



February 11, 2021
L-2021-040
10 CFR 50.4
10 CFR 50 Appendix E

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555-0001

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Radiological Emergency Plan Revision 67

The Turkey Point Plant Radiological Emergency Plan, Revision 67 was implemented on February 11, 2021.

A summary of the changes to the revised document is attached. FPL has determined that the changes described do not result in a decrease in the effectiveness of the Emergency Plan. Pursuant to the requirements of 10 CFR 50.4 and 10 CFR 50 Appendix E, one copy of the revised document is enclosed.

Sincerely,

A handwritten signature in black ink, which appears to read 'Michael Pearce', is written over a horizontal line.

Michael Pearce
Site Vice President
Turkey Point Nuclear Plant

Attachment, Enclosure

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

Summary of Changes to Turkey Point Plant Radiological Emergency Plan, Revision 67

AR 2344324, PCR 2344404

Revision 67 Implementation Date: 2/11/2021

Revision 67 updates Section 5.2.8, Alert and Notification System, to reflect the following changes:

- Revise the total number of sirens in the network from 45 to 46 rotating and directional Whelen pole mounted sirens
- Deletes reference to the WPS 3000 since all pole mounted sirens have been updated to Whelen WPS 4000

TURKEY POINT PLANT

RADIOLOGICAL

EMERGENCY PLAN

REVISION 67

Revision Approval Date: 2/11/21

Approved by: _____



ORG Approved

Date: 02 / 11 / 21

TABLE OF CONTENTS

	<u>Page</u>	<u>Planning Standards (NUREG 0654)/NEI 99-01</u>
1. GENERAL INFORMATION		
1.1 Purpose	1-1	A.1.b
1.2 Definitions	1-1	
1.3 Scope and Applicability	1-6	A.1.b
1.4 Concept of Operations	1-7	A.1.b
1.5 Supporting Plans and Agreements	1-10	P.6
2. ORGANIZATION, FACILITIES, AND SUPPORT SERVICES		
2.1 Elements of the Emergency Response Organization	2-1	A.1.a, b, c, B.8,B.9, C.4, L.4
2.2 Florida Power & Light Company Emergency Response Organization	2-10	A.1.b, d, e, A.2.a, A.4, B.1, B.2, B.3, B.4, B.5, B.6, B.7, C.2.b, G.3.a, G.4.a, M.2, M.3, P.2, P.3
2.3 Emergency Response Support and Resources	2-26	B.8, C.1, C.3, C.4, H.6.c
2.4 Emergency Facilities and Equipment.....	2-27	H.1, H.2, H.4, H.9, H.11
2.5 Medical and Health Support.....	2-34	F.2, L.1, L.2, L.4
3. EMERGENCY CLASSIFICATION SYSTEM		
3.1 Notification of Unusual Event.....	3-1	D.1
3.2 Alert.....	3-1	D.1

TABLE OF CONTENTS (Cont'd)

	<u>Page</u>	<u>Planning Standards (NUREG 0654)/NEI 99-01</u>
3. EMERGENCY CLASSIFICATION SYSTEM (cont'd.)		
3.3 Site Area Emergency	3-2	D.1
3.4 General Emergency	3-3	D.1
3.5 Emergency Action Levels	3-4	D.1, D.2, I.1
4. NOTIFICATION AND COMMUNICATION		
4.1 FPL Emergency Response Organization	4-1	E.1, E.2, F.1.e, M.3
4.2 State Agencies	4-3	E.3, E.4, F.1.a, b, d, e, J.7, M.3
4.3 Miami-Dade County Office of Emergency Management Director and Monroe County Office of Emergency Management	4-7	E.3, F.1.a, b, d, e
4.4 Federal Agencies	4-8	E.3, F.1.c, e, f
4.5 Notification of the Public by the State/County	4-8	E.5
4.6 Communications Equipment	4-9	F.1
4.7 Testing	4-12	F.3
5. RESPONSE TO ACCIDENT CONDITIONS		
5.1 Accident Assessment.....	5-1	H.5, H.6, H.7, H.8, H.12, I.2, I.3, I.4, I.5, I.6, I.7, I.8, I.9, M.4
5.2 Protective Response	5-15	E.5, E.6, J.1, J.2, J.3, J.4, J.5, J.6, J.7, J.8, J.10, K.7, M.4
5.3 Radiological Exposure Control	5-24	J.6, K.1, K.2, K.3, K.5
5.4 Recovery and Re-entry	5-27	M.1, M.2, M.3

