiological Emergency Preparedness Plan.

2.8.4 United States Nuclear Regulatory Commission, Region 1, Incident Response (Reference: NUREG-0728, NRC Incident Response Plan):

This NRC Plan describes the notification, communication decision-making and mobilization of the NRC Incident Response Organization in the event of an event/incident related to Ginna Station.

The extent of mobilization will depend upon the emergency classification and associated plant conditions.

The Company will supply whatever support services and resources are needed to maintain Federal assistance.

2.8.5 United States Department of Energy Radiological Assistance Program, Region I, Brookhaven Area Office, Upton, New York (DOE RAP/IRAP):

Since Ginna Station is located in DOE Region I, the Brookhaven Office of the U.S. Department of Energy (DOE) has the responsibility to provide radiological assistance in the event of an emergency. Their principal goal is to be prepared in the event of a major accidental release, or other loss of control of radioactive material. Radiological assistance can be requested at any time by calling and indicating the nature of the incident, the location, and how to contact utility and local authorities in order to coordinate the Department of Energy response.

The assistance includes advice and emergency actions essential for the control of the immediate hazards to health and safety. This preparedness includes plans and procedures for: effective and economic use of resources; minimization of radiation exposure of individuals and the public; prevention of the spread of radioactive materials into the environment; and appropriate countermeasures to control and remove radiological hazards. Large numbers of qualified radiation, nuclear and medical specialists are the principal resource that can be made available in an emergency, along with quantities of radiation monitoring equipment and specialized detector and test equipment.

Most assistance requests can be handled by giving advice, by sending radiological safety experts to the incident scene, or by transferring the request to another Federal agency or a State agency. The Department of Energy, Brookhaven Office, has agreed to provide such assistance upon notification of a hazard to the general public. Available resources are noted in the county plans. Assistance could be onsite within 4 hours of a request. The Company will supply whatever support services and resources are needed to maintain Federal

assistance. RAP/IRAP teams initially report to the EOF for briefing and coordination.

It should be understood that this Federal advice, assistance and equipment is provided to the local government institutions to assist in carrying out their responsibilities and authority for protecting the health and safety of the local population and in no way supersedes that local responsibility. Furthermore, this assistance may be terminated as soon as the immediate hazards are brought under control and there is reasonable assurance that public health and safety are being protected.

2.9 Industry/Private Support Organizations

Exelon retains contractors to provide supporting services to the company's nuclear generating stations. For station specific support, copies of current contracts and letters of agreement with these groups are maintained by the Emergency Preparedness Department.

Current contracts and letters of agreement are maintained in each Emergency Preparedness Department's files.

2.10 Supplemental Emergency Assistance to the ERO

Agreements are maintained (for each nuclear station) with outside support agencies who do not take part in the organizational control of the emergency that provide assistance when called on during an emergency or during the recovery phase. These agreements identify the emergency measures to be provided, the mutually accepted criteria for implementation, and the arrangements for exchange of information. These support agencies provide services of:

- a. Law enforcement;
- b. Fire protection;
- c. Ambulance services;
- d. Medical and hospital support

Support groups providing transportation and treatment of injured station personnel are described in Section 5.5 of this plan.

Current contracts and letters of agreement with these groups are referenced in Appendix 2 of this plan.

2.10.1 County Sheriff:

The Wayne County Sheriff's Department will assume responsibility for necessary police services in Wayne County. They respond to directions and requests from the Director of the Wayne County Emergency Management Office, who identifies problems and designates responsibilities. Ginna Station does not make direct contact with the Sheriff's Department for a radiation emergency. The same arrangement is true for the Monroe County Sheriff's Department which is directed by the Monroe County Director of the Office of Emergency Management.

The Wayne County Sheriff's Office, in conjunction with the National Incident Management System (NIMS), will respond to a radiological event, including a

Hostile Action-Based Event, upon notification by the station in accordance with established communications protocols.

2.10.2 Ontario Volunteer Emergency Squad (OVES):

OVES is an organization located approximately 5 miles from Ginna Station. OVES is certified to Paramedic Care by the New York State Department of Health (NYS DOH) and operates under 10 NYCRR Part 800 State Emergency Medical Code and Public Health Law Article 30.

In the event of an emergency situation at Ginna including a Hostile Action-Based Event, OVES will provide emergency medical services when requested through established communications protocols via 911 Dispatch. To include the transport of person(s) who may have been exposed to radiation or who have injuries complicated by radioactive contamination, to either Rochester General Hospital or Newark-Wayne Community Hospital.

2.10.3 Ontario Fire Company (OFC):

OFC is a town fire district. The Fire Station is located approximately 5 miles from Ginna Station. OFC is operated under Section 209 of New York State General Municipal Law and is part of the New York State Mutual Aid Plan.

Should an emergency situation, including a Hostile Action-Based event occur at Ginna, Ontario Fire Company agrees to provide assistance to the extent of their capabilities. This assistance includes; fire response, fire apparatus and volunteer firefighters as requested by Ginna. It may be necessary for Ontario Fire to request mutual aid in order to receive additional support.

2.10.4 Radiation Emergency Medical Response:

The Ginna Station emergency medical response is detailed in procedure A-7. Control Room personnel are notified of any medical emergency. The location and known information about the emergency is announced over the plant page and the medical response team responds. Emergency medical services (EMS) may be contacted via the 911 dispatcher. Advanced Life Support (ALS), Mercy Flight and mutual aid can also be requested via the Control Room to augment the local EMS.

2.10.5 Rochester General Hospital/Newark-Wayne Community Hospital:

Arrangements have been made with the designated hospitals to receive and assume control of patients from Ginna Station, if requested. Implementing procedures include the means of communication between the utility and the hospital.

If an emergency situation, to include a Hostile-Action based event, should occur at Ginna, Rochester General Hospital and Newark-Wayne Community Hospital agree to ensure the capability for the evaluation of radiation exposure and intake, including assurance that personnel providing these services are adequately prepared to handle contaminated individuals and are capable of providing medical support for any injured individuals who may be contaminated.

Rochester General Hospital is equipped with a dedicated room for treatment of radiologically contaminated victims. Newark/Wayne has an area within the

hospital which can be converted to a radiation treatment room. Adequate contamination control and procedures are maintained in each facility. Hospital personnel are trained in the treatment of radiation accident patients and each hospital has an approved radiological emergency plan specific to their facilities and resources.

Annual training is provided to hospital staff. Radiation Protection instrumentation is supplied to the hospital by the Company. Annual training drills are conducted by the Company and the hospitals and include critiques. Hospital staffs also attend training seminars on treatment of radiation accident victims.

2.10.6 Medical Emergency Consultant:

Radiation Emergency Assistance Center/Training Site (REAC/TS) will respond as follows upon request from one of the medical responders or from the Company:

- a) Dispatch a radiation emergency medical team, which is available on a 24 hour basis.
- b) Make available the services of a radiation/decontamination treatment facility.
- c) Make transportation arrangements (air or ground) for patients to the radiation/decontamination treatment facility.

REAC/TS has laboratory and medical facilities at the Oak Ridge National Laboratories. Ginna has an arrangement with the hospital for management and treatment of radiation accident victims and ensures that facilities necessary for treatment are readily available by equipping the hospital with the medical and radiological equipment needed. Ginna has conducted an initial evaluation and made recommendations for an effective local medical emergency program, coordinating the planning for local medical support with REAC/TS. Periodic site visits are made to coordinate and review emergency medical support with company officials and local medical personnel.

REAC/TS and other vendors can provide radiological emergency training for plant, hospital and ambulance personnel if not provided by Company personnel.

2.10.7 The Company Medical Department and Contract Physicians:

The Company medical department is contacted for all medical emergencies occurring at Ginna Station. The medical department provides contract physicians to interface between the hospital health care organization and the Company. REAC/TS may be contacted for assistance during or after a radiation medical emergency. Contract physicians can facilitate the integration of REAC/TS, or other responders, with the hospital health care organization treating the victim.

2.10.8 Consultants and Contractors:

Implementing procedures give the name and phone contacts for additional consultants and contractors who may be requested to provide technical assistance to the emergency organization.

In case of a radiation event, the Emergency Director has the authority to procure the services of any consultant group that may be needed. The Company, as part of the Institute of Nuclear Power Operations (INPO), can call upon INPO

resources to supplement Company efforts in executing emergency response plans. Support may be requested directly from licensees and service companies listed in the INPO Emergency Resources Manual or may be obtained by using INPO as an agent to arrange and coordinate the required support. The Company also has agreements with upstate New York State licensees for mutual assistance in times of emergency.

2.10.9 Laboratories:

There are two radiochemical laboratories at Ginna. One is adjacent to the controlled area and is used for primary coolant and other plant samples.

The second laboratory is used for environmental samples and is located in the Ginna Training Center East, remote from the plant. This laboratory contains some of the equipment found in the main laboratory and could be used for diluted post-accident samples if needed.

The laboratory at the Fort Smallwood Road Complex is operated by Exelon and is available for analysis of samples. The laboratory is located in Baltimore, Md.

2.11 Other Emergency Plans:

Ginna's Emergency Plan and other implementing procedures are coordinated with the following external organizations' plans:

1. Rochester General Hospital Radiological Medical Emergency Plan
2. Newark-Wayne Community Hospital Radiological Medical Emergency Plan
3. Monroe County Radiological Emergency Preparedness Plan
4. Wayne County Radiological Emergency Response Plan
5. New York State Radiological Emergency Preparedness Plan for Commercial Nuclear Power Plants.

Table 2.1:

Minimum Staffing Requirements for the ERO

| Functional Area | Major Tasks | Emergency Positions | Minimum Staff ** | Full Augmentation |
|------------------------------------|-------------------------------------|---|----------------------|-----------------------|
| 1. Plant Ops and Assessment | Control Room Staff | Shift Manager (Shift) Control Room Supervisor (SRO) (Shift) Control Room Operator (RO) (Shift) Auxiliary Operator (AO) (Shift) | 1* 1* 2* 4* | |
| 2. Emergency Direction and Control | Command and Control | Shift Manager (Shift) Corporate Emergency Director (EOF) Station Emergency Director (TSC) | See above 1 1 | |
| | Facility Control | TSC Director (TSC) EOF Director (EOF) | 1 1 | |
| 3. Notification & Comm. | Emergency Communications | Shift Communicator (Shift) State/Local Communicator (EOF) ENS Communicator (TSC) HPN Communicator (EOF) | 1* 1 1 | 1 |
| | Plant Status & Technical Activities | CR Operations Communicator TSC Operations Communicator OSC Operations Communicator EOF Operations Communicator | | 1 1 1 1 |
| | In-Plant Team Control | Team Tracker (OSC) | | 1 |
| | Governmental | EOC Communicator (EOF) State Liaison (EOF) County Liaison (EOF) Incident Command Post Liaison | | 1 1 2 Note 2 |

| Functional Area | Major Tasks | Emergency Positions | Minimum Staff ** | Full Augmentation | |
|-------------------------------|--|--|---|-------------------|---|
| 4. Radiological Assessment | Offsite Dose Assessment | Dose Assessor (EOF) | | 2 | |
| | Offsite Surveys | Environmental Coordinator (EOF) Offsite Monitoring Team (EOF) | 4 | 1 | |
| | Onsite Surveys | Shift RP Technician (Shift) | 1* | | |
| | | RP Technician (OSC) | 2 | | |
| | In-plant Surveys | RP Technician (OSC) | 1 | | |
| | Chemistry | Shift Chemistry Technician (Shift) | 1* | | |
| | | Chemistry Technician (OSC) | 1 | | |
| | | OSC Chemistry Lead | 1 | | |
| 4. Radiological Assessment | RP Supervisory | Radiation Protection Manager (TSC) Radiation Protection Manager (EOF) | 1 1 | | |
| | 5. Plant System Engineering , Repair, and Corrective Actions | Technical Support / Accident Analysis | Shift Technical Advisor (Shift) | 1* | 1 |
| | | | Technical Manager (TSC) | | |
| | | | Electrical Engineer (TSC) | 1 | |
| | | | Mechanical Engineer (TSC) | 1 | |
| | | | Core / Thermal Hydraulic Engineer (TSC) | 1 | |
| | | | Operations Manager (TSC) | 1 | |
| | | | EOF Technical Advisor (EOF) | 1 | |
| Repair and Corrective Actions | | Maintenance Manager (TSC) | | 1 | |
| | OSC Director (OSC) | 1 | | | |
| | Assistant OSC Director (OSC) | 1 | | | |
| | Electrical Technicians (OSC) | 1 | (Note 2) | | |
| | Mechanical Technicians (OSC) | 1 | (Note 2) | | |
| | I&C Technicians (OSC) | 1 | (Note 2) | | |
| | Operations Personnel Craft Leads (Elec, Mech, I&C) | | (Note 2) 3 (Note 3) | | |

| Functional Area | Major Tasks | Emergency Positions | Minimum Staff ** | Full Augmentation |
|---|------------------------------------|---|---|--------------------------|
| 6. In-Plant Protective Actions | Radiation Protection | RP Technician (OSC) RP Lead | 1 1 | |
| 7. Fire Fighting | -- | Fire Brigade (Shift) Fire Brigade Lead (Shift) | (Note 4) 1* | |
| 8. First Aid / Rescue | -- | First Aid provided by trained Shift Personnel Rescue support provided by shift personnel or OSC personnel. | Fire Brigade members (3) (collateral duty) | |
| 9. Site Access Control | Security & Accountability | Security Shift Supervisor (Shift) Security Personnel Security Coordinator (TSC) | (Note 5) (Note 5) | 1 |
| 10. Resource Allocation and Admin Support | Logistics | EOF Logistics Manager (EOF) JIC Logistics Manager (JIC) | 1 | 1 |
| | Administration | Administrative Staff (TSC) | | 2 |
| | | Administrative Staff (OSC) | | 2 |
| | | Administrative Staff (EOF) Administrative Staff (JIC) | | 2 (Note 6) 2 (Note 6) |
| | Facility Operations | Computer Specialist (TSC / OSC) Computer Specialist (EOF / JIC) | | 1 1 |
| 11. Public Information | Media Interface | Company Spokesperson (JIC) Media Liaison (JIC) | 1 | 1 |
| | Information Development | News Writer (JIC) Technical Advisor (JIC) | 1 | 1 |
| | Media Monitoring and Rumor Control | MM/RC Coordinator (JIC) Inquiry Phone Team (JIC) Media Monitoring Team (JIC) | 1 | 2 (Note 2) 2 (Note 2) |
| | Facility Operation and Control | JIC Manager (JIC) JIC Security (JIC) | 1 | 1 |

| Functional Area | Major Tasks | Emergency Positions | Minimum Staff ** | Full Augmentation |
|-----------------|-------------|---------------------|------------------------------|-------------------|
| | | TOTALS: | Shift staff: 13 Other: 34 | 37 |

Notes:

* Minimum Shift Staffing

** Minimum Staff will respond within 60 minutes.

(1) Provided by On-Shift personnel, denoted by an asterisk.

(2) Personnel numbers depend on the type and extent of the emergency.

(3) Craft Lead positions can be filled by senior technicians or craft supervisors.

(4) Fire Brigade per FSAR/Technical Specifications, as applicable. May be a collateral duty.

(5) Per Station Security Plan.

(6) EOF and JIC may share Administrative Staffs

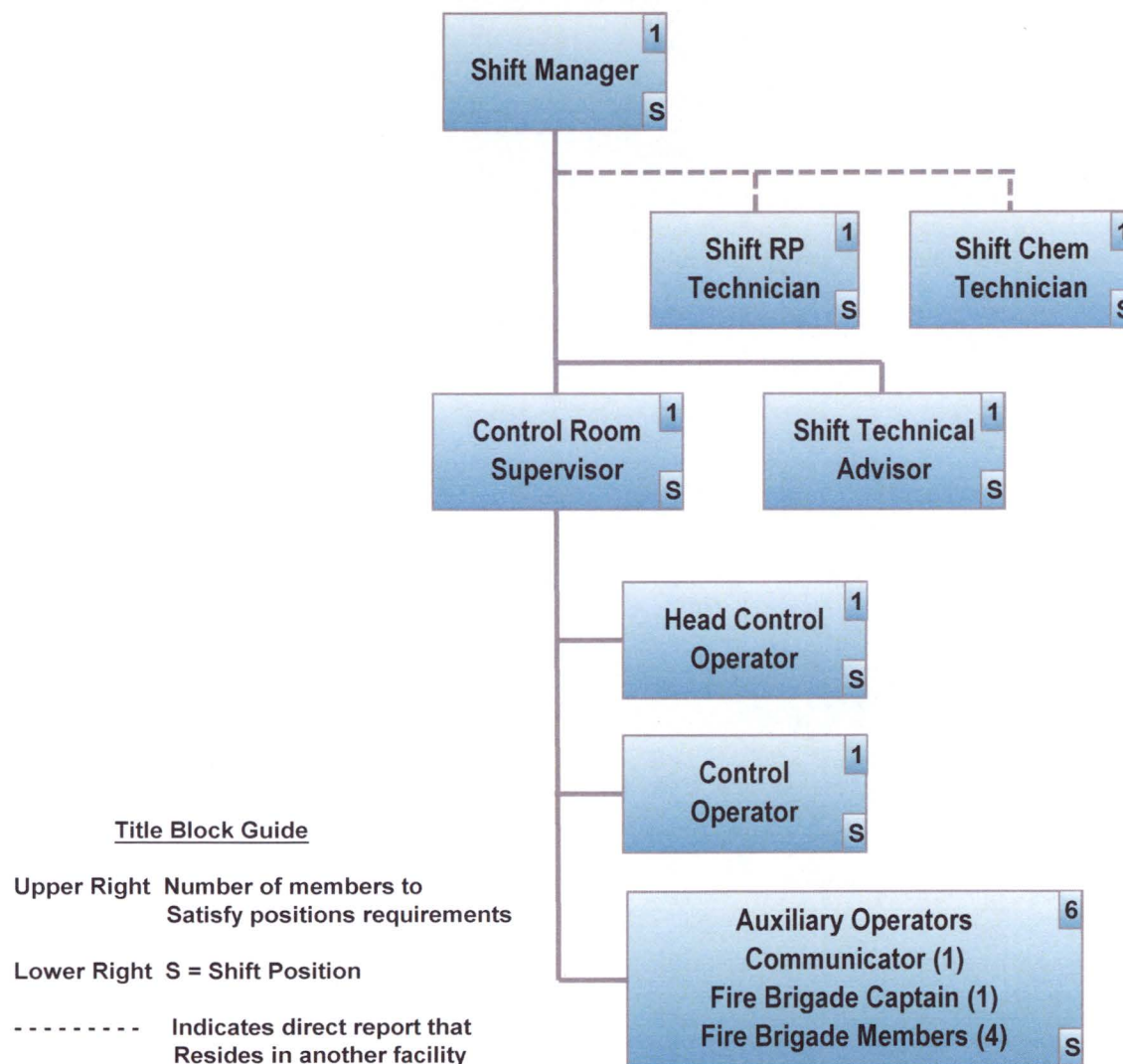
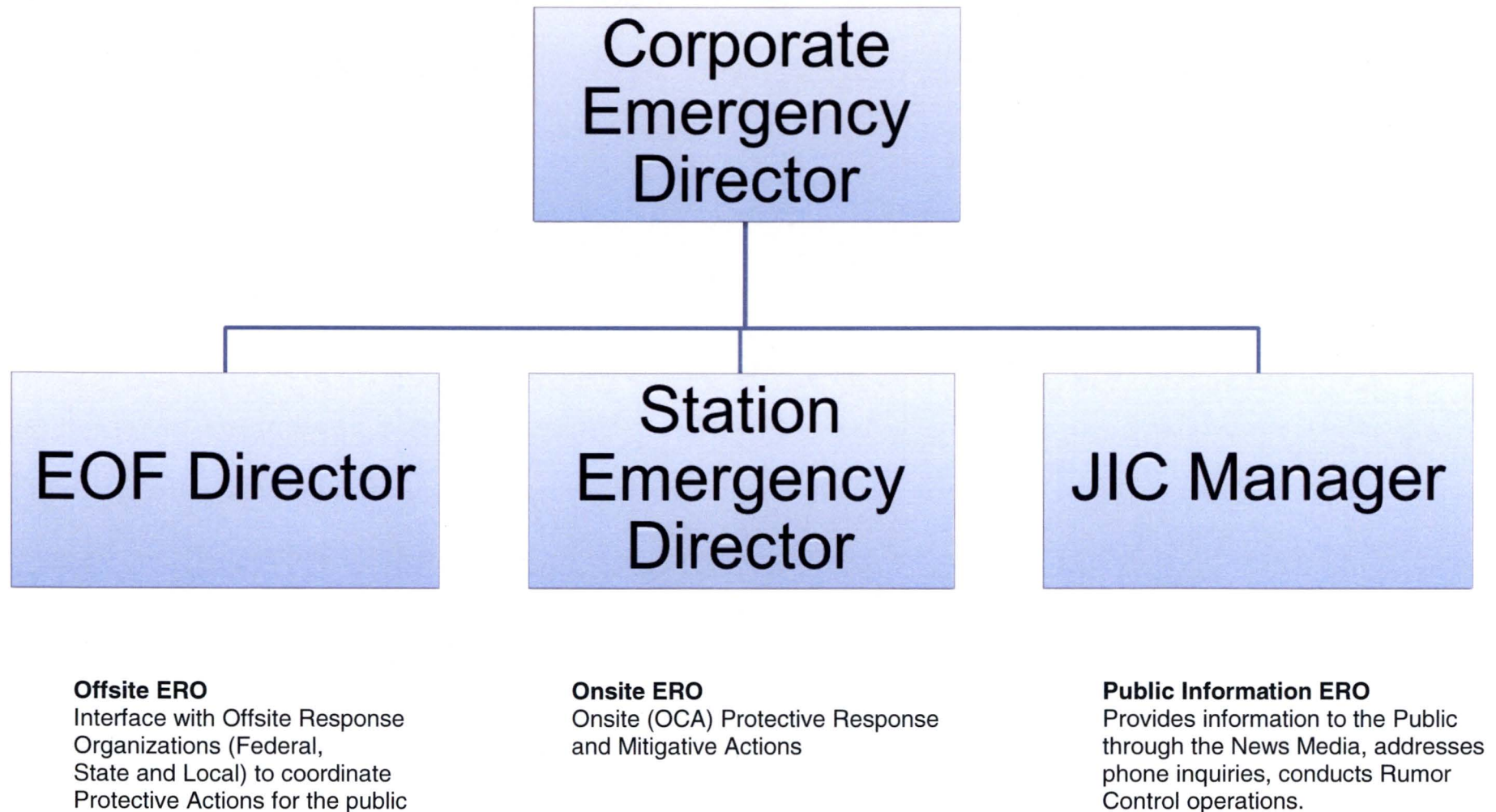
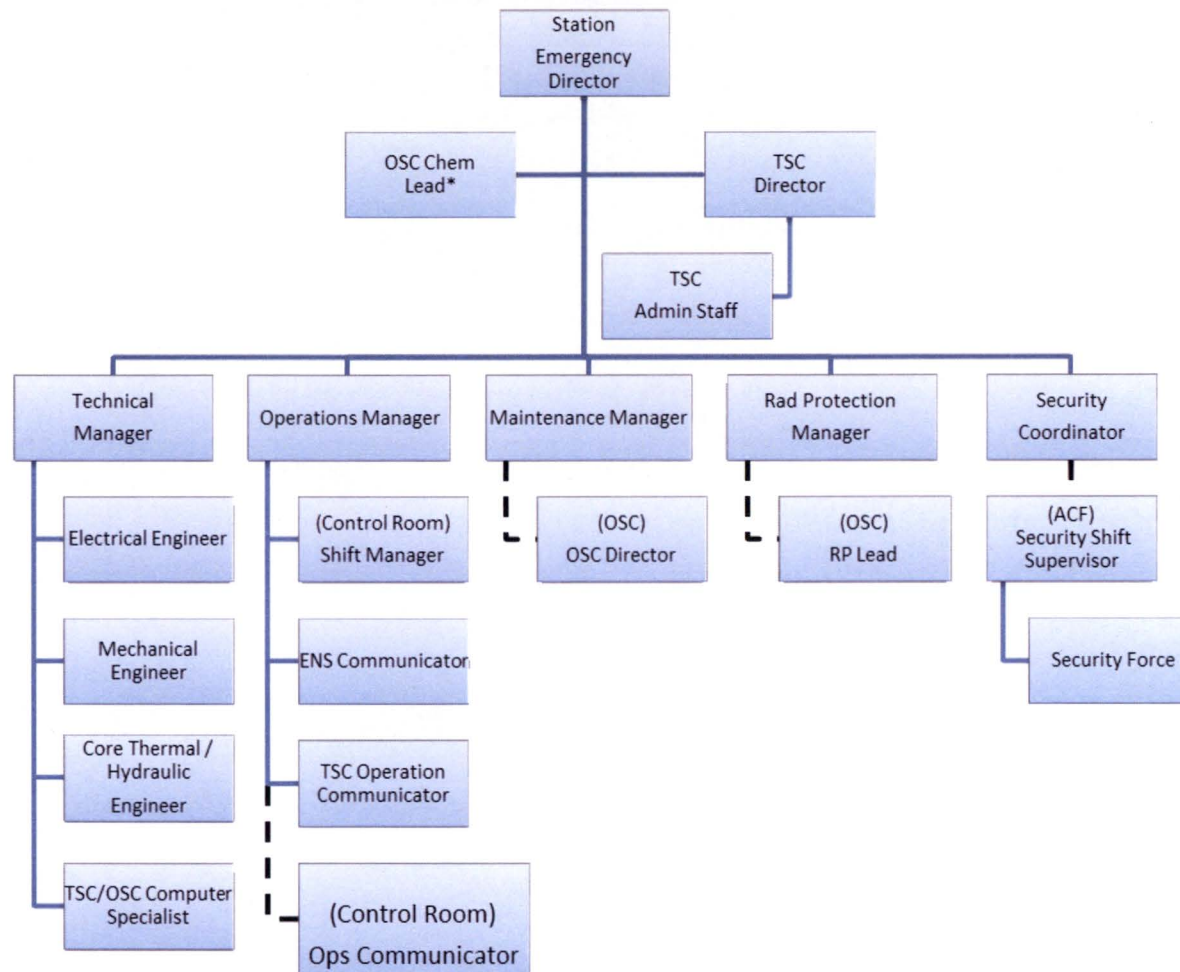
Figure 2.1 Shift ERO

Figure 2.2 ERO Management Structure



Note: The Emergency Director, with overall Command & Control, is normally located in the EOF.

