LICENSE AMENDMENT REQUEST

ENCLOSURE 2

Peach Bottom Atomic Power Station, Units 2 and 3 – Evaluation of Proposed Changes

Enclosure 2

License Amendment Request

Peach Bottom Atomic Power Station, Units 1, 2, and 3
Operating [Possession Only] License No. DPR-12
Renewed Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-171, 50-277, 50-278, and 72-79

EVALUATION OF PROPOSED CHANGES

Subject: License Amendment Request for Approval of Changes to Emergency Plan Staffing Requirements

1.0 SUMMARY DESCRIPTION

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1.0 SUMMARY DESCRIPTION

10 CFR 50.47(b) and 10 CFR 50, Appendix E establish emergency planning standards that require: 1) adequate staffing; 2) satisfactory performance of key functional areas and critical tasks; and 3) timely augmentation of the response capability.

Exelon Generation Company, LLC (Exelon) is requesting NRC approval of a proposed revision to the Peach Bottom Atomic Power Station (PBAPS) Radiological Emergency Preparedness Plan. The proposed changes would revise certain Emergency Response Organization (ERO) positions in the PBAPS Emergency Plan. Specifically, the proposed changes would revise certain ERO positions to align with the minimum staff ERO guidance specified in draft Revision 2 of NUREG-0654/FEMA-REP-1, *"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants"* (referred to NUREG-0654 hereafter).

The proposed changes will also relocate the identified Full-Augmentation ERO specified in the PBAPS Emergency Plan Annex EP-AA-1007, Table PBAPS 2-1, *"Minimum Staffing Requirements,"* to an Emergency Preparedness Implementing Procedure (EPIP).

The proposed changes have been reviewed considering the requirements of 10 CFR 50.47, *"Emergency plans,"* paragraph (b), 10 CFR 50 Appendix E, "*Emergency Planning and Preparedness for Production and Utilization Facilities,"* and other applicable emergency preparedness NRC guidance documents. An evaluation of the proposed changes pursuant to 10 CFR 50.54, *"Conditions of licenses,"* paragraph (q), *"Emergency plans,"* determined that the proposed changes result in a reduction in effectiveness of the Emergency Plans for the affected facilities and, therefore, require prior NRC approval.

As specified in Enclosure 4 of this submittal for the PBAPS, Exelon has committed to conduct a confirmation Emergency Preparedness (EP) Drill at one of the Exelon stations located in Pennsylvania (Limerick or Peach Bottom) with the proposed minimum staff personnel to demonstrate that sufficient staffing capabilities will remain and no loss of EP function will result due to the proposed changes in the ERO staffing.

2.0 DETAILED DESCRIPTION

2.1 Proposed Changes

2.1.1 The content and format of the PBAPS Emergency Plan Annex EP-AA-1007, Table PBAPS 2-1, *"Minimum Staffing Requirements,"* will be revised to align with the draft NUREG-0654, Revision 2 updated Table B-1 guidance. This includes revisions to the EP Functions and Major Tasks, as well as the Minimum Staff assigned to these areas. The proposed changes will result in a reduction of some designated Minimum Staff responders and the relocation of the Full Augmentation staff from the Emergency Plan to PBAPS EPIPs, consistent with the NUREG-0654, Revision 2 draft guidance.

The specific wording changes are provided in Attachments 2A and 2B of this enclosure as marked-up and clean copy Emergency Plan pages, respectively. Enclosure 3 contains a task assessment of the Minimum Staff and Full-Augmented Staff removed from the PBAPS Emergency Plan. Enclosure 5 of the License Amendment Request contains information related to the review of the proposed changes by the Commonwealth of Pennsylvania and the State of Maryland.

2.1.2 On-Shift ERO Revision Summary

The PBAPS on-shift staff will align with the guidance specified in draft Revision 2 of NUREG-0654. The proposed changes to align the PBAPS Emergency Plan Annex EP-AA-1007, Table PBAPS 2-1 with the draft guidance for the on-shift ERO are described as follows:

- The Radwaste Operator is removed from the on-shift staff.
- The Instrumentation & Controls (I&C) Technician is removed from the on-shift staff.
- The offsite Field Monitoring team personnel is moved from the on-shift staff to minimum staff
- The on-shift dose assessment function will no longer be performed remotely by Limerick Radiation Protection (RP) Technicians.
- One of the two designated Communicators is removed from the on-shift staff.
- The designated number of Fire Brigade personnel will be removed and the Table will be annotated stating the Function will be controlled per the Fire Protection Plan (FPP).
- The First Aid and Rescue EP Function is removed from the Table, consistent with the draft NUREG-0654, Revision 2 guidance.
- The total number of on-shift RP Technicians will remain at two (2); however, the assignment to specific EP Functions and Major Tasks is revised to align with the NUREG-0654, Revision 2 draft guidance.

The table below identifies the current and proposed PBAPS on-shift ERO staffing positions for each EP Function identified in the NUREG-0654, Revision 2 draft guidance.

An on-shift analysis utilizing the guidance and methodology in NEI 10-05, *"Assessment of On-Shift Emergency Response Organization Staffing and Capabilities,"* concluded that the proposed changes do not result in conflicting duties for on-shift ERO personnel.

EP Function (based on NUREG 0654, Draft Rev 2)	Current On-Shift Staff Positions	Proposed On-Shift Staff Positions
Command and Control	(1) Shift Emergency Director	(1) Shift Emergency Director
Communications	(2) Shift Communicators	(1) Shift Communicator
Radiation Protection	(2) RP Personnel	(2) RP Personnel
Supervision of RP	-	(1) Shift Emergency Director
Dose Assessment Projections	(1) Limerick RP Personnel (performed remotely)	(1) RP Technician (Collateral duty)
Emergency Classifications	-	(1) Emergency Classification Advisor (Collateral Duty)
Engineering	(1) Shift Technical Advisor (STA) (Collateral Duty)	(1) STA (Collateral Duty)
Security	Per the Security Plan	Per the Security Plan
Repair Team Activities	(1) Mechanical Maintenance Staff (Operator Collateral Duty) (1) Electrical Maintenance Staff (Operator Collateral Duty) (1) Radwaste Operator (1) Instrument and Control Personnel	(2) Operations Staff (Collateral Duty)
Supervision of Repair Team Activities	-	(1) Operations Supervisor (Collateral Duty)
Fire Fighting/Fire Brigade	(5) Persons	-
First Aid / Rescue Operations	Plant Personnel (Collateral Duty)	-

EP Function (based on NUREG 0654, Draft Rev 2)	Current On-Shift Staff Positions	Proposed On-Shift Staff Positions
Radiation Accident Assessment and Support of Operational Accident Assessment (Offsite Surveys)	(2) Off-site Field Team Personnel	-
Radiation Accident Assessment and Support of Operational Accident Assessment (Chemistry)	(1) Chemistry Personnel	-

2.1.3 Minimum Staffing

The PBAPS Minimum Staff ERO is revised to be consistent with the draft NUREG-0654, Revision 2 guidance with some exceptions that include:

- No Technical Support Center (TSC) Dose Assessor. This is deemed to be acceptable because the PBAPS Emergency Operations Facility (EOF) is activated at a lower classification level than required by the draft NUREG-0654 guidance for escalating events. The TSC Dose Assessor is not considered necessary because the PBAPS EOF will activate at 60 minutes of an Alert or higher Emergency Classification Level (ECL) and will include an EOF Dose Assessor as Minimum Staff.
- The on-site Field Monitoring Team will not include a driver. Due to the configuration and size of the site within and around the Protected Area (PA) and the limited available roads in that area, a vehicle would not be needed to traverse the site.
- The EOF Information Technology (IT) Lead (Computer Specialist) is proposed to be staffed within 90 minutes of an Alert rather than 60 minutes of a Site Area Emergency.
- The TSC does not have an IT Lead staffed at 90 minutes.
- The EOF will not staff an additional NRC Communicator at a Site Area Emergency.

The following ERO positions will be added to the PBAPS Emergency Plan as Minimum Staff consistent with the draft NUREG-0654, Revision 2 guidance:

- TSC Security Coordinator
- EOF Computer Specialist (staffed at 90 minutes from an Alert)
- OSC RP Supervisor / Lead
- OSC Electrical Maintenance Supervisor / Lead
- OSC Mechanical Maintenance Supervisor / Lead
- OSC I&C Maintenance Supervisor / Lead

The following ERO support positions will no longer be considered Minimum Staff under the PBAPS Emergency Plan and will be designated as Full-Augmented Staff. The Full-Augmented ERO Staff will be managed under an EPIP consistent with the draft NUREG-0654, Revision 2 guidance.

- TSC Director
- EOF Director
- Operations Support Center (OSC) Chemistry Person
- TSC Technical Manager
- TSC Maintenance Manager
- EOF Logistics Manager
- EOF Health Physics Network (HPN) Communicator
- EOF Environmental Coordinator

The following positions will be reduced in number consistent with the draft NUREG-0654, Revision 2 guidance.

- Mechanical Technician – reduction of one (1) position
- RP Personnel – reduction of one (1) position

Additional changes include:

- The response time for one Offsite Field Monitoring Team will change from being on shift to responding within 90 minutes consistent with the draft NUREG-0654, Revision 2 guidance.

- Three (3) RP Personnel will be changed from 60-minute responders to 90-minute responders consistent with the draft NUREG-0654, Revision 2 guidance.

The PBAPS minimum ERO staff positions are being revised as follows:

Current Minimum Staff Positions	**Proposed Minimum Staff Positions** (response times are 60 minutes unless otherwise noted)
Technical Support Center (TSC)	
Station Emergency Director	Station Emergency Director
Operations Manager	Operations Manager (Emergency Classification Advisor)
ENS Communicator	ENS Communicator
Rad Protection Manager	Rad Protection Manager
Core Thermal/Hydraulic Engineer	Core Thermal Engineer
Mechanical Engineer	Mechanical Engineer
Electrical Engineer	Electrical Engineer
N/A	Added Security Coordinator
TSC Director	Relocated to EPIP as Full-Augmentation
Technical Manager	Relocated to EPIP as Full-Augmentation
Maintenance Manager	Relocated to EPIP as Full-Augmentation
SAMG Decision Maker (Collateral Duty)	Position removed from Staffing Table
SAMG Evaluator #1 (Collateral Duty)	Position removed from Staffing Table
SAMG Evaluator #2 (Collateral Duty)	Position removed from Staffing Table
Emergency Operations Facility (EOF)	
Corporate Emergency Director	Corporate Emergency Director
State / Local Communicator	State / Local Communicator
HPN Communicator	Relocated to EPIP as Full Augmentation
Dose Assessment Coordinator	Dose Assessment Coordinator
Radiation Protection Manager	Radiation Protection Manager
Logistics Manager	Relocated to EPIP as Full Augmentation
Environmental Coordinator	Relocated to EPIP as Full Augmentation
EOF Director	Relocated to EPIP as Full Augmentation
N/A	Added EOF Computer Specialist (@ 90 min.)
Joint Information Center (JIC)	
Corporate Spokesperson	Corporate Spokesperson (@ 90 min.)
JIC Director	JIC Director (@ 90 Min)
Public Information Director	Public Information Director (@ 90 min.)
Operations Support Center (OSC)	
OSC Director	OSC Director
(relocated from on-shift staff)	Offsite Field Team Personnel
(relocated from on-shift staff)	Offsite Field Team Driver
Offsite Field Team #2 Personnel	Offsite Field Team Personnel (@ 90 min.)
Offsite Field Team #2 Driver	Offsite Field Team Driver (@ 90 min.)
Onsite Field Team member #1 (onsite surveys)	Onsite Field Team member #1 (onsite surveys)
Onsite Field Team member #2 (onsite surveys)	Deleted
RP Tech #1 (In-plant surveys)	RP Personnel #1
RP Tech #2 (In-plant surveys)	RP Personnel #2
RP Personnel #1 (In-Plant Protective Actions)	RP Personnel #3
RP Personnel #2 (In-Plant Protective Actions)	RP Personnel #4 (@ 90 min.)

Current Minimum Staff Positions	Proposed Minimum Staff Positions (response times are 60 minutes unless otherwise noted)
RP Personnel #3 (In-Plant Protective Actions)	RP Personnel #5 (@ 90 min)
RP Personnel #4 (In-Plant Protective Actions)	RP Personnel #6 (@ 90 min.)
Electrical/I&C #1 Maintenance	Electrical Maintenance Tech
Electrical/I&C #2 Maintenance	I&C Tech (@ 90 min)
Mechanical #1 Maintenance	Mechanical Maintenance Tech
Mechanical #2 Maintenance	Deleted
Chemistry Personnel	Deleted
N/A	Added Elec. Maint. Supv/Lead (@90 min.)
N/A	Added Mech. Maint. Supv/Lead (@90 min.)
N/A	Added I&C Supv/Lead (@90 min.)
N/A	Added Rad Protection Supv/Lead (@90 min.)

2.1.4 Full-Augmented Staff

The description of the Full-Augmented Staff contained in the PBAPS Emergency Plan will be relocated to an EPIP. The PBAPS Full-Augmented staff will continue to be notified to respond at an Alert or higher ECL at the same time as the Minimum Staff personnel; however, the Full-Augmentation ERO response is not required in order to activate the Emergency Response Facility (ERF). Additionally, ERO positions designated as "as needed" in the table below will be qualified for their ERO position; however, the position will be notified to respond to the ERF only if conditions warrant, as determined by the Emergency Director (ED) or his designee.

Position	Response Time	Disposition
Technical Support Center (TSC)		
State/Local Communicator (TSC)	Augmented	Position relocated to EPIP
HPN Communicator (TSC)	Augmented	Position relocated to EPIP
Operations Communicators (TSC)	Augmented	Position relocated to EPIP
Operations Communicators (MCR)	Augmented	Position relocated to EPIP
Damage Control Communicator (TSC)	Augmented	Position relocated to EPIP
Damage Control Communicator (MCR)	Augmented	Position relocated to EPIP
TSC Technical Communicator	Augmented	Position relocated to EPIP
Radiation Control Coordinator	Augmented	Position relocated to EPIP
Radiation Controls Engineer	Augmented	Position relocated to EPIP
Logistics Coordinator	Augmented	Position relocated to EPIP
Security Coordinator (TSC)	Augmented	Position reclassified as Min Staff
Clerical Staff	As Needed	Position relocated to EPIP
Emergency Operations Facility (EOF)		
ENS Communicator	Augmented	Position relocated to EPIP
EOC Communicator (EOF)	Augmented	Position relocated to EPIP
Regulatory Liaison	Augmented	Position relocated to EPIP
Dose Assessor	Augmented	Position relocated to EPIP
Field Team Communicator	Augmented	Position relocated to EPIP

Position	Response Time	Disposition
Tech Support Manager	Augmented	Position relocated to EPIP
Operations Advisor	Augmented	Position relocated to EPIP
Technical Advisor	Augmented	Position relocated to EPIP
Administrative Coordinator	Augmented	Position relocated to EPIP
Events Recorder	Augmented	Position relocated to EPIP
Computer Specialist	Augmented	Position reclassified as Min Staff at 90 min.
Security Coordinator	Augmented	Position relocated to EPIP
State EOC Liaison	Augmented	Position relocated to EPIP
Clerical Staff	As needed	Position relocated to EPIP
Joint Information Center (JIC)		
Rad Protection Spokesperson	Augmented	Position relocated to EPIP
Technical Spokesperson	Augmented	Position relocated to EPIP
News Writer	Augmented	Position relocated to EPIP
JIC Coordinator	Augmented	Position relocated to EPIP
Events Recorder	Augmented	Position relocated to EPIP
Access Control	Augmented	Position relocated to EPIP
Administrative Coordinator	Augmented	Position relocated to EPIP
Rumor Control Staff	As Needed	Position relocated to EPIP
Media Monitor Staff	As Needed	Position relocated to EPIP
Clerical Support	As Needed	Position relocated to EPIP
Operations Support Center (OSC)		
Damage Control Communicator (OSC)	Augmented	Position relocated to EPIP
Assistant OSC Director	Augmented	Position relocated to EPIP
Chemistry Personnel	As Needed	Position relocated to EPIP
Operations Lead & Support	As Needed	Position relocated to EPIP
Offsite Field Team Personnel	As Needed	Position reclassified as Min Staff
On Site Field Team Personnel	As Needed	Position reclassified as Min Staff
RP In-Plant Surveys	As Needed	Position reclassified as Min Staff
RP Personnel In-Plant Protective Actions	As Needed	Position reclassified as Min Staff
Mechanical Maintenance Personnel	As Needed	Position reclassified as Min Staff
Electrical / I&C Maintenance Personnel	As Needed	Position reclassified as Min Staff
First Aid	As Needed	Position relocated to EPIP
Radwaste Operator	As Needed	Position relocated to EPIP
Chemistry Personnel	As Needed	Position relocated to EPIP

2.2 Reason for the Proposed Changes

The PBAPS Emergency Plan is being revised to align with the recently issued draft NUREG-0654, Revision 2 guidance. The revision to the NUREG-0654 guidance reflects changes to NRC regulations, guidance, and policies, as well as advances in technology and best practices that have occurred since the NUREG-0654 guidance was originally issued in November 1980.

2.3 Peach Bottom Emergency Plan Background

Peach Bottom Atomic Power Station (PBAPS) is located partly in Peach Bottom Township, York County, partly in Drumore Township, Lancaster County, and partly in Fulton Township, Lancaster County, in southeastern Pennsylvania on the westerly shore of Conowingo Pond at the mouth of Rock Run Creek. It is about 38 miles north-northeast of Baltimore, Maryland, and 63 mi west-southwest of Philadelphia, Pennsylvania. Units 2 and 3 were issued operating licenses on October 25, 1973, and July 2, 1974, respectively; Unit 2 began commercial operation during July 1974, and Unit 3 began commercial operation during December 1974.

The PBAPS Emergency Preparedness Plan consists of the Exelon Nuclear Standardized Radiological Emergency Plan (EP-AA-1000) and a Station Emergency Plan Annex (EP-AA-1007). Additionally, the program provides direction and guidance through EPIPs, and associated program administrative documents. The 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 Exelon Standardized Emergency Plan. The Standardized Emergency Plan establishes the concepts, evaluation and assessment criteria, and protective actions that are necessary to limit and mitigate the consequences of potential or actual radiological emergencies.

The PBAPS Annex (EP-AA-1007) generally contains information and guidance that is unique to the station. The Annex and associated Addendums address site-specific criteria including:

- Emergency Action Levels (EALs) located in Addendum 3 to the station Annex.
- Differences from the Standardized Emergency Plan (such as station specific staffing commitments, unique aspects of ERO augmentation, etc.).
- Facility geography and location for a full understanding and representation of the station's emergency response capabilities.
- Plant specific facilities and equipment associated with the Emergency Preparedness Program.

2.3.1 Peach Bottom Atomic Power Station, Units 2 and 3 Emergency Plan – The first PBAPS Emergency Plan written against NUREG-0654 was submitted to the NRC on January 14, 1980. The NRC provided comments which were subsequently addressed by PBAPS staff.

2.3.2 Nuclear Emergency Plan – In August 1993, Philadelphia Electric Company (PECO) combined the Emergency Plans for Limerick Generating Station (LGS) and PBAPS into a common Emergency Plan (Revision 0). The revision identified the On-Shift and Augmented Staff, and included an Exhibit 3-7, *"Personnel and Facility Planning Basis summary which provided a staffing comparison to NUREG-0654, Revision 1."* A public

meeting was held between PECO and the NRC on January 7, 1993, to discuss implementation of the common Emergency Plan.

2.3.3 Exelon Nuclear Standardized Radiological Emergency Plan, Revision 13 – On August 30, 2002, as part of the merger with the Commonwealth Edison stations (Braidwood, Byron, Dresden, LaSalle, and Quad Cities), PBAPS, Units 2 and 3, and LGS, Units 1 and 2, were incorporated into the Exelon Generation Company Standard Emergency Plan. The revision established a mostly common ERO throughout the Exelon Fleet.

2.4 Minimum Staffing and Full-Augmentation as discussed in Peach Bottom Atomic Power Station's Emergency Plan

The PBAPS Emergency Plan designates two (2) types of augmented ERO responders. Those designated as Minimum Staff are those key ERO personnel needed to relieve the on-shift staff of key EP functions/tasks required in response to the emergency. Those key functions and associated tasks are identified in NUREG-0654, Section II.B. Evaluation Criteria 5 of Section II.B of NUREG-0654, Revision 1, states in part:

> *Each licensee shall specify the positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity. For emergency situations, specific assignments shall be made for all shifts and for plant staff members, both onsite and away from the site. These assignments shall cover the emergency functions in Table B-1 entitled, "Minimum Staffing Requirements for Nuclear Power Plant Emergencies." The minimum on-shift staffing levels shall be as indicated in Table B-1. The licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. This capability shall be as indicated in Table B-1.*

Those ERO positions designated as Minimum Staffing in the PBAPS Emergency Plan are those required to activate their respective Emergency Response Facility (ERF). Specifically, these are the ERO positions that are the absolute minimum needed to implement the Emergency Plan (i.e., if any position or function is not staffed then the Emergency Plan may not be effectively implemented). These positions in most cases are required to respond to their respective ERF within 60 minutes of the declaration of an Alert or higher ECL.

> *…"Facility Activation" refers to the decision to consider a facility fully operational based on the minimum staffing required in ERO staffing tables contained within the station specific Annex and the ability of facility staffing and equipment to perform its designed function(s).*

The positions which are considered Full-Augmented Staff (i.e., Non-Minimum Staff) are those positions which provide support for the Minimum Staff in their response to the emergency. While some Full-Augmentation positions were historically described in the PBAPS Emergency Plan EP-AA-1007, they were only added to EP-AA-1007, Table PBAPS 2-1, at the time of the PECO/AmerGen and ComEd merger for the development of a common Exelon fleet Emergency Plan in Revision 11.

The current Standardized Emergency Plan, in EP-AA-1000, Part II, Section B.5 supporting PBAPS emergency planning included the following description for the Full-Augmentation ERO:

> *ERO staffing tables contained within the station specific Annex, 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. The full augmentation staffing levels are used as a planning basis to cover a wide range of possible events….*

As described in the PBAPS Emergency Plan, these Full-Augmentation positions consist of liaisons, coordinators, and additional communicators which help facilitate communication and the emergency response effort over time, but are not directly needed to implement the Functions/Tasks identified in the draft NUREG-0654, Revision 2, Table B-1 guidance. The list of Full-Augmented positions and their current assigned tasks are listed in Enclosure 3.

2.5 EOF Activation as discussed in the Peach Bottom Atomic Power Station Emergency Plan

The draft NUREG-0654, Revision 2 guidance establishes that the EOF facility activate within 60 minutes of a Site Area Emergency (SAE) or greater ECL. Exelon has elected to activate the EOF within 60 minutes of an Alert or greater ECL. By establishing the EOF at the Alert level, certain EP functions such as Dose Assessment or State/local communications can be established immediately following the Alert classification at the EOF and need not be duplicated at the TSC.

The turnover of Command and Control of EP functions will occur through a conference line between the Main Control Room (MCR), TSC, and EOF and may occur simultaneously if all facilities are available. In this manner, there will be no delay in transferring functions such as Emergency Action Level (EAL) classifications, State/local Notifications, Protective Action Recommendations (PARs), and Emergency Exposure Control from the MCR to the respective ERF (i.e., TSC or EOF).

2.6 ERO Performance Validation

As part of the implementation of these changes, a confirmation of the capabilities of the final Minimum Staff personnel will be performed through an EP drill to demonstrate that no loss of function will result due to the changes in the ERO. The corresponding State(s) are invited to participate in this EP drill. Additionally, the NRC will be invited to observe the drill.

In support of this effort, and as documented in Enclosure 4 of this submittal, Exelon makes the following commitment:

> Exelon will conduct a confirmation Emergency Preparedness Drill at one of the affected Pennsylvania stations (Limerick or Peach Bottom) under this License Amendment Request to demonstrate that no loss of EP function will result due to

the proposed changes in the ERO. The drill will include each of the Emergency Response Facilities described in the Emergency Plan (i.e., MCR, TSC, OSC, EOF and JIC).

This commitment shall be completed prior to the implementation of the approved license amendment.

2.7 On-Shift Staffing Analysis (OSA)

Regulatory Issue Summary (RIS) 2016-10, *"License Amendment Requests for Changes to Emergency Response Organization Staffing and Augmentation,"* states that an on-shift staffing analysis under 10 CFR 50, Appendix E, Section IV.A.9 should not be used to provide the primary basis to support the Technical Evaluation of a License Amendment Request (LAR). The OSA, however, may be utilized as part of the overall evaluation of staffing changes. The RIS states:

> *…an evaluation performed using only the guidance of NEI 10-05 does not satisfy the requirement to identify and evaluate changes to ERO augmentation timing or ERO augmentation staffing that reduces the capability to perform an emergency planning function.*

In conjunction with this License Amendment Request, PBAPS performed an OSA per 10 CFR 50, Appendix E, Section IV.A.9. The results are used to support the conclusions made in this License Amendment Request for on-shift staffing; however, Exelon understands that the OSA comprises a select set of identified scenarios and should not be used as the sole basis for the conclusions in the technical evaluation supporting this amendment request.

3.0 TECHNICAL EVALUATION

The evaluation of the proposed changes is discussed below.

3.1 Technical Advancements and Support

The following section discusses technical changes in plant systems, procedures, EP equipment/programs and training, which have been completed to better support ERO functions, ease Operator burden and improve Augmented Staff efficiency. The following discussion describes the improvements implemented since the last revision of the NUREG-0654 staffing guidance.

3.1.1 Plant Process Computer

The Plant Process Computer (PPC) system provides for the Safety Parameter Display System (SPDS) functions discussed below as well as data collection and processing, accounting, alarming and logging functions. An auxiliary function of the PPC is to transmit plant data to remote locations, including the TSC and the EOF.

The PPC and the SPDS provide a concise display of critical plant variables to the

Main Control Room (MCR) personnel to aid them in rapidly and reliably determining the safety status of the plant. The PPC and SPDS are operated during normal plant operations, as well as during abnormal and emergency conditions. The principal purpose and function is to aid the MCR personnel during abnormal and emergency conditions in determining the safety status of the plant.

Parameters displayed by the PPC and SPDS are the quantitative and qualitative measures to indicate the accomplishment or maintenance of critical safety functions. Information needed to assess the status of the plant safety parameters is obtained by the measurement of key plant variables. The safety parameters utilized to assess the maintenance or accomplishment of the critical safety functions as required by NUREG-0737, Supplement 1, "Clarification of TMI Action Plan Requirements: Requirements for Emergency Response Capability," Section 4 are:

1. Reactivity control
2. Reactor core cooling and heat removal
3. Reactor coolant system integrity
4. Containment conditions
5. Radiation control

In general, the ranges of parameters monitored by the PPC and SPDS are identical to those ranges monitored by existing MCR instrumentation. Ranges displayed by the PPC/SPDS are adequate to cover plant responses analyzed in UFSAR Chapter 14*, "Plant Safety Analysis."*

Benefits of the current level of computer capabilities include:

- Improved plant monitoring capability for emergency functions.
- Real time plant data available through graphical displays.
- PPC PI functions available to any desktop computer through the plant's Emergency Response Facilities.
- Programming capability for automated response such as indication of critical parameter alarms.
- Easier interface when switching between graphical displays.

The PPC system is an operating platform incorporating the Plant Monitoring System (PMS) and the SPDS as well as the following:

- Process Computer System
- Meteorological Data Acquisition System
- Sequence of Events Recorder (SER)
- Radiation monitoring

MCR personnel can quickly monitor all critical plant parameters from a single workstation. The following are some of the benefits of the PPC:

- The Shift Manager has improved plant monitoring capability to support

Emergency Director (ED) function.

- Workstations have the capability of being programmed for automated response (such as automatically indicating a critical parameter during events that may challenge that parameter).

- Data manipulation functions, such as plotting information graphically or recovering historical data.

- Much of the PPC functionality can be made available to any desktop computer through the plant's site-wide intranet.

PBAPS also utilizes a Digital Plant Viewer (DPV) system that permits personnel to view conditions in the plant where cameras are installed live-time prior to entry. The DPV also allows personnel to access live-time dose rate data in areas with installed Area Radiation Monitors (ARM). No RP Technician support is required to use the DPV.

In aggregate, these improvements support the proposed change in ERO staffing by ensuring that major functions and tasks are completed more easily with less burdens on the MCR staff.

3.1.2 Dose Assessment

Radiological dose assessment has benefited from technological advances that make its use simpler and less time consuming. During the early days of operation, procedures describing methods for manually calculating offsite doses were provided. The methods incorporate constants which simplified and speed up calculations. Soon after, a computer based method for Dose Assessment was implemented. The Common Dose Model (CDM) was a PC-based computer dose model based on the MESOREM Jr, Model. The MESOREM Jr. system was designed to satisfy applicable 10 CFR Part 50, Appendix E requirements and Utilization Facilities and NUREG CR-3011, "Dose Projection Consideration at Nuclear Power Plants" guidance. It provided a means for immediate dose assessment as well as the capability to track the plume and resultant doses of an accidental radioactive airborne release for a duration of up to 24 hours. By 1995, the PBAPS Emergency Plan indicated that MESOREM Jr was being used for dose assessment calculations.

MESOREM Jr was replaced in 2002 with a Microsoft Access data program known as DAPAR developed internally by Exelon. DAPAR allowed the user to move within different input screens making changes as needed.

In 2012 DAPAR was replaced by Unified Rascal Interface (URI), a Visual Basic.net program. URI is a more efficient program utilizing menus and toolbars with the majority of inputs on a single screen making the program more user friendly. The plant display systems have improved over the years allowing access to more data points that are needed within dose assessment. Redundant Dose Assessment computers were installed as part of the implementation of cyber security requirements. Peach Bottom

Atomic Power Station has an individual plant data screen dedicated to the needs of dose assessment inputs.

The overall improvements in technology and information availability over the years have enabled the on-shift staff to assess plant conditions quickly and efficiently, and with less distraction than before. The computing power of modern computer processors allows for calculation of dose projections that take seconds rather than minutes.

3.1.3 Automated Call-Out Systems

Enhancements in automated call-out and paging systems have resulted in streamlined processes for activation of the ERO. The ERO activation can occur through a Web based or phone based system to initiate rapid notification of ERO members in lieu of individual calls to fill the individual ERO positions included in the current Emergency Plan for PBAPS. The system includes a primary activation system as well as back-up capability to ensure uninterrupted operation.

3.1.4 Procedural Improvements

a. Emergency Operating Procedures (EOPs)

Since the original Emergency Plan approval, EOPs have been improved through industry initiatives. EOPs generally use a symptom-based approach that demands less assessment and interpretation of plant conditions by the crew. In addition, the EOPs are better human factored, and have an improved layout allowing for more consistent implementation.

EOPs interface well with new technology such as the PPC. The PPC system is capable of graphically displaying plant conditions to assist in EOP execution.

Abnormal Operating Procedures (AOPs) also contain directional steps for when a review of the classification procedure is required to determine potential classifiable conditions. This prompts the user to identify applicable EALs.

b. Emergency Action Levels (EALs)

In 2016, PBAPS updated the EAL classification methodology to that published in NEI 99-01, Revision 6, *"Development of Emergency Action Levels for Non-Passive Reactors."* The PBAPS EALs incorporate the new guidance that has simplified the classification process, including the use of a matrix of EAL initiating conditions that streamlines the process of evaluating EALs against plant conditions.

3.1.5 Training

a. Operations Training

Training is used to strategically drive improved performance at PBAPS. Since NRC approval of the PBAPS Emergency Plan, the Systematic Approach to Training (SAT)

has resulted in developing a task list for Operations personnel. The SAT process ensures training is conducted to industry-accepted standards, and has led to accreditation of the Operations Training Programs by the Institute of Nuclear Power Operations (INPO) National Academy for Nuclear Training.

A dynamic simulator is routinely used during Operations training. "As found" simulator evaluations that include emergency response scenarios are part of the requalification segment. Simulator scenarios are designed to be realistic and reflect a wide range of plant conditions, including emergency conditions. During the simulator evaluated sessions the MCR staff is taken from normal operations to accident conditions which require evaluation against EALs and may result in the declaration up to a General Emergency (GE). The Operations crew performs critical functions, such as classification, core damage assessment, accident mitigation, response prioritization, and communications without augmentation from additional responders. The proficiency of the MCR staff to perform these functions while maintaining situational awareness, without additional support, is assessed during evaluated simulator sessions.

The Licensed Operator Requalification Training (LORT) Program includes licensed Operations crew performance evaluations that are to consider the scenario guidance attributes of INPO Operations Department Standing Instruction, ODSI-3, *"Operations Department Guidance for Conducting Crew Performance Evaluations."*

INPO ODSI-3, provides guidance on the realistic integration of the emergency response into crew performance evaluations. The purpose is to ensure the additional challenges the Emergency Plan responsibilities add to the crew's ability to manage an event are realistically represented in the crew performance evaluations. Representing the event as realistically as possible, which includes the additional challenges of Emergency Plan responsibilities, helps promote the situational awareness necessary during a real event.

b. Shift Technical Advisor (STA) /Incident Assessor(IA) Training

The STA/IA was originally trained as an advisor to the operating shift per NUREG-0737, *"Clarification of TMI Action Plan Requirements."* In 2014, additional guidelines were developed by INPO for the training of STAs. This is detailed in the document ACAD 14-002, *"Guidelines for the Training and Qualification of the Shift Technical Advisor."*

The ACAD 14-002 guidelines describe the role of the STA. The STA/IA performs independent assessments of plant operating concerns, technical support, appropriate corrective actions, analysis of events and their effects, effectiveness of response(s) to emergent conditions, classifications of emergencies, protection of the public and any other actions related to critical safety functions and plant safety during abnormal and emergency situations. They also contribute to operations during normal plant conditions. By routine monitoring of equipment and plant operations, the STA/IA can focus on preventative actions in order to mitigate the consequences of an accident.

3.1.6 Radiation Protection Improvements

There have been many improvements in RP since the PBAPS staffing was established under NUREG-0654, Revision 1 guidance.

The following provides a summation of the technology/tools associated with the in-plant protective actions:

a. Access Control

- Access to the Radiologically Controlled Area (RCA) is controlled electronically. The electronic access control system provides for the user to electronically sign Radiation Work Permits (RWPs) to self-authorize themselves to access the RCA and self-issuance of an electronic dosimeter (in addition to the assigned Dosimetry of Legal Record (DLR) that is always worn). Access to the RCA is controlled electronically without interface with a RP Technician.

b. Personnel monitoring

- Personnel are issued DLRs that are continuously worn for constant monitoring. No RPT support is needed for issuance of DLRs to on-shift emergency workers.

- Secondary dosimeters are issued through the electronic access control system. The secondary dosimeters are self-reading, alarming electronic dosimeters that provide readout of accumulated dose and ambient dose rate. No RP Technician support is needed for issuance of electronic dosimeters.

- Automated whole-body monitors provide contamination monitoring. All radiation workers are qualified to use the automated whole-body monitors without RP Technician interface.

- In circumstances when the automated whole-body monitors are not available, hand held friskers are used for personnel contamination monitoring. All radiation workers are qualified to use the hand-held friskers without RP Technician interface.

c. Dosimetry

- Personnel are issued DLRs that are continuously worn for constant monitoring.

- Secondary dosimeters are self-issued through the electronic access control system. The secondary dosimeters are self-reading, alarming electronic dosimeters that provide readout of accumulated dose and ambient dose rate. No RP Technician support is needed for issuance of electronic dosimeters.

- If a DLR is lost or damaged under emergency conditions, additional DLRs are staged for emergency issuance.

- If an electronic dosimeter is lost or damaged, additional electronic dosimeters are available.

d. Area Radiation Monitors (ARMs) are also used and reviewed prior to dispatch of personnel into the plant. PBAPS has multiple ARMs throughout the plant.

Some RP Technician support functions associated with in-plant protective actions such as access control, personnel monitoring, dose assessment, and dosimetry now require less dedicated support time since they are covered by plant process enhancements (newer technology/tools).

These technology/tools use available equipment such as portal monitors, self-alarming dosimeters, and an automated access control point.

All onsite ERO members expected to be dispatched into the plant for evaluation, operations, or repair activities are Radiation Worker qualified and understand and are trained on how to use the available tools.

3.1.7 Improvements Summary

The improvements to staffing, equipment, procedures, and training that have occurred since initial approval of the PBAPS Emergency Plan have resulted in a significant increase in the on-shift capabilities and knowledge. Based on these improvements, it is concluded that there would be no significant degradation or loss of any functional task as a result of the proposed changes in ERO staffing.

3.2 Functional Analysis

This analysis evaluates the impact of implementing the changes in staffing on the ERO ability to perform the major tasks for the major functional areas of the PBAPS Emergency Plan. The analysis demonstrates that no degradation or loss of function would occur as a result of the change.

3.2.1 EP Function: Command and Control (formerly Emergency Direction and Control)
The Command and Control function includes the following tasks as defined in the draft NUREG-0654, Revision guidance:

- Provide overall ERO command and control, until relieved.
- Approve EAL and/ or Protective Action Recommendation (PAR) classifications, until relieved.
- Authorize personnel dose extensions, until relieved

This function is important for effective emergency response because adequate Command and Control enables the PBAPS ERO to effectively develop priorities for

response planning and corrective action(s) and to provide a unified approach to the event response by providing a single individual with overall command and control authority. The function is staffed and maintained at all times and is assigned to the Operations Shift Manager (SM). The augmentation (relief) of this position is intended to relieve the SM of EP functions so that the SM can focus on the event response from an operations perspective. This is available within 60 minutes of an Alert (or greater) ECL declaration and is a position staffed by the TSC ED. In addition, the EOF Corporate ED will take responsibility for those EP functions associated with PARs following activation of the EOF, also at the Alert or greater ECL.

a. On-Shift Staff – The table below identifies the current, proposed, and draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Command and Control – On-shift		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1)* Shift Manager/ Emergency Director * may be performed by persons assigned other functions	• Shift Emergency Director	• Operations Shift Manager

Emergency Plan Change Assessment

The PBAPS existing on-shift staffing table currently aligns with the draft NUREG-0654, Revision 2 guidance with one exception. The current PBAPS Table 2-1 contains a note which states the MCR Shift ED position *"may be performed by persons assigned other functions."* There are no additional functions assigned to the Shift Emergency Director (ED) other than what is annotated in the draft NUREG-0654, Revision 2 guidance and as such, the existing note is deemed unnecessary and is being removed from the PBAPS staffing table.