TABLE OF CONTENTS (Cont'd)

	<u>Page</u>	<u>Planning Standards (NUREG 0654)/NEI 99-01</u>
6. PUBLIC INFORMATION		
6.1 Preparatory Public Information Program	6-1	G.1, G.2
6.2 Florida Power & Light Company Emergency Public Information Program.....	6-1	E.7, G.3.a, b, G.4, a, b, G.5
6.3 Rumor Control.....	6-4	G.4.c
7. MAINTAINING EMERGENCY PREPAREDNESS		
7.1 Exercises and Drills.....	7-1	F.3, N.1, N.2, N.4, N.5, P.2
7.2 Emergency Response Training.....	7-8	O.1, O.2, O.3, O.4, O.5, P.2
7.3 Planning Effort Development.....	7-9	P.1, P.2, P.3, P.4, P.5, P.9
7.4 Emergency Equipment/Maintenance	7-12	H.10
7.5 Letters of Agreement.....	7-12	H.10
APPENDIX A STATE OF FLORIDA RADIOLOGICAL EMERGENCY MANAGEMENT PLAN	A-1	A.2, C.2.a, D.3, H.3, I.11, J.9, J.10.b, d through I, J.11, J.12, K.4, L.3, O.4
APPENDIX B TECHNICAL SUPPORT AGREEMENTS.....	B-1	
STATE MUTUAL AID AGREEMENTS		
BECHTEL POWER CORPORATION		A.3, B.9
INSTITUTE FOR NUCLEAR POWER OPERATIONS		A.3, B.9
U. S. COAST GUARD		A.3, B.9

TABLE OF CONTENTS (Cont'd)

Page Planning Standards
(NUREG 0654)/NEI 99-01

APPENDIX B	TECHNICAL SUPPORT AGREEMENTS (Cont.)	
	FLORIDA HIGHWAY PATROL	A.3, B.9
	MONROE COUNTY SHERIFF'S DEPARTMENT	A.3, B.9
	MIAMI-DADE COUNTY FIRE DEPARTMENT	A.3, B.9
	U. S. DEPARTMENT OF ENERGY (SAVANNAH RIVER OPERATIONS)	A.3, B.9
	BAPTIST HOSPITAL OF MIAMI, FL	A.3, B.9
	MERCY HOSPITAL	A.3, B.9
	U.S DEPARTMENT OF ENERGY (OAKRIDGE OPERATIONS, REAC/TS)	A.3, B.9
	AREVA	A.3, B.9
	AECOM	A.3, B.9
	MIAMI-DADE POLICE DEPARTMENT	A.3, B.9
	TURKEY POINT SECURITY	A.3, B.9
APPENDIX C	LISTING OF EMERGENCY PLAN IMPLEMENTING PROCEDURES	C-1 P.7
APPENDIX D	EAL TECHNICAL BASIS.....	D-1

LIST OF ILLUSTRATIONS

	<u>Page</u>
Figure 1-1 Plume Exposure Pathway (EPZ)	1-8
Figure 1-2 Initial Notification	1-14
Figure 2-1 FPL Emergency Response Organization	2-2
Figure 2-2a State, Local, and Federal Response Before Executive Order	2-5
Figure 2-2b State, Local, and Federal Response After Executive Order	2-6
Figure 2-3 Turkey Point Plant Normal Operating Organization	2-11
Figure 2-4 On-Shift Emergency Response Organization	2-17
Figure 2-5 Expanded Response Organization	2-25
Figure 2-6 Turkey Point Plant Emergency Facilities Location Map	2-32
Figure 4-1 Communications Interfaces	4-6
Figure 5-1 Protective Action Recommendations Based on Plant Conditions and Offsite Dose Estimates	5-8
Figure 5-2 Site Evacuation Routes	5-18
Figure 5-3 Miami-Dade and Monroe County Evacuation Routes	5-23
Figure 6-1 Public Information Interfaces	6-3