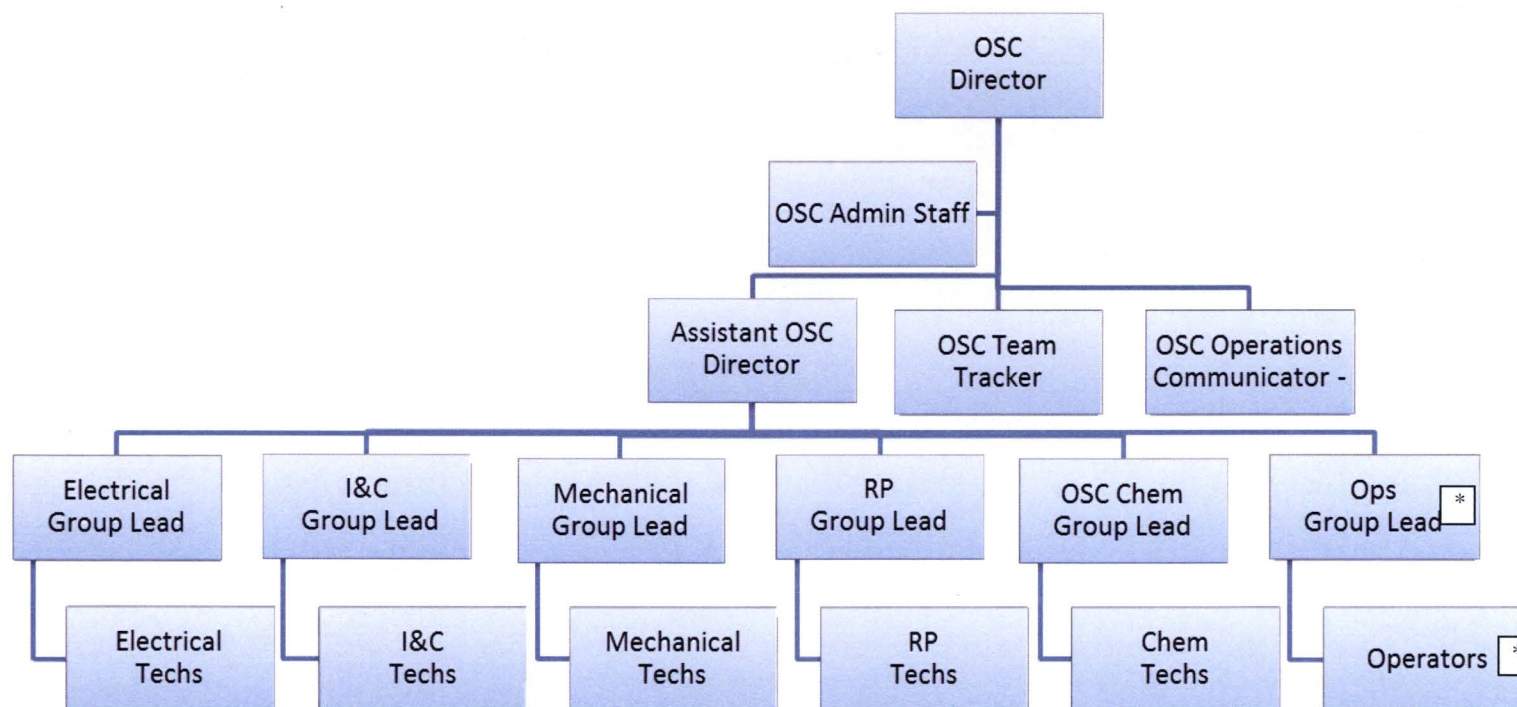
Figure 2.3 TSC Staffing



* OSC Chemistry Group Lead only part of TSC Staffing at UE

Dotted lines indicate positions located in other facilities.

Figure 2.4 OSC Staffing



*Minimum number of operators equal to Shift Staffing

Figure 2.5 EOF Staffing

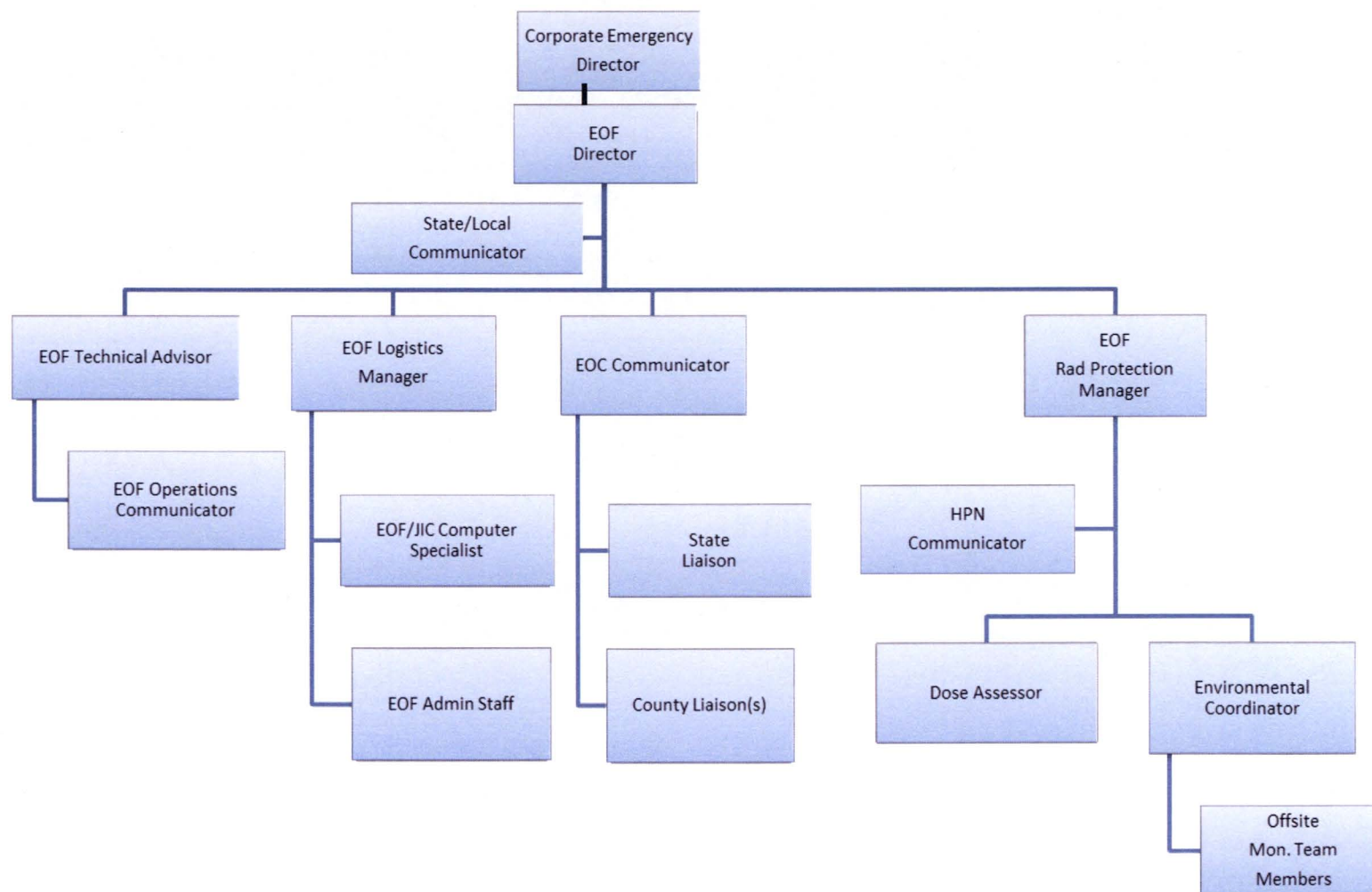


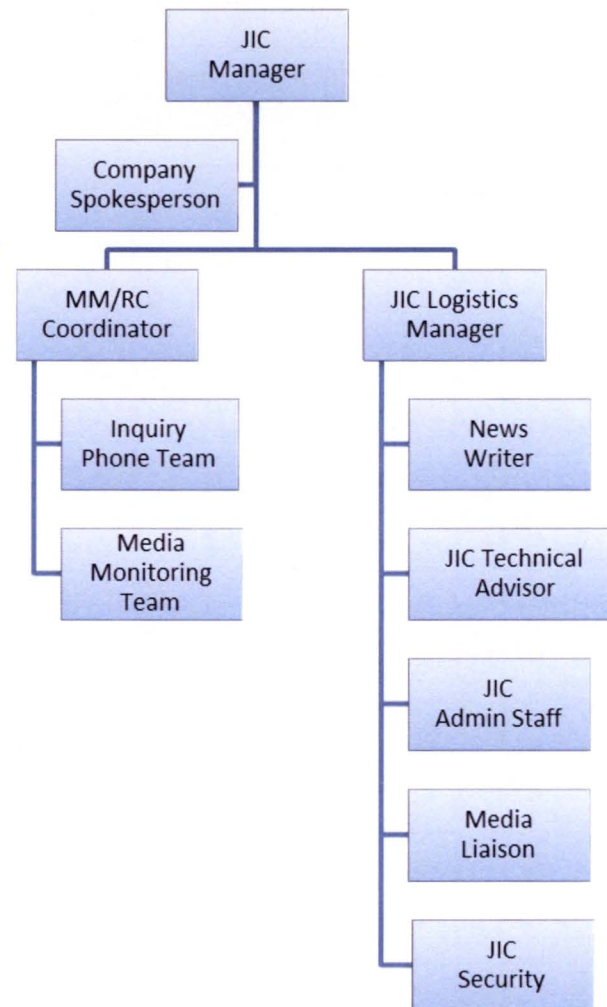
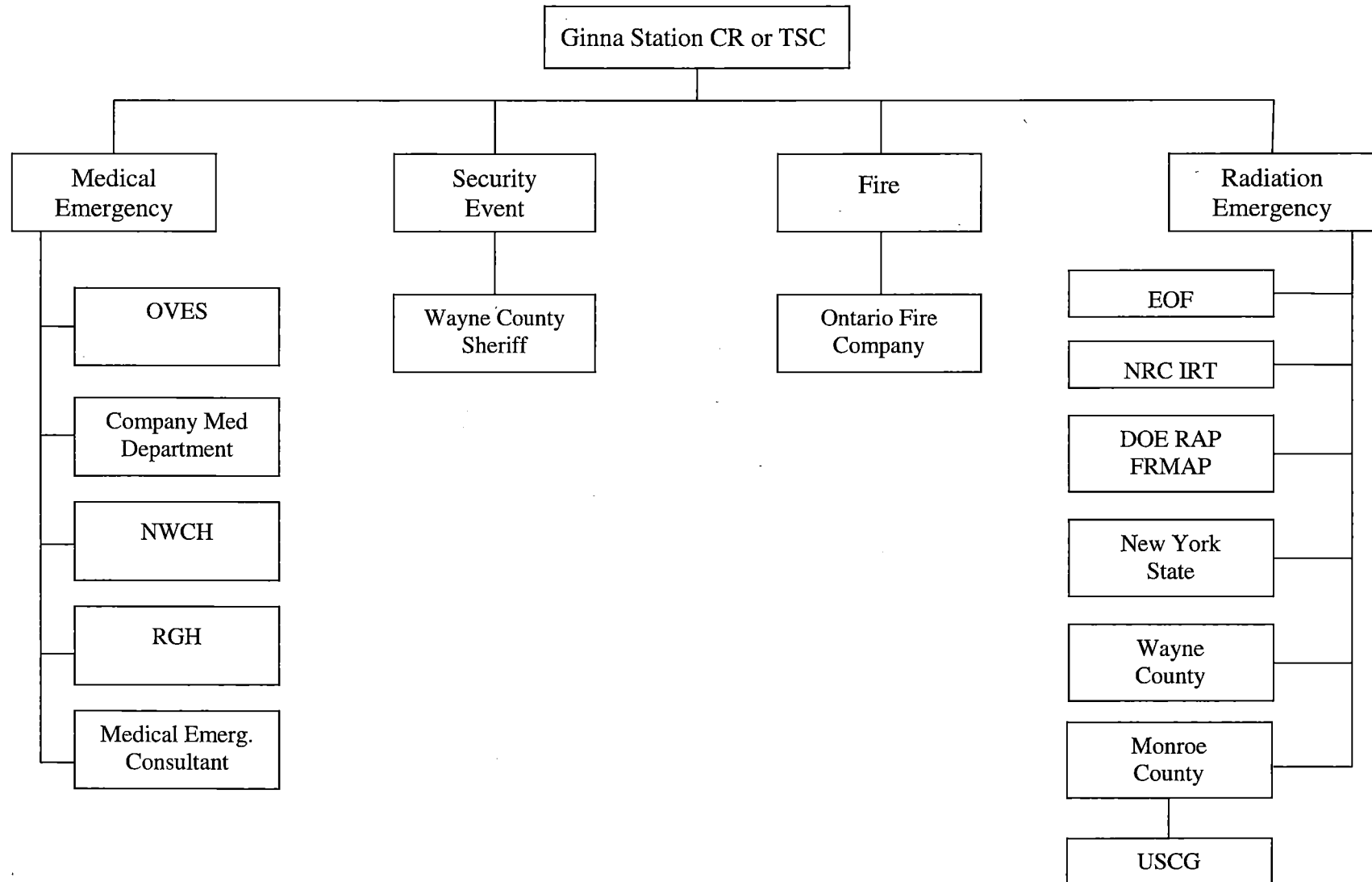
Figure 2.6 JIC Staffing

Figure 2.7 Inter-Relationships of Ginna Station Emergency Response Organizations

Section 3: Classification of Emergencies

Emergencies are classified into four categories, which cover the entire spectrum from probable incidents to postulated major accidents. This system is coordinated with the NRC, New York State, Wayne County and Monroe County to ensure that the classification system is compatible with that used by all organizations. The system provides for notification of appropriate emergency response organizations and implementation of actions immediately applicable to a specific condition. Provisions are included for revising the classification level and the corresponding responses in the event of a change in severity of the emergency condition. This section identifies the events which comprise each of the four emergency classifications requiring formal offsite notification. This section also describes a condition known as a Local Radiation Emergency which does not require formal notification.

Criteria for characterizing, recognizing and declaring each emergency classification are given along with appropriate emergency classifications. Recognition and classification criteria are based, to the extent feasible, on readily available information such as Control Room instrumentation. Plant parameter values and the corresponding emergency classifications are given in appropriate implementing procedures. Immediate actions to be taken in response to plant conditions are detailed in plant operating and emergency procedures. Other emergency actions in response to radiation emergencies are identified in Section 4, Emergency Measures and described in detail in applicable Emergency Plan Implementing Procedures as listed in Appendix 3.

A comprehensive listing of Ginna-specific initiating conditions for each emergency classification is provided in EP-AA-1012, Addendum 3, Radiological Emergency Plan Emergency Action Levels (EALs) for Ginna Station.

EP-AA-1012, Addendum 3 is based on NEI guidance provided in NEI 99-01 and demonstrates how an initiating condition leads directly to the appropriate emergency classification, based on the magnitude of the event. In some cases, extensive assessment is necessary to determine the applicable emergency classification. In any case, continuing reassessment is required to ensure that the classification is upgraded or downgraded commensurate with the severity of the condition.

Emergency Plan Implementing Procedures can be found in the Control Room, Technical Support Center, Emergency Operations Facility, Document Control, and on the internal Ginna website.

3.1 Local Radiation Emergency:

NOTE: The Local Radiation Emergency is not one of the four NRC Emergency Classifications and does not require any offsite notification.

Incidents may occur which require response only within the plant. A Local Radiation Emergency is defined as a radiation emergency condition whose consequences affect only personnel onsite. EPIP-1-13, Local Radiation Emergency, provides for the identification of local radiation emergencies and the actions necessary to ensure worker safety.

NOTE: The following are the four NRC Emergency Classifications.

3.2 Unusual Event:

Events within this Emergency Classification generally characterize off-normal plant conditions which, by themselves, do not constitute significant emergency conditions. Some of these events could, however, indicate a potential degradation in the level of plant safety and/or could escalate to a more severe condition if appropriate action is not taken.

The primary purpose for this classification is to ensure that the plant operating staff recognizes initiating conditions, takes appropriate action, and comes to a state of readiness to respond in the event that the condition becomes more significant. The Unusual Event classification or higher also requires that offsite authorities be promptly informed of the abnormal condition by use of the Radiological Emergency Communications System (RECS) and the New York State Radiological Emergency Data Form, Part I, found in procedure EP-CE-114-100 . No response by offsite authorities is necessary for non-hostile action events within this classification. The TSC or EOF will not usually be activated, although the Station Emergency Director, Operations Manager, OSC Chemistry Lead and Technical Manager will normally report to the TSC to provide assistance.

When giving notice to State and county officials, the Company will make sure that they clearly understand the Unusual Event classification and that, if conditions change, there will be further notification.

3.3 Alert:

This Emergency Classification is characterized by events which indicate an actual or potential substantial degradation of the level of plant safety or a security threat that involves probable life-threatening risk to site personnel or damage to site equipment because of hostile action. This classification requires response by the plant ERO and augmentation of onsite emergency resources. It constitutes the lowest level where emergency offsite response for non-hostile action events may be anticipated.

All Ginna emergency facilities will be staffed at an Alert or higher.

Prompt notification of an event within this classification will be made to the NRC, State of New York and Monroe and Wayne Counties. While the initial assessment would not require immediate response, potential releases of radioactivity make it advisable to alert offsite organizations. Periodic status updates will be made to keep authorities aware of the situation.

3.4 Site Area Emergency:

A Site Area Emergency is characterized by events involving actual or probable major failures of plant functions needed for protection of the public or hostile action that results in intentional damage or malicious acts: (1) toward site personnel or equipment that could lead to the likely failure of equipment needed for the protection of the public; or (2) that prevent effective access to equipment needed for the protection of the public. Most events within this classification

constitute actual or clear potential for significant releases of radioactive material to the environment. For a Site Area Emergency, all emergency response facilities are activated. Although emergency actions involving members of the public may not be necessary, offsite emergency response organizations should be mobilized and ready to implement protective measures. Protective actions taken onsite are: the evacuation, if deemed necessary, of all persons in areas other than the Control Room, Technical Support Center and OSC; initiation of onsite and offsite radiation monitoring; and close monitoring of plant status so that the licensee and other authorities can be advised of changing conditions, whether increasing or decreasing in severity. Meteorological and release data and survey results will be used to provide offsite dose estimates.

For the purpose of classifying an emergency, instrument indications in the Control Room will be used. The instruments of interest and appropriate action points are part of the implementing procedures.

3.5 General Emergency:

A General Emergency is characterized by events which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or hostile actions that result in an actual loss of physical control of the facility. Initial declaration that a General Emergency may exist is based on a situation which may have the potential for serious radiological consequences to the health and safety of the general public. A Site Area Emergency most likely would have been declared earlier and, if events are in progress which may involve core degradation with potential for loss of containment integrity, a General Emergency should be declared. For a General Emergency, all emergency response facilities are activated.

The Emergency Director will promptly notify State and local authorities and the NRC of the plant status and reasons for declaring a General Emergency. The Emergency Director will also make recommendations for offsite emergency measures to be taken. The responsibility for this recommendation to offsite authorities may not be delegated.

Section 4: Emergency Measures

The following sections provide the guidelines for implementing procedures of the four emergency classifications and the Local Radiation Emergency condition which are described in Section 3.0.

4.1 Local Radiation Emergency:

A Local Radiation Emergency condition is established to provide a level of response to a radiological incident which is less serious than the four NRC Emergency Classifications. It has no effect offsite and has no potential for any offsite effects. There is normally no notification or action required by offsite agencies.

- a) EPIP-1-13, Local Radiation Emergency, contains the details of the response. In general, any individual aware of an incident shall notify the Control Room of this fact.
- b) The Control Room shall announce over the plant public address (PA) system that a local evacuation of the area is required.
- c) All personnel in the affected area shall leave the area as directed.

4.1.1 Subsequent Action:

The situation will be evaluated and actions taken to terminate the emergency. The plant shall determine the course of action to be taken to clean up the affected area, correct the cause of the incident, and return the area to normal operation. State and county authorities may be notified of the incident for informational purposes but no actions are required offsite.

NOTE: Sections 4.2, 4.3, 4.4 and 4.5 are NRC Emergency Classifications that require State, county, and NRC notification.

4.2 Unusual Event:

The purpose of the Unusual Event Classification is to provide early warning of minor events which could lead to more serious consequences. The Unusual Event conditions indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs. Declaring an Unusual Event assures that the first step for any response later found to be necessary has been carried out by bringing onsite staff and offsite organizations to a state of readiness, thereby providing a system for handling information and decision-making.

The NRC, State and county authorities will be promptly notified to assure that the first step of any necessary response can be initiated. The Plant Manager will be notified of the Unusual Event Emergency to bring the plant staff to a state of readiness and provide for responsible decision-making. On-shift resources can be augmented so as to be able to assess and respond as needed. Offsite organizations will stand by for further information or closeout.

4.3 Alert:

Events of the Alert classification involve actual or potential degradation of the level of safety of the plant or a security threat that involves probable life-threatening risk to site personnel or damage to site equipment because of hostile action. Any radioactivity released during an Alert would result in exposures well below the guidelines for required offsite action. By assuring that emergency personnel are available to respond if the situation should become worse, protective actions could be taken much quicker, such as performing confirmatory radiation monitoring and providing offsite authorities with current status information.

For events which fall in the Alert classification, Ginna Station will promptly notify the NRC, State and county authorities of the Alert status and the reasons for the classification. All Ginna emergency facilities will be staffed so as to assist in the assessment of the incident and determination of a proper response. Periodic plant status updates will be given to offsite authorities who will also be advised of any change in the classification of the incident.