Draft NUREG-0654, Revision 2 Alignment

PBAPS will maintain the existing title for this EP Function. The draft NUREG-0654, Revision 2 Operations Shift Manager will be titled Shift Emergency Director at PBAPS.

b. Minimum Staff – The table below identifies the current and proposed Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Command and Control – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1) TSC Station Emergency Director • (1) EOF Corporate Emergency Director	• (1) TSC Station Emergency Director • (1) EOF Corporate Emergency Director	• (1) TSC Emergency Coordinator (at Alert or higher) • (1) EOF Emergency Director (at SAE or higher)

The proposed ERO staffing is consistent with the draft NUREG-0654, Revision 2 guidance. There is one difference between the PBAPS proposed Minimum Staff and the draft NUREG-0654, Revision 2 guidance. Specifically, PBAPS will staff the EOF ED within 60 minutes of an Alert or higher ECL, while the NUREG-0654 guidance staffs the position within 60 minutes of a SAE or higher ECL. This difference expands the PBAPS emergency response at the Alert ECL and will ensure that the EOF ERO will be immediately available should an Alert classification escalate to a SAE or GE ECL.

3.2.2 EP Function: Communications

The Communications function includes the following tasks as defined in the draft NUREG-0654, Revision 2 guidance:

- Communicate EAL and PAR classifications to Offsite Response Organizations (OROs), including the NRC, until relieved.

This function is important for effective emergency response. The function ensures adequate communication onsite and offsite to successfully implement the emergency plans. PBAPS maintains the ability to staff this position at all times. This function is assigned to a pre-existing on-shift staff member as a collateral duty and has been assessed through an on-shift staffing analysis, via 10 CFR 50, Appendix E, Section IV.A.9, to ensure that this EP Function can be performed when needed without any additional competing priorities.

The augmentation (relief) of this position is available within 60 minutes of an Alert (or greater) ECL and is intended to relieve the on-shift staff of this EP function. This function consists of two (2) ERO members to fulfill the communication needs (i.e., one (1) for the NRC and one (1) for State/local notification and status updates). Under the PBAPS Emergency Plan, additional Communicators can be called upon as needed, and at the discretion of the ED.

a. On-Shift Staff – The table below identifies the current and proposed Emergency Plan On-shift ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Communications – On-shift		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (2) Shift Personnel	• (1) Shift Communicator	• (1) Communicator[1] [1] Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

Emergency Plan Change Assessment

PBAPS plans to reduce the number of personnel assigned to on-shift communications. PBAPS currently utilizes two (2) Operators to perform these notifications (one dedicated for the State/local communications and one dedicated for ENS communications), which is one more than provided by the draft guidance. Considering the requirements under the Emergency Plan is for State/local communications to occur within 15 minutes of EAL classification and the subsequent Emergency Notification System (ENS) notification occurs as soon as possible after the State/local notification, but not to exceed 60 minutes from an EAL classification, it is possible for one communicator to perform both functions until relieved by the augmented ERO. This model of one dedicated shift communicator has been demonstrated successfully throughout the industry, including other stations within the Exelon fleet.

Draft NUREG-0654, Revision 2 Alignment

PBAPS will keep the Shift Communication function consistent with the draft NUREG-0654, Revision 2 guidance. The Shift Communicator will perform NRC and State/local communications as needed until relieved.

A difference identified related to the PBAPS implementation of the draft NUREG-0654 guidance is the absence of the note (1) regarding collateral duties. The note states: *"Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time,"* and is not included in the PBAPS Emergency Plan. This note is not necessary because no collateral duties are assigned to the on-shift Communicator under the PBAPS Emergency Plan.

There are no other deviations from the draft NUREG-0654, Revision 2 guidance.

b. Minimum Staff – The table below identifies the current and proposed Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Communications – Minimum Staff		
Current Emergency Plan, PBAPS Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1) TSC ENS Communicator • (1) EOF State/local communicator • (1) EOF HPN Communicator • (1) TSC Director • (1) EOF Director	• (1) TSC ENS Communicator • (1) EOF State/local Communicator (additional Communicators will be staffed as needed)	• (1) TSC Communicator (NRC) • (1) TSC Communicator (ORO) • (1) EOF Communicator @ SAE ECL or greater As needed (one communicator staffed at TSC for NRC communications if needed)

Emergency Plan Change Assessment

PBAPS is maintaining the Minimum Staff TSC ENS and EOF State/local Communicator as currently described in the PBAPS Emergency Plan with no proposed changes to those positions. Additional Communicators will be staffed at the EOF or TSC as needed.

The following positions, identified as minimum staff under the current Emergency Plan, are being re-categorized as Full-Augmented staff and managed within an EPIP.

EOF HPN Communicator - The EOF HPN Communicator identified in the current Emergency Plan is removed and relocated to an EPIP. Exelon is adding a statement to the staffing Table that additional communicators will be staffed as needed. This ensures that if required, additional NRC communicators can be augmented as necessary to support communications between Exelon and the NRC.

TSC Director – Under the PBAPS Emergency Plan, the TSC Director responsibilities do not directly perform actions necessary to accomplish EP functions under NUREG-0654, but rather support other personnel at the TSC. The position, as currently defined in the Emergency Plan, would not be considered as part of the absolute

minimum ERO needed to implement the Emergency Plan (i.e., if any position or function is not staffed then the Emergency Plan may not be effectively implemented). The TSC Director performs support activities such as supervisory actions, validations, liaison, assistance and monitoring activities. Specific responsibilities include:

- *Verify that qualified individuals are filling Communicator positions in the Control Room, TSC and OSC.*
- *Supervise the activities of the Logistics Coordinator and state/local Communicator.*
- *Ensure that communications are established with appropriate parties as directed by the Station Emergency Director.*
- *Ensure that all required notifications to offsite governmental agencies (state/local and NRC) are timely and accurate.*
- *Act as the Exelon Nuclear Liaison to any NRC Site Team Representatives.*
- *Ensure that the NRC Site Team Representatives are directed to their appropriate counterparts.*
- *Assist the Corporate Emergency Director in the acquisition of information for off-site agency updates.*
- *Record and relay inquiries to the Station Emergency Director. In addition, record responses to such inquiries prior to transmission.*
- *Assist the Station Emergency Director in maintaining proper records.*

Each of these tasks above are considered support activities and are not required to directly accomplish any of the NUREG-0654 identified functions. As such, the TSC Director position can be deleted from the Minimum Staff and maintained as a Full-Augmentation position. The TSC Director position and the listed responsibilities are being relocated to an EPIP.

EOF Director – Under the PBAPS Emergency Plan, the EOF Director responsibilities do not directly perform actions necessary to accomplish EP functions under NUREG-0654, but rather support other personnel at the EOF. The position, as currently described in the PBAPS Emergency Plan, would not be considered as part of the absolute minimum ERO needed to implement the Emergency Plan (i.e., if any position or function is not staffed then the Emergency Plan may not be effectively implemented). The EOF Director performs support activities such as coordination, assessment, monitoring, and assistance activities. Specific responsibilities include:

- *Direct and coordinate the activation and response efforts of the EOF staff in support of the Corporate Emergency Director.*
- *Evaluate the need to augment the EOF staff based on events in progress.*
- *Assess the effectiveness of ongoing EOF working relationships.*
- *Monitor information flow within the EOF to ensure that facility activities remain coordinated.*
- *Prepare state/local notification forms with the assistance of the EOF Radiation Protection Manager and the Technical Support Manager. (task transferred to the State/local Communicator position)*
- *Coordinate services as necessary to support EOF operations.*
- *Coordinate with the Administrative Coordinator for continual shift staffing requirements.*
- *Assist in the conduct of Corporate Emergency Director duties.*
- *Act as the designated alternate for approval of the technical content of Exelon Nuclear Press Releases and information released to the News Media.*
- *Act as purchasing agent in support of the TSC for contract negotiation/administration.*

Note the responsibility to *"Prepare state/local notification forms with the assistance of the EOF Radiation Protection Manager and the Technical Support Manager,"* is relocated to the State/local Communicator position. Each of these other tasks above are considered support activities and are not required to directly accomplish any of the draft NUREG-0654, Revision 2 identified functions. As such, the EOF Director position can be deleted from the Minimum Staff and maintained as a Full-Augmentation position. The EOF Director position and the listed responsibilities are being relocated to an EPIP.

<u>Draft NUREG 0654, Revision 2 Alignment</u>

PBAPS will maintain the ENS (NRC) Communicator and State/local (ORO) Communicators consistent with the draft NUREG-0654, Revision 2 guidance; however, the reporting location differs. Specifically, the function is maintained with one (1) ENS Communicator staffed at the TSC within 60 minutes to perform NRC communications and one (1) State/local Communicator at the EOF within 60 minutes to perform the State/local notifications with the OROs.

The draft NUREG-0654, Revision 2 designates the minimum staff ORO communication (State/local) is located at the TSC. For PBAPS, the State/local

Communicator is located in the EOF. This is considered acceptable because the PBAPS EOF is activated at the Alert or higher ECL. By establishing the EOF at the Alert level, the function would be available at the same time as if it were located in the TSC.

Additionally, the draft NUREG-0654, Revision 2, identified an EOF NRC communicator to be staffed within 60 minutes of an SAE or higher ECL. Exelon proposes to credit the TSC ENS communicator to provide information to the NRC in conjunction with the commitment to staff additional communicators as needed.

3.2.3 EP Function: Radiation Protection (formerly Radiological Assessment In-Plant Surveys and In-Plant Protective Actions)

The RP function includes the following tasks as defined in draft NUREG-0654, Revision 2 guidance:

- Provide qualified radiation protection coverage for responders accessing potentially unknown radiological environments during emergency conditions.
- Provide in-plant surveys.
- Control dosimetry and radiologically controlled area access.

The ability to provide radiological expertise when the plant is experiencing an event with serious radiological consequences is crucial, due to the unknown radiological environment faced by emergency workers, particularly at the onset of the event.

This function is staffed by two (2) qualified RP staff members on-shift. Under the proposed PBAPS ERO staffing and the draft NUREG-0654, Revision 2 guidance, the augmentation (support) of this position occurs in two (2) stages: 1) within 60 minutes of an Alert (or greater) ECL, three (3) additional qualified RP staff are available; and 2) within 90 minutes of an Alert (or greater) ECL an additional three (3) qualified RP staff are available, and both are staffed in the OSC. The total number of qualified RP staff for the ERO is eight (8) considering the on-shift and augmented staff.

The draft *"Technical Analysis in Support of the Guidance in NUREG-0654/FEMA-REP-1, SECTION II.B, Emergency Response Organization,"* for proposed Revision 2 states that: "*based upon staff review and approval of ERO staffing plans, and the evaluation of licensee exercises, the [NRC] staff has determined that expecting 2 qualified RP staff on-shift is reasonable for the increased time period (30 minutes to 60 minutes), at which point additional RP resources would become available, and that 3 additional RP staff in 60 minutes and 3 additional RP staff in 90 minutes is acceptable to ensure the staff can maintain its reasonable assurance finding (10 CFR 50.47(a)). In addition, the [NRC] staff has determined that field monitoring teams (FMTs) (onsite and offsite) can function with limited RP expertise while under the direct supervision of senior RP staff in the TSC or EOF, thus removing the need for a fully qualified RP staff member being a part of the FMT when their expertise is better suited supporting the ERO on-site*." The senior RP staff supervising the FMTs at PBAPS is responsible for directing the FMTs as well as providing direction for their safety from the radiological event.

In addition, the Chemistry/Radiochemistry function listed in Table B-1 to Revision 1 of NUREG-0654, is no longer needed as the need for immediate reactor coolant sampling has been reduced due to the variety of plant indications of fuel damage available at PBAPS.

Overall, the ERO functions assigned to qualified RP staff are more clearly defined in Table B-1 to the draft NUREG-0654, Revision 2 guidance and support the reduction of the overall staffing levels for qualified RP Personnel.

a. On-Shift Staff – The table below identifies the current and proposed Emergency Plan On-Shift ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Radiation Protection – On-shift		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1) RP Technician (In Plant Surveys) • (2)* RP Persons (In Plant Protective Actions) • (1) Chemistry Personnel *may be performed by persons assigned other functions	• (2) Radiation Protection Personnel	• (2) Radiation Protection Personnel

Emergency Plan Change Assessment

PBAPS currently maintains two (2) RP Technicians on-shift to satisfy the Emergency Plan requirements. One (1) RP Technician is assigned to the In-Plant Surveys Task. Two (2) RP Technicians are assigned to the task of In-Plant Protective Actions; however, those tasks are considered collateral duties and the assigned RP Technicians may be assigned other functions (e.g., dose assessment). PBAPS will maintain two (2) qualified RP staff members on-shift; however, under the draft NUREG-0654, Revision 2 guidance, the RP tasks are combined such that the need to add the clarifying note regarding other functions is not necessary. As such, the PBAPS ERO Staffing Table is revised to show two (2) qualified RP staff members for this function, without the note which states the task may be performed by persons assigned other functions.

The proposed revision also removes the Chemistry personnel from Table 2-1. The Chemistry/Radiochemistry function listed in Table B-1 to Revision 1 of NUREG-0654, is no longer needed as the need for immediate reactor coolant

sampling has been reduced due to the variety of available plant indications of fuel damage available at PBAPS. Early indications of fuel damage can be identified through Containment Radiation Monitors, Core Instrumentation, or Effluent Radiation Monitors, all of which are available in the MCR.

An on-shift staffing analysis under 10 CFR 50, Appendix E, Section IV.A.9 was performed to ensure that the Chemistry major task is not required per PBAPS procedures prior to augmentation. The OSA indicates that the primary responsibility of the on-shift Chemistry Technician is chemistry/radiochemistry sampling to identify fuel damage; however, no chemistry sampling tasks were noted as being time critical in any of the analyzed events.

Draft NUREG-0654, Revision 2 Alignment

The proposed ERO staffing is consistent with the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the NUREG-0654 guidance. PBAPS will maintain two (2) RP personnel on-shift to perform the RP functions and tasks for protection coverage for responders, in-plant surveys, dosimetry and radiologically controlled area access. There are no differences or deviations from the draft NUREG-0654, Revision 2 guidance.

b. Minimum Staff – The table below identifies the current and proposed Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Radiation Protection – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (2) RP Technicians (In-Plant Surveys) • (4) RP Personnel (In-Plant Protective Actions) • (1) Chemistry Personnel	• (3) Additional RP Personnel @ 60 minutes (OSC) • (3) Additional RP Personnel @ 90 minutes (OSC)	• Additional Radiation Protection Technicians @ 60 minutes (In addition to personnel on-shift) (3) (OSC) • Additional Radiation Protection Technicians @ 90 minutes (In addition to personnel on-shift and those responding within 60 min) (3) (OSC)

Emergency Plan Change Assessment

Currently, PBAPS designates six (6) Minimum Staff RP Personnel as required to support the EP Major Tasks of In-Plant Surveys and In-Plant Protective Actions at 60 minutes. PBAPS proposes to maintain six (6) Minimum Staff RP Personnel; however, consistent with the draft NUREG-0654, Revision 2 guidance, three (3) of those RP Personnel will respond within 90 minutes. Note for the purposes of this table, RP Personnel consists of persons with an ANSI qualification. This includes RP Technicians or qualified RP Staff members. This is consistent with the guidance provided in the NRC's Technical Basis for the Proposed Guidance in NUREG-0654/FEMA-REP-1, Section II.B, "Emergency Response Organization".

Technological advances in RP tasks (i.e., protection coverage for responders, in-plant surveys, dosimetry and radiologically controlled area access) support the additional time proposed in the draft NUREG-0654 guidance for the three (3) RPTs. This includes the availability of installed area, process, airborne and effluent radiation monitors, automated systems and information technology solutions supporting RWPs and dosimetry issuance, and enhanced work processes that are available under accident conditions. Supporting tools and processes include portal monitors, self-alarming dosimeters, and the automated access control system for the RCA that maintain active RWPs (e.g., the system verifies qualifications, dose margins, and access requirements).

The proposed revision also removes the one (1) Minimum Staff Chemistry personnel from Table 2-1. The Chemistry/Radiochemistry function listed in Table B-1 to Revision 1 of NUREG-0654, is no longer needed as the need for immediate reactor coolant sampling has been reduced due to the variety of available plant indications of fuel damage available at PBAPS. Early indications of fuel damage can be identified through Containment Radiation Monitors, Core Instrumentation, or Effluent Radiation Monitors, all of which are available in the MCR. If reactor sampling is desired, Chemistry Technicians are on staff at PBAPS and would be called in as necessary to support the event.

NUREG-0654, Revision 2 Alignment

PBAPS will staff three (3) additional RP Personnel at 60 minutes and three (3) more RP Personnel at 90 minutes in the OSC, consistent with the draft NUREG-0654, Revision 2 guidance. The augmented staff will perform the RP functions for protection coverage for responders, in-plant surveys, dosimetry and radiologically controlled area access. There are no differences or deviations from the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654 guidance.

3.2.4 EP Function: Supervision of Radiation Protection Staff and Site Radiation Protection

Supervision of RP staff and Site RP Functions include the following tasks as defined in the draft NUREG-0654, Revision 2 guidance:

- Evaluate and assess plant and offsite radiological data in the development of onsite protective actions and offsite PARs, until relieved.
- Recommend onsite protective actions and offsite PARs to the applicable decision-maker, until relieved.
- Direct all radiation protection activities, including Field Monitoring Team (FMT) direction, until relieved.
- Provide relevant information to applicable communicators who are communicating offsite PARs to OROs, until relieved.

This function is important for effective emergency response to a radiological event because the management of RP resources, and the assistance this position provides the ED, is crucial for response to radiological events.

Radiological events can be very significant and constantly evolving, and require significant expertise in radiation and radiological consequences. The evaluation of radiological events, and the development of effective PARs, requires this expertise to support the ED in making these decisions.

This position is also responsible for the direction and protection of FMTs.

The augmentation (relief) of this function is available within 60 minutes of an Alert (or greater) ECL and is staffed in the TSC. Also for PBAPS, at the Alert (or greater) ECL, an EOF RP Manager position is staffed. Note that this position is primarily tasked with providing the applicable command and control position (i.e., Corporate ED) relevant expertise on radiological events. This will increase the PBAPS emergency response at the Alert ECL and will ensure the EOF ERO will be immediately available should an Alert classification escalate to a SAE or GE.

a. On-Shift Staff – The table below identifies the current and proposed PBAPS Emergency Plan On-Shift ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Supervision of Radiation Protection Staff and Site Radiation Protection – On-shift		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision Guidance
• None	• Shift Emergency Director	• Operations Shift Manager

Emergency Plan Change Assessment

The current PBAPS Emergency Plan does not specifically identify this Function on-shift under Table PBAPS 2-1. To align with the draft NUREG-0654, Revision 2 guidance, the Function is being added and assigned to the Shift ED. The tasks identified above align with current responsibilities for the Shift ED. An OSA under 10 CFR 50, Appendix E, Section IV.A.9 was performed to ensure that the major tasks under this Function identified above can be performed when needed without any additional competing priorities.

Draft NUREG-0654, Revision 2 Alignment

PBAPS will utilize the Shift ED on-shift to perform the *"Supervision of Radiation Protection Staff"* function until relieved by the Augmented Staff. There are no differences or deviations from the draft NUREG-0654, Revision 2 guidance. The proposed ERO staffing is consistent with the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654 guidance.

b. Minimum Staff – The table below identifies the current and proposed Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Supervision of Radiation Protection Staff and Site Radiation Protection – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1) TSC Radiation Protection Manager • (1) EOF Radiation Protection Manager	• (1) TSC Radiation Protection Manager • (1) EOF Rad Protection Manager	• (1) TSC Site Radiation Protection Coordinator • (1) EOF Radiation Protection Manager @ SAE ECL or greater

Emergency Plan Change Assessment

PBAPS will staff both the TSC RP Manager and the EOF RP Manager at 60 minutes from an Alert ECL consistent with current Emergency Plan commitments. There are no changes proposed to the current Emergency Plan for this Function.

Draft NUREG-0654, Revision 2 Alignment

The TSC RP Manager will perform site related duties which include actions to recommend onsite protective actions, to direct all radiation protection activities at the

site, and to evaluate and assess plant radiological data in the development of onsite protective actions. The TSC RP Manager will also provide relevant information to applicable communicators who are communicating offsite PARs to OROs.

The EOF RP Manager will perform duties which include actions to support evaluation of offsite radiological data in the development of onsite protective actions and offsite PARs, and to direct FMTs at the Alert ECL, or greater.

PBAPS staffing of this Function is different than the draft NUREG-0654, Revision 2 guidance, in that PBAPS staffs both the TSC RP Manager and the EOF RP Manager at 60 minutes from an Alert ECL. The draft NUREG-0654, Revision 2 guidance does not staff the EOF RP Manager until the SAE declaration.

This will increase the PBAPS emergency response at the Alert ECL and will ensure that the EOF RP Manager will be immediately available should an Alert classification escalate to a SAE or GE ECL.

The proposed ERO staffing activates the EOF earlier than the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654, Revision 2 guidance.

3.2.5 EP Function: Dose Assessments/Projections

The Dose Assessments/ Projections function includes the following tasks as defined in the draft NUREG-0654, Revision 2 guidance:

- Perform dose assessments/projections and provide input to applicable PAR decision-maker, until relieved.

This function is important for effective emergency response to a radiological event because timely dose assessments/projections ensure accurate and timely PARs can be developed, when necessary. PBAPS maintains the ability to staff this position at all times. This function is assigned to a pre-existing on-shift staff member as a collateral duty. An OSA under 10 CFR 50, Appendix E, Section IV.A.9 was performed to ensure that this EP function can be performed when needed without any additional competing priorities.

The augmentation (relief) of this function is available within 60 minutes of an Alert (or greater) ECL and is staffed in the EOF.

Maintaining the ability to perform dose assessments/projections at all times ensures that the consequences of a radiological event, to the public, are effectively mitigated by providing timely dose related information to the Station ED (TSC) or Corporate ED (EOF) depending on which position is in command and control. As a result, this position (Function) is expected to be available on-shift and in the EOF depending on the ECL declared.

a. On-Shift Staff – The table below identifies the current and PBAPS Emergency Plan on-shift ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Dose Assessments/Projections – On-shift Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1) RP Personnel (from LGS RP)	• Shift Dose Assessor [1] [1]Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.	• Dose Assessment / Projections Staff [1] [1]Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time

Emergency Plan Change Assessment

PBAPS currently utilizes on-shift RP personnel from Limerick Generating Station to perform the Dose Assessment Function prior to augmentation of the ERO. To align with the draft NUREG-0654, Revision 2 guidance, the PBAPS Emergency Plan is revised to remove this flexibility in staffing the on-shift Dose Assessment position. The PBAPS Emergency Plan will be revised to annotate the Dose Assessment Function as the collateral duty and annotated with note (1) *"Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time."* Removing the additional actions to contact Limerick and locate the on-shift RP Technician provides for a more efficient accomplishment of the Dose Assessment function. Exelon utilizes the on-shift RP Technician to perform Dose Assessment at other stations within the Exelon fleet. The use of the on-shift RP Technician to perform Dose Assessment is assessed through an on-shift staffing analysis, via 10 CFR 50, Appendix E, Section IV.A.9, to ensure that this EP Function can be performed when needed without any additional competing priorities.

Draft NUREG-0654, Revision 2 Alignment

PBAPS will maintain a Shift Dose Assessor on-shift to perform dose assessments/projections and provide input to applicable PAR decision-maker functions. This function is performed by available qualified personnel (e.g., the on-shift RP Technician). Additionally, an on-shift staffing analysis under 10 CFR 50, Appendix E, Section IV.A.9 was performed to ensure that the Dose Assessment function on shift can be performed by one (1) of the two (2) RP staff on shift without

any additional competing priorities. The proposed ERO staffing for this Function is consistent with the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654, Revision 2 guidance.

b. Minimum Staff – The table below identifies the current and proposed PBAPS Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Dose Assessments/Projections – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1) EOF Dose Assessment Coordinator	• (1) EOF Dose Assessment Coordinator	• TSC (1) Dose Assessment/ Projection Staff • EOF (1) Dose Assessment / Projection Staff @ SAE or greater

Emergency Plan Change Assessment

PBAPS currently staffs one (1) Dose Assessment position at the EOF as Minimum Staff. The proposed revision to the PBAPS Emergency Plan maintains that commitment of one (1) Dose Assessment staff to be activated within 60 minutes of an Alert ECL or greater. There are no changes, other than position title, proposed for this EP Function.

Draft NUREG-0654, Revision 2 Alignment

The PBAPS proposed ERO staffing for the Dose Assessment Function is different than that in the draft NUREG-0654, Revision 2 guidance. Specifically, the draft guidance provides for one (1) Dose Assessment position to be staffed at the TSC within 60 minutes of an Alert ECL or higher. A second Dose Assessor is staffed at the EOF within 60 minutes of an SAE ECL or higher. PBAPS proposes to staff one (1) EOF Dose Assessor at 60 minutes from an Alert (or greater) ECL.

The draft NUREG-0654, Revision 2 guidance was developed based on the premise that the TSC is activated at the Alert ECL or higher and the EOF is activated at the SAE ECL or higher. While the Dose Assessment function falls more in line with the EOF responsibilities, it is not activated within the draft NUREG-0654 guidance until a SAE ECL or higher. In order to provide early relief of the on-shift Dose Assessment function for Alert ECLs, the guidance provides a TSC Dose Assessor, which is available at the Alert ECL.

The PBAPS EOF is staffed within 60 minutes of an Alert (or greater) ECL, making it unnecessary to staff the redundant TSC Dose Assessor. The EOF Dose Assessor Coordinator will perform duties which include actions to perform dose assessments/projections and provide input to applicable PAR decision-maker at the Alert ECL, or greater.

3.2.6 EP Function: Emergency Classifications

The Emergency Classifications Function includes the following tasks as defined in the draft NUREG-0654, Revision 2 guidance:

- Evaluate plant conditions and recommend emergency classifications, until relieved.

This function is important to ensure a prompt and effective emergency response. Because the impetus for implementing the Emergency Plan is the determination of an EAL at the correct ECL, having this ability maintained at all times is essential. This function is assigned to a pre-existing on-shift staff member as a collateral duty. An OSA under 10 CFR 50, Appendix E, Section IV.A.9 was performed to ensure that this EP function is performed when needed without any additional competing priorities. The augmentation (relief) of this function is available within 60 minutes of an Alert (or greater) ECL and is staffed in the TSC.

Maintaining the ability to perform this function at all times ensures that ECL decisions, and as applicable, the PAR decisions, are timely and accurate as these decisions have a direct relationship to public health and safety from the consequences of a radiological event. This function works in coordination with the ED in command and control, and as a result is available on-shift and in the TSC.

a. On-Shift Staff – The table below identifies the current and proposed PBAPS Emergency Plan On-Shift ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Emergency Classifications – On-shift Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• None specified	• (1) Emergency Classification Advisor Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.	• (1) Emergency Classification Advisor Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

Emergency Plan Change Assessment

The PBAPS Emergency Plan Table 2-1 does not currently specify a separate Emergency Classification Function for the On-shift Staff. PBAPS proposes to revise Emergency Plan Table PBAPS 2-1 to align with the draft NUREG-0654, Revision 2 guidance. This function is assigned to a pre-existing on-shift staff member as a collateral duty (e.g., STA/IA). The STA/IA has the experience and training to fill this position and the responsibilities for monitoring plant operation are consistent with the EP position responsibilities. The STA/IA is trained in EAL classification and is available in the MCR to evaluate plant conditions and recommend emergency classifications as described in the draft NUREG 0654, Rev 2.

The STA's responsibilities are defined in Operations Procedure OP-AA-100-101, Roles and Responsibilities of On-Shift Personnel. The procedure states the STA/IA maintains a sufficient level of independence commensurate with station conditions to act as an advisor to the Shift Manager during abnormal and emergency conditions. During abnormal and emergency conditions the procedure states the STA/IA is responsible to perform an independent assessment and diagnosis of station conditions and provides recommendations to the operating team. This assessment shall include monitoring critical parameters and challenges to radioactive release barriers. The STA/IA is also responsible to perform an independent assessment of Emergency Plan classification (as time permits) and should not cause a delay in making the event classification within the required time limit.

This practice has been demonstrated and evaluated in Operations Training Program and EP Drills and Exercises. Additionally, the STA/IAs role as an Emergency Classification Advisor is assessed in the OSA under 10 CFR 50, Appendix E, Section IV.A.9.

Draft NUREG-0654, Revision 2 Alignment

PBAPS will maintain an Emergency Classification Advisor on-shift to evaluate plant conditions and recommend emergency classifications. There are no differences or deviations from the draft NUREG-0654, Revision 2 guidance.

b. Minimum Staff – The table below identifies the current and proposed PBAPS Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Emergency Classifications – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• None specified	• TSC (1) Operations Manager (Emergency Classification Advisor)	• TSC (1) Emergency Classification Advisor

Emergency Plan Change Assessment

The current PBAPS Emergency Plan does not specifically identify a Classification Advisor on Table 2-1. PBAPS proposes to utilize the Operations Manager to support EAL Classification. PBAPS proposes to revise the Emergency Plan Table 2-1 to include the Emergency Classification Function and assign the TSC Operations Manager to support and advise the non-delegable responsibility of EAL Classification. The Operations Manager under the Emergency Plan has the necessary background, experience and training to fill this position.

Draft NUREG-0654, Revision 2 Alignment

PBAPS will staff a TSC Operations Manager at 60 minutes to evaluate plant conditions and recommend emergency classifications. The proposed ERO staffing is consistent with the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654, Revision 2 guidance.

3.2.7 EP Function: Engineering

The Engineering function includes the following tasks as defined in the draft NUREG-0654, Revision 2 guidance:

- Provide engineering coverage related to the specific discipline of the assigned engineer, until relieved. Specifically:
    - An engineer to monitor and evaluate changing core/thermal hydraulic issues is important to effective emergency response because monitoring and evaluating core conditions, or thermal hydraulic conditions of the reactor coolant system, can support timely corrective action(s), ECL declarations, and subsequent PARs. Radiological events from a power reactor come from damage to an operating reactor core, or the systems used to cool the core, and engineering expertise in this area can greatly benefit the licensee's response.

      This function is assigned to a pre-existing on-shift staff member as a collateral duty. An OSA under 10 CFR 50, Appendix E, Section IV.A.9 was performed to

ensure that this EP function is performed when needed without any additional competing priorities. The augmentation (relief) of this function is available within 60 minutes of an Alert (or greater) ECL and is staffed in the TSC.

- An engineer to provide expertise in Electrical / I&C systems and equipment supports the evaluation of these systems/equipment and supports the development of repair plans if necessary. The augmentation (support) of this function occurs within 60 minutes of an Alert (or greater) ECL and is staffed in the TSC.

- An engineer to provide expertise in mechanical systems and equipment supports the evaluation of these systems/equipment and supports the development of repair plans if necessary. The augmentation (support) of this function is available within 60 minutes of an Alert (or greater) ECL and is staffed in the TSC.

a. On-Shift Staff – The table below identifies the current and proposed PBAPS Emergency Plan On-Shift ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Engineering – On-shift Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1) Shift Technical Advisor/Incident Advisor (IA)	• (1) STA/IA Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.	• (1) Core/Thermal Hydraulics Engineer Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

Emergency Plan Change Assessment

The current PBAPS Emergency Plan utilizes the STA/IA to satisfy the on-shift responsibilities for the Plant System Engineering, Repair, and Corrective Actions Function (Major Tasks: Technical Support).

Under the draft NUREG-0654, Revision 2 guidance, the EP Engineering function is included as an on-shift function. The PBAPS Emergency Plan would be revised to identify the Engineering Function is a collateral duty satisfied by the STA/IA on-shift. Under PBAPS's procedure OP-AA-101-111, Roles and Responsibilities of On-Shift Personnel, the STA/IA is responsible to perform an independent assessment and

diagnosis of station conditions and provides recommendations to the operating team. This assessment shall include monitoring critical parameters and challenges to radioactive release barriers. The STA/IA is also responsible to monitor Critical Safety Function Status per the EOPs.

Draft NUREG-0654, Revision 2 Alignment

PBAPS will maintain STA/IA on-shift to perform the Core/Thermal Hydraulics Engineer function as a collateral duty. There are no differences or deviations from the draft NUREG-0654, Revision 2 guidance and the proposed changes to the PBAPS Emergency Plan.

b. Minimum Staff – The table below identifies the current and proposed PBAPS Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Engineering – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1) Core Thermal/Hydraulic Engineer • (1) Mechanical Engineer • (1) Electrical Engineer • (1) TSC Technical Manager • (1) SAMG Decision Maker (May be provided by other personnel assigned other functions.) • (2) SAMG Evaluator (May be provided by other personnel assigned other functions.)	• (1) Core / Thermal Hydraulics Engineer • (1) Mechanical Engineer • (1) Electrical / Instrumentation & Controls Engineer	• (1) Core / Thermal Hydraulic Engineer • (1) Mechanical Engineer • (1) Electrical / Instrumentation and Control (I&C) Engineer

Emergency Plan Change Assessment

The PBAPS Emergency Plan currently identifies a Minimum Staff of one (1) Core Thermal/Hydraulic Engineer, one (1) Mechanical Engineer and one (1) Electrical Engineer consistent with the draft NUREG-0654, Revision 2 guidance. These positions will continue as Minimum Staff in the proposed PBAPS Emergency Plan Table.

The following positions, currently identified as Minimum Staff under the PBAPS Emergency Plan, are being re-categorized as Full-Augmented Staff and managed within an EPIP.

TSC Technical Manager – Under the PBAPS Emergency Plan, the TSC Technical Manager responsibilities do not directly perform actions necessary to accomplish EP functions under draft NUREG-0654, Revision 2 guidance, but rather support other personnel at the TSC. The position, as currently defined in the PBAPS Emergency Plan, would not be considered as part of the absolute minimum ERO needed to implement the Emergency Plan (i.e., if any position or function is not staffed then the Emergency Plan may not be effectively implemented). The TSC Technical Manager performs support activities such as supervisory actions, evaluations, coordination, assistance and monitoring activities). Specific responsibilities include:

- *Accumulate, tabulate and evaluate data on plant conditions.*
- *Evaluate plant parameters during an emergency to determine the overall plant condition.*
- *Coordinate core damage assessment activities.*
- *Identify data points and control parameters that the Operations staff should monitor.*
- *Ensure that current and adequate technical information is depicted on status boards.*
- *Identify and direct staff in the development of special procedures needed to effect long-term safe shutdown or to mitigate a release.*
- *Supervise the total onsite technical staff effort.*
- *Act as the TSC liaison with state and appropriate NRC Site Team representatives.*
- *Assist the Radiation Protection Manager for onsite radiological/technical matters.*

- *Assist the Station Emergency Director in evaluating plant based PARs (prior to Corporate Emergency Director accepting command and control) and changes in event classification.*

- *Supervise the activities of the TSC Technical Communicator.*

- *Assume the duties and responsibilities of an Evaluator when transition to Severe Accident Management Guidelines (SAMG) is initiated and supervise the activities of the SAMG Evaluator Team.*

Each of these tasks above are considered support activities and are not required to directly accomplish any of the draft NUREG-0654, Revision 2 guidance identified functions. As such, the TSC Technical Manager position can be deleted from the Minimum Staff and maintained as a Full-Augmentation position. The TSC Technical Manager position and the listed responsibilities are being relocated to an EPIP.

SAMG Decision Maker / Two (2) SAMG Evaluators

In 1985, the NRC issued its policy on Severe Reactor Accidents Regarding Future Designs and Existing Plants (i.e., 50FR32138). In mid-1988, the NRC staff formulated a program plan for the integration and closure of severe accident issues. NEI 91-04, *"Severe Accident Issue Closure Guidelines,"* provides guidelines in the closure of the severe accident issues on a plant specific basis.

As a result, Exelon implemented Severe Accident Management Guidance (SAMG) for accidents. Guidance was developed for use by ERO personnel in assessing plant damage, planning and prioritizing response actions, and implementing strategies that delineate actions inside and outside the MCR. Strategies and guidance were interfaced with the EOPs and Emergency Plans.

When plant conditions warrant entry into the SAMG conditions, the Station ED or other qualified individual (e.g., Operations Manager) assumes the role of decision-maker. The Technical Manager and/or another qualified individual(s) assumes the role of Evaluator (at least two (2) are required), and the MCR staff assumes the role of Implementers.

Under the PBAPS Emergency Plan, the TSC SAMG Decision-Maker and SAMG Evaluator responsibilities do not directly perform actions necessary to accomplish EP functions under the draft NUREG-0654, Revision 2 guidance. The position, as currently defined in the PBAPS Emergency Plan, would not be considered as part of the absolute minimum ERO staff needed to implement the Emergency Plan (i.e., if any position or function is not staffed then the Emergency Plan may not be effectively implemented).

As such, the TSC SAMG Decision-Maker and SAMG Evaluator positions can be deleted from the Minimum Staff Table. PBAPS will continue to describe the SAMG interface in the Emergency Plan and maintain its existing commitments for the program.

Draft NUREG-0654, Revision 2 Alignment

PBAPS will staff a Core Thermal/Hydraulic Engineer, a Mechanical Engineer, and an Electrical Engineer at 60 minutes to provide engineering coverage related to their specific discipline. The TSC SAMG Decision-Maker and SAMG Evaluator positions, as well as the TSC Tech Manager position are not identified in the draft NUREG-0654, Revision 2 guidance. There are no differences or deviations from the draft NUREG-0654, Revision 2 guidance. The proposed ERO staffing is consistent with the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654 guidance.

3.2.8 EP Function: Security

The PBAPS Security Force is controlled and maintained by the NRC-approved Physical Security Plan (PSP) and is not reflected in the Emergency Plan. However, the establishment of a Security position in the TSC is advantageous to ensure effective coordination between the security force and the ERO, particularly for events where offsite resources are necessary as well as for security related events and site personnel accountability. The augmentation (support) of this function is available within 60 minutes of an Alert (or greater) ECL and is staffed by Security personnel in the TSC to coordinate security-related activities with that of the ERO. The command and control staff of the TSC all respond within 60 minutes of an Alert (or greater) ECL to ensure that the ED has access to the resources and expertise of the site staff in order to develop response plans for a wide-spectrum of events.

a. On-Shift Staff – The table below identifies the current and proposed PBAPS Emergency Plan On-Shift ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Security – On-shift Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• Per the Security Plan	• Security staffing per the site-specific security plan	• Security staffing per the site-specific security plan

Emergency Plan Change Assessment

There are no changes between the current PBAPS Emergency Plan staffing and the proposed changes to the Emergency Plan for the on-shift Security function.