Unless they are already in the plant, persons so notified will report to the plant, the Emergency Operations Facility (EOF) or, if directed by Security, to the Training Center, where jobs are assigned in line with the trained capabilities of the individual. Procedures provide for staffing of all Ginna emergency facilities. The organization is normally activated via an automated system activated from the Control Room.

The Joint Information Center will be staffed by Company, county and State personnel in order to coordinate public information activities warranted by the emergency.

Offsite agencies will activate primary response centers to standby status and will alert other key emergency personnel, such as monitoring teams and communications centers, the Emergency Alert System, or law enforcement. They will be ready to escalate to a more severe classification, if appropriate.

Figure 4.1 Ginna Notification Process

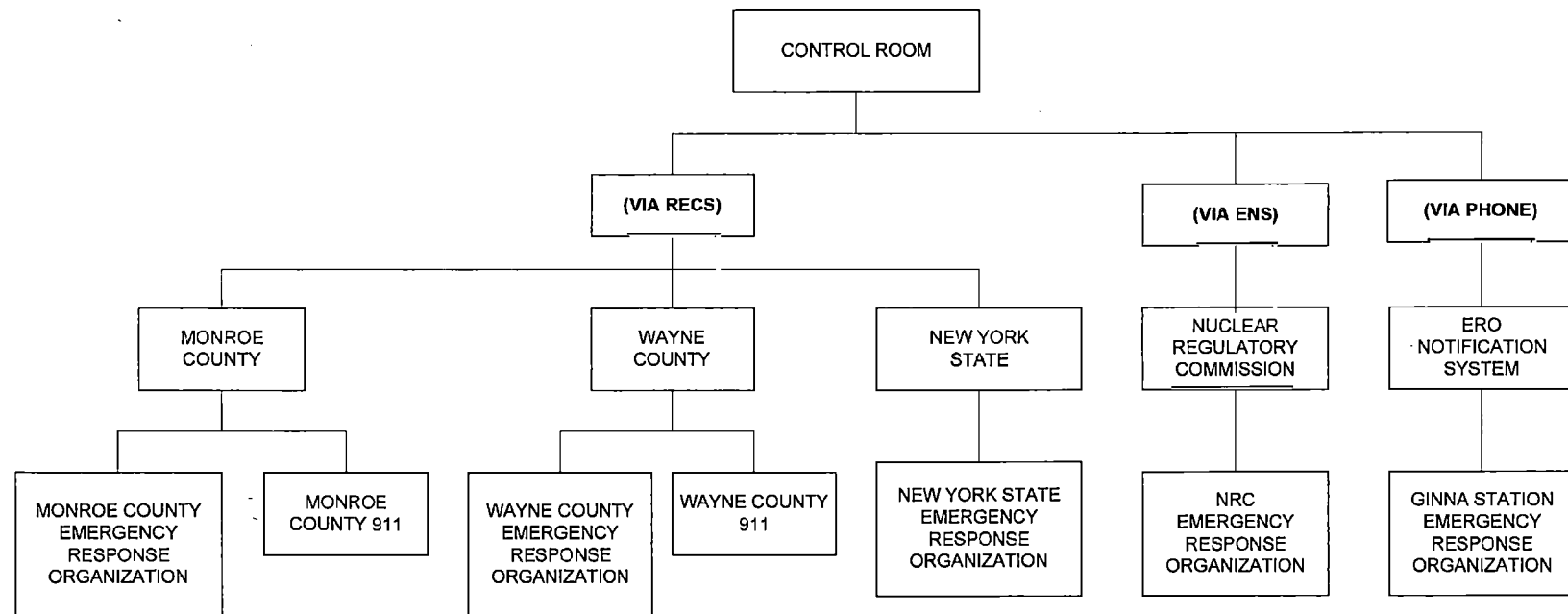
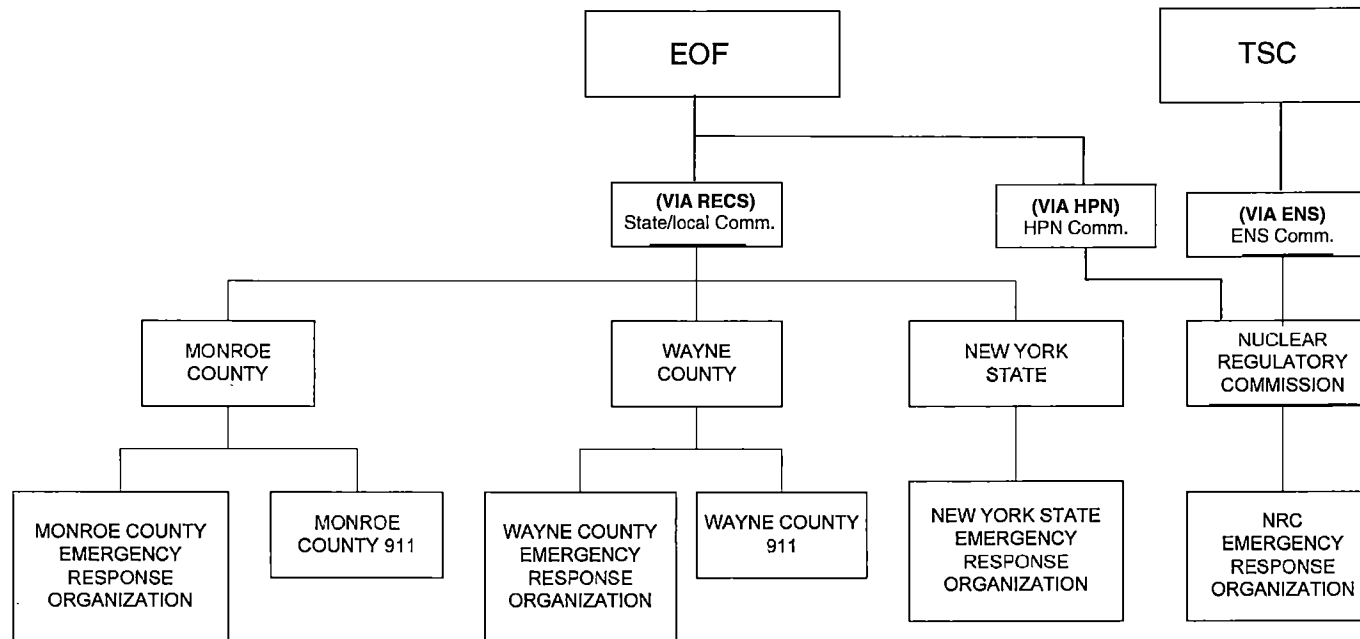


Figure 4.1 (Cont'd) Ginna Notification Process (EOF/TSC)
(Supersedes Standard Plan EP-AA-1000, Figure F-1)



4.4 Site Area Emergency:

A Site Area Emergency is declared when events are in progress or have occurred which involve actual or likely major failures of plant functions needed for the protection of the public or hostile action that results in intentional damage or malicious acts: (1) toward site personnel or equipment that could lead to the likely failure of equipment needed for the protection of the public; or (2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to exceed EPA Protective Action Guideline exposure levels except near the site boundary.

In the event that a Site Area Emergency is declared, the actions to be taken by various plant groups are detailed in the implementing procedures for the plant. The Control Room will make the initial notification to the NRC, State and county authorities.

The purpose of the declaration of a Site Area Emergency is to assure that personnel required for evacuation of near-site areas are at their duty stations if such an evacuation is called for. Also, offsite agency authorities will be available at primary response centers for consultation and updates on the situation, and to provide information to the public.

4.5 General Emergency:

The General Emergency will be declared when the conditions described in Section 3.5 exist. Actions associated with the General Emergency declaration are to: (1) initiate protective actions for the public as predetermined or as indicated by actual releases; (2) provide continuous assessment of information from Ginna Station and offsite measurements; (3) provide consultation with offsite authorities; and (4) keep the public informed through updates of the situation through the Joint Information Center.

4.5.1 Company Actions:

A General Emergency requires that all actions prescribed for the Site Area Emergency (see Section 4.4) be implemented. The NRC, State of New York, and county authorities, who will already have been contacted for lower classifications, will now be updated.

The Emergency Director or designee may request the assistance of offsite groups, which could include REAC/TS, Company medical department, and Department of Energy, Brookhaven Radiological Assistance Program. Technical personnel from other Company departments and/or consultants will be called as needed.

The EOF Radiation Protection Manager has the responsibility to determine the magnitude and extent of the incident by evaluating information from the Control Room and the Offsite Monitoring Teams. This information will consist of instrumentation readings and any survey results available. EOF staff shall update the State and local authorities with new survey data and other information and recommend protective actions. Protective action recommendations will be based on NUREG-0654 / FEMA-REP-1, Rev. 1, Supplement 3, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and

Preparedness in Support of Nuclear Power Plants". A summary dose based recommended actions is presented in Table 4.1.

The methodology for implementation of the Protective Action Recommendation (PAR) process is contained in EP-CE-111, Emergency Classification and Protective Action Recommendations, which also provides guidance for upgrading an initial PAR based on pertinent factors.

In making the recommendation for sheltering or evacuation, the EOF Radiation Protection Manager should evaluate the weather forecast in relation to changing winds and precipitation. The offsite authorities should evaluate the calculated evacuation times in relation to predicted start, length and termination of a release.

Emergency staff at Wayne and Monroe Counties and New York State shall determine, by evaluating the information given by the Corporate Emergency Director, if area evacuation or sheltering is necessary, to what extent, and how to undertake protective action including evacuation. A projection of population distribution in the 10 mile plume exposure zone is included in the Evacuation Time Estimates contained in EP-AA-1012, Addendum 2. A summary of evacuation time estimates for various conditions is provided in EP-AA-1012, Addendum 2.

All surveys will be retained by the EOF Radiation Protection Manager and sample analysis results will be retained by the Chemistry Group Lead for appropriate documentation. Formal reports shall be written and distributed as required by 10CFR20 and the Ginna Technical Specifications. Information concerning the offsite consequences of the incident and protective actions to protect the public will be coordinated in accordance with the New York State Radiological Emergency Plan and County Emergency Plans. A Company spokesperson in the JIC will release the information concerning the plant, plant safeguards and its employees, and assistance being provided to State and local authorities.

Severe Accident Management Guidelines (SAMG) entry conditions are defined in the Station Emergency Operating Procedures.

4.5.2 Offsite Authorities Actions:

All actions of paragraph 4.9.6 for Site Area Emergency will be reviewed and enacted for a General Emergency. All emergency personnel will have been activated and all response centers are operating. Information is evaluated and forwarded to the proper authorities and the public. Protective actions will be instituted as needed for the public and milk animals.

4.6 Activation of Emergency Response Organization:

Emergency procedures necessary to cope with the plant system malfunction will be implemented. All on-duty operations personnel will report to the Control Room. Control Room ventilation dampers will be switched from outside to inside air and the charcoal filters will be put into service.

Plant Security:

During a plant evacuation, the plant security officers assist in the activation of the plan as follows:

- The Security Shift Supervisor will deploy resources to restrict access to the owner controlled area during an Alert or higher. They will inform the TSC Security Coordinator or Corporate Emergency Director of any security issues.
- At least one security officer will remain in the Access Control Facility to instruct all evacuating personnel leaving the plant to proceed to the Training Center or alternate assembly area until released.

The security officers at the plant entrance will stop all personnel and their vehicles from entering the site and direct them to the Training Center or alternate assembly area until the TSC Security Coordinator or his designee notifies them that the condition has been corrected.

Radiation Protection:

The EOF Radiation Protection Manager shall assist the Corporate Emergency Director in evaluating the emergency. The TSC Radiation Protection Manager will report directly to the Technical Support Center. Other Radiation Protection section personnel will:

- a) Report to the Technical Support Center and assume responsibilities as stated in the implementing procedures.
 - Radiation Protection personnel shall ensure that dosimeter readings of evacuated personnel who were in radiologically controlled areas of the plant are recorded.
 - During off-duty hours, RP technicians shall report to their emergency response locations as stated in the implementing procedures. The on-duty RP Technician shall report to the Control Room and provide radiological assessment support as deemed necessary by the Shift Manager.

Chemistry:

The Chemistry Group Lead shall assist the Shift Emergency Director and the Corporate Emergency Director in evaluating the emergency. The Chemistry Group Lead compares plant effluent monitors to release rate limits. The Chemistry Group Lead will report directly to the Operations Support Center.

Off-Duty Personnel:

Off-duty personnel, upon notification, shall report to their emergency response locations, unless directed to their Alternate Facility.

4.7 Immediate Assessment:

The Shift Emergency Director (Shift Manager) shall immediately assess the incident. The Shift Emergency Director is responsible for the implementation of the Emergency Plan until command and control is transferred. The Shift Emergency Director will evaluate plant conditions by checking control and safeguards systems, plant data and radiation monitors. The Shift Emergency

Director shall ensure all offsite agencies are notified in accordance with EP-CE-114-100 and that the following information is given:

- a) Name of facility and communicator
- b) Date/time of incident
- c) Class of Emergency (Unusual Event, Alert, Site Area Emergency, General Emergency)
- d) Brief Description of Event
- e) Radioactive Material Release (None, Atmospheric, Ground, Lake)
- f) Protective Actions Recommended for appropriate population
- g) Temperatures and wind speed and direction

The Wayne County Emergency Management Office and the Monroe County Office of Emergency Management will be notified at the same time through the use of the New York State Radiological Emergency Communications System (RECS). An Emergency Communicator is part of each shift and will maintain contact with New York State and the counties during an emergency. As the RECS line is a closed system, call-back verification by the State and counties is not necessary. The Communicators will also maintain communications with the NRC via the Emergency Notification System (ENS).

If necessary, the Shift Emergency Director shall issue radiation protection equipment and dispatch an RP Technician team to conduct in-plant or area surveys. Prior to augmentation, the Ginna RP Technician is dedicated to on-site activities. If necessary, a relief schedule will be determined. (See Radiation Protection During an Emergency, Section 4.9.1).

4.8 Subsequent Actions:

To ensure that immediate and direct action is taken in an emergency situation, the Technical Support Center, Operations Support Center and the assembly area in the Training Center or Warehouse will be staffed. Details for staffing are in the implementing procedures. During normal working hours, individuals assigned to the Technical Support Center and the Operations Support Center will go there directly.

During off-duty hours, upon notification of an emergency through the call out procedure, personnel may report to the TSC and OSC using normal procedures unless directed to their Alternative Facility.

The Station Emergency Director shall assume responsibility for the activation of onsite Emergency Centers and establish contact with the Control Room. The Station Emergency Director will request from the on-duty Shift Manager an evaluation of plant conditions and all data which has been relayed to the state in preparation for assisting the Corporate Emergency Director in the EOF in the transfer of command and control.

The EOF Radiation Protection Manager or Environmental Coordinator will dispatch monitoring teams to areas of concern and request each team to report by telephone or radio. Offsite Monitoring Teams shall not be placed in a position

where they might receive a whole body dose greater than 1 Rem without special permission from the Corporate Emergency Director.

The Corporate Emergency Director will report conditions to company management.

The Corporate Emergency Director will evaluate radiological data and plant parameters. Current conditions and follow-up actions will be reported to management periodically. The New York State officials and Monroe County and Wayne County Directors of Emergency Management will be kept advised of changing conditions. Responders are assigned as the Ginna Liaisons at the State and County Emergency Operating Centers to provide information and data to offsite agency officials.

Follow-up messages to offsite authorities will contain the following information as appropriate:

- a) Location, name of caller
- b) Class of emergency and date and time of incident
- c) Type of actual or projected release, estimated duration and impact time
- d) Estimated quantity of release for various materials
- e) Chemical and physical form of release material (noble gases, iodine, particulate)
- f) Current weather conditions
- g) Actual or projected dose rate and time integrated dose at site boundary
- h) Projected dose rate and integrated doses in affected sectors
- i) Estimation of any surface radioactive contamination
- j) Recommended emergency response actions or protective measures
- k) Prognosis for course of the event
- l) Status of in-plant emergency actions, and licensee response
- m) Request for further support

The Emergency Medical Plan will be instituted, if necessary. The Shift Emergency Director shall be provided with any survey data necessary to meet his/her responsibilities.

The Corporate Emergency Director will determine if additional personnel should be called to the plant to cope with emergency conditions.

Personnel and cars shall be monitored and surveyed to assess the extent of contamination before leaving the site unless personnel safety or emergency actions require immediate response. All non-essential personnel should be allowed to leave the site.

4.9 Onsite Protective Actions:

During a radiological emergency, protective actions will be employed as follows:

4.9.1 Radiation Protection During an Emergency:

During a radiological emergency, precautions and limitations to minimize doses shall be observed by personnel entering an incident area. In general, doses will be limited to station administrative control levels for occupational radiation exposure in accordance with station procedures. Every effort shall be made to keep exposure As Low As Reasonably Achievable (ALARA) while accomplishing the necessary tasks. Radiation exposures in an emergency shall be evaluated on an ALARA basis. Offsite Monitoring Teams are limited to 1 Rem TEDE dose during the incident unless special permission is given by the Corporate Emergency Director or the EOF Radiation Protection Manager. Information on post-incident doses is provided in Chapter 15 of the Updated Final Safety Analysis Report (UFSAR) for Ginna Station.

For lifesaving actions such as the removal of an injured person and providing first aid, ambulance service, medical treatment or other actions required to reduce severe health effects to the public, volunteers may receive greater than 25 Rem TEDE whole body exposure. The limit set for performing assessment actions or undertaking mitigative actions to prevent substantial radiological releases is 25 Rem TEDE. Authorization to receive doses greater than station administrative limits can be given only by the Corporate Emergency Director.

Offsite Monitoring Teams will consist of at least two persons. All entries into high radiation areas must be carefully planned from available survey data, review of personnel current exposure records, and pre-planning of the activities to be accomplished. Whenever planning to enter an incident area, use the applicable EP Implementing procedures to adequately protect the responders by determining the appropriate survey instruments, protective clothing, dosimetry, respiratory protection or other resources needed. Close communications between team members shall be maintained as much as possible.

The radiation protection program during an emergency will be based on the program defined in the RP series of procedures. Dosimeters are available in the onsite and offsite emergency facilities for the Offsite Monitoring Teams. Provisions for round-the-clock capability to issue dosimeters and maintain dose records will be established to meet long-term needs of the plant procedures. The capability to read dosimeters will be used to maintain control of individual doses.

4.9.2 Site Evacuation:

EP-CE-113, Personnel Protective Actions, provides specific instructions for evacuation of the Protected Area.

The evacuation alarm (special tone) will be activated from the Control Room per direction from the Shift Emergency Director.

Upon becoming aware of the evacuation alarm, all personnel, except those whose duties during an emergency specify otherwise, shall immediately leave their area of work by the nearest exit. All building exits to the outdoors may be

used. Normal egress of the radiologically controlled area should be used if possible. If not possible, workers should use the nearest exit and remove their protective clothing, if worn, as directed by procedures. Personnel will walk to the Assembly Area and stand by for further instructions. All dosimeters will be retained by the individual.

The "Assembly Area" refers to the Training Center or alternate locations defined in emergency procedures depending on plume direction and habitability considerations. The escort accompanying any visitors is responsible to see that visitors are taken to the Assembly Area. Other personnel who may be onsite outside the Protected Area would hear the site evacuation signal.

After evacuation of the plant areas, an accounting will be made of all personnel who were onsite. Accountability of personnel is carried out by plant security using the "onsite" computer list to determine that all persons are accounted for. The Security Shift Supervisor or TSC Security Coordinator initiates a process to verify accountability for all individuals inside the protected area. Drills have indicated that this process can be completed within 30 minutes. This process is verified to be complete by the Corporate Emergency Director using their checklist.

Cars will be monitored and surveyed as necessary before they are allowed to leave the site. Personnel leaving the site will take a route selected by the Corporate Emergency Director, after consultation with the Wayne County Emergency Operations Center (EOC), giving consideration to the wind direction or road impediments. (see Figure 4.2) Before leaving, persons will be monitored for contamination.

Normally, private cars will be used for leaving the site. If cars are contaminated, buses will be brought in for the evacuation. The Corporate Emergency Director will consult with the Wayne County Emergency Director concerning numbers of evacuating personnel and vehicles, and which evacuation routes will be used.

4.9.3 Emergency Medical Treatment:

All emergency medical treatment will be carried out using an emergency medical treatment plan. This plan specifies the types of medical action to be taken in any type of radiation or contamination emergency. First aid team members maintain their proficiency through Red Cross First Aid Training or equivalent as a minimum.

The Emergency Plan Implementing Procedure for Emergency Exposures and KI, provides guidelines for the administration and use of potassium iodide (KI) for onsite personnel and Offsite Monitoring Teams. The determination of need for KI is the responsibility of the TSC Radiation Protection Manager or the EOF Radiation Protection Manager. Approval of the Corporate Emergency Director is required.

Radio-protective drugs will be issued for the general public only if approved by the New York State Department of Health.

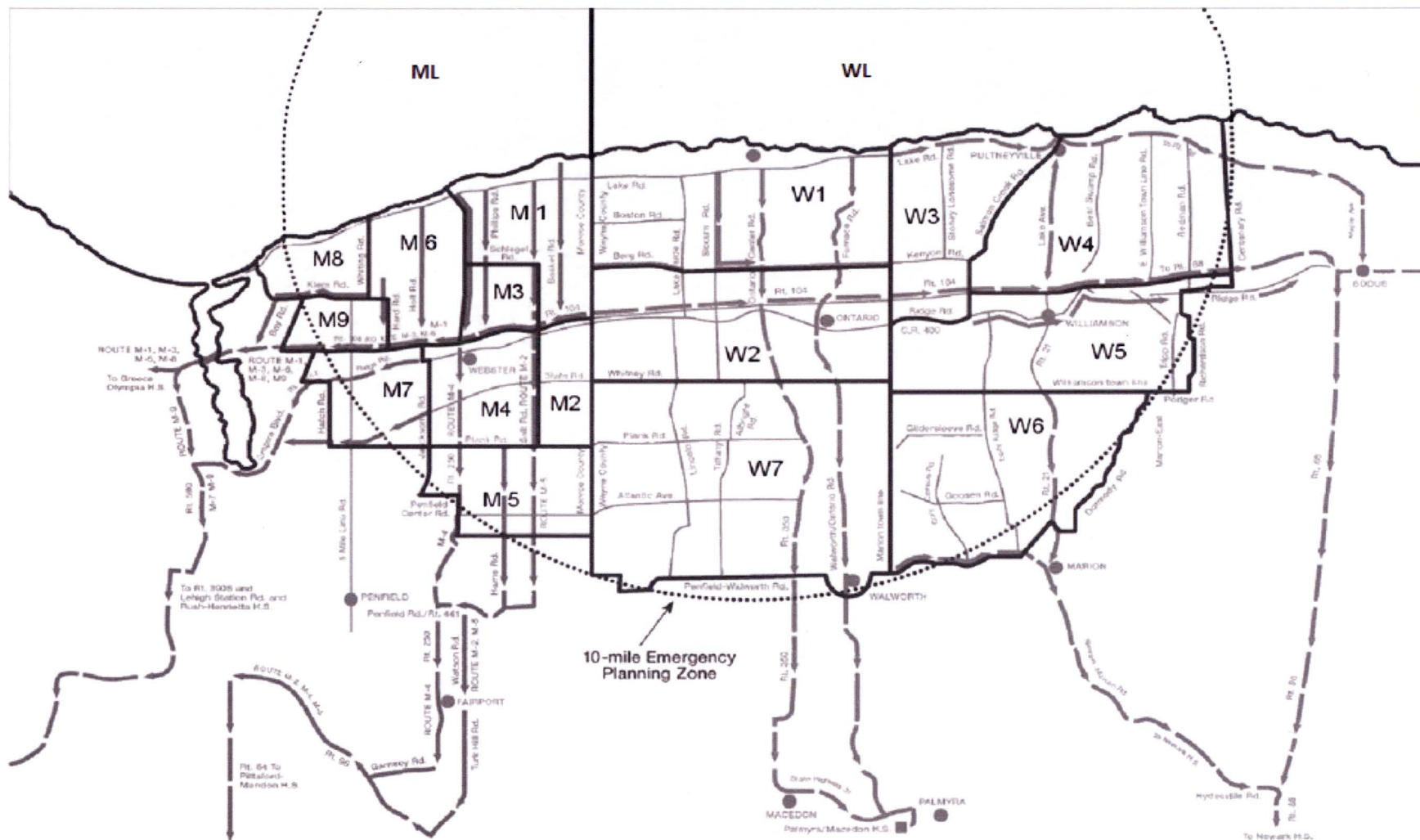
4.9.4 Search and Rescue:

Following site evacuation, all personnel will be accounted for using security records, sign-in sheets, log sheets, etc. The Corporate Emergency Director and Station Emergency Director will determine the necessity for a search and rescue operation. Such an operation will be coordinated by the Shift Emergency Director and the TSC Director.