Draft NUREG-0654, Revision 2 Alignment

There are no differences or deviations from the draft NUREG-0654, Revision 2 guidance. The proposed ERO staffing is consistent with the draft NUREG-0654,

Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654 guidance.

b. Minimum Staff – The table below identifies the current and proposed PBAPS Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Security – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• Per the Security Plan	• (1) TSC Security Coordinator	• (1) TSC Security Liaison

Emergency Plan Change Assessment

PBAPS is revising the Emergency Plan to re-categorize the Full-Augmentation TSC Security Coordinator position as Minimum Staff. The addition of Minimum Staff position ensures timely and effective coordination between the security force and the ERO, particularly for events where offsite resources are necessary as well as for security related events and site personnel accountability.

Draft NUREG-0654, Revision 2 Alignment

PBAPS will staff a TSC Security Coordinator at 60 minutes to be a liaison to the Security Force. There are no differences or deviations from the draft NUREG- 0654, Revision 2 guidance.

The proposed ERO staffing is consistent with the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654 guidance.

3.2.9 EP Function: Repair Team Activities

The NRC has determined that, from an EP perspective, the ability to get Emergency Core Cooling System (ECCS) equipment operational was the primary basis for necessitating maintenance expertise while on-shift. The PBAPS ECCS are designed to be redundant and diverse such that common mode failures are very unlikely. From the PBAPS UFSAR:

> *The plant shall be operated in such a way that no single active component failure can prevent the safety actions essential to avoiding the unacceptable safety results associated with abnormal operational transients and accidents.*

As a result of the redundant and diverse design, the need to accommodate maintenance functionality on-shift is unnecessary. Nevertheless, a minimum number of Maintenance

personnel are assigned to respond to an event as part of the ERO, with more personnel available on an as-needed basis depending on the event.

The augmentation (support) of the Electrical and Mechanical positions occur within 60 minutes of an Alert (or greater) ECL and is staffed in the OSC. The augmentation (support) of the I&C position is available within 90 minutes of an Alert (or greater) ECL and is staffed in the OSC. The OSC is the ERF associated with maintenance tasks, as directed by the Command and Control staff in the TSC.

a. On-Shift Staff – The table below identifies the current and proposed PBAPS Emergency Plan On-Shift ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Repair Team Activities – On-Shift Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• Mechanical Maintenance (May be provided by other personnel assigned other functions.) • Electrical Maintenance (May be provided by other personnel assigned other functions.) • (1) I&C Maintenance • (1) Radwaste Operator	• Operations Staff Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.	• Operations Staff Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

Emergency Plan Change Assessment

The current PBAPS Emergency Plan allows the Mechanical and Electrical Maintenance Repair Activities Function to be performed as a collateral duty by plant Operators. The proposed revision utilizes the language from the draft NUREG-0654, Revision 2 guidance; however, adopting the guidance from the draft NUREG to utilize Operations staff to perform this EP function does not change with this proposed amendment.

The PBAPS Emergency Plan calls for a Radwaste Operator to be on shift. In the late 1980s and early 1990s, PBAPS processed larger volumes of dirty and clean radwaste liquids. Initiatives to reduce plant leakage and minimize dirty radwaste have significantly reduced the volume of waste water. With improvements in water

management that have occurred over the years, PBAPS no longer needs a dedicated Radwaste Operator on shift at all times. The Radwaste function is being removed from the PBAPS Emergency Plan, Table 2-1 as a dedicated on-shift position. A review of procedures and tasks, including the activities directed by the normal plant operating procedures for a plant shutdown, as well as AOPs and EOPs was performed. The minimum shift staff was determined to be sufficient to perform all required actions without support from the dedicated Radwaste Operator. Note that all Equipment Operators on shift at PBAPS are qualified to operate Radwaste systems when needed.

The PBAPS Emergency Plan also contains (1) on-shift I&C Technician to support the Repair Activities Function. A review of procedures and tasks, including the activities directed by the normal plant operating procedures for a plant shutdown, as well as AOPs and EOPs was performed. The minimum shift staff was determined to be sufficient to perform all required actions without support from the dedicated I&C Technician. The necessary timeframe for performing manual actions as well as the training required to perform the tasks was considered. Other operator actions that may be required in the first 60 minutes of the event would be to align equipment for repair. This has also been evaluated under the Equipment Operator training program and no additional tasks are required. Based on this review, eliminating the on shift I&C Technician Repair and Corrective Action ERO responder has no effect on the performance of associated tasks during the early part of an event and maintains the effectiveness of the ERO on-shift response.

An OSA under 10 CFR 50, Appendix E, Section IV.A.9 was performed to ensure that the major tasks under this Function identified above can be performed when needed without any additional competing priorities.

<u>Draft NUREG-0654, Revision 2 Alignment</u>

PBAPS will maintain plant Operators on-shift to perform the actions necessary to run the ECCS systems and perform minor maintenance activities. The ECCS systems at PBAPS are diverse and redundant such that Maintenance technicians are not required on-shift. There are no differences or deviations from the draft NUREG-0654, Revision 2 guidance.

b. Minimum Staff – The table below identifies the current and proposed PBAPS Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Repair Team Activities – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (2) Mechanical Maintenance (OSC) • (2) Electrical Maintenance (OSC) • (1) I&C Maintenance (OSC)	• (1) OSC Mechanical Maintenance Technician • (1) OSC Electrical Maintenance Technician • (1) OSC I&C Technician @ 90 minutes Additional Mechanical and Electrical Maintenance Techs as needed.	• (1) Mechanic (OSC) • (1) Electrician (OSC) • (1) I&C Technician @ 90 minutes • Additional Mechanical and Electrical Maintenance Techs as needed.

Emergency Plan Change Assessment

The current PBAPS Emergency Plan provides for two (2) Mechanical Maintenance technicians, two (2) Electrical Maintenance Technicians and one (1) I&C Technician to the OSC at 60 minutes. PBAPS is revising the Maintenance response consistent with the draft NUREG-0654, Revision 2 guidance, which provides for one (1) technician from each discipline to be staffed as Minimum Staff. Additional technicians are available and would be called as needed depending on the nature of the emergency repairs needed. PBAPS has a proven Work Management program that has demonstrated the ability to respond to emergent work activity issues during off hours, weekends, and holidays. In an emergency situation, the Minimum Staff OSC responders from each Maintenance discipline would be available to assess the required work activities, begin preparation activities, and request the needed support in a timely manner. The proposed staffing is consistent with the draft NUREG-0654, Revision 2 guidance and provides the necessary personnel to respond to the emergency condition.

Draft NUREG-0654, Revision 2 Alignment

PBAPS will staff one (1) Mechanical and one (1) Electrical Maintenance Technician at 60 minutes to perform the maintenance activities from the OSC to respond to the emergency condition. An I&C Technician will respond within 90 minutes consistent with the draft NUREG-0654 guidance. Depending on the need, additional Maintenance Technicians will be called in to support the OSC activities. There are no differences or deviations from the draft NUREG-0654, Revision 2 guidance.

3.2.10 EP Function: Supervision of Repair Team Activities

The ability to effectively supervise repair team personnel during emergency response is important. The augmentation (support) of these functions is as follows:

- A Lead OSC Supervisor (OSC Director) is staffed within 60 minutes of an Alert (or greater) ECL and is staffed in the OSC.
- An Electrical Supervisor/Lead, a Mechanical Supervisor/Lead, an I&C Supervisor/Lead, and an RP Supervisor/Lead is staffed within 90 minutes of an SAE (or greater) ECL and is staffed in the OSC.

The OSC Director can effectively manage the Maintenance resources for the additional 30 minutes prior to the specific craft (Mechanical, Electrical, or I&C) responding, as demonstrated through drills and exercises.

a. On-Shift Staff – The table below identifies the current and proposed PBAPS Emergency Plan on-shift ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Supervision of Repair Team Activities – On-shift Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• None Specified	• (1) Repair Team Supervisor Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.	• (1) Repair Team Supervisor Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

Emergency Plan Change Assessment

PBAPS does not currently have an ERO on-shift position for the Repair Team Supervisor. PBAPS proposes to add the collateral duty of Repair Team Supervisor to the Emergency Plan Table. Operators fulfill the requirements for on-shift Maintenance, so the Operations Shift Supervisor would maintain the supervision of the operators in this capacity. An OSA under 10 CFR 50, Appendix E, Section IV.A.9 assessed that the supervision of on-shift Operations personnel performing the

Maintenance function can be performed when needed by an Operations Shift Supervisor without any additional competing priorities.

Draft NUREG-0654, Revision 2 Alignment

There are no differences or deviations from the NUREG-0654, Revision 2 guidance. The proposed ERO staffing is consistent with the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654 guidance.

b. Minimum Staff – The table below identifies the current and proposed Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Supervision of Repair Team Activities – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1) OSC Director • (1) Maintenance Manager (TSC)	• (1) OSC Director • (1) Electrical Maintenance Supervisor/Lead @ 90 mins (OSC) • (1) Mechanical Maintenance Supervisor/Lead @ 90 mins (OSC) • (1) I&C Supervisor/Lead @ 90 mins (OSC) • (1) RP Supervisor/Lead @ 90 mins (OSC)	• (1) Lead OSC Supervisor • (1) Electrical Supervisor @ 90 mins • (1) Mechanical Supervisor @ 90 mins • (1) I&C Supervisor @ 90 mins • (1) Radiation Protection Supervisor @ 90 mins

Emergency Plan Change Assessment

The current PBAPS Emergency Plan Table PBAPS 2-1 identifies the Supervisory positions of OSC Director and TSC Maintenance Manager under the Major Task of Repair and Corrective Actions. The OSC Director effectively manages the Maintenance resources upon activation of the facility.

PBAPS is adding four (4) Minimum Staff positions to the OSC to be staffed at 90 minutes. These include an Electrical Maintenance Supervisor/Lead Technician, a

Mechanical Maintenance Supervisor/Lead Technician, an I&C Supervisor/Lead Technician, and a RP Supervisor/Lead Technician. The addition of the four (4) supervisor positions enhances the ERO response by putting in place effective supervision repair team personnel early in the emergency response.

TSC Maintenance Manager - The Maintenance Manager is being re-categorized from Minimum Staff to Full-Augmentation Staff. Under the PBAPS Emergency Plan, the TSC Maintenance Manager responsibilities do not directly perform actions necessary to accomplish EP functions under the draft NUREG-0654, Revision 2 guidance, but rather support other personnel at the TSC. The position, as currently defined in the Emergency Plan, would not be considered as part of the absolute minimum ERO needed to implement the Emergency Plan (i.e., if any position or function is not staffed then the Emergency Plan may not be effectively implemented). The TSC Maintenance Manager performs support activities such as supervisory actions, validations, coordination, and assistance activities). Specific responsibilities include:

- *Direct the total onsite maintenance and equipment restoration effort.*
- *Request additional equipment in order to expedite recovery and restoration.*
- *Supervise the activities of the OSC Director and the TSC Damage Control Communicator.*
- *Ensure the Operations Manager is informed of OSC staffing utilization and activities.*
- *In coordination with the Operations Manager, determine the priority assigned to OSC activities.*
- *Ensure adequate staffing of the OSC.*
- *Assist in rescue operations.*
- *Identify required procedures that need to be written or implemented in support of the response efforts.*

Each of these tasks above are considered support activities and are not required to directly accomplish any of the draft NUREG-0654, Revision 2 identified functions. As such, the TSC Maintenance Manager position can be deleted from the Minimum Staff and maintained as a Full-Augmentation position. The TSC Maintenance Manager position and the listed responsibilities are being relocated to an EPIP.

Draft NUREG-0654, Revision 2 Alignment

Under the proposed PBAPS Emergency Plan staffing, the OSC Director position is staffed within 60 minutes to oversee the activation of the OSC facility and the maintenance craft as they arrive. The Mechanical, Electrical, I&C, and RP Supervisors/Lead Technicians staff at 90 minutes to support coordination and supervision of repair team activities.

PBAPS proposes one difference to the draft NUREG-0654, Revision 2 guidance. Specifically, PBAPS proposes to allow a Maintenance or RP Lead Technician to fill the supervisory role at 90 minutes. Under the Exelon Maintenance and RP programs, Lead Technicians are qualified, experienced craft technicians who successfully demonstrate the day-to-day leadership of the technician work force and act as lead on back shifts. Duties and responsibilities include training and development of other employees in performing preventive maintenance and routine equipment service activities. Basic qualifications for a Lead Technician include demonstrated reliability and responsibility and the ability to make quick and effective technical decisions, as well as demonstrated situational leadership, environmental and safety stewardship. The experience and qualification of PBAPS Lead Technicians satisfy the requirements and the needs of the OSC for the Supervision of Repair Team Activities EP Function.

Other than the difference discussed above, the proposed ERO staffing is consistent with the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654 guidance.

3.2.11 EP Function: Field Monitoring Teams (FMTs)

The ability to locate, monitor, and track a radioactive plume is important to ensure appropriate protective measures are taken in response to a radiological event. The ability to staff these teams before they may be needed (i.e., before a radiological release) greatly enhances the ability to provide timely and accurate PARs.

The augmentation (support) for these teams is as follows:

- On-site Field Monitoring

  An On-site Field Monitoring person is staffed consisting of personnel to monitor radiation. This on-site position is responsible for radiological monitoring of the site's PA. The size and configuration of the PBAPS PA does not support the need of an accompanying driver. The PA can be easily and efficiently traversed without use of a vehicle. This RP person is staffed within 60 minutes of an Alert (or greater) ECL.

  The On-site Field Monitor is qualified to assess radiation and contamination levels, but is not necessarily an ANSI-qualified RP Technician since the person is under the direct supervision of RP Manager in the TSC. Note: the On-site Field

Monitor would not be staffed if the radiological conditions jeopardize the safety of the Onsite Field Monitor.

- Offsite Field Monitoring

  An Offsite FMT is staffed, consisting of a Monitor and a driver, within 60 minutes of an Alert (or greater) ECL. This Offsite FMT is responsible for locating, monitoring, and tracking a radioactive plume, as well as obtaining environmental samples as necessary (e.g., air, water, vegetation, etc.). The Monitor is qualified to assess radiation and contamination levels, but need not be an ANSI-qualified RP Technician as long as the FMT is under the direct supervision of senior staff in the TSC or EOF.

  Another Offsite FMT is staffed, consisting of a monitor and a driver, within 90 minutes of an Alert (or greater) ECL. This Offsite FMT is also responsible for locating, monitoring, and tracking a radioactive plume, as well as obtaining environmental samples (e.g., air, water, vegetation, etc.).

  The Monitor is qualified to assess radiation and contamination levels, but need not be an ANSI-qualified RP technician as long as the FMT is under the direct supervision of senior staff in the TSC or EOF.

a. On-Shift Staff – The table below identifies the current and proposed PBAPS Emergency Plan on-shift ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Field Monitoring Teams – On-Shift Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (2) Offsite Field Team Personnel	N/A	N/A

Emergency Plan Change Assessment

PBAPS maintains an Offsite Field Monitoring Team on shift. The Team was placed on-shift as an alternative to satisfy the NUREG-0654, Revision 1, 30-minute responders for this Task when PBAPS and Limerick combined their Emergency Plan in the early 1990s. PBAPS proposes to remove the Offsite Field Monitoring personnel and align this function with the draft NUREG-0654, Revision 2 guidance. An OSA under 10 CFR 50, Appendix E, Section IV.A.9 assessed that the Offsite Field Monitoring Team did not have any on-shift actions and was not required on-shift at PBAPS.

Draft NUREG-0654, Revision 2 Alignment

There are no differences or deviations from the NUREG-0654, Revision 2 guidance. The proposed ERO staffing is consistent with the draft NUREG-0654, Revision 2 guidance. The assigned major tasks are aligned with those stated in the draft NUREG-0654 guidance.

b. Minimum Staff – The table below identifies the current and proposed PBAPS Emergency Plan ERO, as well as the NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Field Monitoring Teams – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (2) Onsite Field Team Personnel • (2) Offsite Field Team Personnel • (1) EOF Environmental Coordinator	• Onsite Field Monitoring Individual (Qualified Individual) • Offsite Field Monitoring Team A (1 Qualified Individual and 1 Driver) • Offsite Field Monitoring Team B @ 90 mins (1 Qualified Individual and 1 Driver)	• Onsite Field Monitoring Team (1 Qualified Individual and 1 Driver) • Offsite Field Monitoring Team A (1 Qualified Individual and 1 Driver) • Offsite Field Monitoring Team B @ 90 mins (1 Qualified Individual and 1 Driver)

Emergency Plan Change Assessment

Onsite Field Monitoring – The current PBAPS Emergency Plan designates two (2) RP personnel as Minimum Staff for the EP function of On-site Surveys. The proposed changes to the PBAPS Emergency Plan designate one (1) RP person for on-site surveys. The number of RP personnel for this function is consistent with the draft NUREG-0654, Revision 2 guidance. Note there is a difference with respect to the designated on-site FMT Driver (discussed below). The reduction in RP personnel to this task is acceptable because one (1) Field Monitor dedicated to monitor and survey the site area is sufficient to provide current and timely data to the TSC/EOF in emergency conditions. At Exelon stations, the onsite Field Monitor is responsible only for monitoring the PA. The size of the station's PA allows traverse in minutes and a second RP Field Monitor would not be required to perform this function. The monitoring equipment is hand-held and does not require two (2) personnel for transport or operation. The Owner Controlled Area (OCA) has an

infrastructure that supports vehicular traffic and will be monitored by the Offsite FMTs. This is the current Exelon process and has been demonstrated successfully through drills and exercises at Exelon stations.

Offsite Field Monitoring Teams - The Offsite FMTs at PBAPS currently consist of two (2) Field Teams, one team is maintained on-shift and a second team staffing at 60 minutes; each consisting of a driver and one (1) RP personnel. PBAPS proposes to change the Offsite FMTs to be consistent with the draft NUREG- 0654, Revision 2 guidance. Specifically, there would be two (2) FMTs, but one (1) FMT would staff at 60 minutes and one FMT would staff at 90 minutes. Additional time in the response is considered acceptable. Since both FMTs are expected to respond to an event and in order to better coordinate radioactive plume tracking action(s), allowing for additional time provides some flexibility in staffing this ERO function without compromising the "reasonable assurance" finding in accordance with 10 CFR 50.47(a).

EOF Environmental Coordinator - The EOF Environmental Coordinator is being re-categorized from Minimum Staff to Full-Augmentation Staff. Under the PBAPS Emergency Plan, the EOF Environmental Coordinator responsibilities do not directly perform actions necessary to accomplish EP functions under the draft NUREG-0654, Revision 2 guidance, but rather support other personnel at the TSC. The position, as currently defined in the Emergency Plan, would not be considered as part of the absolute minimum ERO needed to implement the Emergency Plan (i.e., if any position or function is not staffed then the Emergency Plan may not be effectively implemented). The EOF Environmental Coordinator performs support activities such as coordination, communication, monitoring, and assistance activities. Specific responsibilities include:

- *Coordinate the transfer of control of the Field Monitoring Teams if initially under the direction of the TSC Radiological Controls Coordinator.*

- *Ensure communications are established with the TSC to obtain information on the accident conditions, meteorological conditions and estimates of radioactive material releases.*

- *Maintain cognizance of Field Monitoring Team exposure. When warranted, ask the Dose Assessment Coordinator to initiate an evaluation of the need for administering KI to Exelon nuclear workers.*

- *Determine needs of the Dose Assessment Coordinator, the Dose Assessor, the HPN Communicator and the State Environs Communicator(s) for updates on Field Monitoring Team data and ensure distribution of new data to them in accordance with those needs. (task transferred to EOF RPM)*

- *Upon request, provide environmental data to Emergency Public Information personnel.*

- *Evaluate and coordinate additional equipment and personnel as necessary from unaffected stations to augment and/or relieve station Field Monitoring Teams.*

Each of these tasks above are considered support activities and are not required to directly accomplish any of the draft NUREG-0654, Revision 2 identified functions. As such, the EOF Environmental Coordinator position can be deleted from the Minimum Staff and maintained as a Full-Augmentation position. The EOF Environmental Coordinator position and the listed responsibilities are being relocated to an EPIP.

Draft NUREG-0654, Revision 2 Alignment

The proposed ERO staffing for Onsite Field Monitoring is different than that proposed in the draft NUREG-0654, Revision 2 guidance. Specifically, PBAPS On-site Field Monitoring will be staffed without a designated driver.

At Exelon stations, the On-site Field Monitor is responsible only for monitoring the area within the PA. The size of the station's PA allows traverse of foot in minutes and a designated driver would not be required to perform this function. The PA size allows efficient traverse without the use of a vehicle. The monitoring equipment is hand-held and does not require a vehicle for transport. Additionally, the PA does not have an infrastructure which readily supports vehicle transportation.

For Exelon stations, the OCA supports vehicular traffic and is the responsibility of one of the Offsite FMTs. This has been demonstrated successfully through drills and exercises at Exelon stations. The 60-minute and 90-minute Offsite FMTs will staff consistent with the draft NUREG-0654, Revision 2 guidance. There are no differences or deviations from the draft NUREG-0654, Revision 2 guidance for the Offsite FMTs.

3.2.12 EP Function: Media Information

The Media Information function includes the following tasks:

- Manage and coordinate media information related to the event.

Media relations is an important part of effective emergency response and is consistent with the National Incident Management System (NIMS). Revision 1 of NUREG-0654 left the exact staffing composition flexible, with input from applicable OROs, and from the Federal Emergency Management Agency (FEMA).

The augmentation (support) of this function is defined for PBAPS to be that which is absolutely needed to support this function (i.e., without those positions, this function could not occur).

PBAPS is supported through the Exelon Communications Department at all times. The Communications Department responds to media inquiries initially for any ECL. The Communications Department coordinates with Exelon Management and ERFs to respond to media inquiries. Press releases are issued as appropriate from the Communications Department.

Within 90 minutes of an Alert (or greater) ECL, the PBAPS Emergency Plan is revised to describe the positions of Corporate Spokesperson, Public Information Director, and Joint Information Center (JIC) Director as those necessary to support the additional news media related tasks associated with the more significant classifications. These tasks include periodic press briefings, media engagement, and coordination with State and local Emergency Management Agencies (EMAs).

a. On-Shift Staff – There are no on-shift staff assigned to this EP Function; however, the Exelon Communications Department is available to address news media inquiries 24 hours/day. This is consistent is with the draft NUREG-0654, Revision 2 guidance.

EP Function: Media Information – On-Shift Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
N/A	N/A	N/A

b. Minimum Staff – The table below identifies the current and proposed PBAPS Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Media Information – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• (1) Corporate Spokesperson (Min Staffing time not specified) • (1) Public Information Director (Min Staffing time not specified) • (1) JIC Director (Min Staffing time not specified)	• (1) Corporate Spokesperson (established @ 90 min of an Alert or higher ECL) • (1) Public Information Director (Does not need to be performed in the JIC, but needs to be established @ 90 min of an Alert or higher ECL) • (1) JIC Director (established @ 90 min of an Alert or higher ECL)	• JIC/JIS staff to address media inquiries at the Alert ECL • Staff to perform JIC/JIS related tasks at SAE ECL or greater

Emergency Plan Change Assessment

The current PBAPS Emergency Plan identifies three (3) Minimum Staff positions to be staffed following an Alert ECL to address the Media Information EP Function. The positions report to the JIC. The positions consist of the Corporate Spokesperson, Public Information Director, and JIC Director. The PBAPS Emergency Plan, in contrast to other Minimum Staff positions, does not specify an activation time requirement. The proposed PBAPS Emergency Plan changes maintain the three (3) JIC positions; however, the response time is being revised to activate within 90 minutes of an Alert (or greater) ECL. The revision to the Emergency Plan adds a specific facility activation time of 90 minutes from an Alert (or greater) ECL. The Exelon Corporate Communications Department is capable of responding to and addressing events prior to the arrival of the JIC Minimum Staff at 90 minutes of an Alert (or greater) ECL.

Draft NUREG-0654, Revision 2 Alignment

The proposed ERO staffing activates the JIC at a lower ECL than the draft NUREG-0654, Revision 2 guidance. Exelon proposes to activate the JIC within 90 minutes of an Alert (or greater) ECL. The 90-minute activation time provides for a larger population of candidates to fill the JIC minimum staff positions and is offset to some degree by the activation of the JIC at a lower ECL than stipulated in the draft guidance. The Exelon Communications Department is will provide for the JIC functions until the JIC is activated and turnover of responsibility occurs.

PBAPS will staff a Corporate Spokesperson at the JIC to maintain Command and Control of the JIC and conduct periodic briefings with the news media. The JIC Director is staffed at the JIC to coordinate with the State, local and Federal agencies to maintain factual consistency of information conveyed. PBAPS will also staff a Public Information Director to oversee the issuance of news releases and media monitoring/rumor control. The Public Information Director function may be performed remotely by taking advantage of advancements in communication technology.

3.2.13 EP Function: Information Technology

The Information Technology (IT) function includes the following tasks:

- If Emergency Plan functions rely on computer-based equipment, provide IT support.

The ever-increasing advances in technology have led to significant enhancements in many areas of emergency response, such as communications, monitoring, displays, digital procedures, etc. PBAPS has assessed the use of this technology as it is used to enhance the ability to protect the health and safety of the public with respect to EP.

a. On-Shift Staff – There are no on-shift staff assigned to this EP Function; however, the Exelon IT department maintains a 24 hour/day HELP Desk to assist users with IT related issues.

EP Function: Information Technology – On-Shift Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
N/A	N/A	N/A

b. Minimum Staff – The table below identifies the current and proposed PBAPS Emergency Plan ERO, as well as the draft NUREG-0654, Revision 2 guidance for this EP Function.

EP Function: Information Technology – Minimum Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
• Not Applicable	• (1) EOF/JIC Computer Specialist (@ 90 min from Alert or higher) Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.	• (1) EOF/JIC/JIS IT Lead @ SAE ECL or greater Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time. • (1) TSC IT Lead @ 90 mins Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

Emergency Plan Change Assessment

The current PBAPS Emergency Plan does not identify IT positions as Minimum Staff. PBAPS maintains a Computer Specialist position at the EOF as a Full-Augmentation position. Performance of digital equipment at the EOF and TSC has shown to be acceptable during drills and exercises with this staffing. With the built-in redundancy for communication systems and digital EP assets, PBAPS has not identified a need

to maintain an IT Lead as a Minimum Staff position at the TSC facility. The EOF Computer Specialist is revised to Minimum Staff with a response time of 90 minutes from the Alert (or greater) ECL.

Draft NUREG-0654, Revision 2 Alignment

PBAPS proposes to staff an IT Lead at the EOF as Minimum Staff; however, PBAPS proposes to staff the position within 90 minutes of an Alert (or greater) ECL rather than 60 minutes of a SAE. PBAPS does not propose to staff an IT Lead position as minimum staff at the TSC. The draft NUREG 0654, Revision 2, guidance states:

> *IT staff is only required to be described in the emergency plan if the emergency response is reliant on IT equipment to the extent where failure of IT equipment would prevent the effective implementation of the emergency plan. In other words, if the failure of IT equipment prevents the effective implementation of the emergency plan (i.e., redundant methods/options are unavailable or not timely), then this EP function should be developed as described.*

The PBAPS EOF and TSC contain multiple computers and programs in the facility which support EP functions. This includes Plant Parameter Display Systems, Core Damage Assessment and Dose Assessment programs, as well as Web EOC, fax, and copy machines. Performance during drills and exercises indicates consistent performance of the digital assets in the facilities. The communications, dose assessment and core damage assessment equipment is periodically tested and issues, if any identified, are promptly addressed. The facilities and respective digital equipment are frequently used through administration of training for each team, as well as drills and Exercises. In addition, the IT Department maintains a Site IT Duty Person (SIDP) per procedure IT-AA-2001, Information Technology Response to Emergent Issues Process, for each station. During duty periods, the SIDP must be fit for duty, available, reachable by telephone, pager, and/ or cell phone at all times. The SIDP functions as the single point of contact for site IT during the duty period.

- When contacted, must respond to all requests for emergent assistance, including conference calls.
- Manage the response to the emergent IT issues at the site. Primary role to coordinate recovery actions with Vendors and other support teams, as needed.
- Ensure that the appropriate priority and resources are assigned to address all emergent issues.
- Utilize SY-AA-102-201, Call-Outs for Unscheduled Work, for any required Call-Outs.

Additionally, Exelon maintains an IT HELP Desk 24 hours per day, 7 days a week. Many computer issues can be addressed remotely with an IT specialist at the HELP Desk. If additional help is needed at the TSC, the EOF IT Specialist will be available to support resolution of the issue.

In addition, each of these EP related digital assets in the TSC and EOF were evaluated as part of implementation of the Cyber Security Rule, 10 CFR 73.54(b). Under NEI 13-10, "Cyber Security Control Assessments," EP Critical Digital Assets at the TSC and EOF have been assessed and controls have been put in place to protect the assets against cyber-attack. In conjunction with these controls, alternate administrative, non-digital, or adequately independent means have been put in place for performing each EP function, should the digital component or program fail for any reason. For example, both the Core Damage Assessment program and the Dose Assessment programs have a redundant, non-network laptop computer at their respective facility to maintain the EP function should the designated computer fail. ERO position procedures have written instructions for backup communication measures should the primary means fail.

Finally, performance of digital assets are monitored through either the Corrective Action Program or the EP Drill and Exercise critique process. Performance trends are monitored and corrective actions are implemented as necessary.

3.2.14 EP Function: Resource Allocation and Administration

a. On-Shift Staff – There are no on-shift staff assigned to this EP Function; however, the Exelon IT department maintains a 24 hour/day HELP Desk to assist users with IT related issues.

EP Function: Resource Allocation and Administration – On-Shift Staff		
Current Emergency Plan, Table PBAPS 2-1	Proposed Emergency Plan Table	Draft NUREG-0654, Revision 2 Guidance
N/A	N/A	N/A

b. Minimum Staff – The table below identifies the current and proposed PBAPS Emergency Plan ERO.

EP Function: Resource Allocation and Administration – Minimum Staff	
Current Emergency Plan	Proposed Emergency Plan
• (1) EOF Logistics Manager	• Manage positions under Emergency Plan Implementing Procedures (EPIP)

Emergency Plan Change Assessment

Logistics Manager - The Logistics Manager is being re-categorized from Minimum Staff to Full-Augmentation Staff. Under the PBAPS Emergency Plan, the EOF Logistics Manager responsibilities do not directly perform actions necessary to accomplish EP functions under NUREG-0654 guidance, but rather support other

personnel at the EOF. The position, as currently defined in the Emergency Plan, would not be considered as part of the absolute minimum ERO needed to implement the emergency plan (i.e., if any position or function is not staffed then the emergency plan may not be effectively implemented). The EOF Logistics Manager performs support activities such as monitoring, advising, validations, coordination, and assistance activities). Specific responsibilities include:

- Ensure contact is made and communications are maintained with appropriate non-Exelon Nuclear personnel whose assistance may be required to terminate the emergency conditions and to expedite the recovery.
- Advise the EOF Director concerning the status of activities relating to governmental interfaces.
- Obtain support from Human Resources, the Comptroller's Office, the Legal Department, Accounting Department and others as required.
- Coordinate with the Nuclear Duty Officer to maintain communications with ANI and INPO.
- Ensure that access to the EOF is limited to Emergency Responders and authorize admittance to non-Exelon personnel.
- Implement the Exelon Nuclear Fitness for Duty Program.
- Ensure that NRC Site Team Representatives are directed to the Regulatory Liaison upon arrival at the EOF.
- Ensure that updates and information are provided to the EOC Liaisons and to offsite officials present in the EOF.
- Assist in obtaining and coordinating additional equipment/materials and /or technical expertise to support station requests, including Exelon Corporate staff, unaffected stations and vendor/contractors.
- Coordinate maintenance of EOF equipment as necessary.
- Ensure shift relief and continual staffing for the EOF.

Each of these tasks above are considered support activities and are not required to directly accomplish any of the NUREG-0654 identified functions. As such, the EOF Logistics Manager position can be deleted from the Minimum Staff and maintained as a Full-Augmentation position. The EOF Logistics Manager position and the listed responsibilities are being relocated to an EPIP.

Draft NUREG-0654, Revision 2 Alignment

The Resource Allocation and Administration EP Function does not exist in the draft NUREG-0654, Revision 2 guidance. Removing the Logistics Manager and re-categorizing the position as Full-Augmentation is consistent with the draft NUREG-0654, Revision 2 guidance.

3.2.15 EP Function: First Aid and Rescue Operations

The First Aid and Rescue Operations EP Function no longer exists in the draft NUREG-0654, Revision 2 guidance.

a. On-Shift Staff – The table below identifies the current and proposed PBAPS Emergency Plan on-shift ERO.

EP Function: First Aid and Rescue Operations – On-Shift Staff	
Current Emergency Plan	Proposed Emergency Plan
• (2) First Aid and Rescue Operations personnel (May be performed by personnel assigned other functions)	• Not Applicable

Emergency Plan Change Assessment

The PBAPS Emergency Plan identifies two (2) persons fulfilling the EP Function of First Aid and Rescue Operations as collateral duties. PBAPS utilizes Operators and/or RP Personnel to satisfy this responsibility. First Aid and Rescue is no longer identified as an EP Function under the draft NUREG-0654, Revision 2 Table B-1 guidance. First Aid is still maintained as part of the draft NUREG-0654 Revision 2, guidance under Section II.L, *"Planning Standard for Medical and Public Health Support."* As such, PBAPS will continue to maintain qualified First Aid and Rescue personnel on shift; however, the personnel resources are no longer listed on the Emergency Plan Table consistent with the NUREG-0654, Revision 2 guidance.

Draft NUREG-0654, Revision 2 Alignment

The First Aid and Rescue Operations EP Function does not exist in the draft NUREG-0654, Revision 2 Table B-1 guidance. Therefore, removing the Function from the Emergency Plan is consistent with the draft NUREG-0654, Revision 2 guidance.

b. Minimum Staff – There are no ERO resources assigned to First Aid and Rescue Operations under the current PBAPS Emergency Plan. Additionally, the First Aid and Rescue Operations EP Function does not exist in the draft NUREG-0654, Revision 2 guidance. No revision is required to the PBAPS Emergency Plan.

3.3 Full-Augmentation Staff Assessment

The table below identifies the current PBAPS Emergency Plan, Table 2-1 Full-Augmentation ERO for each of the EP Functions. These positions are removed from the Emergency Plan and are either relocated to an EPIP or re-categorized as Minimum Staff, as annotated below.

EP Function: Communications – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• (1) TSC State/local Communicator • (1) EOF ENS Communicator • (1) TSC HPN Communicator • (2) Ops Communicator • (1) EOF Ops Advisor • (3) Damage Control Communicator • (1) TSC Technical Communicator • (1) EOF Technical Advisor • (1) EOC Communicator • (1) State EOC Liaison • (1) Regulatory Liaison	Manage positions under Emergency Plan Implementing Procedures (EPIP)
EP Function: Radiation Protection – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• RP Personnel (In Plant / On Site Surveys) - Personnel numbers depend on the type and extent of the emergency. • RP Personnel (In Plant Protective Actions) - Personnel numbers depend on the type and extent of the emergency. • Chemistry Personnel - Personnel numbers depend on the type and extent of the emergency	• Manage positions under Emergency Plan Implementing Procedures (EPIP)
EP Function: Dose Assessments/Projections – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• (1) EOF Dose Assessor • (1) TSC Radiation Controls Coordinator	• Manage positions under Emergency Plan Implementing Procedures (EPIP)

EP Function: Engineering – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• (1) TSC Radiation Controls Engineer • (1) EOF Tech Support Manager	• Manage positions under Emergency Plan Implementing Procedures (EPIP)
EP Function: Security – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• (1) TSC Security Coordinator • (1) EOF Security Coordinator	• TSC Security Coordinator changed to Minimum Staff • EOF Security Coordinator to be managed under Emergency Plan Implementing Procedures (EPIP)
EP Function: Repair Team Activities – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• Mechanical Maintenance (Personnel numbers depend on the type and extent of the emergency.) • Electrical Maintenance (Personnel numbers depend on the type and extent of the emergency.) • Radwaste Operator (Personnel numbers depend on the type and extent of the emergency.)	PBAPS will identify the additional maintenance personnel available to support the Emergency Condition under the Emergency Plan Table 2-1.
EP Function: Supervision of Repair Team Activities – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• (1) Assistant OSC Director • Ops Lead and Support Personnel (Personnel numbers depend on the type and extent of the emergency.)	• Manage positions under Emergency Plan Implementing Procedures (EPIP)
EP Function: Field Monitoring Teams – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• (1) Field Team Communicator • Additional Offsite Field Monitoring Teams (Personnel numbers depend on the type and extent of	• Manage positions under Emergency Plan Implementing Procedures (EPIP)

the emergency.) • Additional Onsite Field Monitoring Teams (Personnel numbers depend on the type and extent of the emergency.)	
EP Function: Media Information – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• (1) Rad Protection Spokesperson • (1) Technical Spokesperson • (1) News Writer • (1) Media Monitoring Staff (Personnel numbers depend on the type and extent of the emergency.) • (1) Rumor Control Staff (Personnel numbers depend on the type and extent of the emergency.) • (1) JIC Coordinator • (1) Administrative Coordinator • (1) Access Controls • Clerical Support (Personnel numbers depend on the type and extent of the emergency.)	• Manage positions under Emergency Plan Implementing Procedures (EPIP)
EP Function: Information Technology – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• (1) EOF Computer Specialist	• EOF Computer Specialist changed to Minimum Staff
EP Function: Resource Allocation and Administration – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• (1) TSC Logistics Coordinator • (1) EOF Administrative Coordinator • (2) Events Recorders (JIC/EOF) • Clerical Staff (TSC/EOF/OSC) (Personnel numbers depend on the type and extent of the emergency)	• Manage positions under Emergency Plan Implementing Procedures (EPIP)

EP Function: First Aid and Rescue Operations – Full-Augmentation Staff	
Current Emergency Plan	Proposed Emergency Plan
• First Aid and Rescue Operations (Personnel numbers depend on the type and extent of the emergency.)	• Manage positions under Emergency Plan Implementing Procedures (EPIP)

Neither NUREG-0654, Revision 1 or the draft Revision 2 document discuss Full-Augmentation positions under Table B-1. In the draft Revision 2, Table B-1, Note iii addresses the required minimum staffing as compared to other staff not critical to the effective Emergency Plan implementation. Note iii states:

> *iii. The minimum ERO staffing plan is that which is required to effectively implement the site-specific emergency plan (i.e., the emergency plan cannot be effectively implemented without this staff). The emergency plan should describe the minimum ERO staffing plan, while supporting implementing procedures can describe any other staff response desired by the licensee as long as this staff is not critical to effective emergency plan implementation. The augmentation times listed are intended to provide a model for applicants and licensees to consider in the development of their site-specific emergency plan.*

The intent of this note is to emphasize the distinction between ERO minimum staffing and ERO members who serve in a supporting capacity.