The search and rescue team will consist of at least two persons including a Radiation Protection technician.

The search should start at the last known location or work assignment of the unaccounted-for individual. Radiation surveys should be made as the team progresses. It may be necessary to administer first aid to the individual after he or she is located. The Corporate Emergency Director, TSC Director or Control Room shall be advised of the situation.

FIGURE 4.2 EVACUATION ROUTES



4.9.5 Decontamination:

A Radiation Protection procedure provides guidance for graduated measures to be used for decontamination. The objective of decontamination is to prevent the spread of radioactive material on the individual, to the environment or to other personnel and to reduce the resultant dose. Decontamination is essentially the removal of radioactive material and is performed starting with the highest level of contamination using the simplest procedures. Continued decontamination may show diminishing effectiveness and require a decision to stop or use more potent agents.

Decontamination kits, which contain items to decontaminate the skin and for wound cleansing, are available. Decontamination should continue until it is no longer effective but not so as to abrade skin. This procedure should be effective against iodine and other contaminants.

If personnel cannot be decontaminated to the limits of Procedure RP-AA-350, "Personnel Contamination Monitoring, Decontamination and Reporting", Radiation Emergency Assistance Center/Training Site (REAC/TS) may be contacted.

Instruments are available to determine contamination levels of personnel or equipment and the effectiveness of decontamination. Waste drums are available as containers for radioactive waste and emergency clothing is available, if needed.

4.9.6 Offsite Authorities Actions:

Offsite authorities will provide assistance as needed to protect the public. In the event a Site Area Emergency is declared, this may include activating the public notification system and providing information and periodic updates of the situation through the EAS (Emergency Alert System) and/or press briefings. Resources at primary response centers will be augmented by calling other emergency services to standby status and dispatching certain emergency personnel to initiate their functions (i.e., monitoring and communications). Information from the licensee, monitoring teams and weather stations will be continually evaluated with regard to changes in protective actions already initiated for the public, such as sheltering of people or milk animals. Monitoring results and any actions taken should be reported to the licensee and others having a need to know.

4.10 Major Release to Lake Ontario or Deer Creek:

If a major release to Lake Ontario or Deer Creek occurs which exceeds the Technical Specifications limit or the limiting concentrations specified in 10CFR20, Appendix B, Table II, Column 2, at the point of discharge, the following actions shall be taken:

The release will be classified per EP-AA-1012, Addendum 3, Radiological Emergency Plan Emergency Action Levels (EALs) for Ginna Station, and appropriate notifications will be made, if necessary, per the classification and corresponding procedures. The Ontario Water District will be notified. The waste discharge will be isolated, grab samples will be obtained, and dilution will be estimated in accordance with EPIP-1-16, Radioactive Liquid Release to Lake

Ontario or Deer Creek. The Chemistry Department will be instructed to monitor the Ontario Water District Station water.

TABLE 4.1 Recommended Protective Actions to Reduce Whole Body and Thyroid Dose

| PROJECTED DOSE TO THE POPULATION | RECOMMENDED ACTION | COMMENTS |
|--|---|--|
| Total Whole Body <1 REM ^(b) | No planned protective actions. Local authorities or State may issue an advisory to seek shelter and await further instructions. Monitor environmental radiation levels. | None. |
| Total Whole Body ≥1 REM ^(b) Committed Dose Equivalent to the thyroid (child) ≥5 REM. | Conduct evacuation. ^(c) Monitor environmental radiation levels and adjust area for mandatory evacuation based on these levels. Control access. Implement KI plan. | Evacuation should be initiated at 1 REM TEDE or 5 REM CDE Thyroid (child). Seeking shelter would be an alternative if evacuation were not immediately possible. |

GUIDANCE ON DOSE LIMITS FOR WORKERS PERFORMING EMERGENCY SERVICES

| TEDE Limit (rem) | Activity |
|-------------------------|--|
| 5 | All activities during the emergency |
| 10 | Protecting valuable property |
| 25 | Lifesaving or protection of large populations |
| >25 | Lifesaving or protection of large populations, only if individuals receiving exposure is a volunteer, and fully aware of risks involved. |

- (a) Sum of the external dose equivalent and committed dose equivalent to non-pregnant adults from exposure or intake during emergency situation. Workers performing services during emergencies should limit dose to the lens of the eye to three times the listed values and doses to any other organ (including skin and body extremities) to ten times the listed value. These limits apply to all doses from an incident, except those received in unrestricted areas as members of the public during the intermediate phase of the incident.
- (b) The sum of the effective dose equivalent resulting from exposure to external sources and the committed effective dose equivalent incurred from all significant inhalation pathways during the early phase.
- (c) Sheltering may be the preferred protective action determined and implemented by the County when it will provide protection equal to or greater than evacuation, based on consideration of factors such as source term characteristics, and temporal or other on site-specific or off-site conditions.

4.11 Public Relations:

Public information will be released by a Company spokesperson operating from the Joint Information Center. Public information personnel will be assisted by a Technical Advisor who keeps in contact with the Corporate Emergency Director and EOF operations. Company personnel will exchange information with government Public Information officers on a timely basis. All news releases will be coordinated among Federal, State, County and Company sources.

The Company communications department will be notified of any activation of this plan beginning at the Unusual Event classification level. Initial notification at the Unusual Event will be from the Control Room using an automated notification system. Instructions for notifying public information personnel at higher classifications are contained in EP-CE-114-100, Emergency Notifications.

The Joint Information Center will be activated during a nuclear emergency at an Alert or more severe event. The Emergency Plan Implementing Procedures provide for staffing this Center and outline the duties of various positions. Individuals who are qualified to assume these positions are designated. Space is allocated in the Joint Information Center for use by various regulatory and government officials to coordinate and facilitate the flow of accurate information to the public. A Company spokesperson who has access to the EOF will be available to the news media for briefing and questions.

Information concerning plant employees is available through the Public Inquiry function located in the Joint Information Center.

Information concerning the status of the plant, employees and Protective Action Decisions is released by the public information officers representing the Company and Federal, State and local governments.

A public information program to acquaint the public with the proper actions to be taken in the event of a nuclear emergency at Ginna Station will be implemented on an annual basis. This program will provide information about radiation, protective actions which can be taken, suggested evacuation routes, assistance for those with special needs, proper responses to warning signals, and where additional information can be obtained. The program will be coordinated between Company, State and county officials, and consists of items such as printed calendars, brochures and, for Wayne County only, telephone directory instructions.

Material for placement in parks, motels and retail establishments to which transients have access will be provided on an annual basis.

An annual briefing and training session will be held to acquaint the news media with the Ginna Nuclear Emergency Response Plan and related government agency emergency plans. Information on plant operation, radiation effects and concerns, the implementation of our Emergency Plan, points of contact for the release of public information at the Company and other relevant topics will be kept current through these sessions.

Section 5: Emergency Facilities and Equipment

Emergency facilities comprise a number of categories including emergency response facilities, communications systems, assessment facilities, protective facilities and first aid and medical facilities. Each is briefly described as follows:

5.1 Emergency Response Facilities:

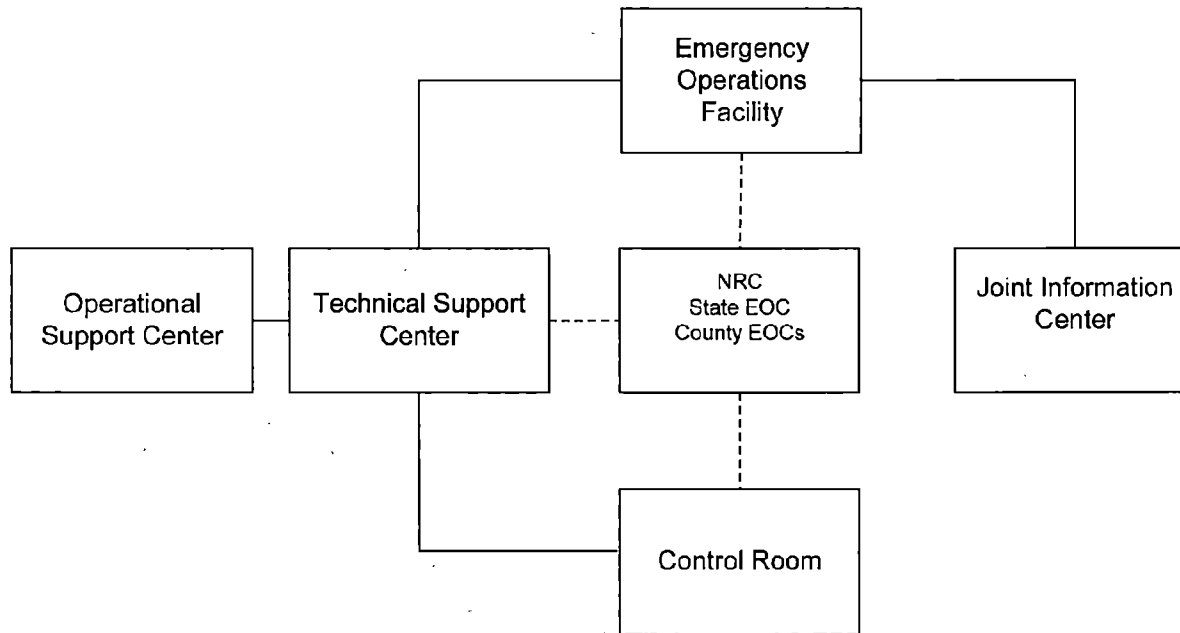
Locations have been designated to be used for evaluation and control of an emergency situation: the Control Room, Technical Support Center, Operations Support Center, Emergency Operations Facility, and the Joint Information Center. Figure 5.1 shows the relationship of these Centers during an emergency.

5.1.1 Control Room:

The Ginna Station Control Room is designed for continuous occupancy following the most limiting accident; therefore, control of plant systems will take place from this center, and on-shift crew activities relating to mitigating the consequences of the accident will be initiated and coordinated by the on-duty Shift Manager in the Control Room. Equipment for radiation monitoring, protective clothing and respiratory equipment are kept in an emergency cabinet.

5.1.2 Technical Support Center (TSC):

An area at the east end of Ginna Station Turbine Building has been constructed for use as the TSC. It is equipped for direct communication with the Control Room, Operations Support Center and the Emergency Operations Facility. The TSC also has direct phone lines to the NRC, New York State, Monroe and Wayne Counties, as well as radios and normal phones. A terminal to the plant process computer data link is installed in the Center for obtaining plant Operations data. Piping and equipment drawings are also available. A radiation monitor is mounted in the Technical Support Center. The Center has filtered air supply and is shielded to meet the same habitability requirements as the Control Room. A continuous air monitor is installed to indicate the activity of airborne iodine, noble gas and particulate. This Center meets the criteria of NUREG-0696 and is within 2 minutes walking time of the Control Room. Protective clothing and breathing apparatus are available, if needed.

FIGURE 5.1 GINNA STATION EMERGENCY CENTERS INTERFACES

5.1.3 Operations Support Center (OSC):

An area within the Ginna Administration Building has been designated as the OSC. The facility is co-located with the Outage Control Center (OCC). Personnel who are capable of providing support to the Operations needs of the plant will be assigned to this area in case of an emergency. Telephones and the plant GAI-Tronics page are available.

Personnel designated by the implementing procedures who are onsite will report directly to the OSC. OSC personnel responding from offsite will report to the OSC unless directed to the Alternative Facility.

The OSC is staffed by the Maintenance personnel, Integrated Work Management and other requested organizations. The planners will prepare work packages for the craft personnel.

The overall management of the OSC is provided by the OSC Director. The TSC Maintenance Manager is located near, and works directly with, the TSC Operations Manager to determine equipment needs vital to safe plant operation. The TSC Maintenance Manager receives input on equipment problems and priority of Operations concern from the Control Room via the TSC Operations Manager. The TSC Operations Manager and TSC Maintenance Manager receive information via wireless headsets or telephones from the Control Room staff. The TSC Maintenance Manager provides direct input to the OSC via the OSC Director.

The OSC is not a "hardened" facility and, therefore, does not have any protection from airborne radioactivity. The procedure for activation of the OSC has provisions that, if the ambient radiation levels or airborne radioactivity levels become too high, the OSC will be relocated to the TSC.

The OSC is directed by the OSC Director. The TSC Maintenance Manager communicates with the TSC Operations Manager and the Control Room. The TSC Maintenance Manager is located in the TSC near the Operations Manager. This allows the maintenance organization to get input on maintenance priorities from the TSC staff. The TSC Maintenance Manager has a dedicated telephone in the TSC. Each OSC position has a dedicated telephone extension.

Supplies in the OSC include respiratory protection equipment, protective clothing, portable lighting and portable radios. Potassium iodide tablets and dosimeters are also included in the OSC locker. Radiation monitoring equipment for surveys of the OSC or for use out on a job is available in the TSC or in the Radiation Protection office. Emergency equipment necessary to repair, control or mitigate the consequences of an accident is available in shops and in the stockroom within the plant.

5.1.4 Emergency Operations Facility (EOF):

The Emergency Operations Facility (EOF) for the Ginna Nuclear Power Plant is located at 1255 Research Forest, Macedon, NY, approximately 12 miles from the plant. The EOF shares the structure with the Joint Information Center (JIC). The

building is a single story structure of 19,000 square feet situated on a 7.23 acre land parcel with parking space for 200+ vehicles.

Approximately 7,500 square feet is designated and kept in readiness to operate as an EOF. An additional 4,000 square feet is utilized for training space but can be activated for use during a nuclear event. It will accommodate the numbers of people anticipated and provides facilities for these people. During an emergency, the entire building will be secured for exclusive use by emergency personnel. Space is allocated for Exelon personnel, NRC, Federal, State, and Local Government officials. In addition, sufficient space for Ginna emergency personnel and support groups, such as vendors and consultants, is available in the building. Facilities and briefing areas are provided for the Exelon Communications personnel, news media and general public. Facilities are provided for the news media and the Company emergency communications personnel in the front portion of the building.

Ample telephone and data communications are provided for the emergency personnel and news media. Emergency personnel are provided with communications redundancy: digital and Centrex lines are provided through multiple vendors; and dedicated lines to Baltimore (MD), Albany (NY), Lyons (NY), Rochester (NY), Ginna Station and the NRC are available. A satellite phone system is also provided. The data/computer system has its own network server and is supported on T1 lines back to Ginna and Exelon in Baltimore, MD. Two-way radio communications are installed for use by radiological Offsite Monitoring Teams. Cable TV service is provided by the local cable provider.

To aid in emergency assessment, pertinent information (such as engineering drawings, UFSAR, Technical Specifications, etc.) is stored at the facility and available via computer.

A terminal to the plant process computer data link is installed in the facility for obtaining plant Operations data. As the emergency is evaluated, accurate and up-to-date information of the situation is relayed to appropriate governmental agencies and the public through this center.

Communications equipment and radiation monitoring equipment for use by field teams from the EOF are maintained and readily available to them.

The EOF is also the alternative emergency facility for the TSC and OSC for planned and unplanned maintenance.

The EOF has been designated as the Alternative Facility as required by 10CFR Part 50 Appendix E Section IV.E.8.d to be used in the event of a hostile action.

5.1.5 Joint Information Center (JIC):

The Joint Information Center (JIC) for the Ginna Nuclear Power Plant is located at 1255 Research Forest, Macedon, NY. The JIC shares the structure with the Emergency Operations Facility (EOF). The building is a single story structure of 19,000 square feet situated on a 7.23 acre land parcel with parking space for 200+ vehicles. The structure was erected in early 2005 and was built in accordance with the Town of Macedon and the State of New York building codes.

The auditorium will be used for press conferences during the emergency. When not used for press conferences, it may be used as a conference room or classroom. The auditorium is 3,500 square feet and has a 100 seat capacity. The media work area adjacent to the auditorium will be used for phone communications by the news media. Sixteen phones are available for use by the news media.

Basic information regarding the status of the Ginna Nuclear Power Plant will come from the EOF. After review by Company technical personnel, news releases will be issued from the Joint Information Center. A telephone center for response to the general public will be established and the EOC Communicator in the EOF will be in contact with elected officials.

5.1.6 Habitability:

The offsite facilities are located approximately 12 miles south of the Ginna plant. Since their location is not in the direction of the prevailing wind patterns and considering the relative distance from the plant, radiation protection equipment is not a consideration. Building heat at Research Forest is provided by natural gas fired, forced air, furnaces. Cooling is provided with electric split units. The building's electric supply is 480 volt three phase, 600 amp service. Both the gas and electric mains are underground. A secondary electric source is supplied by natural gas fueled generator, which provides 50 KV at 480/208/120 voltages. The building is also supported with a UPS/battery system and provides 208/120 volt service for approximately 30 minutes. This is to allow for a delayed start of the generator. Lavatory facilities are available and can accommodate the emergency personnel anticipated.

5.1.7 Alternative Facility

The Alternative Facility maintains the capability for staging the TSC/OSC emergency response organization personnel in the event of a hostile action. This alternative facility has the capability for communications with the emergency operations facility, control room, and plant security and the capability for engineering assessment activities, including damage control team planning and preparation. Consistent with NRC EPFAQ No. 2013-005, the EOF will satisfy the offsite notification responsibilities for the Alternative Facility. The Alternative Facility is located at the Ginna EOF/JIC located at 1255 Research Forest, Macedon, NY.

5.1.8 Categories of Emergency Equipment

Equipment used for responding to a radiation emergency is stored in Emergency Response Facilities (ERFs), (i.e., Technical Support Center, Control Room, Operations Support Center and Emergency Operations Facility). Implementing procedures establish minimum quantities of equipment and describe inventory and testing requirements. Equipment may include survey and air sample instruments, respiratory protection, communications, dosimetry, and protective clothing.

Equipment used for responding to a radiation emergency which would necessitate site evacuation is stored in strategic storage locations: Training Center and Warehouse. Implementing procedures establish minimum quantities

of equipment and describe inventory and testing requirements. Equipment may include survey and air sample instruments, respiratory protection, communications, dosimetry and protective clothing. Minimum quantities of equipment are stored in each location and periodically inventoried as described in implementing procedures.

5.2 Communications Systems (Ginna Station):

A broad range of communication equipment is available at Ginna Station. Several systems are installed for communication between Ginna Emergency Facilities and for communication with outside agencies. Equipment is periodically verified operable by plant procedure. The use of particular types is specified in the appropriate implementing procedures as first choice and backup systems. All services other than radio are underground between centers. Communication systems are tested periodically.

5.2.1 Evacuation Warning:

A special warbling tone on the GAI-Tronics page system is sounded from the Control Room to warn personnel of a site evacuation. Warning is immediate to all persons on site as directed by the Emergency Plan Implementing Procedures. High noise areas have, in addition to the Public Address system, red warning lights with signs to direct personnel to evacuate. Special announcements on the page and special tones are used for other emergencies.

5.2.2 Phone Systems:

Communications among the Control Room, Technical Support Center, Emergency Operations Facility and Joint Information Center can be established using telephone, radio or plant PA System. A description of the specific telephone methods of communication are as follows:

- 1) Dedicated ring down lines between:
 - Station Emergency Director and Corporate Emergency Director
 - TSC Radiation Protection Director and EOF Radiation Protection Director
- 2) PBX between all facilities
- 3) Commercial lines in the EOF and CR

Communication systems are tested periodically according to the schedule in the implementing procedure.

The telephone system at Ginna affords a great deal of flexibility and capacity. Calls can be received or made to either the Frontier telephone system or the local Verizon telephone system. The telephone system has its own power supply located onsite which could maintain house phones independent of offsite lines. There are Ontario direct lines powered by the Verizon telephone system. The Control Room, Technical Support Center, Emergency Operations facility and the Central Alarm Station also contain satellite telephones for redundant communications in the event of phone system problems.

In case of an emergency, personnel not at the plant can be summoned using either the on site phones or direct lines to the Verizon and Frontier systems. A contracted notification system is used to notify responders of an emergency at the site.

Offsite radiation Offsite Monitoring Teams are also provided with portable cellular telephones as back-ups for their portable radios.

5.2.3 Radio Systems:

There are three frequencies available for use at Ginna Station. They are assigned to the Fire Brigade, Security, and Radiation Monitoring. The base stations and antennas are located for maximum transmission coverage of the areas of use. The security channel is monitored at the Central Alarm Station, the Secondary Alarm Station, and the Access Control Facility. The Radiation Monitoring and Fire Brigade channels have operator capability at the Technical Support Center and at the Emergency Operations Facility. Portable radios are available for use by Offsite Monitoring Teams in the field.

Security has a radio channel for communication with the Wayne County Sheriffs.

Portable low power hand radio sets are located in the Technical Support Center to be distributed in the event of an emergency for backup or mobile communication. Portable hand radio sets are also located in the EOF and Training Center for use by the Offsite Monitoring Teams. Offsite Monitoring Teams can communicate with the Technical Support Center or EOF.

5.2.4 Offsite Communications:

Extensive phone communications capability exists at the EOF at the Research Forest building. There is installed capacity for 400 telephone lines from Research Forest to local telephone exchanges. Approximately 140 telephone lines are maintained as active. Each one of these lines can have several handsets at different locations sharing a common circuit. The Research Forest system is powered by an AC power supply which is backed up with a generator and battery uninterruptible power supply. A satellite telephone is installed in the TSC. This phone can be used if the commercial telephone system is inoperable or if there are transmission or grid problems that affect the offsite phone system. Additional circuits to the Ginna plant are provided by five outgoing and five incoming lines provided by the Verizon system.

A 25 line Centrex system to the EOF and Joint Information Center is totally separate from the site Nortel PBX. A direct line is connected between EOF Dose Assessment and the TSC. There are four satellite phones at the EOF.

A radio communications system provides the backup to the Ginna phone system. Three other frequencies are available in the Control Room and Technical Support Center for the use of Fire Brigades, Radiation Offsite Monitoring Teams, and Plant Security. The use of these channels is explained in Section 5.2.3.

The EOF has access to all channels except security and provides monitoring of the Radiation Offsite Monitoring Teams during an incident.

Direct contact between the EOF and the TSC or Control Room is possible on the 153.50 MHz channel in case of telephone failure.

The New York State Radiological Emergency Communications System (RECS) has drops at 9 locations across the State connecting the Ginna plant, TSC, EOF, Wayne County, Monroe County and New York State Emergency Operations Centers (EOCs).

There is also a network of facsimile machines connecting key areas as well as telephone paging units for key staff position persons.

5.2.5 Offsite Notification:

Notification to State and county emergency response organizations is available 24 hours a day. The State Warning Point is staffed around the clock by the New York State Office of Emergency Management. The Monroe County Office of Emergency Management and Wayne County Emergency Management Office answer the RECS line during the workday. During non-business hours, weekends and holidays, the RECs line is covered for Wayne and Monroe Counties at their 911 Centers. At Ginna Station, there are always Control Room personnel to originate calls. New York State has responsibility for communications to other counties which may fall within the ingestion pathway exposure zone. Any contacts with Canada would also be through the State agencies.

To contact appropriate offsite agencies, the telephones would normally be used as previously noted in Section 5.2.2, with direct lines or the commercial telephone system. If necessary, offsite agencies can be contacted using satellite phones.

Communications with Federal emergency response organizations consists of telephone contact to the Department of Energy, Brookhaven Radiological Assistance Program. This call would be made by the EOF Director per our letter of agreement with Brookhaven. Their assistance may also be requested by the State or Counties.

The NRC Emergency Telecommunications System (ETS) consists of the NRC Emergency Notification System (ENS) "red phones". They are installed in the Control Room, the EOF and the Technical Support Center (including the NRC office). NRC Health Physics Network phones are also available in the Technical Support Center and EOF. There are additional ETS telephones in the EOF and TSC.

5.3 Assessment Facilities:

Facilities are provided for the assessment of post-accident radiological conditions in order to determine the appropriate emergency measures. They consist of onsite monitoring systems, laboratory facilities and environmental radiological monitoring and sampling equipment.

5.3.1 Safety Assessment System and Plant Process Computer System (SAS/PPCS):

The PPCS incorporates the Safety Assessment System.

The PPCS computer system at Ginna Station provides historical and real time plant information via displays and hard copy devices that are located in the Ginna

Control Room, the Technical Support Center and the Emergency Operations Facility.

PPCS display and report information is accessed via an alpha-numeric keyboard or icons that support menu driven functions. PPCS provides the logging and archival capability.

Both computer systems are designed to assist Control Room operators and emergency response personnel in the decision-making process during normal and abnormal plant conditions.

5.3.2 Process Radiation Monitoring System:

The process radiation monitoring system provides indications and alarms which permit assessment of in-plant conditions, as well as providing certain automatic actuations. The general functions of these systems are as follows:

- a) To indicate primary system leakage and fuel rod failures.
- b) To indicate radioactivity levels in selected process systems.
- c) To indicate radioactivity released through vents or drains.
- d) To provide visible and audible alarms in the Control Room when a significant increase in radiation occurs in systems or areas.
- e) To alarm in the Control Room on monitoring equipment failure.
- f) To shut down a purge or a release if radioactivity reaches the alarm set points and thereby avoid exceeding the release limits.

5.3.3 Effluent Monitors:

Effluent monitors available at Ginna are listed in Tables 5.1A and 5.1B. Of these monitors, particular importance is placed upon the plant vent monitors and liquid release monitor; the former because, as described in Section 3.0, Classification of Emergencies, in combination with other monitors, they indicate the need for site evacuation and protective actions for the public; the latter because it indicates the need for protective measures with regard to the use of lake water.

Alarm set points are based upon the maximum allowable environmental radioactivity concentration and dose which might result from a release and set at a fraction of those values. Monitor calibration factors, correlating monitor readings and vent concentrations can be used to estimate the release rate. From vent concentrations, the offsite dose or concentration levels can be calculated. Table 5.1A summarizes these monitors and alarm functions.

Several approaches are available to supplement effluent monitor readings for the assessment of release rates and projected doses.

High range monitors have been established for the estimation of noble gas release from the plant ventilation exhaust point in the event that normal range effluent monitors are off scale or inoperable. Periodic grab samples of effluent release paths would also be used to quantify and further refine estimated releases from the plant. Table 5.1B summarizes the SPING 4 high range monitoring system.

If no release data is available, a method for assessment of release rates is used in conjunction with the X/Q values and offsite concentrations. The release rate of radioactive material from the plant can be calculated from the measured airborne concentration at a given downwind sample location and the X/Q value for that location. Field Team survey results can be used to back calculate doses at the site boundary and offsite.

The Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA 400-R-92-001), NUREG-0133, Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants (October 1978) and Regulatory Guide 1.109 Rev. 1, Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluation Compliance with 10 CFR Part 50, Appendix I (October 1977) provide the methodology for relating radiological measurements in various environmental media or effluent monitor readings to offsite dose or dose rates. Meteorological conditions can be factored into these calculations.

A computer program operating on a personal computer is available in the Control Room, TSC and EOF. This system provides multiple methods of calculating downwind dose rates and airborne contamination levels.

The sophisticated computer program, which uses the methods for environmental dose calculations required by Federal regulations, is also available to assess doses during and after an emergency. Additional information on the radiological consequences of a variety of accidents can be found in Chapter 15 of the Ginna Updated Final Safety Analysis Report.

External dose or dose rates from surface contamination or airborne radioactivity are determined by direct field measurements (dosimeter or survey meter). Internal dose commitments from key isotopes via water or airborne pathways would be evaluated using the uptake rates, dose conversion factors, and other pathway parameters given in EPA 400, NUREG-0133 and Regulatory Guide 1.109. Computer software is available that uses these dose calculation models to determine the radiological dose assessment. In this manner, rapid determination of dose estimates from multiple pathways may be made for comparison with protective action guides.

**TABLE 5.1A
EFFLUENT RADIATION MONITORS**

| RADIATION MONITORS | LOCATION | METER READOUT | DETECTOR RANGE | PURPOSE |
|--|--|------------------------------------|--------------------------|---|
| R-10A Containment Iodine | Top Floor Cold Side Intermediate Building | Control Room and Plant Computer | 1.0E+01 – 1.0E+07 cpm | Indicates the concentration of radioiodine in the containment atmosphere or containment vent air. |
| R-10B Plant Vent Iodine | " | " | " | Indicates the concentration of radioiodine in the plant vent air. |
| R-11 Containment Particulate | " | " | " | Normally measures short-lived particulate daughters of noble gases in the containment atmosphere or containment vent air. |
| R-12 Containment Gas | " | " | " | Measures the noble gas concentration in which xenon 133 is the major isotope present in the containment atmosphere or containment vent air. |
| R-13 Plant Vent Particulate | " | " | " | Plant vent particulate monitor normally measures short-lived particulate daughters of noble gas. |
| R-14 Plant Vent Gas | " | " | " | Plant vent noble gas monitor normally measures low concentrations of xenon 133 from reactor coolant leaks in the auxiliary building. |
| R-15 Air Ejector | Turbine Building Top Floor, NW | " | " | Measures condenser off gas and is usually the first sensor of primary to secondary leakage. |
| R-16 Containment Fan Cooling Water | Turbine Building Basement Southwest Corner | " | " | Monitors the service water from the containment fan coolers. |
| R-17 Component Cooling Water | Top Floor Auxiliary Building | " | " | Used to detect leakage of primary coolant into component cooling water. |
| R-18 Liquid Waste Disposal | Auxiliary Building Top Floor West End | " | " | Monitors liquid released for unexpected activity levels. An alarm will isolate the release. |

TABLE 5.1A (continued)

EFFLUENT RADIATION MONITORS

| RADIATION MONITORS | LOCATION | METER READOUT | DETECTOR RANGE | PURPOSE |
|--|--|----------------------------------|--|--|
| R-19 S/G Blowdown | Intermediate Bldg South Side Intermediate Floor | Control Room & Plant Computer | 1.0E+01 – 1.0E+07 cpm | Monitors Steam Generator blowdown water for primary to secondary leakage. High activity will isolate the S/G blowdowns. |
| R-20A Spent Fuel Pool Heat Exchanger 1A Cooling Water | Auxiliary Building Intermediate Floor West End | " | " | Monitors for leakage from the spent fuel pool into the service water as the result of heat exchanger tube leaks |
| R-20B Spent Fuel Pool Heat Exchanger 1B Cooling Water | Auxiliary Building Top Floor | " | " | Monitors for leakage from the spent fuel pool into the service water as the result of heat exchanger tube leaks |
| R-21 Retention Tank | Service Bldg Basement Recirculation Line | " | " | Monitors retention tank water which is collected from normally clean areas of the plant. An alarm will isolate the release |
| R-22 High Conductivity Waste Tank | AVT Room | N/A | 1.0E+01 – 1.0E+06 cpm | Monitors condensate polisher regeneration waste water activity. An alarm will isolate the normal discharge |
| R-47 Condenser Air Ejector Normal Range | Turbine Building Middle Floor, Air Ejector Area | Plant Computer | 1.0E+01 – 1.0E+07 cpm | Measures condenser off gas and is usually the first sensor of primary to secondary leakage. |
| R-48 Condenser Air Ejector Accident Range | Turbine Building Top Floor, NW | Plant Computer | 1.0E-03 – 1.0E+05 $\mu\text{Ci/cc}$ | Measures condenser off gas. |

TABLE 5.1B

SPING 4 RADIATION MONITORING SYSTEM

Unit #01 Containment Vent Sampler, Unit #02 Plant Vent Sampler

| CHANNEL | RANGE |
|-------------|--|
| Particulate | 2.48E-05 to 2.48E+01 μ Ci on the filter |
| Iodine | 1.38E-05 to 1.38E+01 μ Ci on the filter |
| Noble Gas | 1.0E-06 to 1.0E+05 μ Ci/cc equivalent Xe-133 |

Note: Units 1 and 2 can be read on the PPCS or locally on the 296 foot level of the north side of the intermediate building.

Unit #04 Steam Line Monitors**NOTE:**

Unit #04 can be read on the PPCS, digital display in the control room or at the 296 foot level of the intermediate building north.

| CHANNEL | RANGE |
|-------------------------------|--------------------------|
| #01 "A" Steam Line Monitor | 1.0E-02 to 1.0E+04 mR/hr |
| #02 "B" Steam Line Monitor | 1.0E-02 to 1.0E+04 mR/hr |

TABLE 5.1C
AREA MONITORS

| RADIATION MONITORS | LOCATION | METER READOUT | DETECTOR RANGE | POSSIBLE MEANINGS OF ALARMS OR UPWARD TRENDING OF MONITORS |
|--|--|-----------------------|--------------------------|---|
| R-1 Control Room Monitor | Control Room | Control Room and PPCS | 1.0E-01 to 1.0E+07 mR/hr | Possible radiation level in the Control Room. Possible Control Room inaccessibility |
| R-2 Containment | By Personnel Hatch | " | " | Rising radiation levels in containment |
| R-7 Incore Detector Area | Intermediate Floor Containment | " | " | Indicates flux mapping in progress or possible rising radiation levels in containment |
| R-9 Letdown Line Monitor | Auxiliary Building, Basement Floor, NaOH Tank Room | " | " | Increasing radiation levels in the reactor coolant system |
| R-29 High Range Containment Monitor | Containment, Operating Floor, Northwest | " | 1.0E+00 to 1.0E+07 R/hr | Primary coolant leak inside containment |
| R-30 High Range Containment Monitor | Containment, Operating Floor, Northeast | " | 1.0E+00 to 1.0E+07 R/hr | Primary coolant leak inside containment |

5.3.4 Area Radiation Monitoring System:

The plant area radiation monitoring system provides indications and alarms which assist in assessment of plant conditions. Its general functions are as follows:

- a) To indicate the general radiation level in specified areas of the plant.
- b) To provide visible and audible alarms in both the Control Room and the remote meter location when a significant increase in radiation level occurs.
- c) To provide a visible alarm in the Control Room on meter or detector failure.

As described in Section 3.0, Classification of Emergencies, this system is used to initiate local radiation emergency protective action and, in combination with other systems, to indicate the need for a site evacuation and possible offsite protective measures. Table 5.1C lists the location of area monitors of major interest. Alarm set points can be found in Plant Procedures.

High Range Radiation Monitors are installed within containment with readout in the Control Room. A procedure is available by which readings can be converted to an interpretation of the extent of fuel damage and/or radioactivity released to the containment atmosphere.

5.3.5 Source Range Nuclear Instrumentation:

The two source range channels are used at shutdown to provide an audible count rate signal and audible alarms in both the Control Room and containment to call attention to unexpected increase in neutron flux. A high source range alarm in containment is the signal to evacuate the area.

5.3.6 Continuous Air Monitors:

Several mobile radiation monitors are available within the controlled areas particularly for use during work where local detection of excessive airborne contamination is advisable. Various combinations of noble gases, iodine and particulate monitors are available. These are equipped with meter as well as audible and visible alarms.

5.3.7 Portable Monitors, Sampling Equipment and Other Special Equipment:

Portable monitors, sampling equipment and other special equipment for assessing the extent of the consequences of a radiation emergency are located in the Control Room, the Radiation Protection office, the Auxiliary Building and the Training Center. A summary of this equipment is given in Step 5.1.8. Additional sampling and monitoring equipment is also available in the TSC and the EOF.

5.3.8 Process and Containment Monitors:

Numerous process variables are indicated and recorded in the Control Room to ensure safe and orderly operation of all systems and processes over the full operating range of the plant, as well as for detection of off-normal or emergency conditions. Of these monitors, particular importance is placed upon those which provide for detection of a loss of coolant accident and the immediate automatic actuation of equipment to mitigate its consequences. These include 4 channels

for Pressurizer pressure, 3 channels for Pressurizer level, 4 channels for Steam Generator level, 4 channels for Reactor Coolant average temperature, 2 channels for steam flow and feedwater flow for each Steam Generator. Along with these are indications of containment conditions, which include 6 channels for containment pressure, sump level and pump actuation, safety injection recirculation sump level indicator, 4 channels for fan cooler condensate level, and 6 channels for dew point temperature.

Greater detail for the process and containment monitors is given in the UFSAR, Chapter 7.

Seismic and hydrologic emergencies are treated by Procedure ER-SC.4 and ER-SC.2 respectively. A seismic monitor (accelerograph) is located in the intermediate building sub-basement and a lake level indication is available from the plant computers or the Screen House.

Information concerning seismic or hydrologic events can be obtained from offsite agencies such as the NYS geologist at the State Education Department or at Cornell University Geology Department.

5.3.9 Plant Laboratories:

The laboratory area of the plant is maintained for the purpose of monitoring the condition of a variety of fluid streams and stored fluids including: the activity and isotopic content; for assessing the degree of contamination of plant areas, movable items and personnel; and for storing, calibrating and maintaining portable and laboratory radiation measuring instruments. Separate laboratory services are available at Exelon's Ft Smallwood Road Complex in Baltimore, MD for assessing the effect of the plant operation on the environs.

By the use of a Post-Accident Sampling System located in the controlled area of the Intermediate Building, samples can be drawn from reactor coolant, containment atmosphere, and containment sump. These samples are processed from a remote control board to open valves, collect the sample, and read out results of the analysis. Analyses for chlorides and radioactive isotopes can be completed on diluted, shielded grab samples in a laboratory facility within the times required by NUREG-0737, Clarification of TMI Action Plan Requirements. Samples can be taken and analyzed without exceeding personnel doses of 5 Rem. This system will also be used for normal Operations samples.

In addition to laboratory facilities within the plant, some capability is provided at the Training Center for use in assessing the offsite effects of an incident. The chemistry laboratories of the nuclear plants at the Oswego, New York, site are also available to supplement the Ginna onsite laboratory.

5.3.10 Meteorological Monitoring:

Data on meteorological conditions is available to the Control Room for use in assessing the consequences of an airborne release of radioactive matter. All meteorological measuring devices, with the exception of the precipitation measuring system, are mounted on a 250 feet weather tower located at the Ginna plant site. Wind speed, wind direction and temperature are measured at the 33, 150, and 250 feet levels. The 33 foot wind speed and direction sensor

readings are recorded on the Radiation Monitoring System Panel in the Ginna Control Room. Temperatures at three tower levels are also indicated in the Control Room by digital display. This information will be relayed to the NRC Operations Center and the New York State and County EOCs. Meteorological data is available continuously and is also programmed for printout at 15 minute averages, accessible from the TSC and EOF.

Rainfall is measured by a tipping bucket rain gauge located at the base of the Ginna weather tower. Wind direction, wind speed, and temperature indications from the three tower elevations are also registered on the Ginna Plant Process Computer System. Instrumentation and calibration procedures associated with the Ginna meteorological program are in conformance with Regulatory Guide 1.23.

The weather tower is equipped with redundant sensing devices for use as backup indicators of wind speed, direction, temperature and temperature difference. All meteorological data will be collected and computer processed to provide estimates of radioactive materials transport and diffusion under routine and accident conditions. Power for the meteorological measurements system and associated equipment is supplied by an electrical feed separate from the plant. Means for remote interrogation of the meteorological system by telephone link is available to the TSC and EOF via computer terminals at each location.

The Buffalo International Airport (National Weather Service) has meteorological instrumentation readings which can be accessed by private phone number on a 24 hour basis. A backup weather tower is located in close proximity south of the plant, and has a wind direction and speed recorder. Means for remote interrogation of the backup meteorological system is available at the TSC and EOF via computer terminal.

An implementing procedure describes the method by which onsite meteorological information is used for the estimation of offsite radiation doses. Based upon wind conditions and determined atmospheric stability, estimates of downwind radioactivity concentrations and doses can be made by dose assessment staff using computerized calculation methods.

5.3.11 Envirom Radiological Monitoring:

Sampling systems are established for normal environmental sampling in the immediate area surrounding the plant and also in locations whose distance from the plant roughly corresponds to 1/100th of the onsite radioactivity concentrations estimated from annual average atmospheric dispersion. These stations contain provisions for air sampling and for radiation dose measurement. Certain stations include precipitation collectors. They provide information about the extent of a general emergency and its effect on the environment, in accordance with appropriate implementing procedures.

In addition, an array of dosimeters is in place at the site boundary, at the offsite sampling stations (approximately 10 miles) and at the onsite sampling stations. Up to 18 additional dosimeters have been placed at specified locations, which will add to the evaluation of doses throughout the Emergency Planning Zone.

The placement of these dosimeters around Ginna Station for routine or post-accident radiation assessment is given in an environmental chemistry procedure.

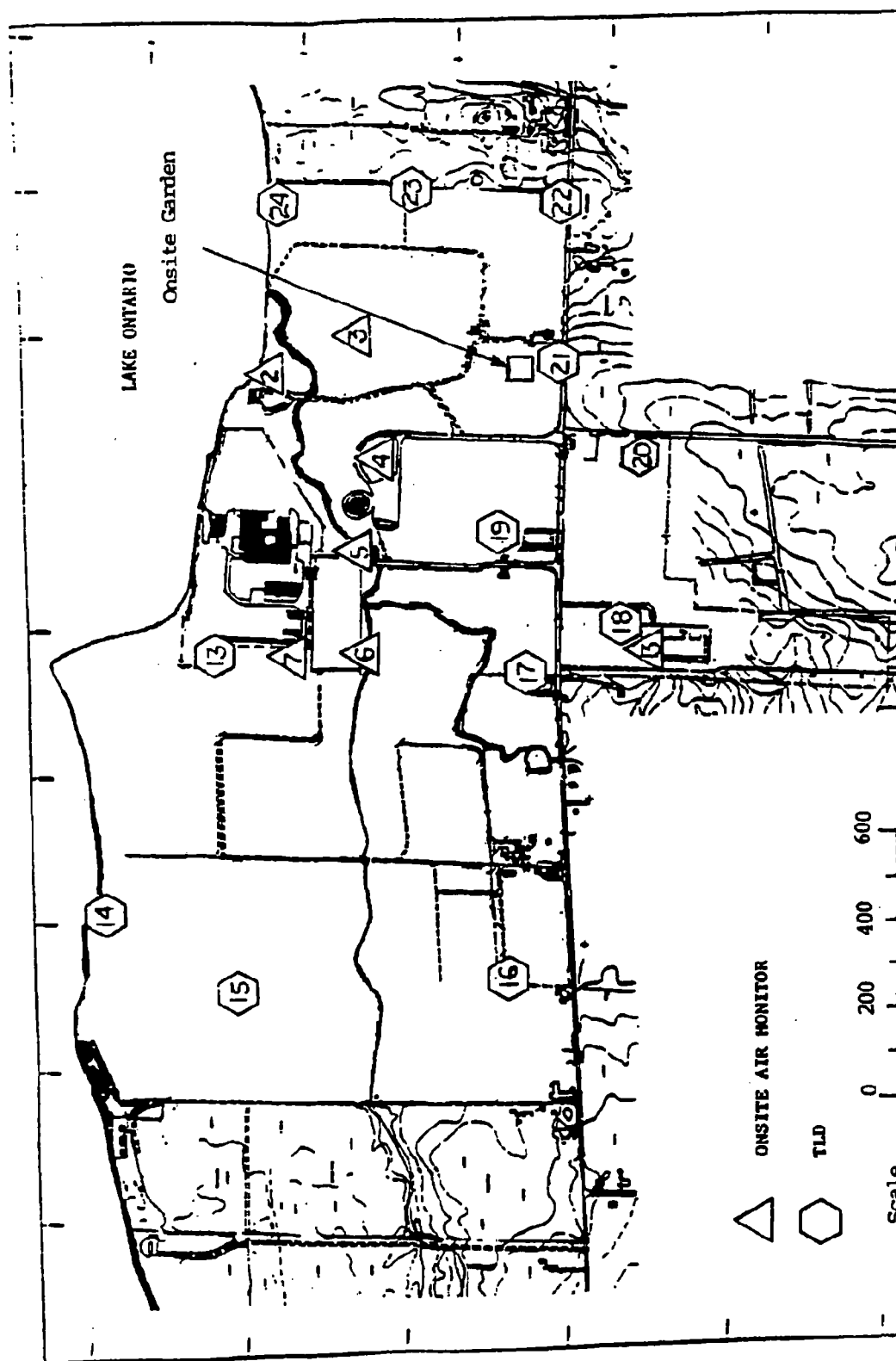
Maps are included in that procedure so as to locate the TLDs for best coverage (Figure 5.2). The radiological program provided meets the minimum requirements of the NRC Radiological Assessment Branch Technical Position for Environmental Radiological Environmental Monitoring.

Monitoring teams are quickly dispatched to follow designated routes for the field monitoring within the plume exposure zone. A Ginna Station procedure details the method used for the rapid field determination of airborne particulate and radioiodine concentrations following an accident in addition to radiation levels. The procedure consists of operating a portable air sampler which contains a silver zeolite cartridge and particulate filter, followed by direct filter measurement with a count rate meter probe. The minimum sensitivity for iodine by this method, based upon a 6 minute sampling time, is approximately $2.3 \text{ E-8 microcurie/cc}$.

It is recognized that under certain post-accident conditions, some unavoidable interference from noble gas or high background levels may affect the initial filter readings being taken in the field. The absorption of noble gases in the charcoal cartridge would lead to an overestimate of airborne radioiodine concentrations. Therefore, silver zeolite is used. If background levels are too high to determine a proper filter reading, filter measurements will be made at an alternate location out of the radiation plume.

Air samples collected by Offsite Monitoring Teams from portable sampling devices and from fixed air monitoring systems may be evaluated using higher sensitivity methods with onsite or near-site analytical equipment (e.g., environmental laboratory).

Figure 5.2 Dosimeter Locations



5.3.12 Emergency Instruments and Equipment:

Emergency equipment for the various centers is described in step 5.1.8. This equipment is checked periodically according to the schedule in implementing procedures to ensure that it is available and operable. Any instrument or equipment found to be in need of repair or calibration is immediately replaced from the Radiation Protection reserve supplies. Instruments are calibrated along with plant instruments by the Radiation Protection section according to RP procedures which meet the manufacturers' recommendations. Sufficient reserves of instruments and equipment are available to replace those that are removed from service for maintenance and/or calibration.

5.3.13 Public Alerting System:

An alerting system to make the public aware of an incident at Ginna Station which may require protective action on their part has been developed and installed. The Ginna prompt public alerting system consists of 96 sirens. In addition, tone alert radios have been provided at schools, nursing homes and industrial establishments as an enhancement to the Public Alerting System. Tone alert radio locations are listed in EPG-1, Emergency Preparedness Guideline. The special supplemental needs of transient populations at locations such as motels, parks and work camps will be addressed, as necessary, within the individual county plans. Instructions for transient populations have been distributed to such locations.

The objectives of the Ginna prompt public alerting system are twofold: to alert the general public both indoors and outdoors of the existence of an emergency situation and to provide for the communication of preliminary emergency information.

The design objective for this system is to complete the initial alerting of the affected population within the Plume Exposure Pathway within 15 minutes after the notification of State and local governments by the Ginna. The system was designed to assure coverage of essentially 100% of the population within the 10 mile Emergency Planning Zone.

The control of the system rests with the county officials within their respective borders. In Monroe County, the County Executive has this authority and, in Wayne County, it is the Chairman of the Board of Supervisors. Sirens are activated by the counties and maintained by Ginna. Tone alert radios are activated by a radio signal from the Emergency Alert System (EAS). The sirens activate for 3 to 5 minutes.

5.3.13.1 Siren Backup:

A backup activation point is available in each county for activating the alert system should the primary transmitter fail. The siren portion of the alert system is designed to produce a minimum 10dB(C) above ambient sound levels in all portions of the Emergency Planning Zone or a sound level of at least 60 dB for population areas with <2,000 persons/mile or 70dB for population areas with >2,000 persons/mile.