The PBAPS Emergency Plan describes the Minimum Staff ERO that is the absolute minimum needed to implement the station's Emergency Plan (i.e., if any position or function is not staffed, then the Emergency Plan cannot be effectively implemented). PBAPS utilizes additional Full-Augmentation ERO Staff that are trained, qualified, and available to ensure all available licensee resources are used when a radiological emergency occurs and to provide for staff relief on a 24-hour / 7-day a week extended basis. The Full-Augmentation Staff performs support functions such as intra-facility communications, organization liaisons, and expert advisors. This description of the additional Full-Augmentation ERO Staff is being relocated from the PBAPS Emergency Plan to an EPIP.

The PBAPS Emergency Plan shall be effectively implemented utilizing the Minimum Staff positions. However, most Full-Augmentation Staff will still be assigned ERO teams, be expected to maintain Fitness-for-Duty during duty weeks, and be notified to respond to their ERF at the Alert or higher ECL. Their presence will not be required, however, to activate the respective ERFs.

The complete list of Full-Augmented Staff relocated from the PBAPS Emergency Plan, along with their respective EP tasks is listed in Enclosure 3 of this submittal. Each EP task assigned under the Emergency Plan is further evaluated and dispositioned in Enclosure 3.

3.4 Other Changes to the Emergency Plan

3.4.1 Command and Control Turnover

The Exelon Standardized Radiological Emergency Plan EP-AA-1000, Part II, Sections B.3 and B.4, are being revised to reflect the changes to the Command and Control turnover description. With the proposed changes in ERO, the description of the turnover process is revised to describe the transfer of non-delegable duties for PARs and State/local notifications directly from the MCR to the EOF. Note that under the current Emergency Plan, the MCR has the option to transfer PAR and State/local notification responsibilities directly to the EOF or to the TSC on an interim basis should the EOF be unavailable. The section of the Emergency Plan is revised to no longer describe the capability to transfer PARs and State/local notifications to the TSC on an interim basis. The revision will have no impact on timeliness or resources since the EOF and TSC are both staffed within 60 minutes of declaration and will continue to have staff available to perform the functions. The Command and Control turnover of responsibilities between the MCR, TSC, and EOF will occur concurrently on a bridge-line without delay.

3.5 Impact of Proposed Changes on State Emergency Plan

3.5.1 Potential Impact of ERO Changes on Off-Site Emergency Response Organizational Interfaces

On January 29, 2018, Exelon held a meeting with representatives of the Pennsylvania Emergency Management Agency (PEMA) and the Pennsylvania Bureau of Radiation Protection (BRP) to discuss the proposed changes to the PBAPS Emergency Plan and to ensure the revision had no adverse impact on the ability of State and local response organizations to effectively implement their FEMA-approved RERP plans. Exelon subsequently provided a draft copy of this License Amendment Request to representatives from both PEMA and BRP.

BRP provided information via electronic mail dated February 6, 2018, and PEMA provided information via electronic mail dated February 8, 2018, stating that based on their initial review, neither organization had "any concerns at this time." PEMA further stated they *"…will conduct a formal review with the Bureau of Radiation Protection once the proposed amendments have been issued and will submit our input as part of the NRC's review."*

Additionally, in an electronic mail message dated April 6, 2018, the Maryland Emergency Management Agency (MEMA) responded that they *"…have reviewed the proposed LAR for Peach Bottom's emergency response plan staffing. MEMA is fine with the proposed changes."*

Refer to Enclosure 5, "Information Related to Review of Proposed Changes by the States," for a copy of the referenced State communications.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

The proposed changes have been evaluated to determine whether applicable regulations and requirements continue to be met.

Section 50.47, "Emergency plans," of Title 10 of the *Code of Federal Regulations* (10 CFR) sets forth the U.S. Nuclear Regulatory Commission's (NRC) Emergency Plan requirements for nuclear power plant facilities. The regulation in 10 CFR 50.47(a)(1)(i) states, in part:

> …no initial operating license for a nuclear power reactor will be issued unless a finding is made by the NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

Section 50.47(b) establishes the standards that the onsite and offsite emergency response plans must meet for NRC staff to make a positive finding that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

Planning Standard (2) of this section requires that:

> On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.

Section IV.A of 10 CFR 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," states:

> *The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization and the means for notification of such individuals in the event of an emergency. Specifically, the following shall be included:*
>
> 1. *A description of the normal plant operating organization.*
> 2. *A description of the onsite emergency response organization (ERO) with a detailed discussion of:*
>   a. *Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency;*
>   b. *Plant staff emergency assignments;*

c. Authorities, responsibilities, and duties of an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.

3. A description, by position and function to be performed, of the licensee's headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.

4. Identification, by position and function to be performed, of persons within the licensee organization who will be responsible for making offsite dose projections, and a description of how these projections will be made and the results transmitted to State and local authorities, NRC, and other appropriate governmental entities.

5. Identification, by position and function to be performed, of other employees of the licensee with special qualifications for coping with emergency conditions that may arise. Other persons with special qualifications, such as consultants, who are not employees of the licensee and who may be called upon for assistance for emergencies shall also be identified. The special qualifications of these persons shall be described.

6. A description of the local offsite services to be provided in support of the licensee's emergency organization.

7. By June 23, 2014, identification of, and a description of the assistance expected from, appropriate State, local, and Federal agencies with responsibilities for coping with emergencies, including hostile action at the site. For purposes of this appendix, "hostile action" is defined as an act directed toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate 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.

8. Identification of the State and/or local officials responsible for planning for, ordering, and controlling appropriate protective actions, including evacuations when necessary.

9. By December 24, 2012, for nuclear power reactor licensees, a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned responsibilities that would prevent the timely performance of their assigned functions as specified in the emergency plan.

Revision 1 to NUREG-0654/FEMA-REP-1, *"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,"* dated November 1980, was intended to aid licensees, applicants for licenses, or State and local emergency response organizations in the development of their Radiological Emergency Response Plans. The NRC endorsed this document for use in

this effort via Revision 2 to Regulatory Guide (RG) 1.101, *"Emergency Planning and Preparedness for Nuclear Power Reactors,"* dated October 1981. RG 1.101 allowed for licensees to submit alternatives to the guidance provided in NUREG-0654/FEMA-REP-1 for staff review and approval if necessary.

Section II.B of NUREG-0654/FEMA-REP-1, Revision 1, states, in part:

> *On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.*

Evaluation Criteria 5 of Section II.B of NUREG-0654/FEMA-REP-1, Revision 1, states, in part:

> *Each licensee shall specify the positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity. For emergency situations, specific assignments shall be made for all shifts and for plant staff members, both onsite and away from the site. These assignments shall cover the emergency functions in Table B-1 entitled, "Minimum Staffing Requirements for Nuclear Power Plant Emergencies." The minimum on-shift staffing levels shall be as indicated in Table B-1. The licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. This capability shall be as indicated in Table B-1.*

- 10 CFR 50.54(q) establishes requirements that all holders of a nuclear power reactor operating license must follow and maintain in effect emergency plans which meet the planning standards in 10 CFR 50.47(b) and the requirements in 10 CFR 50, Appendix E, *"Emergency Planning and Preparedness for Production and Utilization Facilities."* 10 CFR 50.47 of 10 CFR, *"Emergency plans,"* sets forth emergency plan requirements for nuclear power plant facilities.

- NUREG-0654/FEMA-REP-1, *"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,"* provides guidance and acceptance criteria to provide a basis for NRC licensees, State and local governments to develop radiological emergency plans and improve emergency preparedness.

- Regulatory Guide 1.219, *"Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors,"* provides guidance related to emergency preparedness and specifically to making changes to emergency response plans.

- NRC Regulatory Issue Summary (RIS) 2005-02, Revision 1, *"Clarifying the Process for Making Emergency Plan Changes,"* which provides guidance to (1) clarify the meaning of a "decrease in effectiveness," as stated in 10 CFR 50.54(q); (2) clarify

the process for evaluating proposed changes to emergency plans; (3) provide a method for evaluating proposed changes to emergency plans; and (4) provide clarifying guidance on the appropriate content and format of applications submitted to the NRC for approval prior to implementation.

- NSIR/DPR-ISG-01, *"Interim Staff Guidance, Emergency Planning for Nuclear Power Plants,"* provides guidance for addressing emergency planning requirements for nuclear power plants. This guidance is based on changes to Emergency preparedness regulations 10 CFR 50.47 and 10 CFR 50 Appendix E, that were published in the Federal Register (FR) on November 23, 2011 (i.e., reference 76FR 72560). The guidance should be used by licensees and applicants for implementing changes to onsite EP programs based on the revised emergency preparedness requirements and by NRC for reviewing the adequacy of the revised onsite emergency preparedness programs.

In addition, Exelon also reviewed draft NUREG-0654, Revision 2 (NUREG-0654/FEMA-REP-1, Revision 2*), "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,"* dated May 2015 and draft RIS 201X-XX, *"License Amendment Requests for Changes to Emergency Response Organization Staffing and* Augmentation" (ML15338A291) in support of this submittal.

Exelon has evaluated the proposed changes against the applicable regulatory requirements and guidance criteria. The proposed Emergency Plan changes continue to assure that regulatory requirements and emergency planning standards associated with emergency response are met.

4.2 Precedent

There is no industry precedent for licensees implementing changes based on the draft NUREG-0654, Revision 2 guidance; however, there have been other ERO staffing amendments approved by the NRC within the last few years. Specifically, on March 14, 2017, the NRC approved Southern Nuclear Operating Company's License Amendment Request to standardize the Emergency Plans for the Joseph M. Farley, Edwin I. Hatch and Vogtle Nuclear Plant Stations which included changes to the ERO staffing (ML16141A109). Regarding Exelon stations, a revision to the Three Mile Island Emergency Plan related to ERO staffing was approved by the NRC on June 23, 2017 (ML17137A393).

4.3 No Significant Hazards Consideration

In accordance with 10 CFR 50.90, *"Application for amendment of license, construction permit, or early site permit,"* Exelon Generation Company, LLC (Exelon) requests amendments to the following licenses:

- DPR-12, DPR-44, and DPR-56 – Peach Bottom Atomic Power Station, Units 1, 2, and 3, respectively

The requested amendments to the licenses support changes to the Peach Bottom Atomic Power Station (PBAPS) Emergency Plan based upon completion of a supporting evaluation of onsite Emergency Response Organization (ERO) staffing. The proposed changes will help align the Exelon nuclear stations' minimum staff ERO with the draft NUREG-0654/FEMA-REP-1, *"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,"* Revision 2 guidance.

The proposed changes have been reviewed considering the applicable requirements of 10 CFR 50.47, 10 CFR 50, Appendix E and other applicable NRC guidance criteria. Exelon has evaluated the proposed changes to the PBAPS Emergency Plan and determined that the changes do not involve a Significant Hazards Consideration. In support of this determination, an evaluation of each of the three (3) standards, set forth in 10 CFR 50.92, *"Issuance of amendment,"* is provided below.

1. ***Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?***

   Response: No.

   The proposed changes to the PBAPS Emergency Plan do not increase the probability or consequences of an accident. The proposed changes do not impact the function of plant Structures, Systems, or Components (SSCs). The proposed changes do not affect accident initiators or accident precursors, nor do the changes alter design assumptions. The proposed changes do not alter or prevent the ability of the onsite ERO to perform their intended functions to mitigate the consequences of an accident or event. The proposed changes remove ERO positions no longer credited or considered necessary in support of Emergency Plan implementation.

   Therefore, the proposed changes to the PBAPS Emergency Plan do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. ***Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?***

   Response: No.

   The proposed changes have no impact on the design, function, or operation of any plant SSCs. The proposed changes do not affect plant equipment or accident analyses. The

proposed changes do not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed), a change in the method of plant operation, or new operator actions. The proposed changes do not introduce failure modes that could result in a new accident, and the proposed changes do not alter assumptions made in the safety analysis. The proposed changes remove ERO positions no longer credited or considered necessary in support of Emergency Plan implementation.

Therefore, the proposed changes to the PBAPS Emergency Plan do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

Margin of safety is associated with confidence in the ability of the fission product barriers (i.e., fuel cladding, reactor coolant system pressure boundary, and containment structure) to limit the level of radiation dose to the public.

The proposed changes do not adversely affect existing plant safety margins or the reliability of the equipment assumed to operate in the safety analyses. There are no changes being made to safety analysis assumptions, safety limits, or limiting safety system settings that would adversely affect plant safety as a result of the proposed changes. Margins of safety are unaffected by the proposed changes to the ERO staffing. The proposed changes are associated with the PBAPS Emergency Plan staffing and do not impact operation of the plant or its response to transients or accidents. The proposed changes do not affect the Technical Specifications. The proposed changes do not involve a change in the method of plant operation, and no accident analyses will be affected by the proposed changes. Safety analysis acceptance criteria are not affected by these proposed changes. The proposed changes to the Emergency Plan will continue to provide the necessary onsite ERO response staff.

Therefore, the proposed changes to the PBAPS Emergency Plan do not involve a significant reduction in a margin of safety.

4.4 Conclusions

In conclusion, based on the considerations discussed above: 1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, 2) such activities will be conducted in compliance with the Commission's regulations, and 3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

The proposed changes are applicable to emergency planning standards for Peach Bottom Atomic Power Station involving proposed ERO staffing changes. The proposed changes do not reduce the capability to meet the emergency planning standards established in 10 CFR 50.47 and 10 CFR 50, Appendix E. The proposed changes do not involve (i) a significant

hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meet the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(10). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed changes.

Furthermore, in accordance with 10 CFR 51, additional information is provided below in support of a finding that the proposed changes do not have significant impact on the quality of the human environment.

Pursuant to 10 CFR 50.90, Exelon Generation Company, LLC (Exelon) is requesting amendments to the licenses for Peach Bottom Atomic Power Station, Units 1, 2, and 3.

Specifically, the proposed changes would revise certain Emergency Response Organization (ERO) positions to align with the minimum staff ERO guidance specified in draft Revision 2 of NUREG-0654/FEMA-REP-1, *"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants."*

The proposed changes will also relocate the identified Full-Augmentation ERO positions specified in Table 2-1, *"Minimum Staff Requirements,"* of the station's Emergency Plan to an Emergency Preparedness Implementing Procedure (EPIP).

The proposed changes have been reviewed considering the requirements of 10 CFR 50.47, *"Emergency plans,"* paragraph (b), 10 CFR 50 Appendix E, "*Emergency Planning and Preparedness for Production and Utilization Facilities,"* and other applicable emergency preparedness NRC guidance documents. An evaluation of the proposed changes pursuant to 10 CFR 50.54, *"Conditions of licenses,"* paragraph (q), *"Emergency plans,"* determined that the proposed changes result in a reduction in effectiveness of the Emergency Plans for the affected facilities and, therefore, require prior NRC approval.

Exelon has determined that the proposed changes do not individually or cumulatively have a significant effect on the human environment. The proposed changes update the licensing basis for the PBAPS related to ERO staffing consistent with guidance in draft Revision 2 of NUREG-0654. The associated changes to the ERO staffing will not affect the quality of the human environment.

As described above, Exelon has determined that operation of PBAPS in accordance with the proposed changes does not involve a significant hazards consideration, in that it does not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety.

Exelon has determined that operation of PBAPS in accordance with the proposed changes does not authorize a significant change in the types or a significant increase in the amounts of any effluent that may be released offsite. The proposed changes are unrelated to any aspects of plant construction or operation that would introduce any changes to effluent types (e.g., effluents containing chemicals or biocides, sanitary system effluents, or other effluents) or affect

any plant radiological or non-radiological effluent release quantities. Furthermore, these changes do not diminish the functionality of any design or operational features that are credited with controlling the release of effluents during plant operation.

Exelon has determined that operation of the affected facilities in accordance with the proposed changes does not result in a significant increase in individual or cumulative occupational radiation exposure. The proposed changes will not affect how a structure, system, or component will be used to meet the design bases of the nuclear plant. The proposed changes will have no effect on the construction or operation of the nuclear plants and, therefore, would not introduce any changes to the amount of occupational radiation exposure.

In conclusion, Exelon has determined that the operational effects of the proposed amendment do not involve 1) a significant hazards consideration, 2) a significant change in the types of or significant increase in the amounts of any effluents that may be released offsite, or 3) a significant increase in the individual or cumulative occupational radiation exposure. Consequently, the proposed changes will not have a significant effect on the quality of the human environment.

6.0 REFERENCES

6.1 NSIR/DPR-ISG-01, *"Interim Staff Guidance, Emergency Planning for Nuclear Power Plants,"* Revision 0, November 2011.

6.2 NEI 10-05, Revision 0, *"Assessment of On-Shift Emergency Response Organization Staffing and Capabilities,"* dated June 2011.

6.3. NUREG-0654/FEMA-REP-1, *"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,"* Revision 1, U.S. Nuclear Regulatory Commission and Federal Emergency Management Agency, Washington, DC, November 1980.

6.4 10 CFR 50.47, *"Emergency plans."*

6.5 10 CFR 50, Appendix E, *"Emergency Planning and Preparedness for Production and Utilization Facilities."*

6.6 Regulatory Issue Summary 2005-02, Revision 1, *"Clarifying the Process for Making Emergency Plan Changes,"* dated April 19, 2011.

6.7 Regulatory Guide 1.219, *"Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors,"* dated November 2011.

6.8 Peach Bottom Atomic Power Station, Units 2 and 3, Updated Final Safety Analysis Report (UFSAR).

ATTACHMENT 2A

Emergency Plan Marked-up Pages – Peach Bottom Atomic Power Station

Standardized Emergency Plan EP-AA-1000
and
Emergency Plan Annex EP-AA-1007

Affected Pages

Standardized Emergency Plan EP-AA-1000

Mark-up Pages

EXELON NUCLEAR

STANDARDIZED RADIOLOGICAL EMERGENCY PLAN

Shift Technical Advisor (STA): During normal plant operations, the Senior Reactor Operators report to the Shift Manager and directly supervise the licensed Reactor Operators and all activities in the Control Room. During an abnormal condition, the Shift Manager assumes direct supervision of personnel and all activities in the Control Room while a qualified individual steps back and assumes an overview role as an STA with the specific responsibility of monitoring the maintenance of core cooling and containment integrity. An individual assigned the duty as the STA shall be available to the Control Room at all times.

Radiation Protection: The Station Radiation Protection personnel are responsible for the handling and monitoring of radioactive materials. Included in this organization are Health Physicists, Radiation Protection Supervisors and Technicians.

Chemistry: The Station Chemistry personnel are responsible for sampling of system effluents, and the chemical and radio-analytical analysis of those samples. Included in this organization are Chemists, Chemistry Supervisors and Technicians.

Security: The Station Security personnel are responsible for the physical security of the site. Included in this organization are Security Supervisors and Security Guards.

2. Authority Over the Emergency Response Organization

The Emergency Director in Command and Control is the designated Exelon Nuclear individual who has overall authority and responsibility, management ability, and technical knowledge for coordinating all emergency response activities at the nuclear power station.

- Control Room: Shift Emergency Director (Shift Manager)
- TSC: Station Emergency Director
- EOF: Corporate Emergency Director

3. Criteria for Assuming Command and Control (Succession)

Emergency personnel assume responsibility for their positions upon receiving notification to activate. The responsibility for initial assessment of and response to an emergency rests with the Shift Manager. The Shift Manager is the Shift Emergency Director and has the Station and Corporate Emergency Director's responsibilities and authority until relieved ~~by a qualified Station Emergency Director~~. The ~~Station~~ Corporate Emergency Director, once having relieved the Shift Manager of the Emergency Director responsibilities, is responsible for continued assessment of the severity of the emergency and for the necessary functions as described in the E-Plan, the Station Annex, and the emergency implementing procedures. ~~Final succession is achieved when the Corporate Emergency Director assumes overall Command and Control, and directs Exelon Nuclear's Emergency Response activities.~~

The Shift Emergency Director is relieved of Command and Control as soon as possible after the declaration of an Alert (or higher classification if Alert not declared). ~~Command and Control may be transferred directly to the Corporate Emergency Director, or transferred to the Station Emergency Director on an interim basis.~~ Following the Command and Control turnover, the Corporate Emergency Director shall have overall Command and Control of the Emergency Response. Note that the Station Emergency Director takes responsibility for onsite Non-Delegable Responsibilities including Classification and Emergency Exposure Control. The Corporate Emergency Director takes responsibility for offsite Non-Delegable Responsibilities including Protective Action Recommendations and State/local Notifications. Command and Control does not transfer until the following criteria have been met:

- Adequate 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 turnover between the Emergency Director relinquishing Command and Control and the Emergency Director assuming Command and Control has been made.

Although Exelon Nuclear's ERO fulfills all regulatory requirements for emergency response, it may be altered by the Emergency Director. This type of alteration will be based upon identified needs within the ERO, event dependent criteria, and identified needs of the company as a whole.

4. Non-Delegable Responsibilities

Non-delegable responsibilities include the following functions:

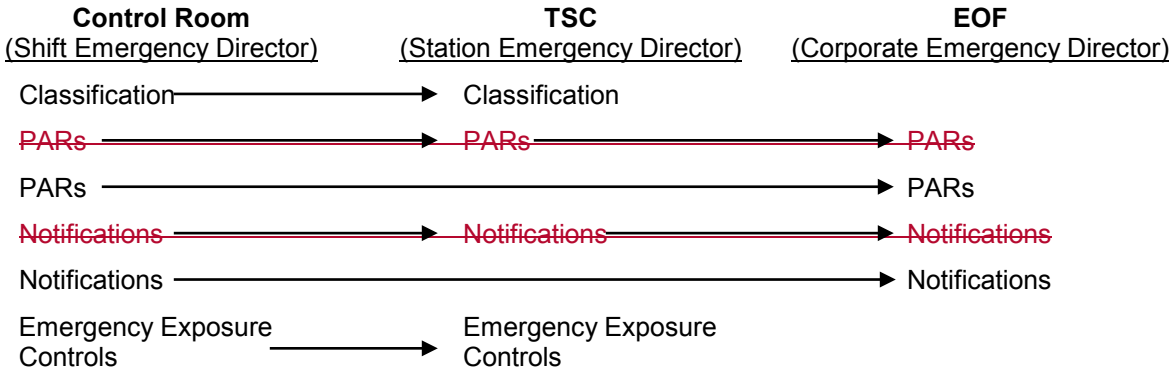
- Event classification.
- Protective Action Recommendations (PARs) for the general public.
- Notification of offsite authorities (approval of state/local and NRC notifications).
- Authorization of emergency exposure controls in excess of 5 Rem TEDE and the issuance of potassium iodide (KI), for Exelon Nuclear emergency workers per EPA-400.

The Shift Manager is responsible for the initial classification of an event and assumes the position as Shift Emergency Director. In this capacity, the Shift Manager has responsibility for performing the non-delegable responsibilities until relieved.

The Shift Emergency Director is relieved of Command and Control as soon as possible after the declaration of an Alert (or higher classification if Alert not declared). Overall Command and Control is transferred to the ~~Station Emergency Director but may be transferred directly to the~~ Corporate Emergency Director.

~~When t~~The Station Emergency Director assumes overall authority and responsibility for Classification and Emergency Exposure Control~~performing all the non-delegable duties from the Shift Manager,~~. T~~t~~he Corporate Emergency Director (EOF) ~~will subsequently relieve the Station Emergency Director (TSC) of overall Command and Control and~~ assume~~s~~ the non-delegable responsibilities for PAR determination and notifications to offsite authorities.

Transition of "Non-Delegable" Responsibilities



5. Emergency Response Organization Positional Responsibilities

The Emergency Plan designates two types of augmented ERO responders. Those designated as Minimum Staff are those key ERO needed to relieve the on-shift staff of key EP functions/tasks required in response to the Emergency and are those required to activate their respective Emergency Response Facility (ERF). Specifically, these are the ERO that are the absolute minimum needed to implement the emergency plan (i.e., if any position or function is not staffed then the emergency plan may not be effectively implemented). These positions in most cases are required to respond to their respective ERF within 60 minutes of the declaration of an Alert or higher. See Appendix 5, Table 5-1 for the list of On-shift and Minimum Staff positions.

The positions which are considered Full Augmented staff (i.e., non-min staff) are those positions which provide support for the minimum staff in their response to the Emergency. The Full Augmentation positions consist mostly of liaisons, coordinators and additional communicators which help facilitate communication and the emergency response effort over time, but are not directly needed to implement the functions/tasks identified in the Emergency Plan.

ERO staffing tables contained within ~~the station specific Annex~~this Emergency Plan, 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. The full augmentation staffing levels are ~~used as a planning basis to cover a wide range of possible events~~described in Emergency Preparedness Implementing Procedures (EPIPs). For extended events (one which lasts for more than 24 hours), actual staffing will be established by the 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.

In addition to maintaining adequate documentation of the event, responsibilities for each position are as follows:

a. Station Emergency Response Organization: The Station ERO is the onsite group that is activated during an emergency. It functions under the Station Emergency Director, who is responsible for organizing and coordinating the emergency efforts at and within the immediate vicinity of the station (including carrying out all onsite emergency efforts and the initial offsite environs monitoring efforts necessary to assess plant releases).

   The Station ERO consists of station personnel who are involved with emergency response efforts necessary to control the plant during an incident. This organization operates out of the Control Room, the Technical Support Center (TSC) and the Operations Support Center (OSC). Collectively, members of the Station ERO provide for the following activities during an emergency:

   - Plant systems operations
   - Radiological survey and monitoring (including Environs Monitoring)

- Firefighting
- Rescue operations and First Aid
- Decontamination
- Security of plant and access control
- Repair and damage control
- Personnel protection including Assembly, Accountability and Evacuation
- Communications
- ~~Initial Liaison responsibilities with Federal, state and local authorities~~

When plant conditions warrant entry into the Severe Accident Management Guidelines (SAMGs), the Station Emergency Director or other qualified individual (e.g., Operations Manager) assumes the role of Decision-Maker. ~~The Technical Manager and/or another~~ Other qualified individual(s) assumes the role of Evaluator (at least 2 are required), and the Control Room staff assumes the role of Implementers. Control Room personnel will perform mitigating actions for severe accidents per EOPs prior to TSC activation.

All Station ERO personnel shall have the authority to perform assigned duties in a manner consistent with the objectives of this plan.

1) Shift Manager (Shift Emergency Director) Control Room

A Shift Manager is on duty 24 hours a day and is the Shift Emergency Director in a declared emergency until relieved of this function. While serving in this capacity the Shift Manager is responsible for:

- Activating the ERO (as deemed appropriate or as procedurally required).
- Performing those duties outlined in Section B.5.a.2 for the Station Emergency Director. ~~The responsibilities described for the Station Emergency Director applies to either the Shift Emergency Director or the Station Emergency Director depending on which individual is in Command and Control.~~

The on-duty Shift Manager directs the activities of the operating crew and is responsible for the safe operation of the plant in compliance with the station NRC operating license and the station operating procedures. The Shift Manager, after relinquishing Command and Control, functionally reports to the Operations Manager in the TSC.

The Shift Manager's responsibilities, when not in Command and Control, are described below:

- The authority and responsibility to shutdown the reactor when determined that the safety of the reactor is in jeopardy or when operating parameters exceed any of the reactor protection circuit set-points and automatic shutdown does not occur;

- To ensure a review has been completed to determine the circumstance, cause, and limits under which operations can safely proceed before the reactor is returned to power following a trip or an unscheduled or unexplained power reduction;

- The responsibility to be present at the plant and to provide direction for returning the reactor to power following a trip or an unscheduled or unexplained power reduction;

- The responsibility to adhere to the station Technical Specifications and to review routine operating data to assure safe operation;

- The responsibility to identify applicable EALs and emergency classifications; and

- The responsibility to adhere to plant operating procedures and the requirements for their use. During an emergency, operations personnel may depart from approved procedures where necessary to prevent injury to personnel, including the public, or damage to the facility consistent with the requirements of 10 CFR 50.54(x) and (y).

- Supervise the activities of the Control Room Crew~~, Operations Communicator and Damage Control Communicator in the Control Room~~.

2) Station Emergency Director TSC

The Station Emergency Director reports to the Corporate Emergency Director and supervises and directs the Station ERO. The Station Emergency Director's responsibilities include organizing and coordinating the onsite emergency efforts. Additionally, the Station Emergency Director has the requisite authority, plant operating experience and qualifications to implement in-plant recovery operations.

a) Station Emergency Director Responsibilities ~~while in Command and Control:~~

- ~~Perform all non-delegable responsibilities as the Emergency Director in Command and Control until relieved by the EOF.~~

- Conduct personnel assembly/accountability and evacuation of non-essential personnel at Site Area Emergency, General Emergency or as conditions warrant.

- If the emergency involves a hazardous substance and/or oil discharges, ensure that appropriate notifications and responses have been made.
- Determine if the OSC is to remain activated at the Alert Classification.

b) ~~Station Emergency Director Responsibilities while not in Command and Control:~~

- Event classification.
- Emergency exposure controls.
- Protective actions for all onsite personnel.
- Supervision of the Station ERO.
- Inform the Corporate Emergency Director and onsite NRC as to the status of the plant.
- Assist the Corporate Emergency Director in the acquisition of information for the state/local notifications, NRC notifications and offsite agency updates.
- Provide information and recommendations to the Corporate Emergency Director.
- Implement plans, procedures and schedules to meet emergency response objectives as directed by the Corporate Emergency Director.
- Request from the Corporate ERO any additional material, personnel resources or equipment needed to implement response plans and operations.
- Assume the duties and responsibilities of Decision-Maker when a transition to Severe Accident Management Guidelines (SAMGs) is initiated. This responsibility can be delegated to the Operations Manager if qualified.

3) ~~TSC Director TSC~~

~~The TSC Director reports to the Station Emergency Director and is responsible for the content of information transmitted from the TSC to other agencies (or facilities) and for documenting information received at the TSC in coordination with the Station Emergency Director. Responsibilities include:~~

- ~~Verify that qualified individuals are filling Communicator positions in the Control Room, TSC and OSC.~~

- ~~Supervise the activities of the Logistics Coordinator and state/local Communicator.~~
- ~~Ensure that communications are established with appropriate parties as directed by the Station Emergency Director.~~
- ~~Ensure that all required notifications to offsite governmental agencies (state/local and NRC) are timely and accurate.~~
- ~~Act as the Exelon Nuclear Liaison to any NRC Site Team Representatives.~~
- ~~Ensure that the NRC Site Team Representatives are directed to their appropriate counterparts.~~
- ~~Assist the Corporate Emergency Director in the acquisition of information for off-site agency updates.~~
- ~~Record and relay inquiries to the Station Emergency Director. In addition, record responses to such inquiries prior to transmission.~~
- ~~Assist the Station Emergency Director in maintaining proper records.~~

4) ENS Communicators ~~CR/~~TSC~~/OSC~~

~~The Communicators are responsible for transmitting/receiving information to and from the TSC, OSC and Control Room. General r~~Responsibilities assigned to the ENS ~~all~~ Communicators include:

- Establish communications with appropriate parties as directed.
- Transmit information that has been reviewed and/or approved by the responsible Manager or Coordinator.
- Document time, date and information being transmitted or received on appropriate forms.
- Record and relay inquiries and the responses to those inquiries.
- Assist appropriate Managers and Coordinators in maintaining proper records and logs of emergency related activities.
- Gather, record and post appropriate information.

~~a) Specific responsibilities assigned to the State/Local Communicator include:~~

- ~~Communicate and receive information via the Nuclear Accident Reporting System (NARS) circuit or commercial telephone line with appropriate agencies prior to the EOF accepting Command and Control.~~

- ~~Monitor NARS communications until released by the TSC Director.~~

~~b) Specific responsibilities assigned to the Damage Control Communicator include:~~

- ~~Relay requests from the Control Room and TSC for the dispatching of OSC Teams.~~

- ~~Apprise the station emergency response facilities of the status of OSC Team activities.~~

~~c) Specific responsibilities assigned to the Operations Communicator include:~~

- ~~Apprise the TSC and EOF staff of the overall plant condition and significant changes to system and equipment status.~~

- ~~Inform the Control Room, TSC, and EOF of significant changes in event status (e.g. changes in classification, command and control, initiation of station assembly, accountability, evacuation, etc.).~~

~~d) Specific responsibilities assigned to the TSC Technical Communicator include:~~

- ~~Establish and maintain contact with the EOF Technical Advisor.~~

- ~~Provide EOF with updates on technical support activities and priorities.~~

~~e) Specific responsibilities assigned to the ENS Communicator include:~~

- Notify the NRC of changes in event classification~~, prior to the EOF accepting Command and Control,~~ and assist ~~the EOF ENS Communicator~~ in completing the NRC Event Notification Worksheet and responding to NRC inquiries.

- Provide real time updates of significant changes to plant and system status and responses to NRC inquiries.

- Maintain continuous communications with the NRC, if requested, via the NRC ENS phone or commercial telephone line.

~~f) Specific responsibilities assigned to the HPN Communicator include:~~

- ~~Maintain continuous communications with the NRC, if requested, via the NRC Health Physics Network (HPN) phone or commercial telephone line.~~
- ~~Communicate current Health Physics information to NRC representatives, as requested.~~
- ~~Coordinate the communications of radiological information to the NRC with the EOF HPN Communicator (onsite vs. environmental data).~~

5) Operations Manager TSC

The Operations Manager reports to the Station Emergency Director. Major functions include determining the extent of station emergencies, initiating corrective actions, and implementing protective actions for onsite personnel. In the event that the Station Emergency Director becomes incapacitated and can no longer fulfill the designated responsibilities, the Operations Manager will normally assume the responsibilities until relieved by another qualified Station Emergency Director. Responsibilities include:

- Coordinate TSC efforts in determining the nature and extent of emergencies pertaining to equipment and plant facilities in support of Control Room actions.
- Initiate immediate corrective actions to limit or contain the emergency invoking the provisions of 10 CFR 50.54(x) if appropriate, and specifically when addressing Severe Accident Management Guidelines (SAMG).
- Recommend equipment operations checks and miscellaneous actions to the Control Room in support of restoration and accident mitigation.
- Approve emergency special procedures, and implement as required under the provisions of 10 CFR 50.54(x).
- Assist ~~the Maintenance Manager~~ in determining the priority assigned to OSC activities.
- Organize and direct medical response efforts for injured personnel.
- Ensure adequate staffing of the Control Room and TSC subordinates.
- Ensure the Shift Manager is informed of OSC staffing utilization and activities.
- Identify steps or procedures that the Operations staff should be utilizing to properly respond to the emergency condition.

- Assist the Station Emergency Director in evaluating changes in event classification.
- Supervise the activities of the ~~Operations Communicator and the~~ ENS Communicator in the TSC.
- Act as the TSC liaison with the appropriate NRC Site Team Representative.
- At the direction of the Station Emergency Director, assume the duties and responsibilities of the Evaluator, or Decision-Maker if qualified, when transition to Severe Accident Management Guidelines (SAMG) is initiated.

~~6) Technical Manager TSC~~

~~The Technical Manager reports to the Station Emergency Director and directs a staff in performing technical assessments of station emergencies and assists in recovery planning. Responsibilities include:~~

- ~~Accumulate, tabulate and evaluate data on plant conditions.~~
- ~~Evaluate plant parameters during an emergency to determine the overall plant condition.~~
- ~~Coordinate core damage assessment activities.~~
- ~~Identify data points and control parameters that the Operations staff should monitor.~~
- ~~Ensure that current and adequate technical information is depicted on status boards.~~
- ~~Identify and direct staff in the development of special procedures needed to effect long-term safe shutdown or to mitigate a release.~~
- ~~Supervise the total onsite technical staff effort.~~
- ~~Act as the TSC liaison with state and appropriate NRC Site Team representatives.~~
- ~~Assist the Radiation Protection Manager for onsite radiological/technical matters.~~
- ~~Assist the Station Emergency Director in evaluating plant based PARs (prior to Corporate Emergency Director accepting command and control) and changes in event classification.~~
- ~~Supervise the activities of the TSC Technical Communicator.~~

- ~~Assume the duties and responsibilities of an Evaluator when transition to Severe Accident Management Guidelines (SAMG) is initiated and supervise the activities of the SAMG Evaluator Team~~

7) Technical Support Staff TSC

The TSC Technical Support Staff consists of the following minimum staff engineering positions:

- Electrical Engineer
- Mechanical Engineer
- Core/Thermal Hydraulic Engineer - serves as Core Damage Assessment Methodology (CDAM) Evaluator, as applicable.

In addition, station Engineering support will be augmented on an as needed basis to support accident assessment and mitigation activities.

~~8) Logistics Coordinator TSC~~

~~The Logistics Coordinator reports to the TSC Director and provides administrative services in support of emergency/recovery operations. Responsibilities include:~~

- ~~Coordinate shift relief and continual staffing of the station.~~
- ~~Arrange for clerical staff at the TSC, OSC and Control Room.~~
- ~~Assist the Security Coordinator in coordinating ERO and station activities in support of on-going security contingency, accountability or site/area evacuation efforts.~~
- ~~Support the processing of special procedures and interim reports during an emergency.~~
- ~~Ensure that event status and priority logs are being maintained in the TSC.~~
- ~~Coordinate record-keeping efforts at the station.~~
- ~~Arrange for food, sleeping facilities and other necessary accommodations for onsite emergency workers.~~
- ~~Arrange for specialized training of Emergency Response personnel as needed.~~

9) Radiation Protection Manager (RPM) TSC

The Radiation Protection Manager reports to the Station Emergency Director ~~and supervises the activities of the Radiation Controls Coordinator and Radiation Controls Engineer~~. The TSC RPM directs ~~a~~ staff in determining the extent and nature of radiological or hazardous material problems onsite. Responsibilities include:

- Accumulate, tabulate and evaluate data on plant conditions such as meteorological and radiological monitoring readings, and other pertinent data.
- Act as the TSC liaison with the appropriate NRC Site Team representative.
- Ensure use of protective clothing, respiratory protection, and access control within the plant as deemed appropriate to control personnel exposures.
- Ensure that appropriate bioassay procedures have been implemented for onsite personnel when a radioactivity incident has occurred.
- Ensure that personnel are decontaminated, if necessary.
- Authorize personnel exposures below 5 Rem TEDE (EPA-400 lower limit).
- Assist the Station Emergency Director in determining if exposures in excess of the 5 Rem TEDE (EPA-400 lower limit) are necessary.
- Advise the Station Emergency Director of situations when the use of KI should be considered.
- ~~Assist the Station Emergency Director in evaluating dose-based PARs (prior to Corporate Emergency Director accepting command and control) and changes in radiological event classification.~~
- Advise the Station Emergency Director and EOF Radiation Protection Manager of changes in radiological release status.
- Assist the Operations Manager in planning rescue operations and provide monitoring services as required, including the transfer of injured and/or contaminated personnel.
- Coordinate with the Security Coordinator to determine the routes to be used for evacuation of non-essential personnel.
- Assure additional radiation protection personnel and/or equipment is arranged for, as necessary.