The Technical Support Center has an activation point that can be used as a back-up for both Monroe and Wayne Counties. Each county also has a method for back-up alerting. In the Wayne County portion of the 10-mile EPZ, route alerting is activated by the Wayne County EOC and carried out using loudspeakers mounted on county-owned emergency response vehicles. Monroe County's back-up alerting method is a mass-notification reverse-calling system that can send emergency alert messages to specific geographical areas.

5.3.13.2 Siren Testing:

Siren reliability will be tested periodically at 3 levels of operation:

1. Bi-weekly silent tests to verify system electronic components are functioning.
2. Quarterly manually-activated growl tests
3. Annual full duration audible tests of the entire system.

Periodic surveys will be taken by the Federal Emergency Management Agency to determine any difficulties which may require corrective measures.

Alert system operations reliability is expected to be greater than 95%. Sirens are powered off the RG&E distribution system which has better than 99% availability. It is fed from the New York State Power Pool grid; therefore, it is not dependent on the operation of Ginna. The Company has the responsibility for maintaining the siren alert system operable. The location of sirens is given in the Ginna Alert and Notification System (ANS) Design Report.

A siren verification system is installed providing remote feedback capability to both counties and Ginna from all 96 siren units. The system is used to verify proper siren activation and to verify whether inadvertent siren activations have occurred.

When appropriate, growl testing of the sirens will be conducted following preventive or corrective maintenance. Depending on the scope of the maintenance, the work order will determine if growl testing is appropriate.

5.3.13.3 Emergency Alert System:

If the sirens are activated, the Emergency Alert System (EAS) will notify the public of the actions they should take.

During an emergency at Ginna, activation of the EAS will be the result of a cooperative decision between lead officials of Wayne and Monroe Counties and New York State. In extenuating circumstances, activation requests may be made unilaterally by one of those entities.

Sample messages to be given over the EAS via radio and television are part of the county procedures. A calendar that is distributed annually provides information regarding the system and appropriate actions to be taken.

The Wayne County Public Information Officer (PIO) will notify the Local Primary (LP-1) station of an imminent EAS broadcast and will coordinate the broadcast time for the message. If Ginna's JIC has not been activated, or all

lead PIOs have not yet reported there when the decision is made by either county to request EAS activation, coordination of the message preparation may take place between the Wayne and Monroe County EOCs.

If Wayne County cannot contact the LP-1 station, the Wayne County PIO will communicate the approved EAS message to Monroe County. Monroe County will read the EAS message to the LP-1 station via a telephone at the Monroe County EOC that is hard-wired into the LP-1 station's newsroom.

5.3.14 Fire Protection Facilities:

The fire protection facilities are comprised of a number of automatic and non-automatic protection systems as well as assessment and alerting equipment.

Fire protection facilities have been installed in accordance with NRC Fire Protection Safety Evaluations. Detection is provided in all areas of the plant that contain vital equipment. The system initiates suppression systems and alarms in the Control Room.

5.4 Protective Facilities:

Aspects of the plant which serve a protective function to personnel onsite in the event of an emergency are described in this section. They include accident shielding, protective ventilation, emergency condition signaling equipment, assembly locations, containment control provisions, and other protective equipment and supplies. First aid and medical facilities are treated separately in Section 5.5.

5.4.1 Accident Shield:

The containment vessel consists of the 3.5 feet thick reinforced concrete cylinder capped by a hemispherical reinforced concrete dome of a 2.5 feet thickness. The shielding includes supplemental shields in front of the containment personnel hatch and 20 inch walls, east and south sides and the roof of the Control Room. The equipment access hatch is shielded by a 3 feet thick concrete shadow shield and a 1 foot concrete roof to reduce scattered dose levels. Concrete walls and ceiling of the Technical Support Center provide shielding.

5.4.2 Protective Ventilation:

During normal operation a varying amount of fresh outside air is admitted to the Control Room via the normal Control Room ventilation system.

If sensors detect high radiation levels, chlorine gas or ammonia gas in the Control Room outside air intake, the Control Room is automatically isolated, the normal Control Room ventilation system is secured, and two trains of the Control Room Emergency Air Treatment System (CREATS) will automatically start. CREATS provides charcoal and high efficiency particulate air (HEPA) filtration for removal of radioactive particles and gaseous iodine from the Control Room atmosphere.

The Technical Support Center has filtered fresh air makeup, with charcoal filtration, to meet habitability requirements for occupancy.

5.4.3 Alerting Equipment:

Plant personnel are signaled to evacuate at once by a special tone, activated manually in the Control Room. In areas where audible signals may not be heard, special flashing lights have been installed. For fire and medical emergencies, an explicit announcement is made over the PA system.

5.4.4 Assembly Locations:

Several assembly locations have been established, the selection of which will depend on the conditions of the emergency. Non-essential personnel affected by a local radiation emergency are to report to the Decontamination Area.

In the event of a site evacuation, all Control Room operators are to report to the Control Room, the protective features of which are described above. Non-essential personnel are to reassemble at the Ginna Training Center or alternate assembly area as directed, except for those having a role in the Technical Support Center or Operations Support Center, described in Section 5.1. The Training Center has several classrooms and offices to accommodate non-essential personnel. The classrooms and offices, roughly 600 feet from the reactor, seats more than 150 people; there is additional room in the classrooms and offices. A local radiation monitor is installed in the Training Center which houses the Offsite Monitoring Team equipment to aid in the evaluation of the necessity for emergency organization personnel to relocate.

5.4.5 Contamination Control Provisions:

The plant site is divided into two categories, the "Clean Area" and the Radiologically Controlled Area. Entry to and exit from the Radiologically Controlled Area is normally through the designated Access Control Point. Any area in which radioactive materials and radiation are present shall be surveyed, classified, roped and conspicuously posted with the appropriate radiation caution sign. These then become Radiologically Controlled Areas and proper access is provided and controlled. Plant procedures provide the radiation or contamination levels at which an area is declared a Radiologically Controlled Area or removed from radiation control status.

The general arrangement of the service facilities is designed to provide adequate personnel decontamination and change areas. The clean locker room is used to store items of personal clothing not required or allowed in the Controlled Area.

The Hot Shop is employed as a protective clothing change area. A supply of clean protective clothing for personnel is maintained in this area, and there is provision for collection of used protective clothing.

All personnel will survey themselves on leaving the Controlled Area using equipment provided at the Access Control Point.

Personnel decontamination supplies with instructions posted for their use are available in the access control area.

In the event of a site evacuation, provisions for decontamination are available at the onsite Training Center.

A 1000-gallon holding tank is available to contain decontamination water from a sink and shower located at the Training Center. Decontamination water will be sampled prior to transfer, treatment or disposal.

5.4.6 Protective Equipment and Supplies:

Personnel entering the Controlled Area may be required to wear protective clothing. The nature of the work to be done governs the selection of protective clothing to be worn by individuals. The protective apparel available is shoe covers, head covers, gloves and coveralls. Additional items of specialized apparel such as plastic suits, face shields, and respirators are available for operations involving high levels of contamination. In all cases, Radiation Protection personnel shall evaluate the radiological conditions and specify the required items of protective clothing to be worn.

Respiratory protective devices are required wherever an airborne radiation area exists or is expected. In such cases, Radiation Protection personnel monitor the airborne concentrations and specify the necessary protective devices according to concentration and type of airborne contaminants present.

Available respiratory devices include full face air purifying respirators (filter type both negative and pressured powered air purifying units). Air-line supplied respirators of pressure demand type are used as well as constant flow hoods. Self-Contained Breathing Apparatus devices, using full face masks and pressure demand regulators, are also available.

Site specific ERO Respirator qualification requirements contained in the ERO Training and Qualification procedure take precedence over requirements contained in the Exelon Standardized Radiological Emergency Plan for Ginna Station.

For use in an emergency, equipment and supplies are located in the Control Room, Technical Support Center, and the Training Center. Equipment categories are given in 5.1.8.

5.4.7 Emergency Vehicles:

In the event it becomes necessary to make use of automotive equipment, a number of vehicles will be available. These include a variety of company-owned vehicles assigned to the Station. Lastly, a large and diverse fleet of vehicles is available from the Company vehicle fleet.

5.5 First Aid and Medical Facilities:

First aid and medical provisions include both onsite and offsite facilities. The latter are described in Section 2.8, Augmentation of the Emergency Organization. A dispensary onsite contains sinks, a bed, a stretcher, and miscellaneous first aid equipment and supplies. Decontamination supplies can be obtained from the Radiation Protection group. Personnel decontamination supplies and bioassay collection kits are available at Rochester General Hospital and Newark-Wayne Community Hospital.

Auxiliary Operators are trained in first aid procedures using Red Cross Multi-Media or an equivalent program. An administrative procedure establishes a First Aid Team and the actions to be followed in the event of illness or injury at Ginna Station.

Section 6: Maintaining Nuclear Emergency Preparedness

Formalized training program(s) have been established to ensure that all personnel who actively participate in the Nuclear Emergency Plan maintain their familiarity with the plan and their required response. A radiation emergency exercise shall be conducted at least annually, with emphasis placed upon orderly implementation of the emergency plan.

It is the Company management's expectation that responders will respond immediately upon being notified and not wait for additional time. This expectation is reinforced as part of the responder training.

Personnel trained for onsite response to a radiation emergency are part of the regular plant staff and are trained to specific responsibilities within the emergency organization. Training is documented by the Manager, Emergency Preparedness and the Emergency Preparedness Staff. Any emergency plan work by consultants will be under the control of, and reviewed by, the Manager, Emergency Preparedness.

Exercises shall be evaluated by the Manager, Emergency Preparedness and reviewed by the Emergency Preparedness Station and Corporate Management, thereby assuring the effectiveness of the plan throughout the lifetime of the R. E. Ginna facility.

6.1 Training and Drills:

Training classes on the emergency plan shall be conducted once per calendar year not to exceed 18 months between training sessions for all Ginna emergency response personnel who may actively participate in the radiation emergency plan. Details of the training programs are established in Exelon ERO Training and Qualification procedure. Training will include a demonstration of their ability to perform the functions to which they may be assigned by participating in a Drill or Exercise at least once every two years. During drills, on-the-spot corrections of erroneous performance may be made, followed by a critique or corrective action.

Provisions must be made to start a drill or exercise between 6:00 p.m. and 4:00 a.m. at least once in every eight-year cycle. Some drills or exercises should be unannounced.

Specialized training will be provided for:

1. Technical Support Center assignees
2. Operations Support Center assignees
3. First Aid Teams
4. Offsite Monitoring Teams
5. Emergency Operations Facility personnel
6. Security personnel
7. Local Emergency Support Services personnel
8. Fire Brigade personnel
9. Dose Assessment personnel

10. Core Damage Assessment personnel
11. JIC personnel
12. On-Shift Radiation Protection technicians
13. Severe Accident Management Evaluators and Decision-Makers

6.1.1 Emergency Director:

Training of Emergency Directors will be given annually to the personnel who fill the Corporate and Shift Emergency Director position. This training will cover responsibilities, communications, emergency classifications, protective action recommendations, and review of all procedures pertinent to their respective duties under the Emergency Plan. The necessary lesson plans and training documents are developed in accordance with Exelon procedures and processes.

6.1.2 Offsite Monitoring Teams:

Offsite Monitoring Team Training will be given to selected personnel. Training material will cover Radiation Protection practices and techniques utilized during radiation monitoring, Offsite Monitoring Team equipment and its use, radio communication techniques, monitoring and sampling procedures, survey routes and sample points, contamination and decontamination considerations, and review of implementing procedures used by Offsite Monitoring Teams. Field training will be given as needed.

6.1.3 Special Training for Participating Agencies:

Annual training will be provided to offsite support agencies, State and counties on EALs/PARs and other pertinent topics.

Training shall also be provided at least annually for but not limited to the following groups:

- a) Ontario Volunteer Fire Company
- b) Ontario Volunteer Emergency Squad
- c) Rochester General Hospital
- d) Newark-Wayne Community Hospital

Training for these groups consists of lectures concerning their required involvement during radiation emergencies, procedures for notification, and basic radiation protection.

6.1.4 Drills and Exercises:

The ERO Training and Qualification procedure establishes the training program which develops and maintains the proficiency of emergency response personnel. This program meets the requirements of 10CFR50 Appendix E Section IV F regarding responding to emergencies. Through the initial training program and annual drills, personnel will be familiarized with the intent of the plan and the content of implementing procedures. Key personnel will be trained in the specific duties to which they may be assigned. Lectures and field training will be used, as appropriate, to familiarize personnel with their duties.

Communications equipment and processes are checked periodically as established by an implementing procedure. The New York State Radiological Emergency Communications System (RECS) and the NRC Emergency Notification System (ENS) are tested monthly.

Fire drills are conducted in accordance with plant procedures. A medical emergency drill which involves a simulated contaminated/injured individual and participation by the local support services will be conducted annually. A plant environs radiological monitoring drill (onsite and offsite) will be conducted annually in conjunction with training for and during the annual exercise. This shall include collection and review of analysis procedures for environmental samples. Radiation Protection drills shall be conducted semi-annually. Analysis of in-plant liquid samples, including use of the post-accident sampling system, shall be included in Radiation Protection drills annually.

Periodic drills will check communication systems, response time, performance of participants, and interrelations of the various emergency centers. Training drills may be held prior to any exercises. Exercises will be held in conjunction with Ginna Station, New York State and local governments as required by regulations. All aspects of an exercise will be monitored by trained observers and a report made to the station and corporate management. Any comments will be evaluated and actions taken if appropriate. Emergency response facilities, procedures and equipment are evaluated by the ERO members and the controllers/evaluators during drills and exercises and deficiencies are noted during facility critiques.

Preparation of the scenarios for use in exercises and drills will be coordinated by the Manager, Emergency Preparedness. The scenario preparation team is appointed by the Manager, Emergency Preparedness to develop the scenario package which shall include the scope, goals and objectives of the exercise, a time line of real and simulated events, a narrative summary, participating organizations, appropriate messages and data sheets, evaluation criteria, and information for official observers. The Manager, Emergency Preparedness will review and approve the scope and objectives for the Annual Ginna Emergency Exercise. The Manager, Emergency Preparedness will arrange for qualified controllers and coordinate activities of participating organizations. The scenario should be varied from year to year to test all major elements of the plan within a 8 year period. The exercise shall simulate an emergency that results in offsite radiological releases which require response by offsite authorities.

Annually, a radiation emergency exercise will be held. This exercise will be coordinated with principal participating offsite agencies, testing at a minimum the communication links and one other element. Drills will be started at various times of the day and under various weather conditions. Some exercises will be unannounced. Hostile action based scenarios will periodically be used to practice and evaluate the integration of security functions with emergency plan implementation (at least one during a eight-year period). Scenarios will be developed which allow for free play in decision-making by those individuals in responsible positions. Structured responses will be used only to the extent necessary to keep the exercise moving so as to meet the objectives of the exercise.

Written Drill/Exercise Reports shall be submitted by the Manager, Emergency Preparedness to the station and corporate management emphasizing areas of strength and weakness and outlining plans for remedial action, as necessary.

A critique at which controllers, observers and participants may make comments will be held as soon as practical after the exercise to evaluate the actions and interactions of response organizations. These comments will be evaluated by the Manager, Emergency Preparedness to determine if they should be entered into the Ginna Corrective Action Program to assure that necessary corrections to the Plan are implemented.

6.1.5 Manager, Emergency Preparedness and Emergency Preparedness Coordinator:

The Manager, Emergency Preparedness is responsible for coordinating the Emergency Plan with other response organizations. They will review the Plan and agreements to certify that they are current. The update will take into account changes identified by drills and exercises.

The Emergency Preparedness Coordinator reports to the Manager, Emergency Preparedness. The Emergency Preparedness Coordinator provides assistance on emergency planning issues in the plant and will be designated duties by the Manager.

The Manager and Coordinator will maintain their awareness of emergency response activities, facilities and procedures by participating in related committees and reviewing completed documentation. The Ginna procedure change process requires multiple independent reviews. A 10CFR50.54(q) screening is also required for all EP implementing procedure revisions.

The EP Coordinator conducts surveillance of the emergency response facilities through scheduled inspections and tests to ensure their readiness. The Manager and EP Coordinator meet routinely with Ginna management and supervisors to discuss emergency concerns, training and changes relative to emergency planning. These meetings include: EP Advisory Committee, PORC, POD, the Exelon Nuclear Training Emergency Preparedness Oversight Committee (ENTEPOC), and special task forces.

The Manager and EP Coordinator will attend appropriate training, seminars, workshops, and conferences sponsored by the Company, the nuclear industry, and Federal, State and local governments to keep current on emergency planning techniques and concepts.

The Plant Manager is the chairman of the Emergency Preparedness Advisory Committee which tracks the progress of emergency planning activities and acts as a sounding board for all emergency planning issues. The EP Manager is a board member.

6.2 Annual Review and Revision of the Plan and Procedures:

The Ginna Emergency Plan will be reviewed and revised annually in accordance with EPIP-5-6. Revisions to the Plan are subject to approval by PORC.

Revisions to the Plan and Emergency Plan Implementing Procedures (EPIP) may be the result of drills, exercises, training or routine surveillance. The Plan is

reviewed by the PORC. EIPs are reviewed in accordance with site and fleet requirements.

Emergency procedure changes are controlled so that only current copies are available for use. Revised procedures are distributed to a list of controlled copy holders. Shift Operators and licensed staff are made aware of revisions during regularly scheduled training coordinated by the Training Department. Emergency telephone numbers are kept up-to-date through quarterly review and distribution of revisions.

The Emergency Plan is a Quality Record and shall be processed per Records Management procedures. Copies shall be maintained in the Station Archives for the lifetime of the plant.

6.3 Emergency Equipment and Supplies:

The operational readiness of all items of emergency equipment and supplies will be assured through periodic inspections of emergency equipment in accordance with implementing procedures. Communications test with state & local governments (RECS) is performed monthly. The EP procedures include inspecting and testing of equipment stored in the Control Room, OSC, JIC, EOF, Training Center, Technical Support Center and Warehouse. Also included are tests of the operability of equipment.

Necessary transportation for offsite surveys will be through a company owned vehicle.

6.3.1 Siren Tests and operability:

The Ginna Emergency Sirens shall be activated at intervals not to exceed one year (plus or minus three calendar months). This test will be considered successful if no more than 10% (10 of 96) of the sirens fail to operate properly. Any time it is found that siren failures result in the loss of capability to alert more than 25% of EPZ population for more than one hour, the NRC shall be notified.

6.4 Auditing:

All Nuclear Emergency Response Plan elements are reviewed by persons who have no direct responsibility for the implementation of the emergency preparedness program either:

- a. At intervals not to exceed 12 months; or
- b. As necessary, based on an assessment by the licensee against performance indicators, and as soon as reasonably practicable after a change occurs in personnel, procedures, equipment or facilities that potentially could adversely affect emergency preparedness, but no longer than 12 months after the change. In any case, all elements of the emergency preparedness program must be reviewed at least once every 24 months.

The review must include an evaluation of the adequacy of interfaces with State and local governments and of licensee drills, exercises, capabilities and procedures. The results of the review, along with recommendations for improvements, must be documented, reported to corporate and plant management, and retained for a period of five years. The part of the review

involving the evaluation of the adequacy the of interfaces with State and local governments must be available to the appropriate State and local governments.

Follow-up implementation tasks are assigned through the use of Condition Reports. The results of the review are reviewed by the Nuclear Safety Review Board (NSRB).

Section 7: Recovery

After the initial emergency response actions are concluded (i.e., the plant is in cold shutdown and under control), a decision to begin the recovery phase will be initiated. A number of considerations will enter into the decision to begin the recovery phase and dismantle the Emergency Response Organization. The decision to enter the recovery phase will be made by the Corporate Emergency Director in consultation with the support managers, the Plant Operation Review Committee, and the corporate officers and offsite personnel. EP-CE-115, Termination and Recovery will be used by the organization to transition from a response organization to a recovery organization.

Federal, State and local authorities shall be advised of any decisions and resulting changes pertaining to the Emergency Organization status.

7.1 Recovery Actions:

Re-entry of the plant, decontamination, repair, and return to operation will be controlled by a general implementing procedure which provides for development of a flexible plan of actions and specifies particular evaluation and planning activities. A recovery organization to provide long term augmentation of the emergency organization has been established. A procedure to alert these people and put the EOF into operation is part of the station implementing procedures.

EP-CE-115 details the establishment of a Recovery organization.

The Corporate Emergency Director will notify all response organizations that recovery operations are underway.

In the recovery phase, all actions will be carefully planned by station supervisory personnel in conjunction with the Recovery Team, the Technical Support Center personnel and the Ginna senior management. Planning for recovery will include evaluation of survey data, review of exposures incurred, projection of manpower and equipment needs, and re-entry offsite monitoring team activities. Actions prescribed upon re-entry include a comprehensive survey of the plant to define radiological problem areas. Based on survey results, high radiation areas and areas of contamination will be isolated and posted and, if possible, portable shielding will be used, as appropriate.

Upon evaluation of plant conditions, further activities for making necessary repairs, decontamination and restoration to normal operations will be outlined by Ginna senior management in accordance with standard Radiation Protection practices. Personnel radiation exposure during the recovery stage of the incident shall be closely controlled and documented. Individual exposures shall be in accordance with 10CFR20 limits.

Corporate management and Emergency Response Organization personnel will augment the plant staff in long-term recovery operations.

- a) Corporate groups such as Business Continuity may provide logistical support using corporate emergency plans, protocols and procedures.
- b) Technical support may be provided by the Engineering Services Department and consultants under the direction of the Manager, Nuclear Services.

- c) The Vice President, Ginna, will provide management level interface with government authorities. He or she will be assisted by the Corporate Communications group.
- d) Communicating with the President of the United States and the Governor of New York State is the responsibility of Company senior management.

Section 8: Definitions

- Assembly Area - A designated building in which all non-essential personnel congregate following a site evacuation.
- Centers - Locations where communications, equipment and information are available and personnel will assemble to evaluate conditions during and after an event. See Section 5.1 for details.
- Drill - A drill is a supervised instruction period aimed at developing, maintaining and testing skills needed for a particular operation. A drill will be supervised by qualified instructors or controllers.
- Manager, Emergency Preparedness - The individual who has overall responsibility for maintaining the Ginna Station Nuclear Emergency Response Plan and implementing procedures. He/she will also coordinate these plans with New York State and county organizations having emergency responsibilities. He/she will act as liaison with private organizations in developing plans which augment the Company plans.
- Emergency Classification Levels - Four Emergency Classification Levels have been established by the NRC and incorporated into the Emergency Plan Annex and State and county plans. Each Emergency Classification requires a different degree of response actions by the state, counties and the Company. The four emergency classification levels are:

Unusual Event - Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

Alert - Events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life-threatening risk to site personnel or damage to site equipment because of hostile action. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

Site Area Emergency - Events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or hostile action that results in intentional damage or malicious acts: (1) toward site personnel or equipment that could lead to the likely failure of equipment needed for the protection of the public; or (2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protection Action Guideline exposure levels beyond the site boundary.

General Emergency - Events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or hostile action that results in an actual loss of physical

control of the facility. Any releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

- Emergency Director - An individual who has received appropriate training in the actions to be taken in the event of an incident at Ginna Station. He has full authority and responsibility for meeting the emergency.
- Emergency Plan Implementing Procedures (EPIPs), Procedures used to govern actions of the ERO to declare events and respond to a classified emergency. The following types of procedures are considered EPIPs:

Fleet Facility Operations Procedures - Governing procedure for each Emergency Response Facility directing use of Position Specific Checklists.

Fleet Functional Procedure - Standard procedures directing actions to complete a specific function (such as Classification or Emergency Exposure Controls)

Position Specific Checklist - Checklist directing actions of an ERO position.

Station Specific Functional Procedure - Procedures directing actions to complete a station specific function (such as Dose Assessment or Core Damage Assessment)

- Emergency Planning Zone (EPZ) - An area around Ginna Station divided into Emergency Response Planning Areas (ERPAs) for which preplanned actions to meet possible hazards have been developed. Actions to meet site hazards are the responsibility of the Company. Protective actions in the Emergency Planning Zone (approximately 10 miles) are the responsibility of the county organizations. New York State is responsible for actions to limit ingestion exposure in the zone out to approximately 50 miles.
- Emergency Operations Facility (EOF) - A facility located at 1255 Research Forest, Macedon, NY, from which additional Company personnel, consultants, NRC and other individuals can provide assistance to the plant in evaluating any emergency, gaining control of it and continuing the recovery operation. Meteorology, field monitoring and plant data can be evaluated here by the dose assessment staff and recommendations made to the State and counties for protection of the public. The EOF is a coordinating center for gathering and initially evaluating information relative to possible offsite radiation and contamination.
- Emergency Preparedness (EP) Coordinator - The Emergency Coordinator provides assistance on emergency planning issues at the plant and will be designated duties and responsibilities by the Manager, Emergency Preparedness.

- Emergency Response Organization (ERO) - Organization put in place to respond to declared events. The ERO replaces normal plant organization when activated and remains in control until the event is terminated. The full ERO is made up of the following sub-groups:
 - On-Shift Personnel - minimum number of shift personnel filling positions identified in Shift Staffing Assessment.
 - Minimum Staffing - The minimum number of ERO members that must be staffed within one hour whenever the Technical Support Center, Operations Support Center, Emergency Operations Facility and the Joint Information Center are required to activate. These positions and number of individuals filling them are identified in Table 2.1.
 - Full Staffing: Total members of the ERO including Shift Personnel, Minimum Staff personnel and augmented staffing. Full Augmentation positions and number of individuals filling them are identified in Table 2.1.
- Hostile Action - An act toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment or take hostages, and/or that intimidates the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles or other devices used to deliver destructive force. Other acts that satisfy the overall intent may be included. Hostile action should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the nuclear power plant. Non-terrorism-based Emergency Action Levels (EALs) should be used to address such activities (e.g., violent acts between individuals in the Owner Controlled Area).
- Joint Information Center - Located at 1255 Research Forest, Macedon, NY, it has facilities for press briefings, public inquiry and general information dissemination. Information regarding the status of Ginna Station will come from the EOF.
- Local State of Emergency - May be declared by a county executive in the event that public safety is imperiled by a disaster or public emergency. Following such a declaration, the county executive may promulgate local emergency orders to protect life and property or to bring the emergency under control. Actions may include prohibition or control of vehicular traffic, closing of public facilities and suspension of local ordinances. (Further details provided in NYS Executive Law Article 2-B.)
- Operations Support Center (OSC) - Located in the Ginna Administration Building's Outage Control Center where personnel qualified to support the Operations needs of the plant will be assigned.
- Protective Action Recommendation (PAR) - Recommendation by the licensee to County and State officials to shelter or evacuate members of the general public based upon plant conditions or projected radiological doses.

- Radiological Emergency - An incident that may result in the uncontrolled release of radioactive material leading to a hazard or potential hazard to the health and safety of the general public. As a result, the Ginna Emergency Organization, the Company recovery organization, and State and county emergency organizations may be activated, depending upon the level of response required.
- State Disaster Emergency - May be declared by the Governor on his own initiative or pursuant to a request from one or more county executives. Actions may include public notifications, protective actions, and requests for Federal assistance. (Further details provided in NYS Executive Law Article 2-B.)
- Technical Support Center (TSC) - An onsite facility which is used by the plant staff to assist the operating personnel in evaluating an emergency and bringing the plant under control. The TSC is a coordinating center for gathering and initially evaluating information relative to accident conditions.

Appendix 1NUREG-0654 Evaluation Criteria Cross Reference

| <u>NUREG-0654 Reference</u> | <u>Criteria</u> | <u>Plan Reference Section No.</u> |
|---------------------------------|---|--|
| A1 – Item a | Identification of Response Organizations | 2.8 |
| A1 – Item b | Organization of Concept of Operations | 1.1, 1.2 |
| A1 – Item c | Organizational Inter-Relationships - Block Diagrams | Fig. 2.7 |
| A1 – Item d | Designation of Organization Director | 1.1, 2.2 |
| A1 – Item e | 24 Hour Response/Communication | 5.2 |
| A2 – Item a | Organization Authority | N/A (not required in Licensee Plans) |
| A2 – Item b | Legal Basis for Organization Authority | N/A (not required in Licensee Plans) |
| A3 | Formal Intra-government/Organization Agreements | Appendix 2 |
| A4 | Designated Authority for Organization Resource Continuity | 2.2 |
| B1 | Provision for Onsite Shift Emergency Organization | 2.1, 2.2 |
| B2 | Designation of Onsite Emergency Director | 2.2 |
| B3 | Line of Succession for the Emergency Director | 2.3 |
| B4 | Functional Responsibilities of the Emergency Director | 3.5, 2.2, 2.4, 4.5.1, 4.8 |
| B5 | Assignment of On-Site Emergency Personnel | 2.1 thru 2.6, 6.0 |
| B6 | Onsite Emergency Organization Interface | 2.2 thru 2.6, 5.1, 7.1 |
| B7 | Designation of Minimum Staffing Requirements for Plant Emergencies | Table 2.1 |
| B7 – Item a | Logistics Support for Emergency Personnel | 2.7 |
| B7 – Item b | Technical Support for Planning/Re-entry/Recovery Operations | 2.5 |
| B7 – Item c | Management Level Interface with Governmental Authorities | 2.5 |
| B7 – Item d | Information/Press Releases | 4.11 |
| B8 | | 2.9, 2.10 |
| B9 | Designation/Responsibility/Limitations of Local Agency Assistance | 2.8, 2.10, Appendix 2 |

Appendix 1NUREG-0654 Evaluation Criteria Cross Reference

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|-------------------------|--|--|
| C1 – Item a | Authority to Request RAP/IRAP Resources | 2.2, 4.5, 5.2.5 |
| C1 – Item b | Federal Resources Expected and Time of Arrival | 2.8.4 |
| C1 – Item c | Specify Support Available to Federal Response | 2.8.4 |
| C2 – Item a | Organization Representative at Near-Site Emergency Operations Facility | N/A (not required in Licensee Plans, see State & County Plans) |
| C2 – Item b | Licensee Representative at Governmental EOC | 4.8 |
| C3 | Radiological Laboratory Capabilities | 2.10.9 |
| C4 | Nuclear Assistance Sources | 2.8, 2.9, 2.10 |
| D1 | Facility Emergency Classification System | 3.0 |
| D2 | Initiating Conditions | |
| D3 | State and Local Emergency Classification System | N/A (not required in Licensee Plans, see State & County Plans) |
| D4 | State and Local Procedures | N/A (not required in Licensee Plans, see State & County Plans) |
| E1 | Bases for Notification/Verification | 3.0 |
| E2 | Personnel Notification/Alert/Mobilization Procedures | 4.3 |
| E3 | Contents of Initial Plant Emergency Messages | 4.7 |
| E4 | Provisions for Content of Plant Follow-up Messages | 4.8 |
| E5 | Dissemination of Information from Plant Operators | N/A (not required in Licensee Plans, see State & County Plans) |
| E6 | Means for Population Notification | 5.3.13 |
| E7 | Provision for Written Public Instruction Messages | 4.5 |
| F1 – Item a, b, c, d, f | 24-Hour Notification/Activation of Emergency Response Network | 5.2.5 |
| F1 – Item e | Alerting Ginna Emergency Personnel | 4.6 |
| F2 | Communications with Medical Support Facilities | 2.10 |
| F3 | Periodic Communications System Testing | 5.2 |
| G1 | Public Emergency Education/Information | 4.11 |

Appendix 1NUREG-0654 Evaluation Criteria Cross Reference

| | | |
|-------------|--|--|
| G2 | Public Emergency Education Program | 4.11 |
| G3 | Public Information Control Point | 5.1.5 |
| G4 – Item a | Designated Public Information Spokesperson | 4.11 |
| G4 – Item b | Timely Exchange Among Spokespersons | 2.5.c.2 |
| G4 – Item c | Arrangements for Rumor Control | Figure 2.6 |
| G5 | News Media Education Program | 4.11 |
| H1 | NUREG-0696 Technical & On-site Operations Support Centers | 5.1.2, 5.1.3 |
| H2 | Near-Site Emergency Operations Facilities | 5.1.4, 5.1.5 |
| H3 | State & Local Emergency Operations Center | N/A (not required in Licensee Plans, see State & County Plans) |
| H4 | Provision for Activation/Staffing of Facilities | 4.3 |
| H5 | Onsite Monitoring Systems | 5.3.1 - 5.3.8, 5.3.10, 5.3.14 |
| H6 – Item a | Offsite Geophysical Phenomena Monitors | 5.3.8 |
| H6 – Item b | Off-site Radiological Monitors/Dosimetry | 5.3.7, 5.3.11 |
| H6 – Item c | Laboratory Facilities | 5.3.9 |
| H7 | Off-site Radiological Monitoring Equipment | 5.3.10, 5.3.11 |
| H8 | Provision for Meteorological Instrumentation/Procedures | 5.3.10 |
| H9 | Provision for On-site Operations Support Center | 5.1.3 |
| H10 | Inspection/Inventory/Calibration of Emergency Equipment/Instruments | 5.3.12, 6.3 |
| H11 | Categories of Emergency Equipment | 5.1.8 |
| H12 | Centralized Point for Receipt and Analysis of All Field Monitoring Data | 5.3.9 |
| I1 | Identification of Plant Condition Parameters and Corresponding Emergency Classes | 3.0, 4.0 |
| I2 | NUREG-0578 Post-Accident Sampling and Monitoring Capabilities | 5.3.2, 5.3.3, 5.3.6, 5.3.8, 5.3.9 |
| I3 – Item a | Methods/Techniques for Source Term Determination | 5.3.2 |

Appendix 1**NUREG-0654 Evaluation Criteria Cross Reference**

| | | |
|--------------|--|--|
| I3 – Item b | Methods/Techniques to Determine Release Magnitude | 5.3.3 |
| I4 | Onsite/Offsite Exposures and Contamination for Various Meteorological Conditions | 5.3.3 |
| I5 | Acquisition of Meteorological Information | 5.3.10 |
| I6 | Determination of Release Rate/Projected Doses Given Inoperable Instrumentation | 5.3.3 |
| I7 | Capabilities for Field Monitoring within the Plume Exposure EPZ | 5.3.11 |
| I8 | Capability for Assessment of Actual/Potential Magnitude and Location of Radiological Hazards | 4.6, 4.7, 4.8 |
| I9 | Capability to Detect Airborne Radioiodine Concentrations as Low as 1E-07 microcurie/cc | 5.3.11 |
| I10 | Estimation of Integrated Doses; Comparison with Protective Action Guides | 4.5.1 |
| I11 | Arrangements to Locate and Track the Plume | N/A (not required in Licensee Plans, see State & County Plans) |
| J1 | Capability to Warn Personnel | 4.9.2, 5.2.1 |
| J2 | Offsite Sheltering/Evacuation of Onsite Personnel | 4.9.2 |
| J3 | Radiological Monitoring of Personnel Evacuated from Site | 4.9.1 |
| J4 | Onsite Non-Essential Personnel Evacuation/Decontamination at Offsite Facility | 4.9.2, 4.9.5 |
| J5 | Accountability for Onsite Personnel | 4.9.2 |
| J6 | Onsite Personnel Protection | 4.9.3, 5.1.3 |
| J7 | Prompt Notification of Offsite Authorities for Protective Actions | 3.5.5.5 |
| J8 | Onsite Plan Contains Plume Exposure EPZ Evacuation Time Estimates | EP-AA-1012, Addendum 2 |
| J9 | Protective Action Guides (Personnel Exposure/Food Stuffs) | N/A (not required in Licensee Plans, see State & County Plans) |
| J10 – Item a | Maps of Evacuation Routes/Sectors Relocation Centers | Figures 4.2 & 5.2, EP-AA-1012, Addendum 2 |

Appendix 1NUREG-0654 Evaluation Criteria Cross Reference

| | | |
|--------------|---|---|
| J10 – Item b | Population Distribution by Sector/Zone | EP-AA-1012, Addendum 2 |
| J10 – Item c | Means of Notification of Transient/Resident Population | 5.3.13 |
| J10 – Item d | Protection of Impaired Persons | N/A (not required in Licensee Plans, see State & County Plans) |
| J10 – Item e | Radioprotective Drug Distribution | N/A (not required in Licensee Plans, see State & County Plans) |
| J10 – Item f | Radioprotective Drug Administration | N/A (not required in Licensee Plans, see State & County Plans) |
| J10 – Item g | Means of Relocation | N/A (not required in Licensee Plans, see State & County Plans) |
| J10 – Item h | Relocation Centers 5 to 10 miles Beyond the EPZ | N/A (not required in Licensee Plans, see State & County Plans) |
| J10 – Item i | Evacuation Routes/Traffic Capabilities | N/A (not required in Licensee Plans, see State & County Plans) |
| J10 – Item j | Evacuated Area Access Control | N/A (not required in Licensee Plans, see State & County Plans) |
| J10 – Item k | Evacuation Route Impediments/Contingency Measures | N/A (not required in Licensee Plans, see State & County Plans) |
| J10 – Item l | Evacuation Time Estimates for EPZ | EP-AA-1012, Addendum 2 |
| J10 – Item m | Basis for Protective Actions used in EPZ during Emergency Conditions | Table 4.1 |

Appendix 1NUREG-0654 Evaluation Criteria Cross Reference

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|-------------|---|--|
| J11 | Protective Measures for the Ingestion Pathway | N/A (not required in Licensee Plans, see State & County Plans) |
| J12 | Registration & Monitoring of Evacuees | N/A (not required in Licensee Plans, see State & County Plans) |
| K1 – Item a | Exposure Guidelines for the Removal of Injured Persons | 4.9.1 |
| K1 – Item b | Exposure Guidelines for the Undertaking of Corrective Actions | 4.9.1 |
| K1 – Item c | Exposure Guidelines for Performing Assessment Actions | 4.9.1 |
| K1 – Item d | Exposure Guidelines for Providing First Aid | 4.9.1 |
| K1 – Item e | Exposure Guidelines for Providing Personnel Decontamination | 4.9.5 |
| K1 – Item f | Exposure Guidelines for Providing Ambulance Service | 4.9.1 |
| K1 – Item g | Exposure Guidelines for Providing Medical Treatment Services | 4.9.1 |
| K2 | Onsite Radiation Protection Program | 4.9.1 |
| K3 | 24-Hour Dosimetry Service | 4.9.1 |
| K4 | Authorization for Personnel Exposure in Excess of the Protective Action Guides | N/A (not required in Licensee Plans, see State & County Plans) |
| K5 | Determination of Need for Decontamination | 4.9.5 |
| K6 | Onsite Controls | 5.4.5 |
| K7 | Capability for Decontamination of Relocated Onsite Personnel | 4.9.5 |
| L1 | Ability of Medical/Health Services to Evaluate Radiation Exposure/Handle Contaminated Individuals | 2.10.2, 2.10.4-2.10.7, 5.5 |
| L2 | Onsite First Aid Capability | 4.9.3 |
| L3 | Identification of Medical Services Facilities Equipped/Trained to Treat Radiological Accident Victims | N/A (not required in Licensee Plans, see State & County Plans) |
| L4 | Transportation to Medical Facilities | 2.10.2 |
| M1 | Plans for Recovery/De-escalation of Protective Measures | 7.0, 7.1 |

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| | | |
|-------------|---|---|
| M2 | Designation of Facility Recovery Organization | 7.1 |
| M3 | Notification of Recovery Operation Initiation | 7.1 |
| M4 | Methodology for Periodic Exposure Estimate | 5.3.3 |
| N1 – Item a | Drills to Simulate Offsite Releases | 6.1.4 |
| N1 – Item b | Drills to Test All Elements, Time, & Weather Conditions | 6.1.4 |
| N2 – Item a | Communication Drills | 6.1.4, 6.2 |
| N2 – Item b | Fire Drills | 6.1.4 |
| N2 – Item c | Medical Emergency Drills | 2.10.2, 2.10.4, 2.10.5 |
| N2 – Item d | Radiological Monitoring Drills | 6.1.4 |
| N2 – Item e | Health Physics Drill | 6.1.4 |
| N3 | Drill Scenarios | 6.1.4 |
| N4 | Official Observers/Critique | 6.1.4 |
| N5 | Improvements/Corrective Actions | 6.1.4 |
| O1 – Item a | Onsite Emergency Response Training for Offsite Emergency Organizations | 6.1.3 |
| O1 – Item b | Offsite Emergency Response Organization Training | N/A (not required in Licensee Plans, see State & County Plans) |
| O2 | Onsite Training/Corrective Actions | 6.1 |
| O3 | Onsite First Aid Team Training | 4.9.3 |
| O4 | Response Personnel Training | 6.1 |
| O5 | Annual Retraining of Personnel | 6.1 |
| P1 | Planning Personnel Training | 6.1.5 |
| P2 | Designation of Planning Authority | 1.1 |
| P3 | Designation of Emergency Planning Coordinator | 1.1 |
| P4 | Annual Review and Update of Response Plan | 6.2 |
| P5 | Provisions for Plan Distribution and Promulgation of Plan Revisions | 6.2 |
| P6 | Listing of Supporting Plans | Appendix 5 |
| P7 | Procedures for Plan Implementation | Appendix 3 |
| P8 | Table of Contents | Page 1 |

Appendix 1NUREG-0654 Evaluation Criteria Cross Reference

| | | |
|-----|---|-----|
| P9 | Independent Audit of Emergency Preparedness Program | 6.4 |
| P10 | Updating of Telephone Numbers | 6.2 |

Appendix 2**Letters of Agreement**

The up-to-date Letters of Agreement are maintained in accordance with Ginna document control procedures and are considered to be incorporated as part of this document by reference.

| Agency/Company |
|--|
| New York State Office of Emergency Management |
| Ontario Volunteer Emergency Squad |
| Rochester Regional Health System |
| Ontario Fire Company |
| DOE/REAC/TS |
| Wayne County Board of Supervisors |
| U.S. Department of Commerce, National Weather Service |
| Wayne County Sheriff's Office |
| New York State Police |
| County of Monroe |
| Institute of Nuclear Power Operations |
| Letter of Agreement between Exelon (Ginna Station), Wayne County Emergency Management Office, Monroe County Office of Emergency Management, and New York State Office of Emergency Management (re. Offsite Survey Teams) |
| Memorandum of Understanding for Offsite Staging Area |

Appendix 3
Emergency Plan Implementing Procedures

| <u>EPIP #</u> | <u>Emergency Plan Implementing Procedures (EPIP)</u> | <u>E Plan Reference</u> |
|----------------------|--|---|
| A-7 | <u>Procedures for Handling Injuries/Medical Emergencies at Ginna Station</u> | 2.11, 5.5 |
| EP-CE-113 | <u>Personnel Protective Actions</u> | 4.4, 4.5.1, 5.2.1, 5.3, 5.4 4.9.1, 4.9.3 |
| EP-AA-112-500-F-54 | <u>GNP Offsite Monitoring Team Guidance</u> | 5.3.3, 5.3.11 |
| EP-CE-111 | <u>Emergency Classification and Protective Action Recommendations</u> | 4.5.1 |
| EP-CE-114-100 | <u>Emergency Notifications</u> | 1.3, 3.0, 3.2, 3.3, 4.2-4.5, 5.2.4, 5.2.5, |
| EP-AA-112-600 | <u>Public Information Organization</u> | 2.1 thru 2.7, 4.11, 5.1, 5.1.5, |
| EP-AA-112-400 | <u>Emergency Operations Facility Activation and Operations</u> | 2.1 thru 2.7, 5.1, 5.1.4, 5.2.5 |
| EP-AA-112-100 | <u>Control Room Operations</u> | 2.1 thru 2.7, 5.1, 5.1.1, 5.2.5 |
| EP-AA-112-200 | <u>TSC Activation and Operations</u> | 2.1 thru 2.7, 5.1, 5.1.2, |
| EP-AA-112-300 | <u>Operations Support Center Activation and Operations</u> | 2.1 thru 2.7, 5.1, 5.1.3, |
| EP-CE-115 | <u>Termination and Recovery</u> | 7.0 |
| EP-AA-110-203 | <u>GNP Dose Assessment</u> | 4.6, 5.3.3, 5.3.11, |

Appendix 3
Emergency Plan Implementing Procedures

| <u>EPIP #</u> | <u>Emergency Plan Implementing Procedures (EPIP)</u> | <u>E Plan Reference</u> |
|----------------------|---|--------------------------------|
| EPIP-1-13 | <u>Local Radiation Emergency</u> | 3.1, 4.1, |
| EPIP-1-16 | <u>Radioactive Liquid Release to Lake Ontario or Deer Creek</u> | 4.7, 4.10, |
| EPIP-1-17 | <u>Planning for Adverse Weather</u> | 4.5.1, 5.3.10 |
| EPIP-1-18 | <u>Discretionary Actions for Emergency Conditions</u> | 1.3 |
| EPIP-2-16 | <u>Core Damage Estimation</u> | 5.3 |
| EPIP-4-11 | <u>Activation of the Ginna Sirens from the County Activation Points</u> | 5.3.13 |
| EPIP-4-9 | <u>Activation of Ginna Emergency Sirens from the Technical Support Center</u> | 5.3.13.1 |
| SY-AA-101-121 | <u>Security Response to the Station Emergency Plan</u> | 1.3, 3.3, 4.3 |
| ER-SEC.1 | <u>Response to Change in Security Threat Level</u> | 1.3, 3.3, 4.3 |
| ER-SEC.2 | <u>Response to Intrusion by Adversary</u> | 1.3, 3.3, 4.3 |
| ER-SEC.3 | <u>Response to Airborne Threat</u> | 1.3, 3.3, 4.3 |

Appendix 4**Emergency Response Organization Responsibilities**

Note: The positions and responsibilities described in this Appendix apply to Ginna station and supersede the list of ERO positions and respective ERO responsibilities identified in the Exelon Standard Plan.

1.0 On-Shift Staff Positional Responsibilities

The emergency plan responsibilities for shift personnel are:

1.1 Shift Emergency Director / Shift Manager:

NOTE: * Indicates Non-Delegable responsibilities when performing Emergency Director duties.

- Coordinate between CR, OSC and TSC to set OSC team task priorities.
- Perform or direct emergency PA announcements.
- Ensure flow of information within and between the emergency response facilities.
- Integrate ERO activities with the Incident Command Post (ICP) response activities.
- Assume overall command and control of emergency response.
- Classify and declare emergencies.*
- Direct notification and activation of the ERO.
- Direct and approve offsite emergency notifications to state and local authorities*.
- Direct ENS communications with the NRC.
- Oversee the performance and evaluate the results of dose projection activities.
- Ensure appropriate accountability and search and rescue actions for plant personnel.
- Ensure appropriate evacuation actions for plant personnel*.
- Approve the issuance of KI.
- Make Protective Action Recommendations to offsite authorities*.
- Approve emergency exposures.*
- Terminate the emergency event.

1.2 Shift Manager (After Transfer of Command and Control)

- Coordinate between CR, OSC and TSC to set OSC team task priorities.
- Perform or direct emergency PA announcements.
- Ensure flow of information within and between the emergency response facilities.

Appendix 4Emergency Response Organization Responsibilities

- Participate in Inter-Facility Briefings to communicate and obtain event and response information.
 - Authorize and prioritize requests for external assistance (police, fire, medical) as necessary.
 - Assist with Emergency Classification.
- 1.3 Shift Technical Advisor (STA), SROs and ROs
- Assist with emergency classification.
- 1.4 Designated Shift Communicator
- Notify the ERO.
 - Perform offsite emergency notifications to state and local authorities.
 - Provide plant data and plant information to the NRC via the ENS.
- 1.5 Designated Shift Dose Assessor
- Perform dose assessments.
- 1.6 Shift Radiation Protection Technician(s)
- Provide radiation protection for shift personnel
 - Conduct surveys and radiological monitoring to assist with emergency assessment activities.
- 1.7 Shift Chemistry Technician
- Perform dose assessment
 - Conduct sampling to assist with emergency assessment activities.
- 1.8 Security Shift Supervisor
- Supervise security force activities.
 - Notify the ERO.
 - Perform offsite emergency notifications to state and local authorities.
 - Establish and maintain Protected Area accountability.
 - Direct security actions for offsite assembly.
 - Establish and supervise plant access controls.
 - Supervise security actions for site evacuation.
 - Coordinate administration of KI to the security officers.
- 1.9 Other Shift Personnel (Non-licensed Operators, Security Force, Maintenance Personnel)
- Support emergency response as directed.