~~10) Radiation Controls Engineer (RCE) TSC~~

~~The Radiation Controls Engineer reports to the Radiation Protection Manager and coordinates the radiological and chemistry interface between the technical support engineering efforts. Responsibilities include:~~

- ~~Monitor area and process radiation monitors to identify trends and potential hazards within the station.~~
- ~~Evaluate plant environmental factors regarding radiological and other hazardous material conditions.~~
- ~~Evaluate radiological and hazardous material surveys and chemistry sample results as appropriate.~~
- ~~Direct the performance of sampling activities through coordination with the OSC Chemistry Lead in support of operations and core damage estimates as necessary.~~
- ~~Coordinate radiological and chemistry information with the Core/Thermal Hydraulic Engineer in support of core damage assessment.~~

~~11) Radiation Controls Coordinator (RCC) TSC~~

~~The Radiation Controls Coordinator reports to the Radiation Protection Manager. The RCC coordinates site and in-plant Radiation Protection response activities through the OSC Radiation Protection Lead. Responsibilities include:~~

- ~~Support the OSC Radiation Protection Lead in the dispatching of OSC Teams.~~
- ~~Assist the Operations Manager in planning radiological controls for personnel dispatched from the Control Room.~~
- ~~Ensure the proper use of protective clothing, respiratory protection, and access controls in the plant as appropriate to control personnel exposure.~~
- ~~Monitor habitability concerns impacting access to plant and site areas.~~
- ~~In coordination with the OSC Radiation Protection Lead, assemble and dispatch the Field Monitoring Teams as required.~~
- ~~Supervise the activities of the HPN Communicator in the TSC.~~
- ~~Request additional Radiation Protection personnel and/or equipment, as necessary in support of station activities and staff relief.~~

- Prior to EOF Protective Measures Group staffing:

  - Perform dose assessments and provide appropriate dose-based PARs.

  - Coordinate Field Monitoring Team activities.

  - Monitor meteorological conditions and remain cognizant of forecast data.

- Following EOF Protective Measures Group staffing:

  - Transfer control of the Field Monitoring Teams to the EOF Environmental Coordinator when appropriate.

  - Transfer responsibility of dose assessment activities to the EOF Dose Assessment Coordinator.

  - Assist the EOF Environmental Coordinator in the acquisition of information for the off-site agency updates.

12) Maintenance Manager TSC

The Maintenance Manager reports to the Station Emergency Director and directs a staff in providing labor, tools, protective equipment and parts needed for emergency repair, damage control and recovery efforts to place the plant in a safe condition or return the plant to its pre-accident status. Responsibilities include:

- Direct the total onsite maintenance and equipment restoration effort.

- Request additional equipment in order to expedite recovery and restoration.

- Supervise the activities of the OSC Director and the TSC Damage Control Communicator.

- Ensure the Operations Manager is informed of OSC staffing utilization and activities.

- In coordination with the Operations Manager, determine the priority assigned to OSC activities.

- Ensure adequate staffing of the OSC.

- Assist in rescue operations.

- Identify required procedures that need to be written or implemented in support of the response efforts.

13) Security Coordinator TSC

The Security Coordinator reports to the Station Emergency Director and maintains plant security and personnel accountability at the nuclear station. Responsibilities include:

- Maintain plant security and account for all personnel within the protected area.
- Assist the Station Emergency Director in evaluating changes in security related threats and event classifications.
- Identify any non-routine security procedures and/or contingencies that are in effect or that require a response.
- Expedite ingress and egress of emergency response personnel.
- Coordinate with the Radiation Protection Manager in controlling ingress and egress to and from the Protected Area if radiological concerns are present.
- Provide for access control to the Control Room, TSC and OSC, as appropriate.
- Expedite entry into the Protected Area, as necessary, for the NRC Site Team.
- Act as the TSC liaison with the appropriate NRC Site Team representative.
- Assist the Radiation Protection Manager in determining personnel evacuation routes as necessary.
- Coordinate the evacuation of station non-essential personnel with the appropriate Local Law Enforcement Agencies (LLEAs).

14) Operations Support Center Director OSC

The OSC Director reports to the ~~Maintenance Manager~~Emergency Director and supervises the activities of OSC personnel. Responsibilities include:

- Assign tasks to designated Leads as available:
  - ~~Operations~~ I&C Maintenance
  - Mechanical Maintenance
  - Electrical~~/I&C~~ Maintenance
  - Radiation Protection

- ~~Chemistry~~

- Coordinate with ~~the OSC~~ Operations ~~Lead~~ in the dispatch of Operations personnel to support Control Room and OSC Team activities.
- Notify the Control Room and TSC prior to dispatch of any OSC teams into the plant.
- Maintain OSC resources including personnel, material, and equipment.
- Maintain accountability for all individuals dispatched from the OSC.
- Conduct periodic briefings on the overall plant status, emergency response activities, and station priorities.
- Assemble and dispatch the Field Monitoring Teams as required.

~~15) Assistant Operations Support Center Director OSC~~

~~The Assistant OSC Director reports to the OSC Director and supports the OSC Director in supervising the activities of personnel reporting to the OSC. The Assistant OSC Director may be filled by an OSC Lead, normally the Radiation Protection Lead. Responsibilities include:~~

- ~~Assist the OSC Director in supervising personnel assigned to the OSC.~~
- ~~Assist in formation of Field Monitoring Teams as directed by the TSC.~~
- ~~Assist in formation of sampling teams.~~
- ~~Ensure that records of in-plant survey information and radiochemistry results are maintained.~~
- ~~Ensure that accumulated exposure records for all essential onsite personnel are maintained.~~
- ~~Coordinate with the OSC Leads to organize in-plant teams to support station priorities.~~
- ~~Ensure that in-plant team dispatch briefings include expected activities and radiological hazards.~~
- ~~Ensure that periodic facility briefings are conducted on plant radiological conditions.~~

16) OSC Leads OSC

OSC Leads report to the OSC Director and are assigned from the following station departments:

- Mechanical Maintenance
- Electrical ~~/~~Maintenance
- Instrument and Control
- Radiation Protection
- ~~Chemistry~~
- ~~Operations (on-shift Supervising Operator or designated Operations representative)~~

The OSC Lead assigned to an OSC team is responsible at all times for the safety of team personnel and to keep the OSC Director apprised of team status. Specifically, the OSC Leads are responsible for the managing and supervising OSC team personnel, including:

- Conduct of adequate pre-dispatch briefings.
- Ensuring adequate protective equipment and measures have been identified.
- Tracking of OSC team activities while dispatched.
- Debriefing of team personnel upon return to the OSC.

b. Corporate Emergency Response Organization

~~1) Nuclear Duty Officer (NDO)~~

~~The NDO is the Exelon Nuclear individual who acts as the initial Corporate contact for declared events. Responsibilities include:~~

~~a) Actions for all classified events:~~

- ~~Contact the affected station to verify and obtain updated information concerning emergency response actions and event status.~~
- ~~Notify Exelon Nuclear Executives of event.~~
- ~~Provide information on the event to State Duty Officers, if requested.~~
- ~~Notify the on-call Exelon Communications and Public Affairs Representative.~~
- ~~Prior to EOF activation, review any news releases for accuracy.~~

~~b) Actions for Alert classifications and above:~~

- ~~Complete all actions as listed above.~~
- ~~Notify American Nuclear Insurers (ANI) prior to being transferred to the EOF.~~

2) Corporate Emergency Director EOF

a) When the Station Emergency Director has Command and Control, the ongoing responsibilities include:

- Coordinate all Exelon Nuclear activities involved with the emergency response.
- Ensure off-site agency updates are periodically communicated as required/requested.
- Coordinate Exelon Nuclear press releases with the Nuclear Duty Officer and Exelon Communications and Public Affairs.
- Request assistance from non-Exelon Nuclear emergency response organizations, as necessary.

b) Following assumption of Command and Control, the additional responsibilities assigned to the Corporate Emergency Director include:

- Assumes overall Command and Control of emergency response activities and the non-delegable responsibilities for PAR determination and the notification of offsite authorities.
- Ensure that Federal, state and local authorities and industry support agencies remain cognizant of the status of the emergency situation. If requested, dispatch informed individuals to offsite governmental Emergency Operation Centers (EOCs).
- Approve the technical content of Exelon Nuclear press releases prior to their being released to the media.

3) EOF Director EOF

The EOF Director reports to the Corporate Emergency Director and has the authority, management ability and technical knowledge to assist the Corporate Emergency Director in the management of Exelon Nuclear's offsite ERO.

In the event that the Corporate Emergency Director becomes incapacitated, the EOF Director shall assume the responsibilities of the Corporate Emergency Director until a transfer of Command and Control can be affected either back to the station or to another qualified Corporate Emergency Director. Responsibilities include:

- Direct and coordinate the activation and response efforts of the EOF staff in support of the Corporate Emergency Director.
- Evaluate the need to augment the EOF staff based on events in progress.
- Assess the effectiveness of ongoing EOF working relationships.
- Monitor information flow within the EOF to ensure that facility activities remain coordinated.
- Prepare state/local notification forms with the assistance of the EOF Radiation Protection Manager and the Technical Support Manager.
- Coordinate services as necessary to support EOF operations.
- Coordinate with the Administrative Coordinator for continual shift staffing requirements.
- Assist in the conduct of Corporate Emergency Director duties.
- Act as the designated alternate for approval of the technical content of Exelon Nuclear Press Releases and information released to the News Media.
- Act as purchasing agent in support of the TSC for contract negotiation/administration.

4) Technical Support Manager EOF

The Technical Support Manager reports to the EOF Director and directs the activities of the Technical Support Group. Responsibilities include:

- Assist the Corporate Emergency Director in monitoring changes in event classification.
- Assist the Corporate Emergency Director in determining plant based PARs when necessary.

- ~~Provide information to the EOF Director for completing the state/local notification form.~~

- ~~Provide the Corporate Emergency Director information concerning the status of plant operations, and recommendations for mitigating the consequences of the accident.~~

- ~~Coordinate the overall Exelon Nuclear engineering support from corporate staff and unaffected stations.~~

- ~~Interface with Industry and contractor engineering support organizations.~~

- ~~Ensure that the EOF Radiation Protection Manager is informed of changes in plant status that impacts or potentially impacts the offsite environment or PARs.~~

- ~~Provide technical information on facility and system design.~~

- ~~Assist in the development of post-accident recovery measures.~~

5) ~~Operations Advisor EOF~~

~~The Operations Advisor reports to the Technical Support Manager, directs the ENS Communicator, and is responsible for obtaining and analyzing plant status information and ensuring that it is disseminated. Specific responsibilities include:~~

- ~~Monitor the Operations Status Line to keep apprised of:~~

  - ~~Control Room activities including progress on Emergency Operating Procedures.~~

  - ~~Significant changes in plant system/equipment status and critical parameters.~~

  - ~~Possible changes in event classification.~~

- ~~Identify and track critical parameters for the identification and trending of current plant status information.~~

- ~~Assist the station in identifying Operations resources from corporate staff or unaffected stations for direct support of plant shift operations personnel.~~

- ~~Assist the ENS Communicator in the completion of the NRC Event Notification Worksheet and in responding to NRC inquiries.~~

- ~~Ensure that the EOF Radiation Protection Manager is informed of changes in plant status that impact or potentially impact the offsite environment or PARs.~~

6) ENS Communicator EOF

The ENS Communicator reports to the Operations Advisor. Specific responsibilities include:

- Notify the NRC of changes in event classification. Generally, the TSC ENS Communicator focuses on real time plant operations and the EOF ENS Communicator focuses on notifications following changes in event classification and overall changes in event response or status.
- Establish and maintain continuous communications with the NRC, if requested, via the NRC ENS phone or commercial telephone line.
- Coordinate NRC communications with the ENS Communicator in the TSC.

7) Technical Advisor EOF

The Technical Advisor reports to the Technical Support Manager and is responsible for obtaining and analyzing technical support information, accident mitigating activities and priorities and ensuring that it is disseminated. Responsibilities include:

- Monitor the Technical Conference Line to remain aware of TSC technical support activities, strategies and priorities.
- Assist the Dose Assessment Coordinator in acquiring technical information pertaining to release pathway and core damage assessment.
- Supervise the activities of the Events Recorder.

8) Events Recorder EOF

The Events Recorder reports to the Technical Advisor. Responsibilities include:

- Gather/record approved information on status boards as requested.
- Maintain an event chronology/status log.

9) Radiation Protection Manager EOF

The Radiation Protection Manager reports to the EOF Director and directs the activities of the EOF Radiation Protection staff. Specific responsibilities include:

- Recommend changes in event classification and PARs based upon effluent releases or dose projections.
- Assist the EOF Emergency Director in the evaluation of the significance of an emergency with respect to the public.

- Notify the ~~EOF~~ Emergency Director of meteorological changes that may impact identification of downwind areas.
- Advise the Corporate Emergency Director of protective actions taken by the station for plant personnel.
- Assist the TSC in the planning and coordination of activities associated with the evacuation of non-essential personnel.
- Advise the Corporate Emergency Director on the need for emergency exposures or for issuance of KI to the Field Monitoring Teams or Exelon personnel required to enter the plume.
- Determine the need for and contact Occupational Health/Industrial Safety Services personnel for assistance.
- Monitor plant radiological conditions and advise the TSC Radiation Protection Manager of any adverse trends or potential release pathways that may impact existing event classification.
- Assist in the completion and review of the state/local notification form.
- Maintain cognizance of environmental sampling activities.
- Ensure state authorities are provided information pertaining to Exelon Field Monitoring Team activities and sample results.
- Assist the affected station in the following areas:
  - Planning and coordination of activities associated with the evacuation of non-essential personnel.
  - Acquisition of additional instrumentation, dosimetry, protective equipment and radiological support personnel.
- Assist and interface with the EOF Technical Support Group and the station in the development of plans for plant surveys, sampling, shielding, and special tools in support of waste systems processing and design modification activities.
- Upon request, provide in-plant health physics data to Emergency Public Information personnel ~~and the HPN Communicator~~.
- Coordinate Field Monitoring Team activities.
- Determine needs of the Dose Assessment Coordinator and the ENS Communicator for updates on Field Monitoring Team data and ensure distribution of new data to them in accordance with those needs.

- Promptly report new environmental or Field Monitoring Team exposure data to the Dose Assessment Coordinator.

~~10) Environmental Coordinator EOF~~

~~The Environmental Coordinator reports to the EOF Radiation Protection Manager and directs the Field Team Communicator, Field Monitoring Teams and the State Environs Communicator. Responsibilities include:~~

- ~~Coordinate the transfer of control of the Field Monitoring Teams if initially under the direction of the TSC Radiological Controls Coordinator.~~
- ~~Ensure communications are established with the TSC to obtain information on the accident conditions, meteorological conditions and estimates of radioactive material releases.~~
- ~~Maintain cognizance of Field Monitoring Team exposure. When warranted, ask the Dose Assessment Coordinator to initiate an evaluation of the need for administering KI to Exelon nuclear workers.~~
- ~~Determine needs of the Dose Assessment Coordinator, the Dose Assessor, the HPN Communicator and the State Environs Communicator(s) for updates on Field Monitoring Team data and ensure distribution of new data to them in accordance with those needs.~~
- ~~Upon request, provide environmental data to Emergency Public Information personnel.~~
- ~~Evaluate and coordinate additional equipment and personnel as necessary from unaffected stations to augment and/or relieve station Field Monitoring Teams.~~

~~11) State Environs Communicator EOF~~

~~The State Environs Communicator is staffed as requested by the applicable state agencies. The State Environs Communicator reports to the Environmental Coordinator. Responsibilities include:~~

- ~~As needed, obtain release and dose assessment data from the Dose Assessment Coordinator and Field Monitoring Team data from the Environmental Coordinator.~~
- ~~Coordinate activities and information flow between the EOF Protective Measures Group and the affected state(s) environmental authorities, including periodic updates on meteorological conditions, Field Monitoring Team activities and survey/sample results.~~
- ~~Ensure that the Environmental Coordinator is aware of state environmental activities and sample results.~~

~~12) Field Team Communicator EOF~~

~~The Field Team Communicator reports to the Environmental Coordinator. Responsibilities include:~~

- ~~Establish and maintain contact with the dispatched Field Monitoring Teams.~~
- ~~Document the Environmental Coordinator's instructions and then relay this information to the Field Monitoring Teams.~~
- ~~Document environmental data reported by the Field Monitoring Teams.~~
- ~~Periodically obtain and document information on Field Monitoring Team radiological exposure.~~
- ~~Promptly report new environmental or Field Monitoring Team exposure data to the Environmental Coordinator.~~
- ~~Document questions and answers directed to and received from the Field Monitoring Teams. Ensure the Environmental Coordinator is cognizant of these information requests and relay replies to these requests.~~

13) Dose Assessment Coordinator EOF

The Dose Assessment Coordinator reports to the EOF Radiation Protection Manager ~~and directs the activities of the Dose Assessor and the HPN Communicator~~. Responsibilities include:

- Interpret radiological data and provide PARs based upon dose projections to the EOF Radiation Protection Manager.
- Advise the EOF Radiation Protection Manager of changes in event classification based on effluent releases or dose projections.
- Initiate evaluation of the need for administering KI to Exelon nuclear workers ~~when requested by the Environmental Coordinator~~.
- Remain cognizant of forecast and meteorological data and ensure the status is updated periodically.
- Notify the EOF Radiation Protection Manager of meteorological changes that may impact identification of downwind areas.
- Upon request, provide release and dose assessment data to Emergency Public Information personnel, ~~the HPN Communicator, and the State Environs Communicators~~.

14) Dose Assessor EOF

The Dose Assessor reports to the Dose Assessment Coordinator. Responsibilities include:

- Perform dose projections using the Dose Assessment computer models as directed by the Dose Assessment Coordinator.
- Monitor meteorological and plant effluent conditions.
- Notify the Dose Assessment Coordinator of meteorological changes that may impact identification of downwind areas.
- Evaluate the need for administering KI to Exelon nuclear workers when requested by the Dose Assessment Coordinator.

15) HPN Communicator EOF

The HPN Communicator reports to the Environmental Coordinator. Responsibilities include:

- Provide updates and respond to inquiries from the NRC on offsite environmental data, release status, dose projections and changes to PARs for the general public.
- Obtain release and dose assessment data from the Dose Assessment Coordinator and Field Monitoring Team data from the Environmental Coordinator.
- Maintain continuous communications with the NRC, if requested, via the NRC HPN phone or commercial telephone line.
- Communicate current Health Physics information to NRC representatives, as requested.

16) Logistics Manager EOF

The Logistics Manager reports to the EOF Director and directs the activities of the administrative, security and liaison personnel. Responsibilities include:

- Ensure contact is made and communications are maintained with appropriate Non-Exelon Nuclear personnel whose assistance may be required to terminate the emergency conditions and to expedite the recovery.
- Advise the EOF Director concerning the status of activities relating to governmental interfaces.
- Obtain support from Human Resources, the Comptroller's Office, the Legal Department, Accounting Department and others as required.

- ~~Coordinate with the Nuclear Duty Officer to maintain communications with ANI and INPO.~~
- ~~Ensure that access to the EOF is limited to Emergency Responders and authorize admittance to non-Exelon personnel.~~
- ~~Implement the Exelon Nuclear Fitness for Duty Program.~~
- ~~Ensure that NRC Site Team Representatives are directed to the Regulatory Liaison upon arrival at the EOF.~~
- ~~Ensure that updates and information are provided to the EOC Liaisons and to offsite officials present in the EOF.~~
- ~~Assist in obtaining and coordinating additional equipment/materials and /or technical expertise to support station requests, including Exelon Corporate staff, unaffected stations and vendor/contractors.~~
- ~~Coordinate maintenance of EOF equipment as necessary.~~
- ~~Ensure shift relief and continual staffing for the EOF.~~

~~17) Administrative Coordinator EOF~~

~~The Administrative Coordinator reports to the Logistics Manager. Responsibilities include:~~

- ~~Direct the activities of the Computer Specialist.~~
- ~~Direct the clerical staff and ensure the clerical requirements for the other EOF and JIC staff are met.~~
- ~~Obtain clerical support for the EOF and JIC.~~
- ~~Coordinate shift relief and continual staffing for the EOF.~~
- ~~Obtain services as appropriate to support operation of the EOF.~~

18) Computer Specialist EOF

The Computer Specialist reports to the Administrative Coordinator. Responsibilities include:

- Assist any personnel in logging in, initializing or using a desired computer program.
- Investigate and repair problems encountered with communications equipment and computer equipment/applications.

~~19) Security Coordinator EOF~~

~~The Security Coordinator reports to the Logistics Manager. Responsibilities include:~~

- ~~Provide and interpret information on security events.~~
- ~~Assist with access control activities at the EOF and JIC.~~
- ~~Perform the following in support of the TSC Security Coordinator:~~
  - ~~Provide assistance in resolving security events.~~
  - ~~Assist as a liaison for local, state and federal law enforcement agencies during security related events.~~
  - ~~Serve as the primary contact to the security force for additional support, if necessary, during a security event.~~
- ~~Obtain additional resources to support access control measures needed at the EOF and JIC.~~

20) State/Local Communicator EOF

The State/Local Communicator reports to the ~~Logistics Manager~~Emergency Director. Responsibilities include:

- Communicate and receive information via the Nuclear Accident Reporting System (NARS) circuit or commercial telephone line with appropriate state and county agencies.
- Prepare state/local notification forms with the assistance of the Corporate Emergency Director.
- ~~Ensure that the Logistics Manager is made aware of issues and questions raised by offsite agencies and then relay the replies to these requests.~~

~~21) EOC Communicator EOF~~

~~The EOC Communicator reports to the Logistics Manager. Responsibilities include:~~

- ~~Coordinate and dispatch EOC Liaisons as needed or requested.~~
- ~~Establish and maintain periodic contact with each location where Exelon Nuclear EOC Liaisons have been dispatched.~~
- ~~Ensure EOC Liaisons are provided event information and notifications.~~
- ~~Ensure that the Logistics Manager is made aware of issues and questions raised by offsite agencies and then relay the replies to these requests.~~

22) County EOC Liaison(s) — County EOCs

The County EOC Liaison(s) will be dispatched to County Emergency Operations Centers (EOCs) based on established agreements with the counties. The County EOC Liaisons use the EOC Communicator as their contact at the EOF. Responsibilities include:

- Monitor and report County EOC activities to the EOF.
- Conduct briefings and answer questions.
- Provide simplified explanations to EOC personnel of technical details distributed through approved channels.
- Assist with confirmation/verification of information distributed through approved channels.
- Provide media at the EOC with approved Exelon Nuclear press releases.
- Assist Emergency Public Information personnel in rumor control and media monitoring.

23) State EOC Liaison(s) — State EOCs

At the request of state officials and/or at the discretion of the Corporate Emergency Director, Exelon Nuclear will provide Liaison personnel to state Emergency Operation Centers (EOCs). The state EOC Liaisons use the EOC Communicator as their contact at the EOF. Responsibilities include:

- Monitor and report state EOC activities to the EOF.
- Conduct briefings and answer questions as requested.
- Assist Emergency Public Information personnel in rumor control and media monitoring.

24) Regulatory Liaison — EOF

The Regulatory Liaison reports to the Logistics Manager. Responsibilities include:

- Coordinate interfaces between Exelon Nuclear personnel and governmental agencies within the EOF.
- Obtain necessary equipment and supplies to support activities of governmental agencies located in the EOF.
- Act as the Exelon Nuclear Liaison to the NRC Site Team representatives.

c. Public Information Emergency Response Organization

1) Corporate Spokesperson JIC

The Corporate Spokesperson reports to the Corporate Emergency Director and is responsible for directing the Exelon Emergency Public Information Organization and providing news information to the media. Responsibilities include:

- Maintain command and control of the Joint Information Center.
- Coordinate with Federal, state and local agencies, as well as with other organizations involved in the emergency response, to maintain factual consistency of information to be conveyed to the news media/public.
- Conduct periodic briefings with the news media.
- Interface with the Public Information Director.
- Coordinate and direct responses to media inquiries.
- Ensure that the composition and timeliness of Exelon News Releases are adequate.
- Provide for timely exchange of information between other spokespersons.

~~2) Technical Spokesperson JIC~~

~~The Technical Spokesperson reports to the Corporate Spokesperson. Responsibilities include:~~

- ~~Assist in development of technical and plant status information for use in news releases and media briefings.~~
- ~~Assist the Events Recorder in the preparation of a chronological event description log.~~
- ~~Prepare briefing papers which contain additional detail and background not found in the news releases.~~
- ~~Provide answers as soon as possible to media questions.~~
- ~~Provide a follow-up explanation that corrects misinformation as soon as practicable.~~

~~3) Radiation Protection Spokesperson JIC~~

~~The Radiation Protection Spokesperson reports to the Corporate Spokesperson. Responsibilities include.~~

- ~~Assist in development of environmental and health physics information for use in news releases and media briefings.~~
- ~~Assist the Events Recorder in the preparation of a chronological event description log.~~
- ~~Prepare briefing papers which contain additional detail and background not found in the news releases.~~
- ~~Provide answers as soon as possible to media questions.~~
- ~~Provide a follow-up explanation that corrects misinformation as soon as practicable.~~

4) JIC Director JIC

The JIC Director reports the Corporate Spokesperson to ensure the operability of and to supervise the activities in the JIC. Responsibilities include:

- Maintain cognizance of conditions of the plant and environment, and the actions of Exelon Nuclear and governmental support personnel.
- Coordinate with Federal, state and local agencies, as well as with other organizations involved in the emergency response, to maintain factual consistency of information to be conveyed to the news media/public.
- Participate, as needed, in rumor control activities.
- Ensure that adequate information flow between the EOF and the JIC is coordinated through the Public Information Director.
- Authorize admittance of non-Exelon Nuclear officials to the JIC.
- Until the JIC is fully staffed, work with Corporate Communications to compose draft news releases.
- Provide the drafted news releases to the Corporate Emergency Director for technical review prior to Public Information Director approval.
- Until the JIC is fully staffed, work with Corporate Communications to ensure that rumors are reviewed, documented and responded to by Exelon Nuclear personnel as deemed appropriate.
- Until the JIC is fully staffed, work with Corporate Communications to document and respond to rumors as quickly as possible, through the Exelon Communications and Public Affairs.

- Until the JIC is fully staffed, work with Corporate Communications to ensure that the media is being monitored and that Exelon Nuclear personnel review the information detailed or contained in media releases.

~~5) JIC Coordinator JIC~~

~~The JIC Coordinator reports to the JIC Director and supervises the facilities support staff. Responsibilities include:~~

- ~~Ensure the JIC is activated and operational. This includes the availability of communications and visual aids.~~
- ~~Ensure that access to the JIC areas occupied by Exelon personnel is controlled.~~
- ~~Establish a minimum frequency for addressing news media/public representatives and ensure that some form of communication occurs within that time frame (i.e., an update at least hourly.)~~
- ~~Ensure that approved News Releases and Chronological Event Description Logs are made available in the JIC.~~
- ~~Document unanswered questions and serious public misinformation issues. Follow-up on these questions and issues to ensure that they are being adequately addressed.~~
- ~~Coordinate the interface between Exelon Nuclear and the news media/public, including, as necessary, briefings, news conferences, interviews and responses to information requests.~~

~~7) Administrative Coordinator JIC~~

~~The Administrative Coordinator reports to the JIC Director. Responsibilities include:~~

- ~~Coordinate with the EOF Administrative Coordinator to ensure the clerical requirements for the other JIC staff are met.~~
- ~~Coordinate shift relief and continual staffing for the JIC.~~
- ~~Obtain services as appropriate to support operation of the JIC.~~

~~8) Access Controller JIC~~

~~The Access Controller reports to the JIC Director and is responsible for controlling facility access and obtaining authorization prior to admitting non-Exelon Nuclear officials into the JIC.~~

9) Public Information Director (PID) JIC

When the Emergency Public Information Organization is activated, the Public Information Director reports to the Corporate Spokesperson and is responsible for all emergency event related information intended to be conveyed from Exelon Nuclear to the news media/public. The Public Information Director may perform this function at remote locations. ~~The Public Information Director supervises the activities of the, News Writer, Events Recorder and media monitoring and rumor control personnel.~~ Responsibilities include:

- Provide the Corporate Emergency Director with an overview of the public and media impacts resulting from the Exelon Nuclear and governmental activities.
- Participate with the Corporate Emergency Director regarding information to be released to the public.
- Authorize the issuance of news releases.
- Interface with the Corporate Spokesperson at the JIC.
- Act as a liaison between the ERO and Exelon Nuclear's corporate executives.
- Maintain cognizance of conditions of the plant and environment, and the actions of Exelon Nuclear and governmental support personnel.
- Coordinate information flow between the EOF and the JIC.
- ~~Coordinate with the Media Monitoring Staff to r~~Review and access media coverage of the emergency event.

~~10) News Writer JIC~~

~~The News Writer reports to the Public Information Director. Responsibilities include:~~

- ~~Compose draft news releases with assistance from the Technical Spokesperson and the Radiation Protection Spokesperson.~~
- ~~Provide the drafted news releases to the Corporate Emergency Director for technical review prior to Public Information Director approval.~~

~~11) Events Recorder JIC~~

~~The Events Recorder reports to the Public Information Director. Responsibilities include:~~

- ~~Develop a chronological event description log.~~

~~12) Media Monitoring Staff JIC~~

~~The Media Monitor reports to the Public Information Director. Responsibilities include:~~

- ~~Ensure that the media is being monitored and that Exelon Nuclear personnel review the information detailed or contained in media releases.~~
- ~~Inform the Public Information Director of all media reports and of actions taken to correct any misinformation or rumors.~~
- ~~Direct the activities of the Rumor Control Staff with respect to the function of monitoring rumors from sources other than the media.~~

~~13) Rumor Control Staff JIC~~

~~The Rumor Control Staff reports to the Public Information Director and acts in support of the Media Monitors. Responsibilities include:~~

- ~~Ensure that rumors are reviewed, documented and responded to by Exelon Nuclear personnel as deemed appropriate.~~
- ~~Until the JIC is fully activated, document and respond to rumors as quickly as possible, through the Exelon Communications and Public Affairs.~~
- ~~Inform the Media Monitors when rumors representing serious misinformation are encountered.~~

6. Exelon Emergency Response Organization Block Diagram

ERO staffing tables contained ~~within the station specific Annex~~in Appendix 5, lists the key positions of the ERO~~ and the supporting positions assigned to interface with federal, state, and county authorities~~. Figures B-1a through B-1d illustrates the overall emergency response organization. Section B.5 discusses specific responsibilities and the interrelationships for key positions.

7. Exelon Corporate Emergency Response Organization

The Corporate ERO consists of the EOF Organization and the Emergency Public Information Organization. Personnel staffing these corporate organizations are covered in detail in Section B.5 of this plan.

The Corporate Emergency Response Organization is staffed by Exelon personnel, and operates out of the Emergency Operations Facility (EOF) and the Joint Information Center (JIC). The Corporate ERO is supported by News Media Spokespersons, environmental assessment staff and monitoring teams that provide long-term support to the affected station. Additionally, the Corporate ERO has long term liaison responsibilities with federal, state, and local authorities. These positions are further described in the EPIPs.

The Emergency News Center (ENC) function is responsible for the collection and analysis of event information and status, and development of Company news statements. This information is then communicated to the JIC Corporate Spokesperson~~s~~. The ENC function may be located at either the EOF or the JIC.

The ~~Corporate ERO~~ EOF is activated at an Alert. The EOF Organization is responsible for evaluating, coordinating and directing the overall company activities involved in the emergency response. Within the EOF, the Corporate Emergency Director shall assume Command and Control from the ~~Station~~ Shift Emergency Director when classification escalates to an Alert or higher, unless the EOF capabilities are limited such that the overall control and responsibility for PARs and offsite notifications cannot be assumed. ~~The EOF may also function in a supporting role to the station when the Station Emergency Director maintains Command and Control.~~ The JIC is activated within 90 minutes of an Alert. Some JIC functions may continue to be performed by the Exelon Communications organization until transferred to the JIC.

8. Industry/Private Support Organizations

Exelon Nuclear retains contractors to provide supporting services to nuclear generating stations. A contract/purchase order with a private contractor is acceptable in lieu of an agreement letter for the specified duration of the contract. Among services currently provided are the following:

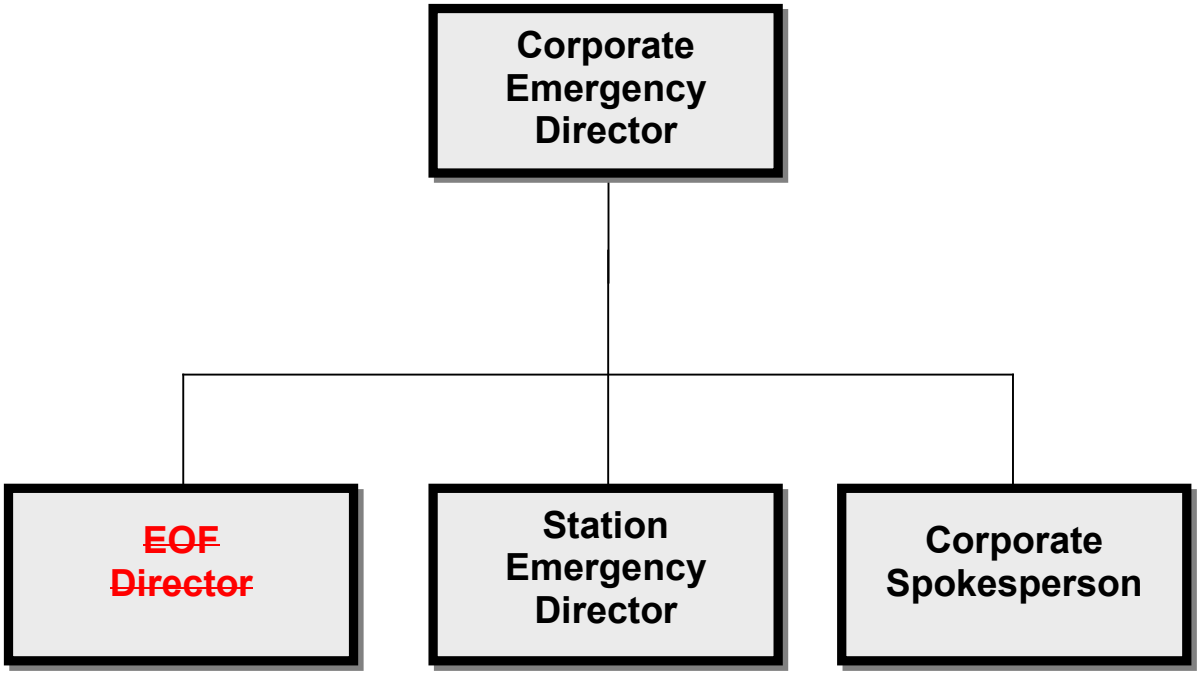
a. Institute of Nuclear Power Operations (INPO): Experience has shown that a utility may need resources beyond in-house capabilities for the recovery from a nuclear plant emergency. One of the roles of the Institute of Nuclear Power Operations (INPO) is to assist affected utilities by quickly applying the resources of the nuclear industry to meet the needs of an emergency. INPO has an emergency response plan that enables it to provide the following emergency support functions:

- Assistance to the affected utility in locating sources of emergency personnel, equipment and operational analysis.

- INPO, Electric Power Research Institute (EPRI) and Nuclear Energy Institute (NEI) maintain a coordination agreement on emergency information with their member utilities.