Appendix 4**Emergency Response Organization Responsibilities****2.0 Technical Support Center (TSC):****2.1 Station Emergency Director**

- Manage all onsite emergency activities in support of plant operations.
- Establish plant/station response priorities.
- Integrate ERO activities with the Incident Command Post (ICP) response activities.
- Authorize and prioritize requests for external assistance (onsite technical support, manpower) as necessary.
- Assist with emergency classification.
- Provide informational updates and recommendations to the ED, regarding plant status and activities.
- Direct ENS communications with the NRC.
- Authorize emergency response facility relocations.
- Evaluate event assessments and mitigative strategies to determine Operations and response actions.
- Authorize and direct extreme measures (SAMGs, EDMGs, §50.54(x) or suspend security controls).
- Ensure appropriate accountability and search and rescue actions for plant personnel.
- Ensure accountability, once established, is maintained in all occupied areas of the station.
- Ensure appropriate evacuation actions for plant personnel.
- Coordinate between CR, OSC and TSC to set OSC team task priorities.
- Conduct facility briefs and updates.
- Participate in the Inter-Facility briefing to communicate and obtain event and response information.
- Coordinate integration of the NRC Site Team
- Assist in the development of recovery plans.

2.2 TSC Director

- Activate the Facility.
- Establish and maintain facility accountability.
- Manage the operation of the facility.
- Review and ensure facility displays are maintained current.
- Coordinate ERO shift relief rosters for the onsite facilities.
- Develop ERO shift relief rosters for the facility.
- Perform or direct emergency PA announcements.
- Coordinate integration of the NRC Site Team.

Appendix 4**Emergency Response Organization Responsibilities**

- Arrange for logistics support.
- Ensure flow of information within and between the emergency response facilities.
- Provide input for facility briefs and updates.
- Coordinate TSC relocation.

2.3 Technical Manager

- Manage the activities of the TSC engineering / technical staff.
- Ensure additional personnel and/or equipment is arranged for, as necessary.
- Provide engineering support for accident detection and assessment.
- Develop mitigative strategies based on assessment of the event.
- Analyze and develop extreme measures actions (SAMGs, EDMGs, §50.54(x) or suspend security controls).
- Provide input for facility briefs and updates.

2.4 Electrical Engineer

- Provide engineering support for accident detection and assessment.
- Provide input into mitigative strategies.
- Analyze and develop extreme measures actions (SAMGs, EDMGs, §50.54(x) or suspend security controls).

2.5 Mechanical Engineer

- Provide engineering support for accident detection and assessment.
- Provide input into mitigative strategies.
- Analyze and develop extreme measures actions (SAMGs, EDMGs, §50.54(x) or suspend security controls).

2.6 Core / Thermal Hydraulic Engineer

- Provide engineering support for accident detection and assessment.
- Provide input into mitigative strategies.
- Perform core damage estimations.
- Analyze and develop extreme measures actions (SAMGs, EDMGs, §50.54(x) or suspend security controls).

2.7 TSC/OSC Computer Specialist

- Support the setup of systems and equipment within the facility.
- Monitor facility equipment (computer related and communications) to ensure adequate operation.
- Resolve any IT related malfunctions.

2.8 Operations Manager

- Manage the activities of the TSC Operations staff.
- Assist with emergency classification.
- Provide technical assistance communication path to the Shift Manager.

Appendix 4**Emergency Response Organization Responsibilities**

- Support the establishment of plant/station response priorities.
- Provide operations support for accident detection and assessment.
- Recommend operations actions to the Shift Emergency Director in support of restoration and accident mitigation.
- Analyze and develop extreme measures actions (SAMGs, EDMGs, §50.54(x) or suspend security controls).
- Coordinate between CR, OSC and TSC to set OSC team task priorities.
- Coordinate operations activities outside of the Control Room between the Shift Emergency Director and OSC.
- Provide input for facility briefs and updates.

2.9 ENS Communicator

- Provide event data and plant information to the NRC via the ENS.
- Verify ERDS operation.
- Monitor assigned communication line and provide key information to facility staff.
- Monitor event information on the facility display systems.

2.10 Ops Communicator (TSC)

- Communicate key information between the facilities over the Technical Information Line.
- Monitor assigned communication line and provide key information to facility staff.
- Display, monitor and trend plant data and event information on the facility display systems.

2.11 Ops Communicator (CR)

- Communicate key information between the facilities over the Technical Information Line.
- Monitor assigned communication line and provide key information to facility staff.

2.12 Maintenance Manager

- Provide input into mitigative strategies.
- Coordinate between CR, OSC and TSC to set OSC team task priorities.
- Coordinate repair and OSC team task information between the TSC and OSC.
- Provide input for facility briefs and updates.

2.13 TSC Radiation Protection Manager

- Manage and direct the radiological activities of the RP personnel.
- Ensure additional personnel and/or equipment is arranged for, as necessary.
- Provide radiological support for accident detection and assessment.

Appendix 4**Emergency Response Organization Responsibilities**

- Monitor, evaluate and communicate conditions involving any release of radioactivity.
- Provide support and logistics for site evacuation activities.
- Evaluate the need for and ensure proper use of KI.
- Ensure habitability is established and maintained for occupied onsite areas.
- Ensure proper emergency exposure controls are taken for personnel.
- Provide radiological assistance for planning rescue operations and repair team monitoring.
- Direct personnel decontamination activities.
- Provide radiological assistance for the transfer of injured and/or contaminated personnel.
- Provide input for facility briefs and updates.

2.14 Security Coordinator

- Integrate ERO activities with the ICP response activities.
- Manage the activities of the site security force.
- Request and coordinate emergency activities with Local Law Enforcement Agencies (LLEAs).
- Provide security related communications with the NRC.
- Direct accountability and search & rescue activities.
- Direct site evacuation activities.
- Direct site access controls activities.
- Coordinate security activities between the SSS and OSC.
- Determine radiation protection measures for security force personnel and law enforcement agency personnel on site.
- Provide input for facility briefs and updates.

2.15 TSC Administrative Staff

- Perform administrative and logistic support functions for facility personnel.
- Establish and maintain facility accountability.

3.0 Operations Support Center (OSC):**3.1 OSC Director**

- Activate the Facility.
- Manage the operation of the facility.
- Develop ERO shift relief rosters for the facility.
- Ensure flow of information within and between the emergency response facilities.
- Support the establishment of plant / station response priorities.

Appendix 4**Emergency Response Organization Responsibilities**

- Direct accountability and search & rescue activities.
 - Establish and maintain facility accountability.
 - Coordinate between CR, OSC and TSC to set OSC team task priorities.
 - Coordinate OSC team dispatch and control.
 - Conduct facility briefs and updates.
 - Participate in the Inter-Facility Briefing to communicate and obtain event and response information.
- 3.2 Assistant OSC Director
- Coordinate between CR, OSC and TSC to set OSC team task priorities.
 - Participate with OSC team dispatch and control.
 - Assemble and dispatch OSC and offsite monitoring teams.
 - Provide input for facility briefs and updates.
- 3.3 OSC Craft, Chemistry and Operations Group Leads
- Manage OSC manpower needs.
 - Assist with formation of OSC teams.
 - Participate with OSC team dispatch and control.
 - Provide technical support to dispatched OSC teams.
- 3.4 OSC Craft, Chemistry and Operations Personnel
- Perform job duties as an OSC team member.
- 3.5 OSC Radiation Protection (RP) Group Lead
- Manage OSC manpower needs.
 - Monitor in-plant radiological conditions.
 - Ensure habitability is established and maintained for occupied onsite areas.
 - Participate with OSC team dispatch and control.
 - Coordinate RP support for OSC teams.
 - Track OSC Team emergency exposure.
 - Implement appropriate protective measures for OSC personnel.
 - Establish OSC and plant access radiological controls.
 - Provide input for facility briefs and updates.
- 3.6 OSC Radiation Protection Technicians(s)
- Perform habitability monitoring in occupied areas.
 - Perform job duties as an OSC team member.

Appendix 4**Emergency Response Organization Responsibilities****3.7 OSC Team Tracker**

- Maintain Team Tracking Status display.
- Participate with OSC team dispatch, control and tracking.
- Track and maintain communications with OSC teams.

3.8 Operations Communicator - OSC

- Communicate key information between the facilities over the Technical Information Line.
- Monitor the Technical Information Line and announce key information to facility staff.
- Display, monitor and trend plant data and event information on the facility display systems.

3.9 OSC Administrative Staff

- Perform administrative and logistic support functions for facility

4.0 Offsite ERO: Emergency Operations Facility**4.1 Corporate Emergency Director**

- Assume overall command and control of emergency response.
- Ensure all Exelon emergency response facilities are properly staffed and activated.
- Classify emergencies.
- Direct and approve offsite emergency notifications to state and local authorities.
- Make Protective Action Recommendations to offsite authorities.
- Direct ENS communications with the NRC.
- Ensure appropriate evacuation actions for plant personnel.
- Approve the issuance of KI.
- Approve emergency exposures.
- Integrate ERO activities with the ICP response activities.
- Authorize and prioritize requests for external assistance (governmental) as necessary.
- Authorize and prioritize requests for external assistance (offsite technical support, manpower) as necessary.
- Ensure other organization's management/decision makers (NRC, State, Exelon, etc.) are kept informed of the emergency situation.

Appendix 4**Emergency Response Organization Responsibilities**

- Ensure flow of information within and between the emergency response facilities.
- Approve technical content of media statements.
- Coordinate integration of the NRC site team.
- Authorize and direct extreme measures (SAMGs, EDMGs, §50.54(x) or suspend security controls).
- Terminate the emergency event.
- Establish a recovery plan and organization.
- Conduct facility briefs and updates.
- Conduct an Inter-Facility briefing to communicate and obtain event and response information.

4.2 EOF Director

- Activate the Facility.
- Manage the operation of the facility.
- Assist offsite agency personnel responding to the facility.
- Coordinate integration of the NRC site team.
- Assist with emergency classification.
- Support the completion of timely offsite event notifications to State and local authorities.
- Evaluate conditions and determine recommendations for PARs.
- Assist in the development of recovery plans.
- Participate in the Inter-Facility briefing to communicate and obtain event and response information.
- Provide input for facility briefs and updates.

4.3 EOF Technical Advisor

- Assist with emergency classification.
- Monitor plant status and Control Room activities.
- Provide input for facility briefs and updates.

4.4 Ops Communicator - EOF

- Communicate key information between the facilities over the Technical Information Line.
- Monitor assigned communication line and provide key information to facility staff.

Appendix 4**Emergency Response Organization Responsibilities**

- Display, monitor and trend plant data and event information on the facility display systems.

4.5 EOF Logistics Manager

- Ensure ERO personnel have been properly notified and are responding to the facilities.
- Oversee staffing of EOF and assist with staffing for other facilities.
- Develop ERO shift relief rosters for the facility.
- Coordinate ERO shift relief rosters for all facilities and the notification of personnel.
- Manage the administrative support staff.
- Review and ensure facility displays are maintained current.
- Manage the procurement and logistical support activities for the onsite and offsite emergency response personnel and facilities.
- Monitor and maintain access controls for the facility.
- Communicate with and coordinate support for ERO responders or plant personnel sent offsite to relocation areas.
- Provide input for facility briefs and updates

4.6 EOF/JIC Computer Specialist

- Support the setup of systems and equipment within the facility.
- Monitor facility equipment (computer related and communications) to ensure adequate operation.
- Resolve any IT related malfunctions.
- Assist in operation of JIC audio visual equipment.

4.7 EOF Administrative Staff

- Callout ERO relief shift.
- Set up EOF equipment in preparation for facility activation.
- Perform administrative and logistic support functions for facility personnel.

4.8 EOC Communicator

- Monitor plant conditions and event response activities.
- Provide information updates to and address questions and support requests from the offsite liaisons.
- Notify and brief external agencies and groups (INPO, ANI) of the emergency event.
- Provide input for facility briefs and updates.

Appendix 4**Emergency Response Organization Responsibilities****4.9 State Liaison**

- Communicate EOC / ICP actions and decisions to the EOF.
- Provide technical support and information to the EOC / ICP.

4.10 County Liaison(s)

- Communicate EOC / ICP actions and decisions to the EOF.
- Provide technical support and information to the EOC / ICP.

4.11 EOF Radiation Protection Manager

- Manage and direct the radiological activities of the RP personnel.
- Coordinate activities with the external agency field monitoring teams.
- Coordinate the comparison and exchange of dose assessment results with offsite agency personnel.
- Assist with emergency classification.
- Monitor, evaluate and communicate conditions involving any release of radioactivity.
- Oversee the performance and evaluate the results of dose projection activities.
- Perform dose assessment.
- Oversee the performance and evaluate the results of OMT activities.
- Provide support and logistics for site evacuation activities.
- Evaluate the need for and ensure proper use of KI.
- Evaluate conditions and determine recommendations for PARs.
- Ensure proper emergency exposure controls are taken for personnel.
- Provide assistance to state and federal agencies for ingestion pathway radiological activities.
- Provide input for facility briefs and updates.

4.12 HPN Communicator

- Provide event data and plant information to the NRC via the HPN.
- Monitor assigned communication line and provide key information to facility staff.

Appendix 4**Emergency Response Organization Responsibilities****4.13 Dose Assessor**

- Monitor, evaluate and communicate conditions involving any release of radioactivity.
- Perform dose assessment.
- Evaluate conditions and determine recommendations for PARs.

4.14 Environmental Coordinator

- Direct and track Offsite Monitoring Team activities.
- Coordinate activities with the external agency field monitoring teams.
- Establish and maintain OMT communications.
- Maintain and update the radiological status displays.
- Coordinate the receipt, analysis, storage and transfer of field monitoring samples.
- Record and report field monitoring survey, sample and exposure information.

4.15 Offsite Monitoring Teams

- Establish and maintain OMT communications.
- Perform equipment checks and inventories in preparation of deployment.
- Track radiological plumes.
- Perform and report results of radiation surveys and environmental sampling.
- Coordinate the receipt, analysis, storage and transfer of field monitoring samples.
- Communicate exposure status to the Environmental Coordinator.

4.16 State/Local Communicator

- Perform offsite emergency notifications to state and local authorities.

5.0 Public Information ERO (JIC Staff)**5.1 JIC Manager**

- Activate the Facility.
- Manage the operation of the facility.
- Assist offsite agency personnel responding to the facility.
- Coordinate integration of the NRC Site Team.
- Provide liaison to the NRC Site Team.
- Arrange for support for Emergency Alert System (EAS) information.

Appendix 4**Emergency Response Organization Responsibilities**

- Ensure flow of information within and between the emergency response facilities.
- Interface with offsite agency Public Information Officers (PIOs) to coordinate overall information flow to the media and public.
- Coordinate facilitation of the media briefing schedule.
- Ensure news media briefings are held regularly during the course of the emergency.
- Oversee conduct of media briefings.
- Integrate ERO activities with the Incident Command Post (ICP) response activities
- Assist in the development of recovery plans.
- Conduct facility briefs and updates.
- Participate in the Inter-Facility Briefing to communicate and obtain event and response information.

5.2 Company Spokesperson

- Establish periodic contact with the communications personnel in the corporate office.
- Interface with offsite agency PIOs to coordinate overall information flow to the media and public.
- Provide interviews to the media.
- Serve as Company Spokesperson during press conferences at the JIC.
- Participate in the Inter-Facility Briefing to communicate and obtain event and response information.
- Provide input for facility briefs and updates.

5.3 JIC Logistics Manager

- Manage the administrative support staff.
- Develop ERO shift relief rosters for the facility.
- Arrange for logistics support.
- Oversee set-up and testing of JIC equipment.
- Maintain access control to the JIC.
- Provide input for facility briefs and updates.
- Oversee collection of technical data and station activities for drafting Media Statements and answering JIC questions.
- Coordinate preparation, review and distribution of Media Statements.

Appendix 4**Emergency Response Organization Responsibilities**

- Obtain ED approval for the technical content of Media Statements.
- Keep JIC staff informed of plant status and Exelon emergency response activities.

5.4 News Writer

- Prepare draft Media Statements.
- Develop public information materials (bulletins, backgrounders and chronologies).

5.5 JIC Technical Advisor

- Provide technical expertise to the JIC staff.
- Assist the News Writer with development of technically accurate media statements.
- Provide answers to technical questions from the news media regarding the emergency situation.
- Periodically monitor EOF/TSC briefings and Technical Information Line to obtain information.
- Provide technical information support to the Company Spokesperson.
- Monitor event information on the facility display systems.
- Provide input for facility briefs and updates.

5.6 Media Liaison

- Ensures media is informed of protocol and schedules established for media briefings.
- Coordinate preparations for media briefings.
- Distribute media statements to the media in the media briefing area.
- Coordinate media relations in JIC and update media between press conferences.
- Coordinate special interviews and facility tours for the media.
- Coordinate JIC briefing area preparation and establish briefing protocol.

5.7 JIC Administrative Staff

- Assist in badging and direction of members of the media to proper work locations.
- Perform administrative and logistic support functions for facility personnel.
- Distribute media materials to the press.

Appendix 4**Emergency Response Organization Responsibilities****5.8 Media Monitoring / Rumor Control Coordinator**

- Supervise media monitoring and Inquiry Phone Team personnel.
- Review Media Monitoring team information for trends, misinformation and rumors.
- Review Phone Team information for trends, misinformation and rumors.
- Ensure adequate staff is available to perform media monitoring and phone team functions.
- Provide input for facility briefs and updates.

5.9 Inquiry Phone Team

- Respond to and log phone inquiries from the media and the public.
- Monitor telephone lines for trends, misinformation and rumors.

5.10 Media Monitoring Team

- Monitor media coverage of the event for trends

5.11 JIC Security

- Provide badging and access controls for the facility.

6.0 In addition to the position specific responsibilities listed above all ERO members have the following general responsibilities:

- Perform position turnover for protracted events
- Respond as directed when notified of a declared event
- Maintain personal event logs and records in support of the after action report
- Restore area and materials upon event termination
- Apply fundamental ERO knowledge in the performance of your ERO duties
- Properly use ERO procedures and checklists in the performance of your ERO duties
- Acquire & maintain qualification in your assigned ERO position
- Apply human performance error reduction techniques in the performance of your ERO duties.

Appendix 5**SUMMARIES OF INTERFACING EMERGENCY PLANS****1. New York State Radiological Emergency Preparedness Plan:**

The purpose of the NYS Plan is to minimize the risk to the health of the inhabitants of the State in the event of a radiological emergency. This will be accomplished by identifying measures to prevent and mitigate such an emergency; by developing mechanisms to coordinate Federal, State, local and private sector resources, during and after such an emergency; and by providing for recovery following a radiological emergency.

The New York State Department of Health is the state agency having primary responsibility in this area.

The New York State Public Health Law gives the Commissioner of Health broad authority for protecting the health and life of the people of New York State, including protection against ionizing radiation. The State Sanitary Code, Part 16, which implements the Public Health Law, includes requirements relating to accidents, emergencies, or incidents.

Article 2-B of the New York State Executive Law (State and Local Natural and Manmade Disaster Preparedness) created a State Disaster Preparedness Commission. This Commission is charged with a wide variety of power and responsibilities, designed to provide a comprehensive emergency system to prevent or react to emergencies or disasters within the State. Among these responsibilities are: (1) to develop and maintain a State plan and to assist local government in developing such plans; (2) to direct State disaster operations and coordinate State operations with local disaster operations; (3) to coordinate recovery operations and recovery assistance; and (4) to provide training to assure that responsible personnel are familiar with plans and procedures. Where, by tradition, emergency plans have been primarily concerned with response activities, New York State has adopted an overall emergency preparedness system which includes two interrelated critical phases.

(1) Preventive/Mitigation:

This is the initial phase of activities that is aimed at eliminating or reducing the probability of the occurrence of a radiological emergency, and at minimizing the impact of a radiological emergency on public health and property. These activities include the development of new legislation and the development of preparedness plans and training programs. Prevention/mitigation activities form a basis for enhancing the quality of response operations.

(2) Response:

The response phase follows the identification or notification of an emergency. Generally, response activities are planned to minimize the adverse impact on public health and to protect property, to the extent possible, through emergency assistance. These activities include accident

Appendix 5**SUMMARIES OF INTERFACING EMERGENCY PLANS**

assessment and evaluation and radiological exposure control. They also reduce the probability of secondary damage and speed recovery operations.

2. Wayne County Radiological Emergency Response Plan (CRERP):

When considering radiological emergencies, preparedness, response, and recovery are general responsibilities which are shared by all levels of government and the nuclear facility operators. These emergencies will be dealt with at the local or county level until such time that the county's resources have been exhausted. At this point, in addition to technical guidance and evaluation, the county will request state assistance through the New York State Emergency Management Office (SEMO).

The mission of the County Emergency Response Organization and the County Radiological Emergency Response Plan (CRERP) is to protect the health and safety of the general public of Wayne County in the unlikely event of a radiological release incident at the Ginna Nuclear Power Plant.

In order to successfully execute this mission it will be necessary to perform the following operations:

1. Monitor and assess the scope and magnitude of the incident;
2. Evaluate and decide which protective action response options should be initiated;
3. Implement the appropriate protective action response option (or combination of options, if necessary.)

The successful implementation of the CRERP will depend on the efficient and effective coordination with other emergency response organizations. Specifically, the CRERP will be closely coordinated with the RERP of Monroe County; the New York State Radiological Emergency Plan; and the Ginna Station Nuclear Emergency Response Plan.

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When considering radiological emergencies, preparedness, response, and recovery are general responsibilities which are shared by all levels of government and the nuclear facility operators. These emergencies will be dealt with at the local or county level until such time that the county's resources have been exhausted. At this point, in addition to technical guidance and evaluation, the county will request state assistance through the New York State Emergency Management Office (SEMO).

The mission of the County Emergency Response Organization and the County Radiological Emergency Plan is to protect the health and safety of the general public of Monroe County in the unlikely event of a radiological release incident at the Ginna Nuclear Power Plant.

Appendix 5**SUMMARIES OF INTERFACING EMERGENCY PLANS**

In order to successfully execute this mission it will be necessary to perform the following operations:

1. Monitor and assess the scope and magnitude of the incident;
2. Evaluate and decide which protective action response options should be initiated;
3. Implement the appropriate protective action response option (or combination of options, if necessary.)

In addition to these operations, the successful implementation of the CRERP will depend on the efficient and effective coordination with other emergency response organizations. Specifically, the CRERP will be closely coordinated with the RERP of Wayne County; the New York State Radiological Emergency Plan; and the Ginna Station Nuclear Emergency Response Plan.

4. Management of Radiologically Contaminated Patient at Rochester General Hospital

The purpose of this plan is to describe the response of Rochester General Hospital (RGH) to an injured and radioactively contaminated patient. The procedure will describe the responsibilities of the hospital staff, the set-up of the Radiation Decontamination Center (RDC), notification protocols, equipment and supplies, decontamination and contamination control techniques.

RGH is a support hospital for the Ginna plant and has agreed to provide medical care to patient(s) who sustained injuries and who may be contaminated and/or overexposed to ionizing radiation.

5. Management of Radiologically Contaminated Patient at Newark-Wayne Community Hospital

The purpose of this plan is to describe the response of Newark-Wayne Community Hospital (NWCH) to an injured and radioactively contaminated patient. The procedure will describe the responsibilities of the hospital staff, the set-up of the Radiation Emergency Area, notification protocols, equipment and supplies, decontamination and contamination control techniques.

NWCH is a support hospital for the Ginna plant and has agreed to provide medical care to patient(s) who sustained injuries and who may be contaminated and/or overexposed to ionizing radiation.

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