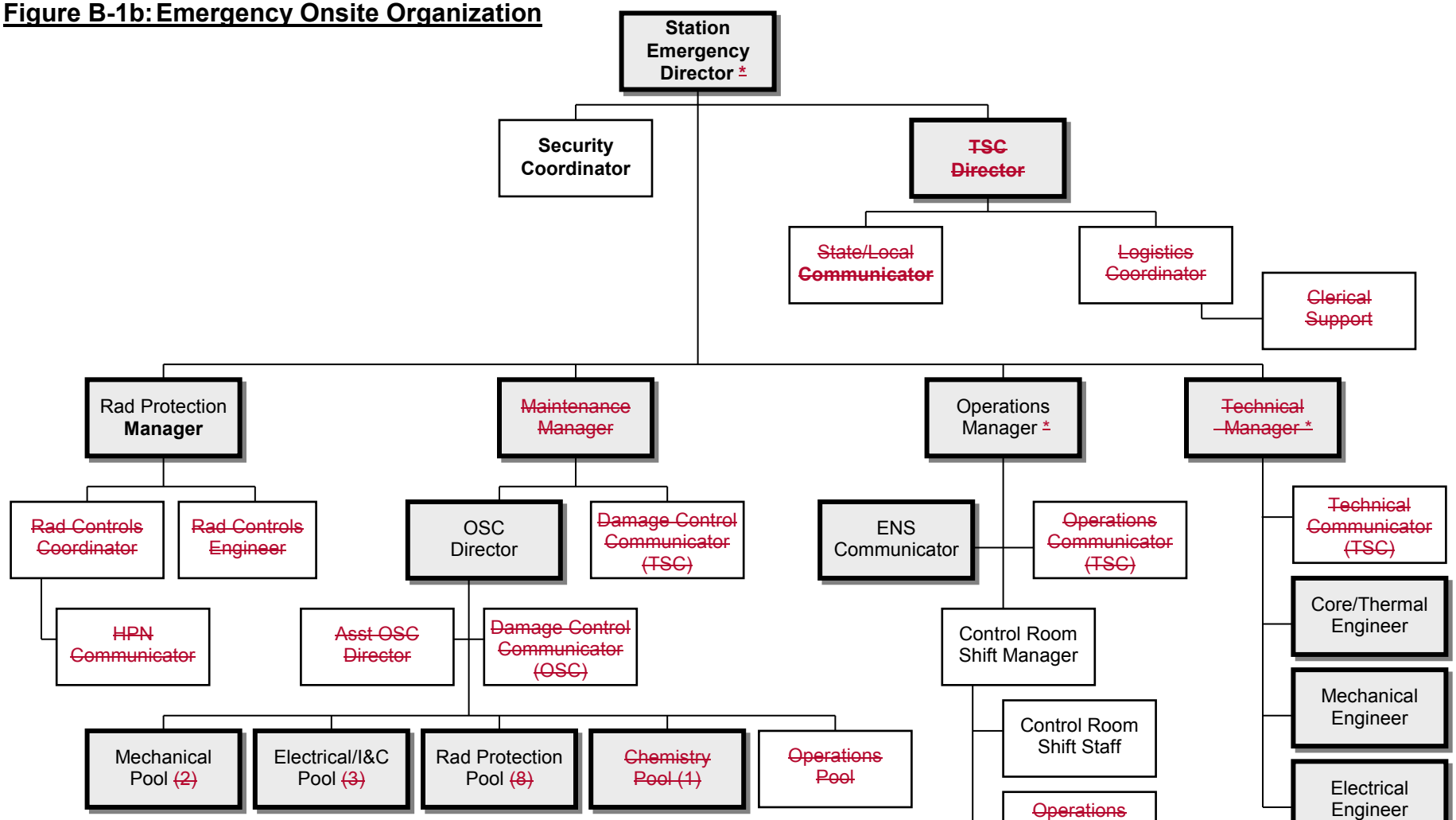
- INPO provides the "Nuclear Network", or its replacement, electronic communications system to its members, participants, NEI, and EPRI to coordinate the flow of media and technical information about the emergency.

Figure B-1a: Exelon Overall ERO Command Structure



~~Shaded/Bold Boxes indicate minimum staffing positions.~~

Figure B-1b: Emergency Onsite Organization

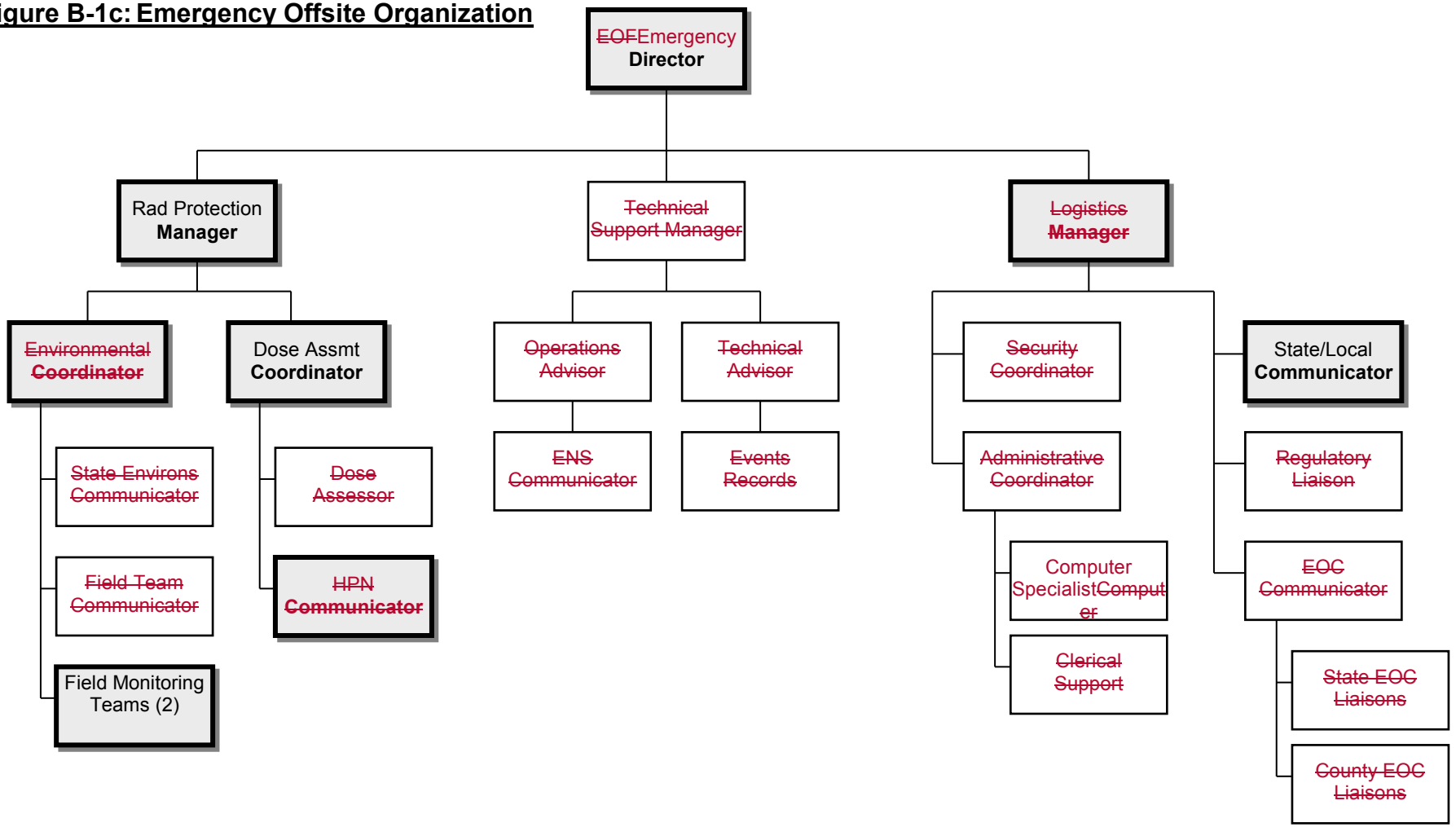


~~Shaded/Bold Boxes indicate minimum staffing positions~~.

ERO response pool personnel do not include the on-shift complement.

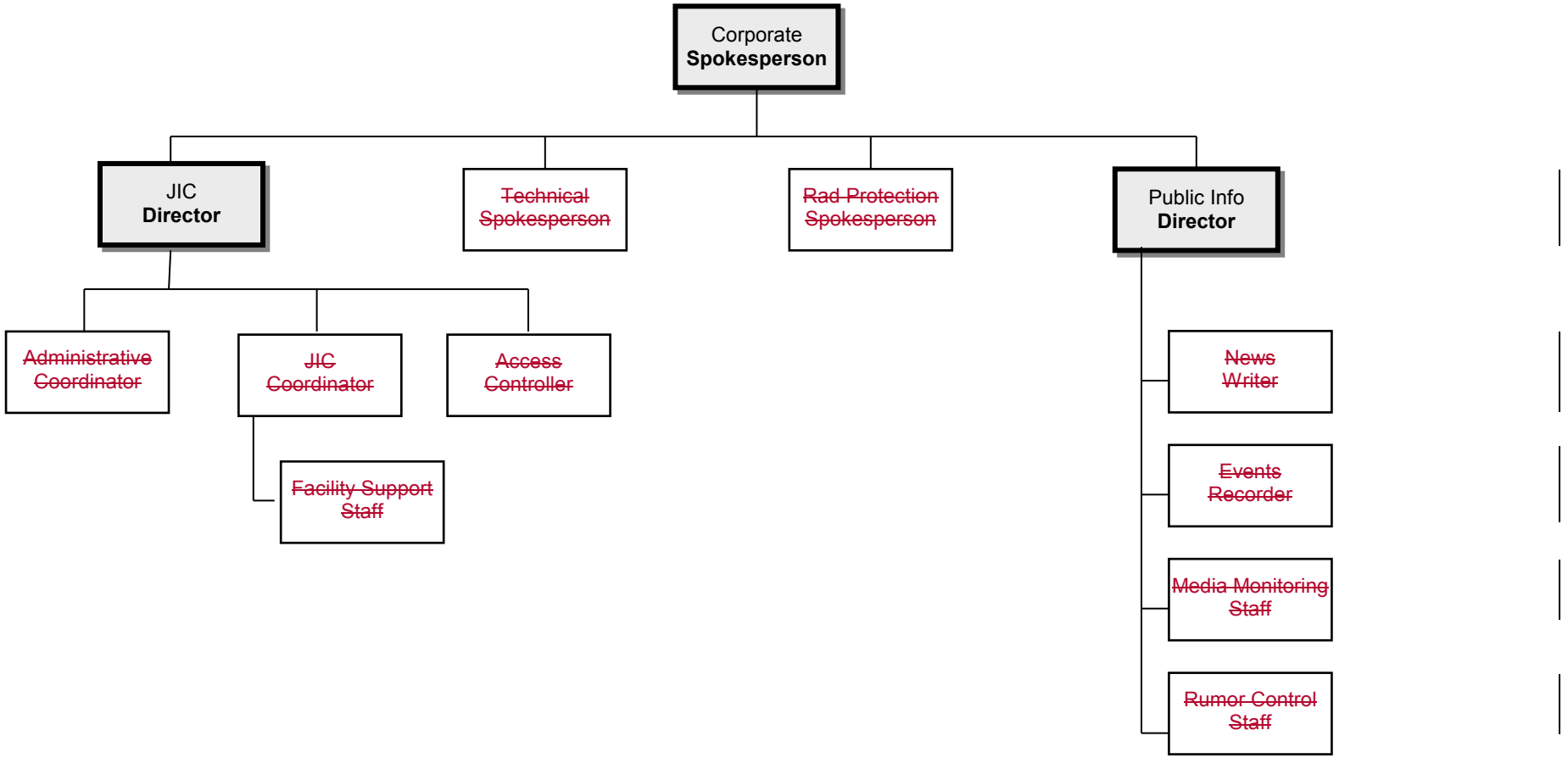
* SAMG functions ~~may be assigned to other qualified personnel. Minimum staffing~~ requires 1 Decision-Maker and 2 Evaluators.

Figure B-1c: Emergency Offsite Organization



Shaded/Bolded Boxes indicate minimum staffing positions.

Figure B-1d: Emergency Public Information Organization



~~Shaded/Bolded Boxes indicate minimum staffing positions.~~

9) Field Monitoring Team (FMT) Communications: A separate communications system has been installed to allow coordinated environmental monitoring and assessment during an emergency. This system consists of the necessary hardware to allow communication between the Control Room, TSC, EOF, and mobile units in Exelon Nuclear vehicles. Though direct communications between the Control Room and the FMTs is not required per the prescribed methods of FMT coordination, the FMTs can be contacted from equipment in the Control Room if required. Commercial cell phones or other means are available as back up to the primary field team communications system.

In addition, station communication links exist to ensure appropriate information transfer capabilities during an emergency. The station may also utilize its Public Address System, station radios and notification devices to augment its emergency communications.

e. ERO Notification System: Exelon Nuclear utilizes an automated ERO Notification System to rapidly notify members of the ERO. The system consists of a network of physical infrastructure capable of initiating and receiving contact via multiple notification devices. When activated, the system contacts the notification devices (e.g., through commercial and cellular phone, email, text message) belonging to members of the ERO. The System includes redundant activation methods via the internet, call-centers, or direct telephone activation, as well as redundant, geographically separated call centers and data centers, with redundant power sources. Implementing procedures specify the course of action to be taken if the primary ERO Notification System activation path fails to respond. The ERO Notification System provides primary and back-up notification functions. For the Exelon North East sites, the ERO notification system description is contained in the Station Annex and EP implementing procedures.

f. NRC Communications (ENS ~~and HPN~~)

Communications with the NRC Operations Center will be performed via the NRC ENS ~~and HPN~~ circuits or commercial telephone line. Information is normally communicated from an approved NRC Event Notification Worksheet prior to establishing an open ENS ~~and/or HPN line~~.

The actual configuration of these systems may vary from station to station. Installation and use of these NRC telephones is under the direction of the NRC (see Figure F-3).

Emergency Notification System (ENS): Dedicated telephone equipment is in place between each nuclear station's Control Room and the NRC, with an extension of that line in the TSC. A separate line is available in the EOF with the capability of being patched with the station through the NRC. This line is used for NRC event notifications and status updates.

~~Health Physics Network (HPN): There also exists a separate dedicated telephone between the NRC, the TSC, and EOF for conveying health physics information to the NRC as requested or as an open line.~~

Figure F-1: Exelon Notification Scheme (For Full Augmentation)

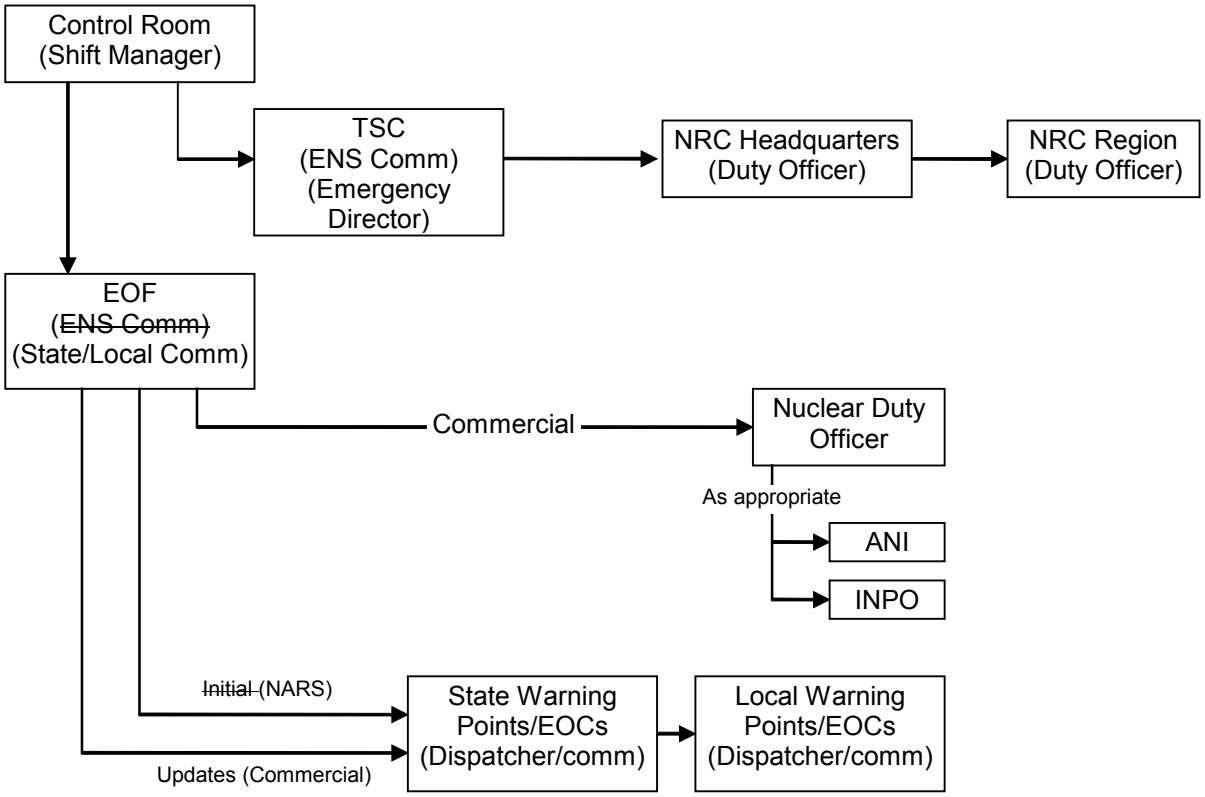
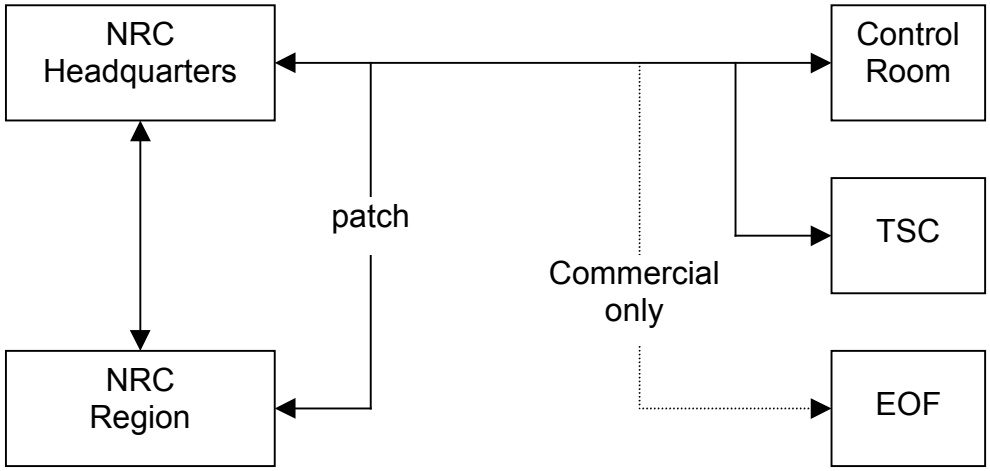


Figure F-3: NRC Communications for Nuclear Response



NOTE: ENS ~~and HPN~~ circuits may use the Federally maintained system, company tie lines or PBX as dedicated primary communications systems and have commercial backups.

The primary purpose of the Emergency Public Information Organization is to disseminate information from Exelon Nuclear's ERO about the emergency events to the public, via the news media. However, the authority for issuance of news releases for the classification of an Unusual Event or prior to ERO activation will always reside with the Exelon Communications and Public Affairs Department. Upon activation, the Emergency Public Information Organization has the responsibility and authority for issuance of news releases to the public.

The Emergency Public Information Organization is comprised of senior managers from Exelon Nuclear who will function as spokespersons, and other Exelon Nuclear individuals including personnel from the Governmental Affairs and Human Relations areas. Exelon Nuclear's spokespersons disseminate information to the news media/public concerning the emergency events out of a Joint Information Center (JIC).

2) The Joint Information Center (JIC): The JIC is the facility in which media personnel gather to receive information related to the emergency event. The JIC is the location where approved news releases will be provided to the media for dissemination to the public. News releases are coordinated between the EOF and JIC personnel and state and/or Federal representatives in the JIC. Exelon public information personnel operate from the EOF and the JIC, which is under the direction of the Corporate Spokesperson and functions as the single point contact to interface with Federal, state, and local authorities who are responsible for disseminating information to the public.

   Each station has a designated JIC. Each JIC is equipped with appropriate seating, lighting and visual aids to allow for public announcements and briefings to be given to the news media. Additionally, JICs are equipped with commercial telephone lines for making outgoing calls. The Emergency Public Information Organization functions from the JIC and EOF in preparing and releasing utility information about the emergency event. The JIC is activated at the declaration of an Alert or higher classification. Some JIC personnel may perform functions remotely from alternate locations while remaining in contact with personnel in the JIC facility (e.g., media monitoring, rumor control, news writers, issuance of press releases). The JIC Director and Corporate Spokesperson will ensure communication and coordination of these functions with the EOF and JIC staff. Functions of the JIC include:

   - Serving as the primary location for accumulating accurate and current information regarding the emergency conditions and writing news releases.
   - Providing work space and phones for public information personnel from the state, counties, NRC, FEMA, and industry-related organizations.
   - Providing telephones for use by the news media personnel.

- Providing responses to media inquiries through ~~Media Monitoring Staff~~ telephones that the media can call for information about an emergency.

b. The news media is not permitted into the EOF during an emergency.

4. Coordination of Public Information

a. The JIC is staffed by Exelon and government public information representatives who will be the source of public information during an emergency at the station. The Corporate Spokesperson is the primary spokesperson for Exelon Nuclear. The Corporate Spokesperson has direct access to all necessary information (see Section B.5).

b. The JIC is staffed by federal, state, county, and utility personnel to assure timely, periodic exchange and coordination of information. Representatives coordinate information prior to conducting news briefings.

c. Rumors or misinformation are identified during an emergency by the ~~media/rumor control monitors~~JIC Staff. They respond to public and news media calls and monitor media reports.

d. The common MW Region JIC is located west of Chicago, in Warrenville IL, in the Exelon Nuclear Cantera facility. This facility supports the Braidwood, Byron, Clinton, Dresden, LaSalle and Quad Cities stations.

The JIC for the MA Region Three Mile Island, Limerick and Peach Bottom Stations is co-located with the EOF at 175 North Caln Road, Coatesville, Pennsylvania.

The JIC for Calvert Cliffs Station is co-located with the EOF about twelve miles from the site, in Calvert Industrial Park, Skipjack Road at Hallowing Point Road.

The JIC for the Ginna Station is located at 1255 Research Forest, Macedon, NY.

The JIC for the Nine Mile Point Station is located near the Oswego County Airport, on County Route 176 in the Town of Volney, New York approximately 12 miles from the site.

5. Media Orientation

Emergency Preparedness, in conjunction with Exelon Communications and Public Affairs Department, offers training (at least annually) to acquaint news media with the E-Plan, information concerning radiation, and points of contact for release of public information in an emergency. Training is provided for those media agencies that accept the training offer.

Personnel in the TSC shall be protected from radiological hazards, including direct radiation and airborne contaminants under accident conditions with similar radiological habitability as Control Room personnel. To ensure adequate radiological protection, permanent radiation monitoring systems have been installed in the TSC and/or periodic radiation surveys are conducted. These systems indicate radiation dose rates and airborne radioactivity inside the TSC while in use. In addition, protective breathing apparatus (full-face air purifying respirators) and KI are available for use as required.

The TSC has access to a complete set of as-built drawings and other records, including general arrangement diagrams, P&IDs, and the electrical schematics. The TSC has the capability to record and display vital plant data, in real time, to be used by knowledgeable individuals responsible for engineering and management support of reactor operations, and for implementation of emergency procedures.

c. Operations Support Center (OSC): Each nuclear generating station has established an OSC. The OSC is the onsite location to where station support personnel report during an emergency and from which they will be dispatched for assignments or duties in support of emergency operations. The OSC shall be activated whenever the TSC is activated, but need not remain activated at the Alert level if its use is judged unnecessary by the Station Emergency Director. At the Site Area and General Emergency levels, the OSC or an alternate OSC shall be activated at all times. The OSC is not activated for a HOSTILE ACTION when the Alternative Facility is implemented. Activation for other events is optional. Station disciplines reporting to the OSC include, but are not limited to:

- Operating personnel not assigned to the Control Room,
- Radiation Protection Personnel,
- ~~Chemistry Personnel,~~
- Maintenance Personnel (mechanical, electrical and I&C).

Figure B-1b illustrates the staffing and organization for the OSC.

Each OSC is equipped with communication links to the Control Room, the TSC and the EOF (see Section F). A limited inventory of supplies will be kept for the OSC. This inventory will include respirators, protective clothing, flashlights and portable survey instruments.

2. Emergency Operations Facility (EOF)

The EOF is the location where the Corporate Emergency Director will direct a staff in evaluating and coordinating the overall company activities involved with an emergency. Activation of the EOF is mandatory upon declaration of an Alert or higher classification. The EOF provides for:

- Management of overall emergency response.

3. Emergency Operations Centers

EOCs operated by the state and local communities have been established to perform direction and control of emergency response functions.

The respective state EOCs are capable of continuous (24-hour) operations for a protracted period. These centers contain sufficient communications (radio, telephone and teletype) equipment, maps, emergency plans, and status boards to provide the necessary interfaces with other federal, state, county, and Exelon emergency facilities.

The county EOCs serve as Command and Control headquarters for local emergency response activities as well as a center for the coordination of communications to field units and to the state EOCs. These EOCs have the equipment necessary, (such as facsimile machines, telecommunications equipment, radio gear, photocopiers, wall maps, etc.) to carry out their emergency responsibilities.

4. Activation

NOTE: NUREG-0654 Criterion II.B.5 states that the "licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency". It further defines that short period as 30 and 60 minutes. The time frames for rapid augmentation of a nuclear power plant staff in the event of an emergency are not rigid inviolate requirements but rather goals. It is Exelon Nuclear's intent to expend its best efforts to meet the augmentation criteria goals regarding staffing Emergency Response Facilities with sufficiently skilled individuals capable of handling an emergency. Both the NRC and Exelon Nuclear realize that due to diversity of normal residential patterns for the stations' staff, possible adverse weather conditions, road congestion and site access restrictions, these time frames might be exceeded.

Exelon Nuclear has put into place plans and procedures to ensure timely activation of its emergency response facilities. The Shift Manager (as Shift Emergency Director) will initiate a call-out in accordance with the implementing procedures. The ERO augmentation process identifies individuals who are capable of fulfilling the specific response functions that are listed in ERO staffing tables contained within the station specific Annex. This table was developed based on the functions listed in NUREG-0654, Table B-1.

Although the response time will vary due to factors such as weather and traffic conditions, a goal of 60 minutes for minimum staffing, following the declaration of an Alert or higher emergency classification, has been established for the ERO personnel responding to the station emergency facilities and the EOF. Additionally, plans have been developed to ensure timely functional activation and staffing of the JIC within 90 minutes of when the classification of Alert is declared.

It is the goal of the organization to be capable of activating the applicable Emergency Response Facility upon achieving minimum staffing. The facility can be declared activated when the following conditions are met:

a. Minimum staffing has been achieved.

b. The facility is functional.

~~Although the minimum staffing criteria applies to the JIC, the activation time is not applicable. Public Information personnel must first coordinate the decision to activate the JIC with the appropriate offsite authorities.~~

The Director in charge may elect to activate their facility without meeting minimum staffing; if it has been determined that sufficient personnel are available to fully respond to the specific event (this would not constitute a successful minimum staff response).

5. Monitoring Equipment Onsite

Each nuclear station is equipped with instrumentation for seismic monitoring, radiation monitoring, fire protection and meteorological monitoring. Instrumentation for the detection or analysis of emergency conditions is maintained in accordance with station Technical Specifications, if applicable, or commitments made to the NRC. The actual instrumentation varies somewhat from site to site and thus will not be described in detail in this plan. Descriptions of the equipment will appear in each Station Annex. This equipment includes but is not limited to the following:

a. Geophysical Monitors

1) Meteorological Instrumentation: A permanent meteorological monitoring station is located near each station for display and recording of wind speed, wind direction, and ambient and differential temperature for use in making offsite dose projections. Meteorological information is presented in the CR, TSC, and EOF by means of the plant computer system. This information is remotely interrogated using a computer or other data access terminal.

With regard to Exelon Nuclear's meteorological monitoring program, there has been a quality assurance program adopted from 10 CFR 50, Appendix B. However, since the meteorological facilities are not composed of structures, systems, and components that prevent or mitigate the consequences of postulated accidents and are not "safety related," not all aspects of 10 CFR 50, Appendix B, apply. Those aspects of quality assurance germane to supplying good meteorological information for a nuclear power station were adopted into the meteorological quality assurance program. The meteorological program is also subject to the requirements of the QATR, Section 19, Augmented Quality.

Radiation Protection personnel are trained to assess the radiological hazards associated with equipment repair and instruct personnel as to the appropriate protective clothing requirements, respiratory protection requirements, stay times, and other protective actions specific to the conditions present.

At least 50% of personnel from those departments, who are potential responders to the OSC as Damage Control Team members, are required to be qualified in the use of respiratory protection equipment. This includes in-plant supervision and craft/technicians for the following departments:

- Operations
- Radiation Protection
- ~~Chemistry~~
- Maintenance (mechanical, electrical and I&C)

f. First Aid and Rescue Personnel: First aid and rescue team members receive training as outlined in Part 3 of this section.

g. Local Support Service Personnel: Local support service personnel providing assistance during an emergency are invited to receive training as outline in Parts 1.a and 1.b of this section.

h. Medical Support Personnel: Onsite medical personnel receive specialized training in the handling of contaminated victims and hospital interface. Offsite ambulance and hospital personnel are offered annual training in accordance with a program provided by Emergency Preparedness.

i. Public Information Personnel: Corporate and station personnel responsible for disseminating emergency public information and responding to media and public information requests receive specialized public information training.

j. Communications Personnel: ERO personnel receive training on communications protocol as a part of the initial Emergency Response Overview Course. Personnel using specialized communications equipment that is not part of their normal daily function receive initial and requalification training on the equipment. Personnel involved in notifications to offsite agencies receive specialized training in the notification process.

5. General, Initial, and Requalification Training Program Maintenance

a. Station Departments and Emergency Preparedness share the responsibility for ensuring that the ERO receives all necessary training and retraining. In order to carry this out, responsibilities are assigned as follows:

Corporate Responsibilities for Corporate ERO Personnel

- Scheduling and conducting initial, retraining, and make-up classes.

Appendix 5

Table 5-1: Emergency Response Organization (ERO) Staffing and Augmentation Plan

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Command and Control • Provide overall ERO command and control, until relieved. • Approve emergency action level (EAL) and/ or protective action recommendation (PAR) classifications, until relieved. • Authorize personnel dose extensions, until relieved.	(1) Shift Emergency Director	(1) Station Emergency Director	Not applicable	(1) Corporate Emergency Director
Communications[3] • Communicate EAL and PAR classifications to offsite response organizations (OROs), including the NRC, until relieved.	Shift Communicator[1]	(1) ENS Communicator (TSC)	Not applicable	(1) State / Local Communicator
Radiation Protection • Provide qualified radiation protection coverage for responders accessing potentially unknown radiological environments during emergency conditions. • Provide in-plant surveys. • Control dosimetry and radiologically controlled area access.	(2) Radiation Protection Personnel	(3) Additional Radiation Protection Personnel *[In addition to personnel on-shift]* (OSC)	(3) Additional Radiation Protection Personnel *[In addition to personnel on-shift and those responding within 60 min.]* (OSC)	Not applicable

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Supervision of Radiation Protection Staff and Site Radiation Protection • Evaluate and assess plant and offsite radiological data in the development of onsite protective actions and offsite PARs, until relieved. • Recommend onsite protective actions and offsite PARs to the applicable decision- maker, until relieved. • Direct all radiation protection activities, including field monitoring team (FMT) direction, until relieved. • Provide relevant information to applicable communicators who are communicating offsite PARs to OROs, until relieved.	(1) Shift Emergency Director	(1) TSC Radiation Protection Manager (RPM) (TSC)	Not applicable	(1) EOF Radiation Protection Manager (EOF)
Dose Assessments/ Projections • Perform dose assessments/projections and provide input to applicable PAR decision- maker, until relieved.	(1) Shift Dose Assessor [1]		Not applicable	(1) Dose Assessment Coordinator (EOF)

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Emergency Classifications • Evaluate plant conditions and recommend emergency classifications, until relieved.	Emergency Classification Advisor[1]	(1) Operations Manager (TSC)	Not applicable	Not applicable
Engineering • Provide engineering coverage related to the specific discipline of the assigned engineer, until relieved.	(1) **Core/ Thermal Hydraulics Engineer - STA**[1] • Evaluate reactor conditions.	**TSC Engineering Staff** • (1) Electrical/ Instrumentation and Control (I&C): Provide engineering coverage for the ERO related to electrical or I&C equipment. • (1) Mechanical: Provide engineering coverage for the ERO related to mechanical equipment. • (1) Core/Thermal Hydraulics: Evaluate reactor conditions.	As needed	Not applicable
Security	Security staffing per the site-specific security plan.	(1) **Security Coordinator (TSC)** • Coordinate security- related activities and information with the Emergency Coordinator.	Not applicable	Not applicable

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Repair Team Activities	**Operations Staff**[1,4] • Limited maintenance capability needed on-shift. This is typically limited to minor electrical and/ or mechanical work to restore power and/or emergency core cooling system (ECCS) flow.	**Maintenance Personnel (OSC)** • (1) Electrical Maintenance Technician: Provide electrical support for ECCS equipment, event mitigation, and equipment repair. • (1) Mechanical Maintenance Technician: Provide mechanical support for ECCS equipment, event mitigation, and equipment repair.	**Maintenance Personnel (OSC)** • (1) I&C Technician: Provide assistance with logic manipulation, support for event mitigation and equipment repair, and support of digital I&C if applicable. Additional I&C staff may be called out if needed. • Electrical Maintenance Technicians – As needed. • Mechanical Maintenance Technicians – As needed.	Not applicable

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Supervision of Repair Team Activities	(1) Repair Team Supervisor[1]	(1) **OSC Director** • Supervise OSC activities as directed by Emergency Coordinator.	**OSC Supervisors** • (1) Electrical Maintenance Supervisor /Lead: Supervise OSC activities related to electrical equipment. • (1) Mechanical Maintenance Supervisor / Lead: Supervise OSC activities related to mechanical equipment. • (1) I&C Supervisor / Lead: Supervise OSC activities related to I&C equipment. May be combined with Electrical Supervisor. • (1) Radiation Protection Supervisor / Lead: Supervise OSC activities related to radiation protection.	Not applicable

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Field Monitoring Teams (FMTs)	Not applicable	**Onsite FM Individual** • (1) Qualified individual to assess the protected area for radiation and contamination and provide input to the TSC RPM. Responsible for radiation protection coverage for the FMT as directed by TSC RPM or EOF RPM. . **Offsite FMT A** • (1) Qualified individual to assess the area(s) outside the protected area for radiation and contamination, and for radioactive plume tracking, as directed by, and under the control of, the EOF DAC or RPM. Responsible for the radiation protection coverage of the FMT as directed by EOF RPM. • (1) Driver to provide transportation.	**Offsite FMT B** • (1) Qualified individual to assess the area(s) outside the protected area for radiation and contamination, and for radioactive plume tracking, as directed by, and under the control of, the EOF DAC or RPM. Responsible for the radiation protection coverage of the FMT as directed by EOF RPM. • (1) Driver to provide transportation.	Not applicable

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF/JIC - Alert or Greater[2]
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 90 min.
Media Information • Manage and coordinate media information related to the event.	Not applicable	Not applicable	Not applicable	Corporate Spokesperson • JIC Director • Public Information Director • Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF/JIC - Alert or Greater[2] Augment w/in 90
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	
JIC/EOF Information Technology (IT)	Not applicable	Not applicable	Not applicable	• (1) EOF/JIC Computer Specialist (@ 90 min from Alert or higher)

1. Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

2. Exelon's Communication Department will perform necessary JIC functions at the Unusual Event declaration and initially upon a higher initial EAL declaration. The JIC facility will be activated within 90 minutes of an Alert declaration; however, some functions may continue to be performed by the Exelon Communications Department. Some JIC functions such as Public Information Director, New Writer, Media Monitor, Rumor Control may be performed remotely by Exelon's Communication Department.

3. Additional Communications will be staffed at the EOF or TSC if needed.

4. At Clinton, one (1) Repair Team Activity position is filled by a station IMD person. The IMD person is annotated in this table to support performance of specific EOP activities such as lifting leads and installing jumpers. The IMD person is required on shift until such time that operators are trained and qualified to perform these tasks.

Emergency Plan Annex EP-AA-1007

Mark-up Pages

Exelon Generation

EXELON NUCLEAR

RADIOLOGICAL EMERGENCY PLAN ANNEX

FOR

PEACH BOTTOM ATOMIC POWER STATION

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The Peach Bottom Emergency Action Levels and supporting information are re-located to EP-AA-1007, Addendum 3.

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Section 2: Organizational Control of Emergencies

PBAPS's Emergency Response Organization (ERO) and its key positions are described in the Exelon Nuclear Standardized Radiological Emergency Plan (EP-AA-1000). 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~~2.1.1 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 EP-AA-1000, Appendix 5, Table 5~~PBAP~~5-1, 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~~2.2 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~~3 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~~4 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~~5 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	1		
		Control Room Supervisor	1		
		Reactor Operator	3		
		Equipment Operator	3		
2. Emergency Direction and Control	Command and Control / Emergency Operations	Shift Emergency Director (CR)	1[d]		
		Station Emergency Director (TSC)		1	
		Corporate Emergency Director (EOF)		1	
3. Notification & Communication	Emergency Communications	Shift Personnel[b]	2		
		TSC Director (TSC)		1	
		EOF Director (EOF)		1	
		State/Local Communicator		1 (EOF)	1 (TSC)
		ENS Communicator		1 (TSC)	1 (EOF)
		HPN Communicator		1 (EOF)	1 (TSC)
	Plant Status	Operations Communicator (CR/TSC)			2
	In-Plant Team Control	Damage Control Comm. (CR/TSC/OSC)			3
	Technical Activities	Technical Communicator (TSC)			1
	Governmental	EOC Communicator (EOF)			1
		State EOC Liaison[f] (PEMA/MEMA)			2
		Regulatory Liaison (EOF)			1
4. Radiological Accident Assessment and Support of Operational Accident Assessment	Offsite Dose Assessment	Radiation Protection Personnel[c]	1		
		Dose Assessment Coordinator (EOF)		1	
		Dose Assessor (EOF)			1
		Radiation Controls Coordinator (TSC)			1
	Offsite Surveys	Environmental Coordinator (EOF)		1	
		Field Team Communicator (EOF)			1
		Off-Site Field Team Personnel [j]	2	2	(e)
	Onsite Surveys	RP Personnel		2	(e)
	In-plant Surveys	RP Technicians	1	2	(e)
	Chemistry	Chemistry Personnel	1	1	(e)
	RP Supervisory	Radiation Protection Manager(TSC/EOF)		2	

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

Functional Area	Major Tasks	Emergency Positions	Minimum Shift Size	[a]60 Minute Augmentation	Full Augmentation
	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
5. Plant System Engineering, Repair and Corrective Actions	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)			1
		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	Security Team Personnel	(h)	(h)	
	EOF Security	Security Coordinator[i] (TSC/ EOF)			2
	Logistics / Administration	Logistics Manager (EOF)		1	
		Logistics Coordinator (TSC)			1
10. Resource Allocation and Administration		Administrative Coordinator (EOF)			1
		Clerical Staff (TSC/OSC/EOF)			(e)
		Events Recorder (EOF)			1
		Computer Specialist (EOF)			1
		SUB-TOTAL:	23	34	27+

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

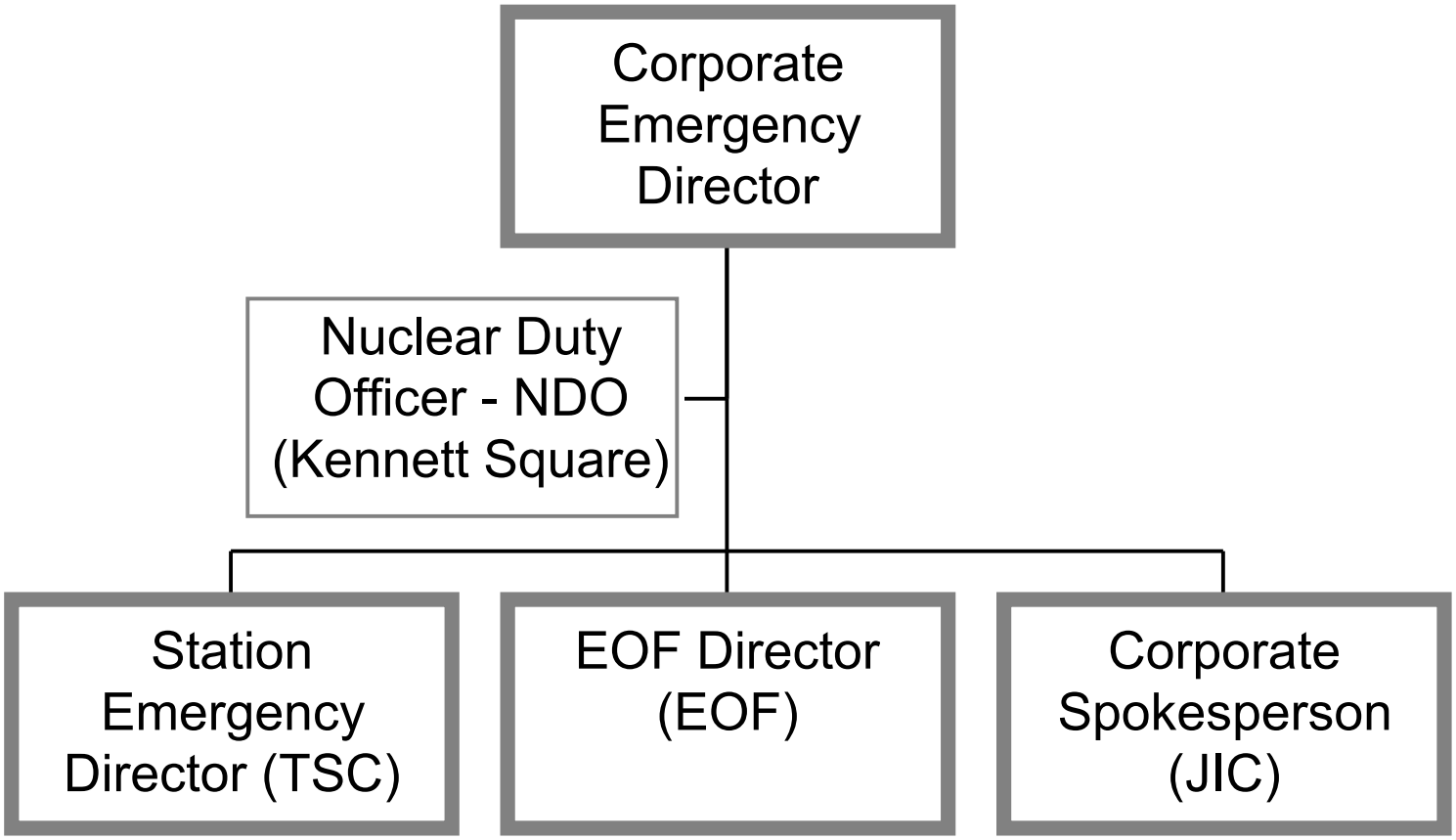
Functional Area	Major Tasks	Emergency Positions	Minimum Shift Size	[a] 60 Minute Augmentation	Full Augmentation
11. Public Information	Media Interface	Corporate Spokesperson (JIC)		1	
		Rad Protection Spokesperson (JIC)			1
		Technical Spokesperson (JIC)			1
	Information Development	Public Information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

	Minimum Shift Size	Total Minimum Staff	Total Full Augmentation
TOTAL:	23	37	34+

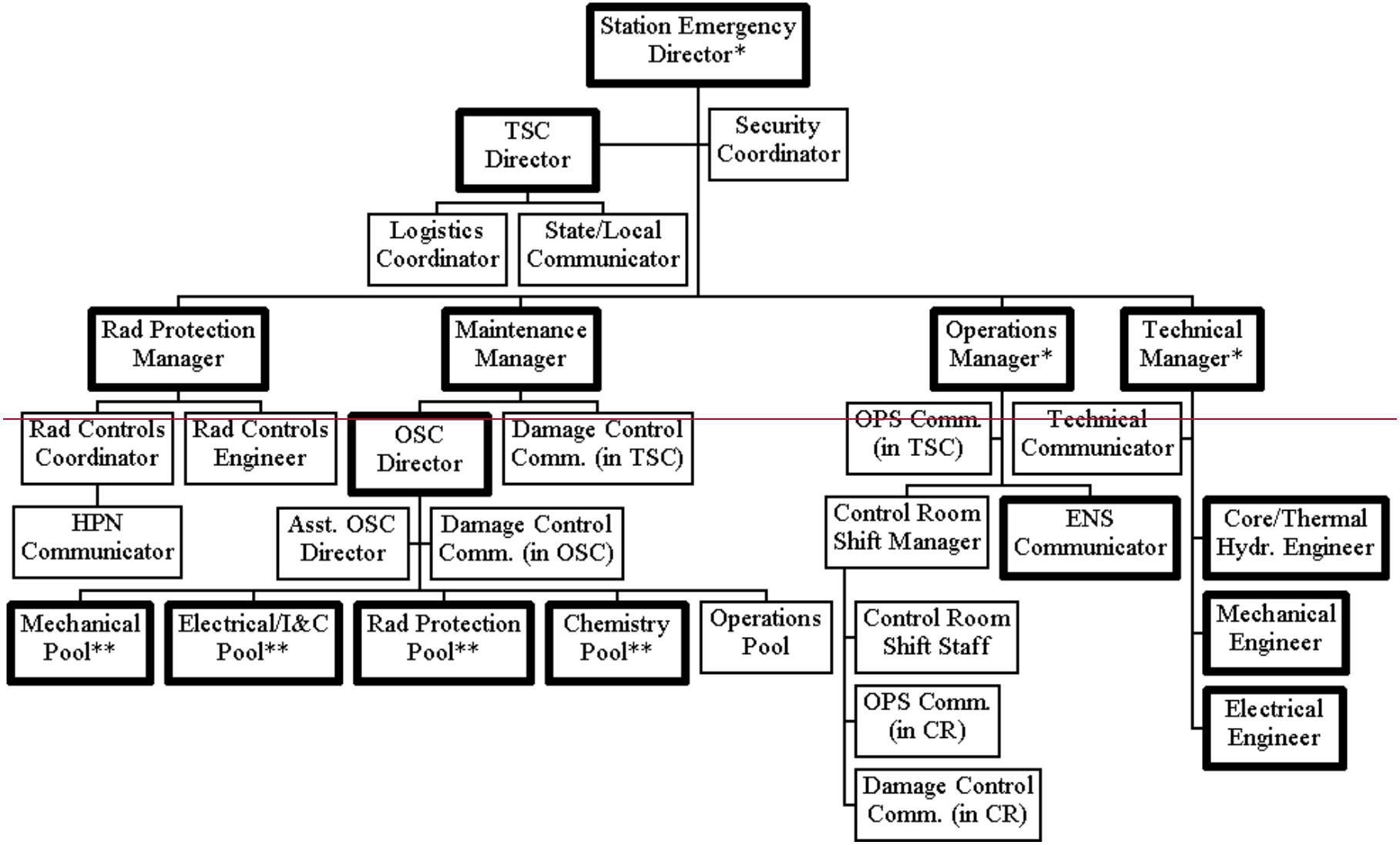
[a] Response time is based on optimum travel conditions.
[b] Refer to Section 2.1.2 for a description of shift emergency communication staffing.
[c] Refer to Section 2.1.1 for description of on-shift dose assessment staffing.
[d] May be provided by personnel assigned other functions. Personnel can fulfill 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~~

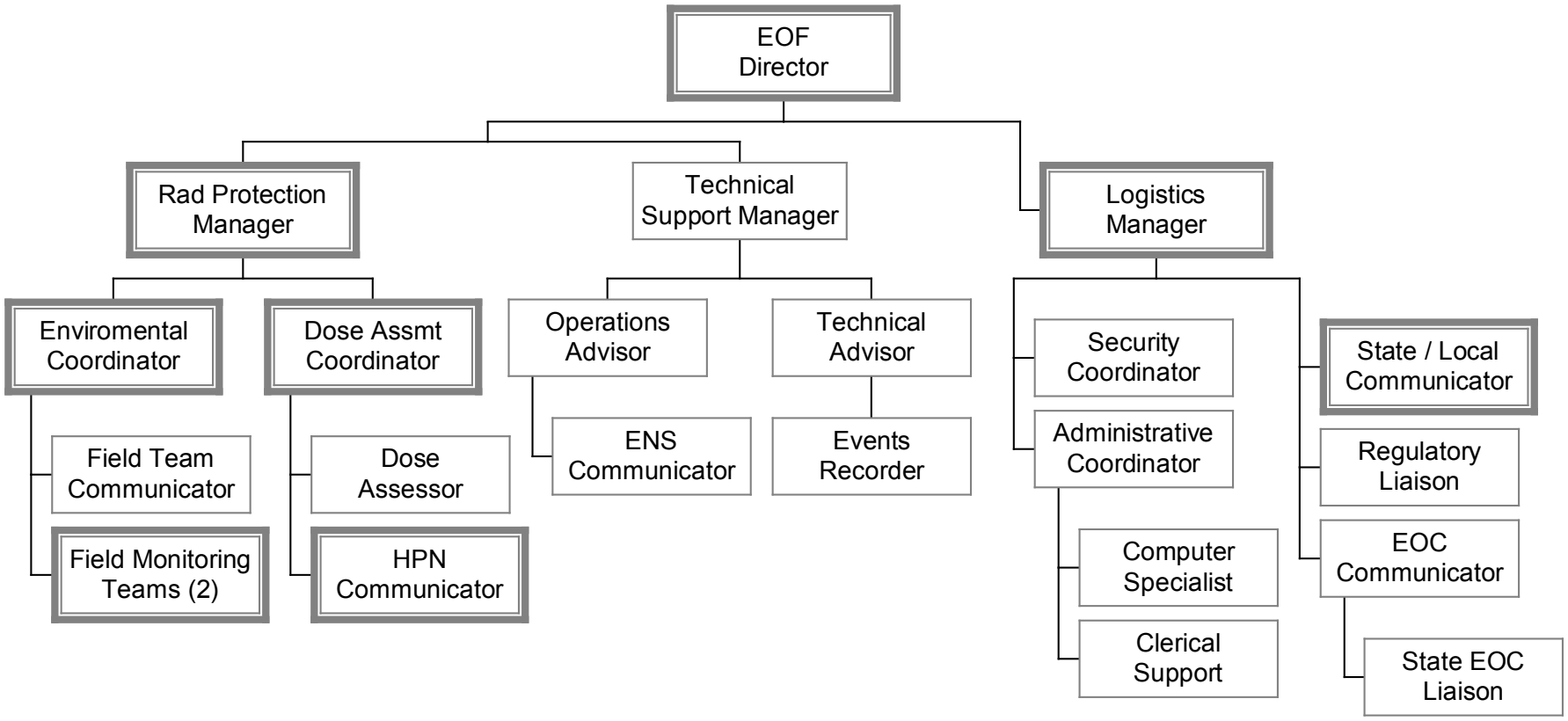


Bolded Boxes indicate minimum staffing positions.

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

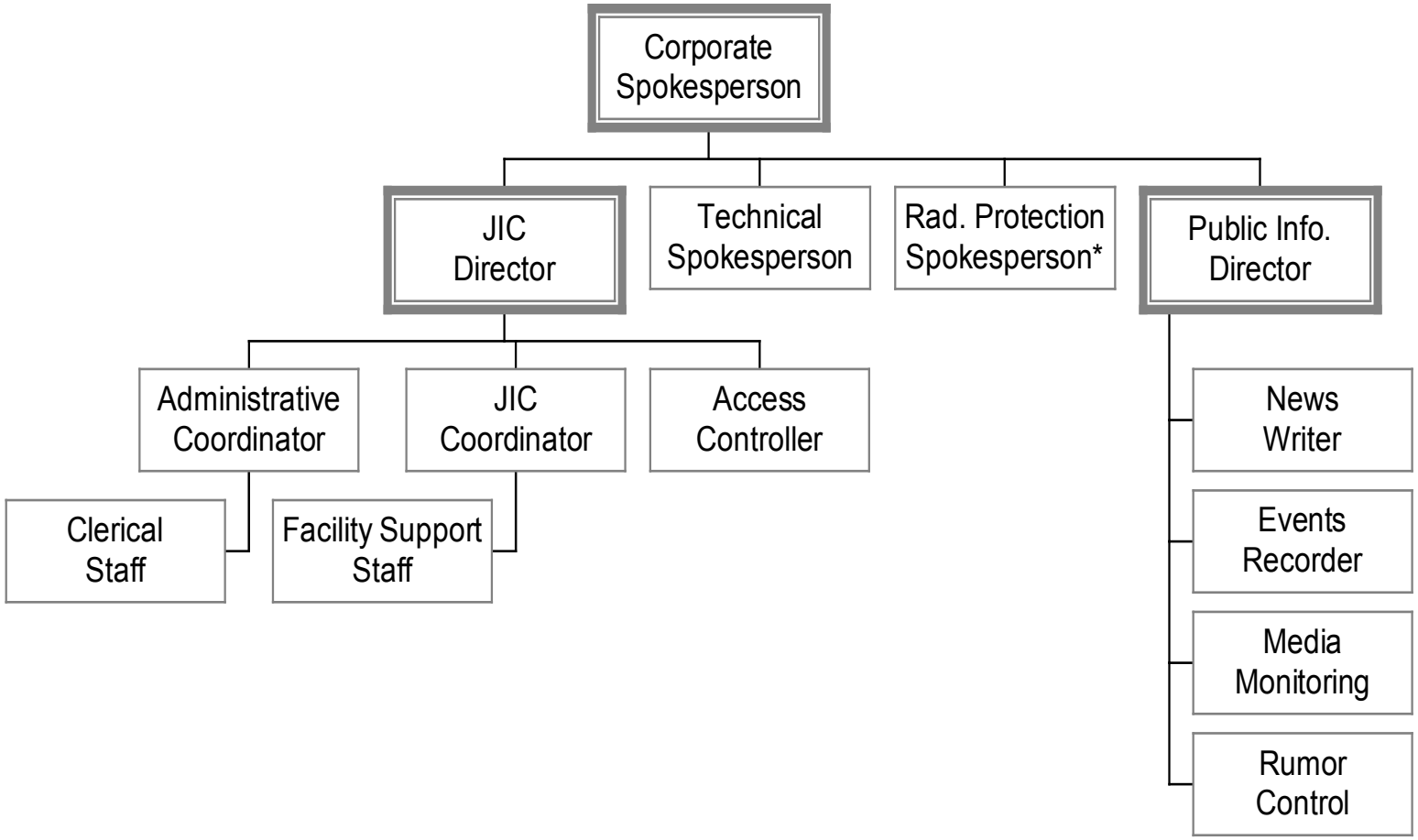
** Refer to Table PBAPS 2-1 for required staffing levels

~~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.~~

ATTACHMENT 2B

Emergency Plan Clean Copy Pages – Peach Bottom Atomic Power Station

Standardized Emergency Plan EP-AA-1000
and
Emergency Plan Annex EP-AA-1007

Affected Pages

Standardized Emergency Plan EP-AA-1000

Clean Pages

EXELON NUCLEAR

STANDARDIZED RADIOLOGICAL EMERGENCY PLAN

Shift Technical Advisor (STA): During normal plant operations, the Senior Reactor Operators report to the Shift Manager and directly supervise the licensed Reactor Operators and all activities in the Control Room. During an abnormal condition, the Shift Manager assumes direct supervision of personnel and all activities in the Control Room while a qualified individual steps back and assumes an overview role as an STA with the specific responsibility of monitoring the maintenance of core cooling and containment integrity. An individual assigned the duty as the STA shall be available to the Control Room at all times.

Radiation Protection: The Station Radiation Protection personnel are responsible for the handling and monitoring of radioactive materials. Included in this organization are Health Physicists, Radiation Protection Supervisors and Technicians.

Chemistry: The Station Chemistry personnel are responsible for sampling of system effluents, and the chemical and radio-analytical analysis of those samples. Included in this organization are Chemists, Chemistry Supervisors and Technicians.

Security: The Station Security personnel are responsible for the physical security of the site. Included in this organization are Security Supervisors and Security Guards.

2. Authority Over the Emergency Response Organization

The Emergency Director in Command and Control is the designated Exelon Nuclear individual who has overall authority and responsibility, management ability, and technical knowledge for coordinating all emergency response activities at the nuclear power station.

- Control Room: Shift Emergency Director (Shift Manager)
- TSC: Station Emergency Director
- EOF: Corporate Emergency Director

3. Criteria for Assuming Command and Control (Succession)

Emergency personnel assume responsibility for their positions upon receiving notification to activate. The responsibility for initial assessment of and response to an emergency rests with the Shift Manager. The Shift Manager is the Shift Emergency Director and has the Station and Corporate Emergency Director's responsibilities and authority until relieved. The Corporate Emergency Director, once having relieved the Shift Manager of the Emergency Director responsibilities, is responsible for continued assessment of the severity of the emergency and for the necessary functions as described in the E-Plan, the Station Annex, and the emergency implementing procedures.

The Shift Emergency Director is relieved of Command and Control as soon as possible after the declaration of an Alert (or higher classification if Alert not declared). Following the Command and Control turnover, the Corporate Emergency Director shall have overall Command and Control of the Emergency Response. Note that the Station Emergency Director takes responsibility for onsite Non-Delegable Responsibilities including Classification and Emergency Exposure Control. The Corporate Emergency Director takes responsibility for offsite Non-Delegable Responsibilities including Protective Action Recommendations and State/local Notifications. Command and Control does not transfer until the following criteria have been met:

- Adequate 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 turnover between the Emergency Director relinquishing Command and Control and the Emergency Director assuming Command and Control has been made.

Although Exelon Nuclear's ERO fulfills all regulatory requirements for emergency response, it may be altered by the Emergency Director. This type of alteration will be based upon identified needs within the ERO, event dependent criteria, and identified needs of the company as a whole.

4. Non-Delegable Responsibilities

Non-delegable responsibilities include the following functions:

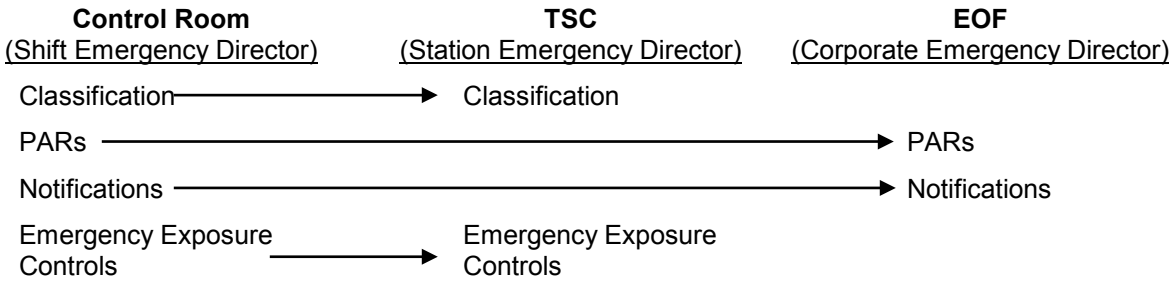
- Event classification.
- Protective Action Recommendations (PARs) for the general public.
- Notification of offsite authorities (approval of state/local and NRC notifications).
- Authorization of emergency exposure controls in excess of 5 Rem TEDE and the issuance of potassium iodide (KI), for Exelon Nuclear emergency workers per EPA-400.

The Shift Manager is responsible for the initial classification of an event and assumes the position as Shift Emergency Director. In this capacity, the Shift Manager has responsibility for performing the non-delegable responsibilities until relieved.

The Shift Emergency Director is relieved of Command and Control as soon as possible after the declaration of an Alert (or higher classification if Alert not declared). Overall Command and Control is transferred to the Corporate Emergency Director.

The Station Emergency Director assumes overall authority and responsibility for Classification and Emergency Exposure Control. The Corporate Emergency Director (EOF) assumes the non-delegable responsibilities for PAR determination and notifications to offsite authorities.

Transition of "Non-Delegable" Responsibilities



5. Emergency Response Organization Positional Responsibilities

The Emergency Plan designates two types of augmented ERO responders. Those designated as Minimum Staff are those key ERO needed to relieve the on-shift staff of key EP functions/tasks required in response to the Emergency and are those required to activate their respective Emergency Response Facility (ERF). Specifically, these are the ERO that are the absolute minimum needed to implement the emergency plan (i.e., if any position or function is not staffed then the emergency plan may not be effectively implemented). These positions in most cases are required to respond to their respective ERF within 60 minutes of the declaration of an Alert or higher. See Appendix 5, Table 5-1 for the list of On-shift and Minimum Staff positions.

The positions which are considered Full Augmented staff (i.e., non-min staff) are those positions which provide support for the minimum staff in their response to the Emergency. The Full Augmentation positions consist mostly of liaisons, coordinators and additional communicators which help facilitate communication and the emergency response effort over time, but are not directly needed to implement the functions/tasks identified in the Emergency Plan.

ERO staffing tables contained within this Emergency Plan, outlines ERO positions required to meet minimum staffing 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 described in Emergency Preparedness Implementing Procedures (EPIPs). For extended events (one which lasts for more than 24 hours), actual staffing will be established by the 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.

In addition to maintaining adequate documentation of the event, responsibilities for each position are as follows:

a. Station Emergency Response Organization: The Station ERO is the onsite group that is activated during an emergency. It functions under the Station Emergency Director, who is responsible for organizing and coordinating the emergency efforts at and within the immediate vicinity of the station (including carrying out all onsite emergency efforts and the initial offsite environs monitoring efforts necessary to assess plant releases).

   The Station ERO consists of station personnel who are involved with emergency response efforts necessary to control the plant during an incident. This organization operates out of the Control Room, the Technical Support Center (TSC) and the Operations Support Center (OSC). Collectively, members of the Station ERO provide for the following activities during an emergency:

   - Plant systems operations
   - Radiological survey and monitoring (including Environs Monitoring)
   - Firefighting

- Rescue operations and First Aid
- Decontamination
- Security of plant and access control
- Repair and damage control
- Personnel protection including Assembly, Accountability and Evacuation
- Communications

When plant conditions warrant entry into the Severe Accident Management Guidelines (SAMGs), the Station Emergency Director or other qualified individual (e.g., Operations Manager) assumes the role of Decision-Maker. Other qualified individual(s) assumes the role of Evaluator (at least 2 are required), and the Control Room staff assumes the role of Implementers. Control Room personnel will perform mitigating actions for severe accidents per EOPs prior to TSC activation.

All Station ERO personnel shall have the authority to perform assigned duties in a manner consistent with the objectives of this plan.

1) Shift Manager (Shift Emergency Director) Control Room

A Shift Manager is on duty 24 hours a day and is the Shift Emergency Director in a declared emergency until relieved of this function. While serving in this capacity the Shift Manager is responsible for:

- Activating the ERO (as deemed appropriate or as procedurally required).
- Performing those duties outlined in Section B.5.a.2 for the Station Emergency Director.

The on-duty Shift Manager directs the activities of the operating crew and is responsible for the safe operation of the plant in compliance with the station NRC operating license and the station operating procedures. The Shift Manager, after relinquishing Command and Control, functionally reports to the Operations Manager in the TSC.

The Shift Manager's responsibilities, when not in Command and Control, are described below:

- The authority and responsibility to shutdown the reactor when determined that the safety of the reactor is in jeopardy or when operating parameters exceed any of the reactor protection circuit set-points and automatic shutdown does not occur;
- To ensure a review has been completed to determine the circumstance, cause, and limits under which operations can safely proceed before the reactor is returned to power following a trip or an unscheduled or unexplained power reduction;

- The responsibility to be present at the plant and to provide direction for returning the reactor to power following a trip or an unscheduled or unexplained power reduction;

- The responsibility to adhere to the station Technical Specifications and to review routine operating data to assure safe operation;

- The responsibility to identify applicable EALs and emergency classifications; and

- The responsibility to adhere to plant operating procedures and the requirements for their use. During an emergency, operations personnel may depart from approved procedures where necessary to prevent injury to personnel, including the public, or damage to the facility consistent with the requirements of 10 CFR 50.54(x) and (y).

- Supervise the activities of the Control Room Crew.

2) Station Emergency Director TSC

The Station Emergency Director reports to the Corporate Emergency Director and supervises and directs the Station ERO. The Station Emergency Director's responsibilities include organizing and coordinating the onsite emergency efforts. Additionally, the Station Emergency Director has the requisite authority, plant operating experience and qualifications to implement in-plant recovery operations.

a) Station Emergency Director Responsibilities

- Conduct personnel assembly/accountability and evacuation of non-essential personnel at Site Area Emergency, General Emergency or as conditions warrant.

- If the emergency involves a hazardous substance and/or oil discharges, ensure that appropriate notifications and responses have been made.

- Determine if the OSC is to remain activated at the Alert Classification.

- Event classification.

- Emergency exposure controls.

- Protective actions for all onsite personnel.

- Supervision of the Station ERO.

- Inform the Corporate Emergency Director and onsite NRC as to the status of the plant.

- Assist the Corporate Emergency Director in the acquisition of information for the state/local notifications, NRC notifications and offsite agency updates.
- Provide information and recommendations to the Corporate Emergency Director.
- Implement plans, procedures and schedules to meet emergency response objectives as directed by the Corporate Emergency Director.
- Request from the Corporate ERO any additional material, personnel resources or equipment needed to implement response plans and operations.
- Assume the duties and responsibilities of Decision-Maker when a transition to Severe Accident Management Guidelines (SAMGs) is initiated. This responsibility can be delegated to the Operations Manager if qualified.

3) ENS Communicators TSC

Responsibilities assigned to the ENS Communicators include:

- Establish communications with appropriate parties as directed.
- Transmit information that has been reviewed and/or approved by the responsible Manager or Coordinator.
- Document time, date and information being transmitted or received on appropriate forms.
- Record and relay inquiries and the responses to those inquiries.
- Assist appropriate Managers and Coordinators in maintaining proper records and logs of emergency related activities.
- Gather, record and post appropriate information.
- Notify the NRC of changes in event classification and assist in completing the NRC Event Notification Worksheet and responding to NRC inquiries.
- Provide real time updates of significant changes to plant and system status and responses to NRC inquiries.
- Maintain continuous communications with the NRC, if requested, via the NRC ENS phone or commercial telephone line.

4) Operations Manager TSC

The Operations Manager reports to the Station Emergency Director. Major functions include determining the extent of station emergencies, initiating corrective actions, and implementing protective actions for onsite personnel. In the event that the Station Emergency Director becomes incapacitated and can no longer fulfill the designated responsibilities, the Operations Manager will normally assume the responsibilities until relieved by another qualified Station Emergency Director. Responsibilities include:

- Coordinate TSC efforts in determining the nature and extent of emergencies pertaining to equipment and plant facilities in support of Control Room actions.
- Initiate immediate corrective actions to limit or contain the emergency invoking the provisions of 10 CFR 50.54(x) if appropriate, and specifically when addressing Severe Accident Management Guidelines (SAMG).
- Recommend equipment operations checks and miscellaneous actions to the Control Room in support of restoration and accident mitigation.
- Approve emergency special procedures, and implement as required under the provisions of 10 CFR 50.54(x).
- Assist in determining the priority assigned to OSC activities.
- Organize and direct medical response efforts for injured personnel.
- Ensure adequate staffing of the Control Room and TSC subordinates.
- Ensure the Shift Manager is informed of OSC staffing utilization and activities.
- Identify steps or procedures that the Operations staff should be utilizing to properly respond to the emergency condition.
- Assist the Station Emergency Director in evaluating changes in event classification.
- Supervise the activities of the ENS Communicator in the TSC.
- Act as the TSC liaison with the appropriate NRC Site Team Representative.
- At the direction of the Station Emergency Director, assume the duties and responsibilities of the Evaluator, or Decision-Maker if qualified, when transition to Severe Accident Management Guidelines (SAMG) is initiated.

5) Technical Support Staff TSC

The TSC Technical Support Staff consists of the following minimum staff engineering positions:

- Electrical Engineer
- Mechanical Engineer
- Core/Thermal Hydraulic Engineer - serves as Core Damage Assessment Methodology (CDAM) Evaluator, as applicable.

In addition, station Engineering support will be augmented on an as needed basis to support accident assessment and mitigation activities.

6) Radiation Protection Manager (RPM) TSC

The Radiation Protection Manager reports to the Station Emergency Director. The TSC RPM directs staff in determining the extent and nature of radiological or hazardous material problems onsite. Responsibilities include:

- Accumulate, tabulate and evaluate data on plant conditions such as meteorological and radiological monitoring readings, and other pertinent data.
- Act as the TSC liaison with the appropriate NRC Site Team representative.
- Ensure use of protective clothing, respiratory protection, and access control within the plant as deemed appropriate to control personnel exposures.
- Ensure that appropriate bioassay procedures have been implemented for onsite personnel when a radioactivity incident has occurred.
- Ensure that personnel are decontaminated, if necessary.
- Authorize personnel exposures below 5 Rem TEDE (EPA-400 lower limit).
- Assist the Station Emergency Director in determining if exposures in excess of the 5 Rem TEDE (EPA-400 lower limit) are necessary.
- Advise the Station Emergency Director of situations when the use of KI should be considered.
- Advise the Station Emergency Director and EOF Radiation Protection Manager of changes in radiological release status.

- Assist the Operations Manager in planning rescue operations and provide monitoring services as required, including the transfer of injured and/or contaminated personnel.

- Coordinate with the Security Coordinator to determine the routes to be used for evacuation of non-essential personnel.

- Assure additional radiation protection personnel and/or equipment is arranged for, as necessary.

7) Security Coordinator TSC

The Security Coordinator reports to the Station Emergency Director and maintains plant security and personnel accountability at the nuclear station. Responsibilities include:

- Maintain plant security and account for all personnel within the protected area.

- Assist the Station Emergency Director in evaluating changes in security related threats and event classifications.

- Identify any non-routine security procedures and/or contingencies that are in effect or that require a response.

- Expedite ingress and egress of emergency response personnel.

- Coordinate with the Radiation Protection Manager in controlling ingress and egress to and from the Protected Area if radiological concerns are present.

- Provide for access control to the Control Room, TSC and OSC, as appropriate.

- Expedite entry into the Protected Area, as necessary, for the NRC Site Team.

- Act as the TSC liaison with the appropriate NRC Site Team representative.

- Assist the Radiation Protection Manager in determining personnel evacuation routes as necessary.

- Coordinate the evacuation of station non-essential personnel with the appropriate Local Law Enforcement Agencies (LLEAs).

8) Operations Support Center Director OSC

The OSC Director reports to the Emergency Director and supervises the activities of OSC personnel. Responsibilities include:

- Assign tasks to designated Leads as available:
  - I&C Maintenance
  - Mechanical Maintenance
  - Electrical Maintenance
  - Radiation Protection
- Coordinate with Operations in the dispatch of Operations personnel to support Control Room and OSC Team activities.
- Notify the Control Room and TSC prior to dispatch of any OSC teams into the plant.
- Maintain OSC resources including personnel, material, and equipment.
- Maintain accountability for all individuals dispatched from the OSC.
- Conduct periodic briefings on the overall plant status, emergency response activities, and station priorities.
- Assemble and dispatch the Field Monitoring Teams as required.

9) OSC Leads OSC

OSC Leads report to the OSC Director and are assigned from the following station departments:

- Mechanical Maintenance
- Electrical Maintenance
- Instrument and Control
- Radiation Protection

The OSC Lead assigned to an OSC team is responsible at all times for the safety of team personnel and to keep the OSC Director apprised of team status. Specifically, the OSC Leads are responsible for the managing and supervising OSC team personnel, including:

- Conduct of adequate pre-dispatch briefings.
- Ensuring adequate protective equipment and measures have been identified.
- Tracking of OSC team activities while dispatched.

- Debriefing of team personnel upon return to the OSC.

b. Corporate Emergency Response Organization

1) Corporate Emergency Director EOF

a) When the Station Emergency Director has Command and Control, the ongoing responsibilities include:

- Coordinate all Exelon Nuclear activities involved with the emergency response.
- Ensure off-site agency updates are periodically communicated as required/requested.
- Coordinate Exelon Nuclear press releases with the Nuclear Duty Officer and Exelon Communications and Public Affairs.
- Request assistance from non-Exelon Nuclear emergency response organizations, as necessary.

b) Following assumption of Command and Control, the additional responsibilities assigned to the Corporate Emergency Director include:

- Assumes overall Command and Control of emergency response activities and the non-delegable responsibilities for PAR determination and the notification of offsite authorities.
- Ensure that Federal, state and local authorities and industry support agencies remain cognizant of the status of the emergency situation. If requested, dispatch informed individuals to offsite governmental Emergency Operation Centers (EOCs).
- Approve the technical content of Exelon Nuclear press releases prior to their being released to the media.

2) Radiation Protection Manager EOF

The Radiation Protection Manager directs the activities of the EOF Radiation Protection staff. Specific responsibilities include:

- Recommend changes in event classification and PARs based upon effluent releases or dose projections.
- Assist the Emergency Director in the evaluation of the significance of an emergency with respect to the public.
- Notify the Emergency Director of meteorological changes that may impact identification of downwind areas.

- Advise the Corporate Emergency Director of protective actions taken by the station for plant personnel.
- Assist the TSC in the planning and coordination of activities associated with the evacuation of non-essential personnel.
- Advise the Corporate Emergency Director on the need for emergency exposures or for issuance of KI to the Field Monitoring Teams or Exelon personnel required to enter the plume.
- Determine the need for and contact Occupational Health/Industrial Safety Services personnel for assistance.
- Monitor plant radiological conditions and advise the TSC Radiation Protection Manager of any adverse trends or potential release pathways that may impact existing event classification.
- Assist in the completion and review of the state/local notification form.
- Maintain cognizance of environmental sampling activities.
- Ensure state authorities are provided information pertaining to Exelon Field Monitoring Team activities and sample results.
- Assist the affected station in the following areas:
  - Planning and coordination of activities associated with the evacuation of non-essential personnel.
  - Acquisition of additional instrumentation, dosimetry, protective equipment and radiological support personnel.
- Assist and interface with the EOF Technical Support Group and the station in the development of plans for plant surveys, sampling, shielding, and special tools in support of waste systems processing and design modification activities.
- Upon request, provide in-plant health physics data to Emergency Public Information personnel.
- Coordinate Field Monitoring Team activities.
- Determine needs of the Dose Assessment Coordinator and the ENS Communicator for updates on Field Monitoring Team data and ensure distribution of new data to them in accordance with those needs.
- Promptly report new environmental or Field Monitoring Team exposure data to the Dose Assessment Coordinator.

3) Dose Assessment Coordinator EOF

The Dose Assessment Coordinator reports to the EOF Radiation Protection Manager. Responsibilities include:

- Interpret radiological data and provide PARs based upon dose projections to the EOF Radiation Protection Manager.
- Advise the EOF Radiation Protection Manager of changes in event classification based on effluent releases or dose projections.
- Initiate evaluation of the need for administering KI to Exelon nuclear workers.
- Remain cognizant of forecast and meteorological data and ensure the status is updated periodically.
- Notify the EOF Radiation Protection Manager of meteorological changes that may impact identification of downwind areas.
- Upon request, provide release and dose assessment data to Emergency Public Information personnel, .
- Perform dose projections using the Dose Assessment computer models as directed by the Dose Assessment Coordinator.
- Monitor meteorological and plant effluent conditions.
- Evaluate the need for administering KI to Exelon nuclear workers when requested by the Dose Assessment Coordinator.

4) Computer Specialist EOF

The Computer Specialist reports to the Administrative Coordinator. Responsibilities include:

- Assist any personnel in logging in, initializing or using a desired computer program.
- Investigate and repair problems encountered with communications equipment and computer equipment/applications.

5) State/Local Communicator EOF

The State/Local Communicator reports to the Emergency Director. Responsibilities include:

- Communicate and receive information via the Nuclear Accident Reporting System (NARS) circuit or commercial telephone line with appropriate state and county agencies.

- Prepare state/local notification forms with the assistance of the Corporate Emergency Director.

c. Public Information Emergency Response Organization

1) Corporate Spokesperson JIC

The Corporate Spokesperson reports to the Corporate Emergency Director and is responsible for directing the Exelon Emergency Public Information Organization and providing news information to the media. Responsibilities include:

- Maintain command and control of the Joint Information Center.

- Coordinate with Federal, state and local agencies, as well as with other organizations involved in the emergency response, to maintain factual consistency of information to be conveyed to the news media/public.

- Conduct periodic briefings with the news media.

- Interface with the Public Information Director.

- Coordinate and direct responses to media inquiries.

- Ensure that the composition and timeliness of Exelon News Releases are adequate.

- Provide for timely exchange of information between other spokespersons.

2) JIC Director JIC

The JIC Director reports the Corporate Spokesperson to ensure the operability of and to supervise the activities in the JIC. Responsibilities include:

- Maintain cognizance of conditions of the plant and environment, and the actions of Exelon Nuclear and governmental support personnel.

- Coordinate with Federal, state and local agencies, as well as with other organizations involved in the emergency response, to maintain factual consistency of information to be conveyed to the news media/public.

- Participate, as needed, in rumor control activities.

- Ensure that adequate information flow between the EOF and the JIC is coordinated through the Public Information Director.
- Authorize admittance of non-Exelon Nuclear officials to the JIC.
- Until the JIC is fully staffed, work with Corporate Communications to compose draft news releases.
- Provide the drafted news releases to the Corporate Emergency Director for technical review prior to Public Information Director approval.
- Until the JIC is fully staffed, work with Corporate Communications to ensure that rumors are reviewed, documented and responded to by Exelon Nuclear personnel as deemed appropriate.
- Until the JIC is fully staffed, work with Corporate Communications to document and respond to rumors as quickly as possible, through the Exelon Communications and Public Affairs.
- Until the JIC is fully staffed, work with Corporate Communications to ensure that the media is being monitored and that Exelon Nuclear personnel review the information detailed or contained in media releases.

3) Public Information Director (PID) JIC

When the Emergency Public Information Organization is activated, the Public Information Director reports to the Corporate Spokesperson and is responsible for all emergency event related information intended to be conveyed from Exelon Nuclear to the news media/public. The Public Information Director may perform this function at remote locations. Responsibilities include:

- Provide the Corporate Emergency Director with an overview of the public and media impacts resulting from the Exelon Nuclear and governmental activities.
- Participate with the Corporate Emergency Director regarding information to be released to the public.
- Authorize the issuance of news releases.
- Interface with the Corporate Spokesperson at the JIC.
- Act as a liaison between the ERO and Exelon Nuclear's corporate executives.
- Maintain cognizance of conditions of the plant and environment, and the actions of Exelon Nuclear and governmental support personnel.
- Coordinate information flow between the EOF and the JIC.

- Review and access media coverage of the emergency event.

6. Exelon Emergency Response Organization Block Diagram

ERO staffing tables contained in Appendix 5, lists the key positions of the ERO. Figures B-1a through B-1d illustrates the overall emergency response organization. Section B.5 discusses specific responsibilities and the interrelationships for key positions.

7. Exelon Corporate Emergency Response Organization

The Corporate ERO consists of the EOF Organization and the Emergency Public Information Organization. Personnel staffing these corporate organizations are covered in detail in Section B.5 of this plan.

The Corporate Emergency Response Organization is staffed by Exelon personnel, and operates out of the Emergency Operations Facility (EOF) and the Joint Information Center (JIC). The Corporate ERO is supported by News Media Spokespersons, environmental assessment staff and monitoring teams that provide long-term support to the affected station. Additionally, the Corporate ERO has long term liaison responsibilities with federal, state, and local authorities. These positions are further described in the EPIPs.

The Emergency News Center (ENC) function is responsible for the collection and analysis of event information and status, and development of Company news statements. This information is then communicated to the JIC Corporate Spokesperson. The ENC function may be located at either the EOF or the JIC.

The EOF is activated at an Alert. The EOF Organization is responsible for evaluating, coordinating and directing the overall company activities involved in the emergency response. Within the EOF, the Corporate Emergency Director shall assume Command and Control from the Shift Emergency Director when classification escalates to an Alert or higher, unless the EOF capabilities are limited such that the overall control and responsibility for PARs and offsite notifications cannot be assumed. The JIC is activated within 90 minutes of an Alert. Some JIC functions may continue to be performed by the Exelon Communications organization until transferred to the JIC.

8. Industry/Private Support Organizations

Exelon Nuclear retains contractors to provide supporting services to nuclear generating stations. A contract/purchase order with a private contractor is acceptable in lieu of an agreement letter for the specified duration of the contract. Among services currently provided are the following:

a. Institute of Nuclear Power Operations (INPO): Experience has shown that a utility may need resources beyond in-house capabilities for the recovery from a nuclear plant emergency. One of the roles of the Institute of Nuclear Power Operations (INPO) is to assist affected utilities by quickly applying the resources of the nuclear industry to meet the needs of an emergency. INPO has an emergency response plan that enables it to provide the following emergency support functions:

Figure B-1a: Exelon Overall ERO Command Structure

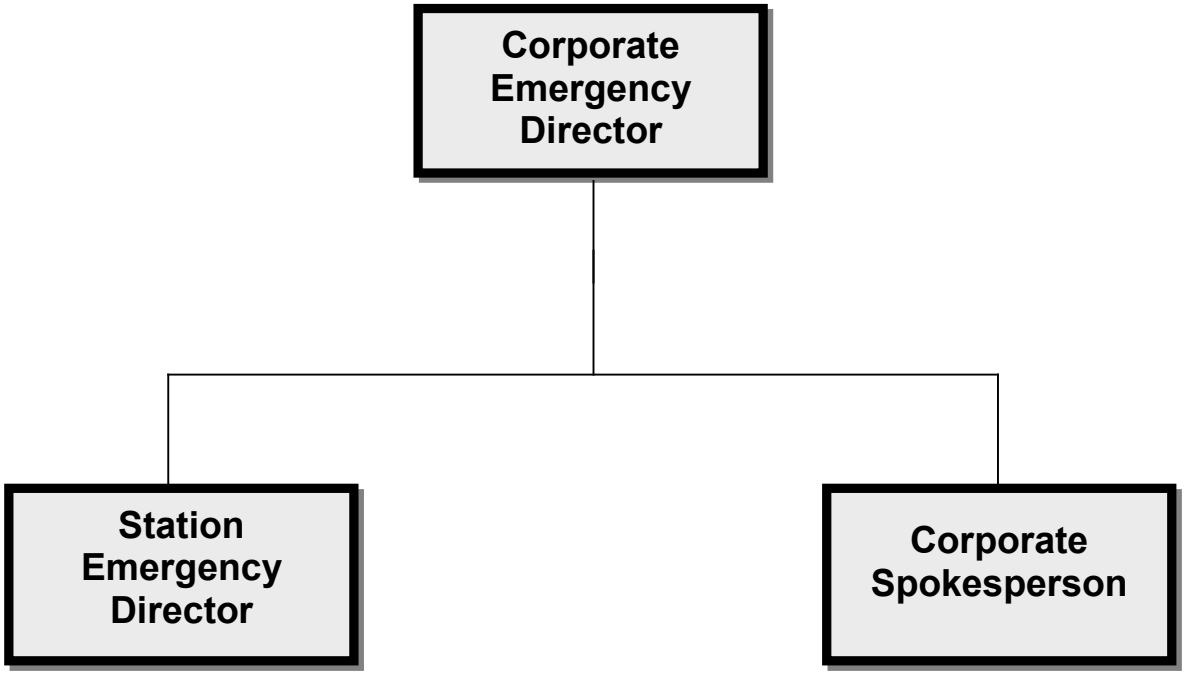
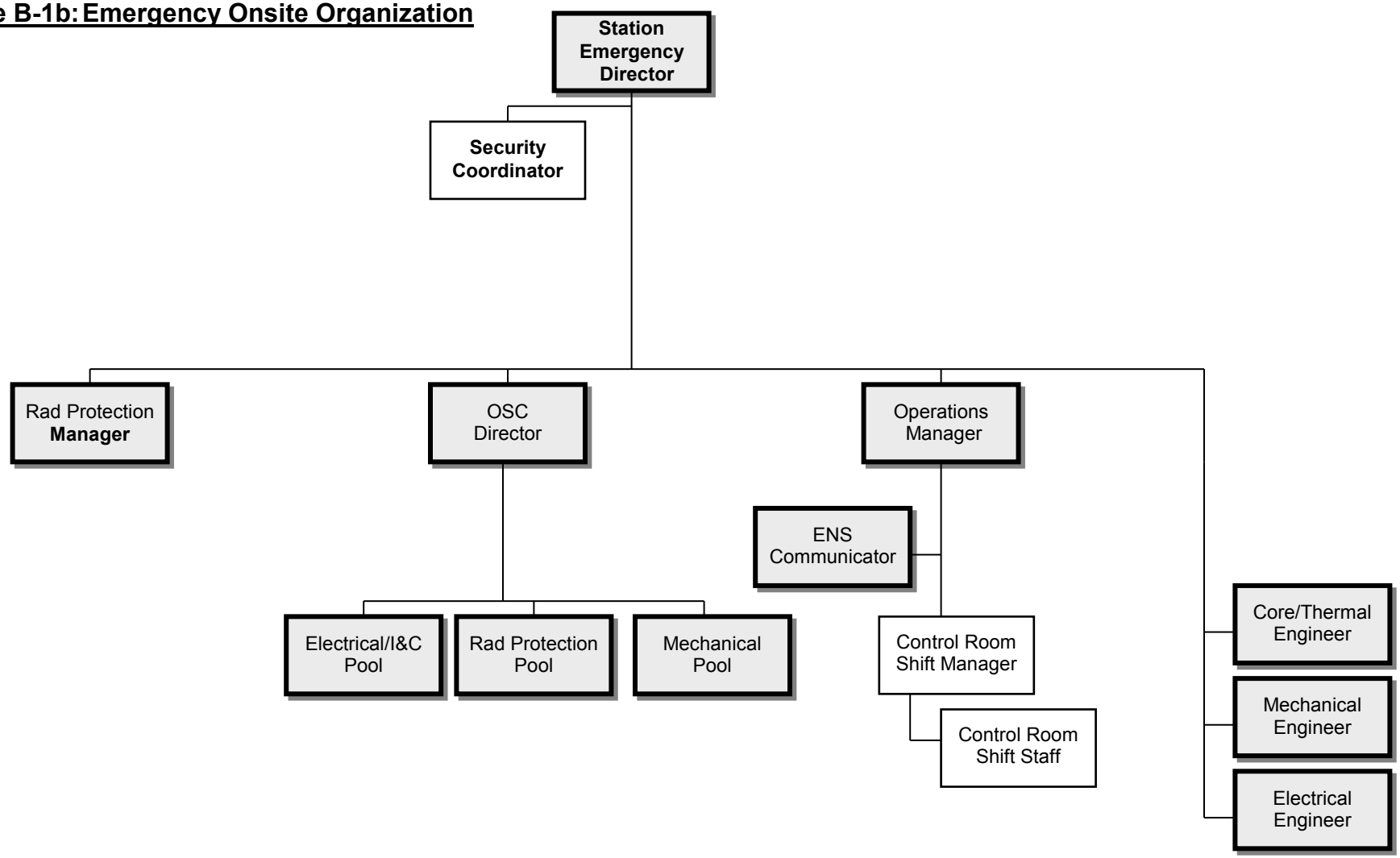


Figure B-1b: Emergency Onsite Organization



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ERO response pool personnel do not include the on-shift complement.

SAMG functions requires 1 Decision-Maker and 2 Evaluators.

Figure B-1c: Emergency Offsite Organization

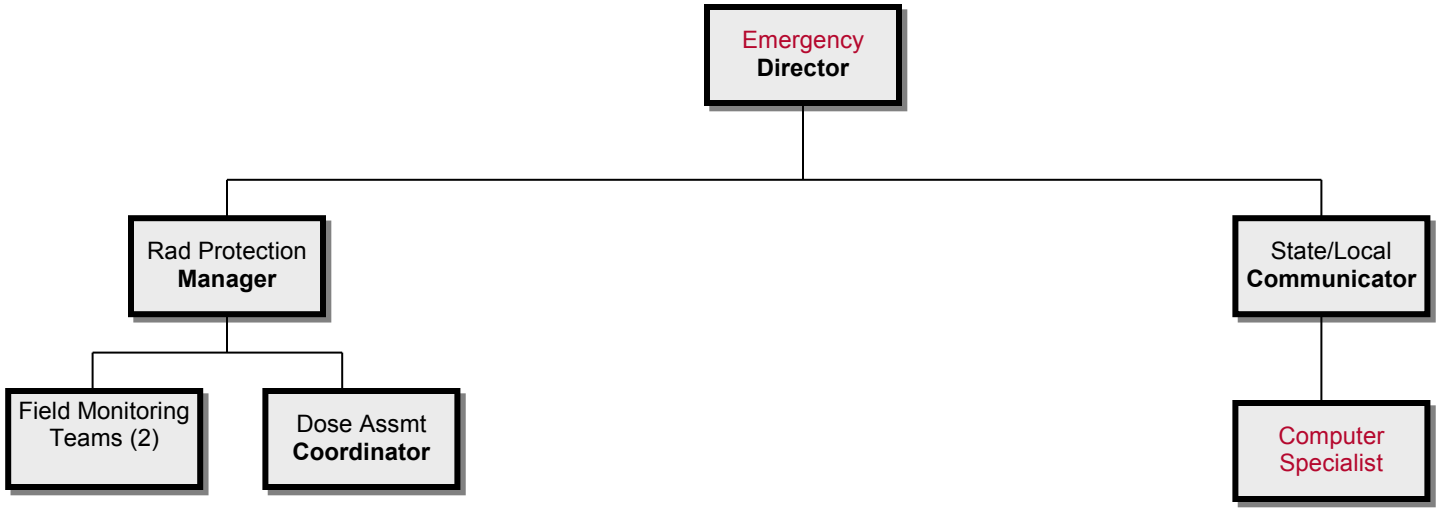
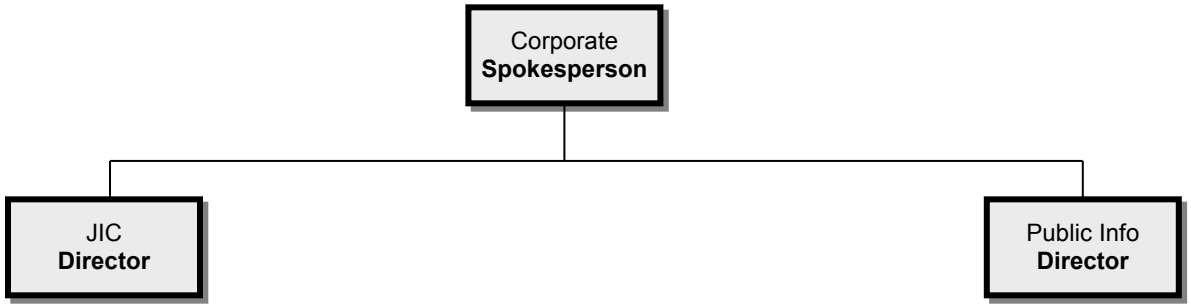


Figure B-1d: Emergency Public Information Organization



9) Field Monitoring Team (FMT) Communications: A separate communications system has been installed to allow coordinated environmental monitoring and assessment during an emergency. This system consists of the necessary hardware to allow communication between the Control Room, TSC, EOF, and mobile units in Exelon Nuclear vehicles. Though direct communications between the Control Room and the FMTs is not required per the prescribed methods of FMT coordination, the FMTs can be contacted from equipment in the Control Room if required. Commercial cell phones or other means are available as back up to the primary field team communications system.

In addition, station communication links exist to ensure appropriate information transfer capabilities during an emergency. The station may also utilize its Public Address System, station radios and notification devices to augment its emergency communications.

e. ERO Notification System: Exelon Nuclear utilizes an automated ERO Notification System to rapidly notify members of the ERO. The system consists of a network of physical infrastructure capable of initiating and receiving contact via multiple notification devices. When activated, the system contacts the notification devices (e.g., through commercial and cellular phone, email, text message) belonging to members of the ERO. The System includes redundant activation methods via the internet, call-centers, or direct telephone activation, as well as redundant, geographically separated call centers and data centers, with redundant power sources. Implementing procedures specify the course of action to be taken if the primary ERO Notification System activation path fails to respond. The ERO Notification System provides primary and back-up notification functions. For the Exelon North East sites, the ERO notification system description is contained in the Station Annex and EP implementing procedures.

f. NRC Communications (ENS)

Communications with the NRC Operations Center will be performed via the NRC ENS circuits or commercial telephone line. Information is normally communicated from an approved NRC Event Notification Worksheet prior to establishing an open ENS.

The actual configuration of these systems may vary from station to station. Installation and use of these NRC telephones is under the direction of the NRC (see Figure F-3).

Emergency Notification System (ENS): Dedicated telephone equipment is in place between each nuclear station's Control Room and the NRC, with an extension of that line in the TSC. A separate line is available in the EOF with the capability of being patched with the station through the NRC. This line is used for NRC event notifications and status updates.

Figure F-1: Exelon Notification Scheme (For Full Augmentation)

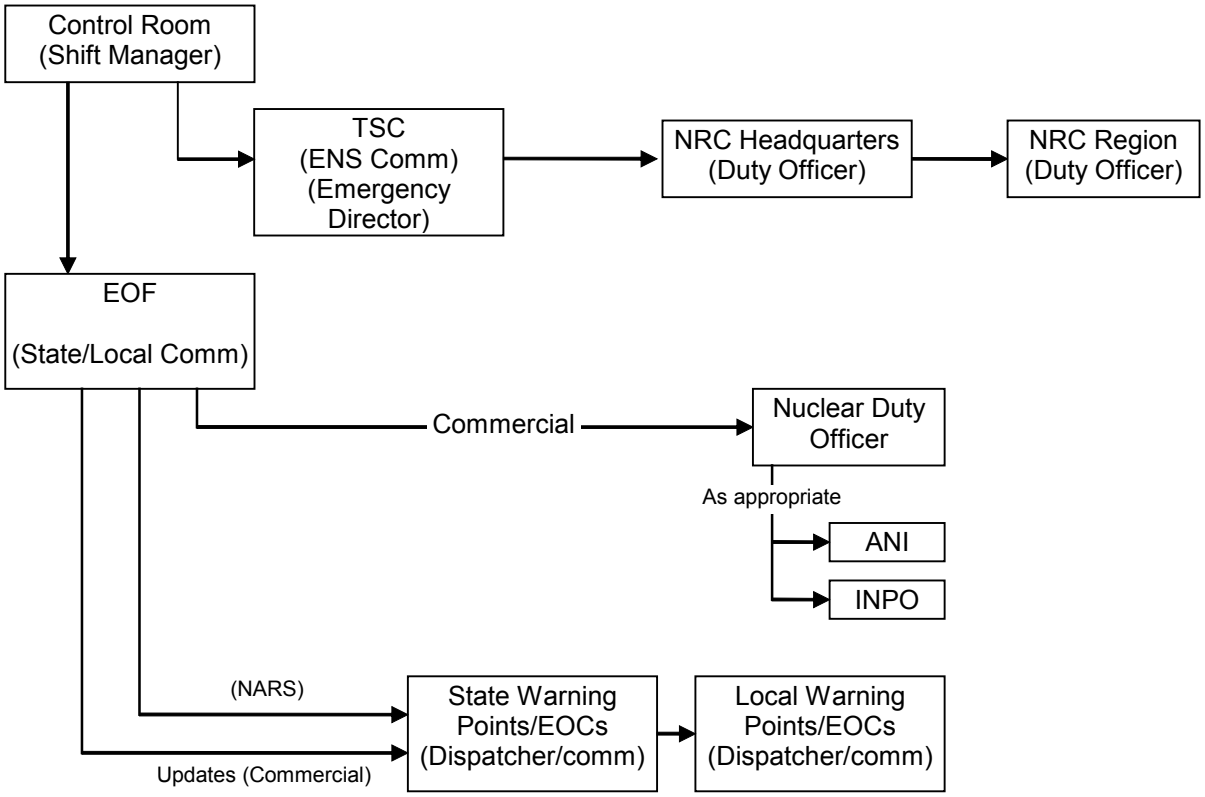
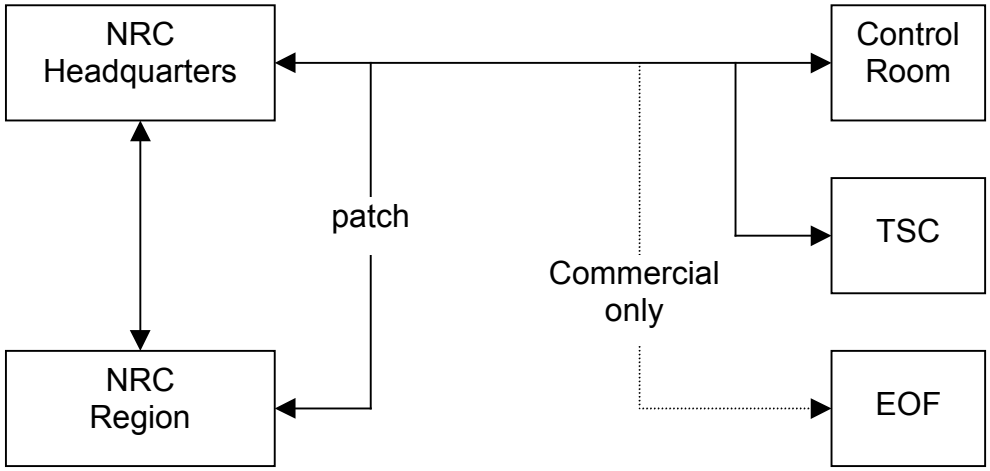


Figure F-3: NRC Communications for Nuclear Response



NOTE: ENS circuits may use the Federally maintained system, company tie lines or PBX as dedicated primary communications systems and have commercial backups.

The primary purpose of the Emergency Public Information Organization is to disseminate information from Exelon Nuclear's ERO about the emergency events to the public, via the news media. However, the authority for issuance of news releases for the classification of an Unusual Event or prior to ERO activation will always reside with the Exelon Communications and Public Affairs Department. Upon activation, the Emergency Public Information Organization has the responsibility and authority for issuance of news releases to the public.

The Emergency Public Information Organization is comprised of senior managers from Exelon Nuclear who will function as spokespersons, and other Exelon Nuclear individuals including personnel from the Governmental Affairs and Human Relations areas. Exelon Nuclear's spokespersons disseminate information to the news media/public concerning the emergency events out of a Joint Information Center (JIC).

2) The Joint Information Center (JIC): The JIC is the facility in which media personnel gather to receive information related to the emergency event. The JIC is the location where approved news releases will be provided to the media for dissemination to the public. News releases are coordinated between the EOF and JIC personnel and state and/or Federal representatives in the JIC. Exelon public information personnel operate from the EOF and the JIC, which is under the direction of the Corporate Spokesperson and functions as the single point contact to interface with Federal, state, and local authorities who are responsible for disseminating information to the public.

   Each station has a designated JIC. Each JIC is equipped with appropriate seating, lighting and visual aids to allow for public announcements and briefings to be given to the news media. Additionally, JICs are equipped with commercial telephone lines for making outgoing calls. The Emergency Public Information Organization functions from the JIC and EOF in preparing and releasing utility information about the emergency event. The JIC is activated at the declaration of an Alert or higher classification. Some JIC personnel may perform functions remotely from alternate locations while remaining in contact with personnel in the JIC facility (e.g., media monitoring, rumor control, news writers, issuance of press releases). The JIC Director and Corporate Spokesperson will ensure communication and coordination of these functions with the EOF and JIC staff. Functions of the JIC include:

   - Serving as the primary location for accumulating accurate and current information regarding the emergency conditions and writing news releases.

   - Providing work space and phones for public information personnel from the state, counties, NRC, FEMA, and industry-related organizations.

   - Providing telephones for use by the news media personnel.

- Providing responses to media inquiries through telephones that the media can call for information about an emergency.

b. The news media is not permitted into the EOF during an emergency.

4. Coordination of Public Information

a. The JIC is staffed by Exelon and government public information representatives who will be the source of public information during an emergency at the station. The Corporate Spokesperson is the primary spokesperson for Exelon Nuclear. The Corporate Spokesperson has direct access to all necessary information (see Section B.5).

b. The JIC is staffed by federal, state, county, and utility personnel to assure timely, periodic exchange and coordination of information. Representatives coordinate information prior to conducting news briefings.

c. Rumors or misinformation are identified during an emergency by the JIC Staff. They respond to public and news media calls and monitor media reports.

d. The common MW Region JIC is located west of Chicago, in Warrenville IL, in the Exelon Nuclear Cantera facility. This facility supports the Braidwood, Byron, Clinton, Dresden, LaSalle and Quad Cities stations.

The JIC for the MA Region Three Mile Island, Limerick and Peach Bottom Stations is co-located with the EOF at 175 North Caln Road, Coatesville, Pennsylvania.

The JIC for Calvert Cliffs Station is co-located with the EOF about twelve miles from the site, in Calvert Industrial Park, Skipjack Road at Hallowing Point Road.

The JIC for the Ginna Station is located at 1255 Research Forest, Macedon, NY.

The JIC for the Nine Mile Point Station is located near the Oswego County Airport, on County Route 176 in the Town of Volney, New York approximately 12 miles from the site.

5. Media Orientation

Emergency Preparedness, in conjunction with Exelon Communications and Public Affairs Department, offers training (at least annually) to acquaint news media with the E-Plan, information concerning radiation, and points of contact for release of public information in an emergency. Training is provided for those media agencies that accept the training offer.

Personnel in the TSC shall be protected from radiological hazards, including direct radiation and airborne contaminants under accident conditions with similar radiological habitability as Control Room personnel. To ensure adequate radiological protection, permanent radiation monitoring systems have been installed in the TSC and/or periodic radiation surveys are conducted. These systems indicate radiation dose rates and airborne radioactivity inside the TSC while in use. In addition, protective breathing apparatus (full-face air purifying respirators) and KI are available for use as required.

The TSC has access to a complete set of as-built drawings and other records, including general arrangement diagrams, P&IDs, and the electrical schematics. The TSC has the capability to record and display vital plant data, in real time, to be used by knowledgeable individuals responsible for engineering and management support of reactor operations, and for implementation of emergency procedures.

c. Operations Support Center (OSC): Each nuclear generating station has established an OSC. The OSC is the onsite location to where station support personnel report during an emergency and from which they will be dispatched for assignments or duties in support of emergency operations. The OSC shall be activated whenever the TSC is activated, but need not remain activated at the Alert level if its use is judged unnecessary by the Station Emergency Director. At the Site Area and General Emergency levels, the OSC or an alternate OSC shall be activated at all times. The OSC is not activated for a HOSTILE ACTION when the Alternative Facility is implemented. Activation for other events is optional. Station disciplines reporting to the OSC include, but are not limited to:

- Operating personnel not assigned to the Control Room,
- Radiation Protection Personnel,
- Maintenance Personnel (mechanical, electrical and I&C).

Figure B-1b illustrates the staffing and organization for the OSC.

Each OSC is equipped with communication links to the Control Room, the TSC and the EOF (see Section F). A limited inventory of supplies will be kept for the OSC. This inventory will include respirators, protective clothing, flashlights and portable survey instruments.

2. Emergency Operations Facility (EOF)

The EOF is the location where the Corporate Emergency Director will direct a staff in evaluating and coordinating the overall company activities involved with an emergency. Activation of the EOF is mandatory upon declaration of an Alert or higher classification. The EOF provides for:

- Management of overall emergency response.
- Coordination of radiological and environmental assessments.

3. Emergency Operations Centers

EOCs operated by the state and local communities have been established to perform direction and control of emergency response functions.

The respective state EOCs are capable of continuous (24-hour) operations for a protracted period. These centers contain sufficient communications (radio, telephone and teletype) equipment, maps, emergency plans, and status boards to provide the necessary interfaces with other federal, state, county, and Exelon emergency facilities.

The county EOCs serve as Command and Control headquarters for local emergency response activities as well as a center for the coordination of communications to field units and to the state EOCs. These EOCs have the equipment necessary, (such as facsimile machines, telecommunications equipment, radio gear, photocopiers, wall maps, etc.) to carry out their emergency responsibilities.

4. Activation

NOTE: NUREG-0654 Criterion II.B.5 states that the "licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency". It further defines that short period as 30 and 60 minutes. The time frames for rapid augmentation of a nuclear power plant staff in the event of an emergency are not rigid inviolate requirements but rather goals. It is Exelon Nuclear's intent to expend its best efforts to meet the augmentation criteria goals regarding staffing Emergency Response Facilities with sufficiently skilled individuals capable of handling an emergency. Both the NRC and Exelon Nuclear realize that due to diversity of normal residential patterns for the stations' staff, possible adverse weather conditions, road congestion and site access restrictions, these time frames might be exceeded.

Exelon Nuclear has put into place plans and procedures to ensure timely activation of its emergency response facilities. The Shift Manager (as Shift Emergency Director) will initiate a call-out in accordance with the implementing procedures. The ERO augmentation process identifies individuals who are capable of fulfilling the specific response functions that are listed in ERO staffing tables contained within the station specific Annex. This table was developed based on the functions listed in NUREG-0654, Table B-1.

Although the response time will vary due to factors such as weather and traffic conditions, a goal of 60 minutes for minimum staffing, following the declaration of an Alert or higher emergency classification, has been established for the ERO personnel responding to the station emergency facilities and the EOF. Additionally, plans have been developed to ensure timely functional activation and staffing of the JIC within 90 minutes of when the classification of Alert is declared.

It is the goal of the organization to be capable of activating the applicable Emergency Response Facility upon achieving minimum staffing. The facility can be declared activated when the following conditions are met:

a. Minimum staffing has been achieved.

b. The facility is functional.

The Director in charge may elect to activate their facility without meeting minimum staffing; if it has been determined that sufficient personnel are available to fully respond to the specific event (this would not constitute a successful minimum staff response).

5. Monitoring Equipment Onsite

Each nuclear station is equipped with instrumentation for seismic monitoring, radiation monitoring, fire protection and meteorological monitoring. Instrumentation for the detection or analysis of emergency conditions is maintained in accordance with station Technical Specifications, if applicable, or commitments made to the NRC. The actual instrumentation varies somewhat from site to site and thus will not be described in detail in this plan. Descriptions of the equipment will appear in each Station Annex. This equipment includes but is not limited to the following:

a. Geophysical Monitors

1) Meteorological Instrumentation: A permanent meteorological monitoring station is located near each station for display and recording of wind speed, wind direction, and ambient and differential temperature for use in making offsite dose projections. Meteorological information is presented in the CR, TSC, and EOF by means of the plant computer system. This information is remotely interrogated using a computer or other data access terminal.

With regard to Exelon Nuclear's meteorological monitoring program, there has been a quality assurance program adopted from 10 CFR 50, Appendix B. However, since the meteorological facilities are not composed of structures, systems, and components that prevent or mitigate the consequences of postulated accidents and are not "safety related," not all aspects of 10 CFR 50, Appendix B, apply. Those aspects of quality assurance germane to supplying good meteorological information for a nuclear power station were adopted into the meteorological quality assurance program. The meteorological program is also subject to the requirements of the QATR, Section 19, Augmented Quality.

The National Weather Service (NWS), or regional weather forecast providers, may be contacted during severe weather periods. These providers analyze national and local weather in order to provide localized weather forecasts for the system or for the station area as appropriate.

Radiation Protection personnel are trained to assess the radiological hazards associated with equipment repair and instruct personnel as to the appropriate protective clothing requirements, respiratory protection requirements, stay times, and other protective actions specific to the conditions present.

At least 50% of personnel from those departments, who are potential responders to the OSC as Damage Control Team members, are required to be qualified in the use of respiratory protection equipment. This includes in-plant supervision and craft/technicians for the following departments:

- Operations
- Radiation Protection
- Maintenance (mechanical, electrical and I&C)

f. First Aid and Rescue Personnel: First aid and rescue team members receive training as outlined in Part 3 of this section.

g. Local Support Service Personnel: Local support service personnel providing assistance during an emergency are invited to receive training as outline in Parts 1.a and 1.b of this section.

h. Medical Support Personnel: Onsite medical personnel receive specialized training in the handling of contaminated victims and hospital interface. Offsite ambulance and hospital personnel are offered annual training in accordance with a program provided by Emergency Preparedness.

i. Public Information Personnel: Corporate and station personnel responsible for disseminating emergency public information and responding to media and public information requests receive specialized public information training.

j. Communications Personnel: ERO personnel receive training on communications protocol as a part of the initial Emergency Response Overview Course. Personnel using specialized communications equipment that is not part of their normal daily function receive initial and requalification training on the equipment. Personnel involved in notifications to offsite agencies receive specialized training in the notification process.

5. General, Initial, and Requalification Training Program Maintenance

a. Station Departments and Emergency Preparedness share the responsibility for ensuring that the ERO receives all necessary training and retraining. In order to carry this out, responsibilities are assigned as follows:

Corporate Responsibilities for Corporate ERO Personnel

- Scheduling and conducting initial, retraining, and make-up classes.
- Acting as the sole contact point for ensuring attendance.

Appendix 5

Table 5-1: Emergency Response Organization (ERO) Staffing and Augmentation Plan

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Command and Control • Provide overall ERO command and control, until relieved. • Approve emergency action level (EAL) and/ or protective action recommendation (PAR) classifications, until relieved. • Authorize personnel dose extensions, until relieved.	(1) Shift Emergency Director	(1) Station Emergency Director	Not applicable	(1) Corporate Emergency Director
Communications[3] • Communicate EAL and PAR classifications to offsite response organizations (OROs), including the NRC, until relieved.	Shift Communicator[1]	(1) ENS Communicator (TSC)	Not applicable	(1) State / Local Communicator
Radiation Protection • Provide qualified radiation protection coverage for responders accessing potentially unknown radiological environments during emergency conditions. • Provide in-plant surveys. • Control dosimetry and radiologically controlled area access.	(2) Radiation Protection Personnel	(3) Additional Radiation Protection Personnel *[In addition to personnel on-shift]* (OSC)	(3) Additional Radiation Protection Personnel *[In addition to personnel on-shift and those responding within 60 min.]* (OSC)	Not applicable

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Supervision of Radiation Protection Staff and Site Radiation Protection • Evaluate and assess plant and offsite radiological data in the development of onsite protective actions and offsite PARs, until relieved. • Recommend onsite protective actions and offsite PARs to the applicable decision- maker, until relieved. • Direct all radiation protection activities, including field monitoring team (FMT) direction, until relieved. • Provide relevant information to applicable communicators who are communicating offsite PARs to OROs, until relieved.	(1) Shift Emergency Director	(1) TSC Radiation Protection Manager (RPM) (TSC)	Not applicable	(1) EOF Radiation Protection Manager (EOF)
Dose Assessments/ Projections • Perform dose assessments/projections and provide input to applicable PAR decision- maker, until relieved.	(1) Shift Dose Assessor [1]		Not applicable	(1) Dose Assessment Coordinator (EOF)

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Emergency Classifications • Evaluate plant conditions and recommend emergency classifications, until relieved.	Emergency Classification Advisor[1]	(1) Operations Manager (TSC)	Not applicable	Not applicable
Engineering • Provide engineering coverage related to the specific discipline of the assigned engineer, until relieved.	(1) **Core/ Thermal Hydraulics Engineer - STA**[1] • Evaluate reactor conditions.	**TSC Engineering Staff** • (1) Electrical/ Instrumentation and Control (I&C): Provide engineering coverage for the ERO related to electrical or I&C equipment. • (1) Mechanical: Provide engineering coverage for the ERO related to mechanical equipment. • (1) Core/Thermal Hydraulics: Evaluate reactor conditions.	As needed	Not applicable
Security	Security staffing per the site-specific security plan.	(1) **Security Coordinator (TSC)** • Coordinate security- related activities and information with the Emergency Coordinator.	Not applicable	Not applicable

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Repair Team Activities	**Operations Staff**[1,4] • Limited maintenance capability needed on-shift. This is typically limited to minor electrical and/ or mechanical work to restore power and/or emergency core cooling system (ECCS) flow.	**Maintenance Personnel (OSC)** • (1) Electrical Maintenance Technician: Provide electrical support for ECCS equipment, event mitigation, and equipment repair. • (1) Mechanical Maintenance Technician: Provide mechanical support for ECCS equipment, event mitigation, and equipment repair.	**Maintenance Personnel (OSC)** • (1) I&C Technician: Provide assistance with logic manipulation, support for event mitigation and equipment repair, and support of digital I&C if applicable. Additional I&C staff may be called out if needed. • Electrical Maintenance Technicians – As needed. • Mechanical Maintenance Technicians – As needed.	Not applicable

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Supervision of Repair Team Activities	(1) Repair Team Supervisor[1]	(1) **OSC Director** • Supervise OSC activities as directed by Emergency Coordinator.	**OSC Supervisors** • (1) Electrical Maintenance Supervisor /Lead: Supervise OSC activities related to electrical equipment. • (1) Mechanical Maintenance Supervisor / Lead: Supervise OSC activities related to mechanical equipment. • (1) I&C Supervisor / Lead: Supervise OSC activities related to I&C equipment. May be combined with Electrical Supervisor. • (1) Radiation Protection Supervisor / Lead: Supervise OSC activities related to radiation protection.	Not applicable

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF - Alert or Greater
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 60 min.
Field Monitoring Teams (FMTs)	Not applicable	**Onsite FM Individual** • (1) Qualified individual to assess the protected area for radiation and contamination and provide input to the TSC RPM. Responsible for radiation protection coverage for the FMT as directed by TSC RPM or EOF RPM. . **Offsite FMT A** • (1) Qualified individual to assess the area(s) outside the protected area for radiation and contamination, and for radioactive plume tracking, as directed by, and under the control of, the EOF DAC or RPM. Responsible for the radiation protection coverage of the FMT as directed by EOF RPM. • (1) Driver to provide transportation.	**Offsite FMT B** • (1) Qualified individual to assess the area(s) outside the protected area for radiation and contamination, and for radioactive plume tracking, as directed by, and under the control of, the EOF DAC or RPM. Responsible for the radiation protection coverage of the FMT as directed by EOF RPM. • (1) Driver to provide transportation.	Not applicable

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF/JIC - Alert or Greater[2]
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	Augment w/in 90 min.
Media Information • Manage and coordinate media information related to the event.	Not applicable	Not applicable	Not applicable	Corporate Spokesperson • JIC Director • Public Information Director • Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

Emergency Preparedness (EP) Functions	On-Shift	TSC / OSC		EOF/JIC - Alert or Greater[2] Augment w/in 90
		Alert or Greater Augment w/in 60 min.	Alert or Greater Augment w/in 90 min.	
JIC/EOF Information Technology (IT)	Not applicable	Not applicable	Not applicable	• (1) EOF/JIC Computer Specialist (@ 90 min from Alert or higher)

1. Other personnel may be assigned this function if no collateral duties are assigned to an individual that are beyond the capability of that individual to perform at any given time.

2. Exelon's Communication Department will perform necessary JIC functions at the Unusual Event declaration and initially upon a higher initial EAL declaration. The JIC facility will be activated within 90 minutes of an Alert declaration; however, some functions may continue to be performed by the Exelon Communications Department. Some JIC functions such as Public Information Director, New Writer, Media Monitor, Rumor Control may be performed remotely by Exelon's Communication Department.

3. Additional Communications will be staffed at the EOF or TSC if needed.

4. At Clinton, one (1) Repair Team Activity position is filled by a station IMD person. The IMD person is annotated in this table to support performance of specific EOP activities such as lifting leads and installing jumpers. The IMD person is required on shift until such time that operators are trained and qualified to perform these tasks.

Emergency Plan Annex EP-AA-1007

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FOR

PEACH BOTTOM ATOMIC POWER STATION

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Section 2: Organizational Control of Emergencies

PBAPS's Emergency Response Organization (ERO) and its key positions are described in the Exelon Nuclear Standardized Radiological Emergency Plan (EP-AA-1000). This section describes interfaces among Exelon Nuclear emergency response personnel and specifies the offsite support available to respond to the nuclear generating stations.

2.1 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 EP-AA-1000, Appendix 5, Table 55-1, the on-shift STA or Incident Assessor shall also provide core/thermal hydraulics support to Control Room staff.

2.2 Emergency Response Organization (ERO) 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.

2.3 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.

2.4 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.

2.5 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.