LIST OF TABLES

	<u>Page</u>
Table 1-1 Typical Sequence of Actions	1-12
Table 2-2a Shift and Emergency Staffing Capabilities	2-20
Table 2-2b Florida Power & Light Emergency Response Organization Functions and Responsibilities	2-22
Table 2-3 On-site Emergency Response Facilities Emergency Equipment (Typical)	2-33
Table 3-1 Intentionally Deleted	
Table 3-2 Process and Effluent Radiation Monitors Used for Accident Assessment	3-5
Table 3-3 Area Radiation Monitors	3-7
Table 3-4 Non-Radiological Instrumentation Used for Accident Assessment	3-8
Table 4-1 Communications Responsibilities	4-4
Table 4-2 Florida Nuclear Plant Emergency Notification Form	4-5
Table 5-1 Summary of Available Meteorological Data	5-6
Table 5-2 Sources of Meteorological Data	5-7
Table 5-3 Typical Population Within the Owner Controlled Area	5-19
Table 6-1 Initial FPL Statement - Unusual Event	6-5
Table 6-2 Initial FPL Statement - Alert	6-6

LIST OF TABLES (Cont'd)

	<u>Page</u>
Table 6-3 Initial FPL Statement - Site Area Emergency	6-7
Table 6-4 Initial FPL Statement - General Emergency	6-8
Table 6-5 Follow-Up FPL Statement - Loss of Power/Core Damage/Radiation Plume	6-9
Table 6-6 Follow-Up FPL Statement - Medical Emergency	6-10
Table 6-7 Follow-Up FPL Statement - Joint Information Center Activated	6-11
Table 7-1 Example Scenario Format	7-5

1. GENERAL INFORMATION

1.1 Purpose

This Emergency Plan contains Florida Power & Light Company's plans for coping with radiological emergencies at the Turkey Point Nuclear Power Plant, (Units 3 and 4) located in Miami-Dade County, Florida.

The plan has been designed to preclude or mitigate the adverse health and safety effects of an emergency. Four general objectives have been considered in the development of this plan:

- 1) Timely and accurate assessment of off-normal or emergency conditions and proper notification of responsible authorities.
- 2) Effective coordination of emergency actions among all organizations having a response role.
- 3) Continued assessment of actual or potential consequences both on site and offsite.
- 4) Continuing maintenance of an adequate state of emergency preparedness.

1.2 Definitions

Airliner - Airliner is meant to be a large aircraft with the potential for causing significant damage to the plant.

Annual - Occurring once per calendar year (January 1 through December 31).

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

Company - Florida Power & Light Company (FPL)

Confinement Boundary - The barrier(s) between areas containing radioactive substances and the environment.

Containment Closure - The procedurally defined actions taken to secure containment and its associated structures, systems, and components as a functional barrier to fission product release under existing plant conditions.

Corporate Functional Area Manager (CFAM) - Emergency Preparedness

The highest authority in a specific functional area. The purpose of the CFAM is to provide fleet wide leadership and direction to position the applicable functional area as a top industry performer. The CFAM provides oversight of functional area programs, policies and processes utilizing assessment reports, performance indicators and peer groups to assess the health of programs, policies and processes. The CFAM works with the Site Functional Area Manager (SFAM), which is the site Emergency Preparedness Manager.

Corrective Actions - Those measures taken to mitigate or terminate an emergency situation at or near the source of the problem in order to prevent an uncontrolled release of radioactive material or to reduce the magnitude of a release, e.g., shutting down equipment, fire fighting, repair, and damage control.

Duty Call Supervisor - A designated supervisor assigned from the nuclear plant staff to provide 24-hour response to any emergency upon notification by the Shift Manager. The Duty Call Supervisor is responsible for notifying the Emergency Response Organization and, as requested, plant management in the event of an emergency.

Emergency - Any off-normal event or condition which is classified into one of the four event categories in Appendix D, Emergency Classification Appendix. A radiological emergency at the plant is classified in accordance with Section 3, Emergency Classification System and Emergency Plan Implementing Procedures (EPIPs). The four classifications of emergencies are Notification of Unusual Event, Alert, Site Area Emergency and General Emergency.

Emergency Action Levels (EALs) - Radiological dose rates, specific contamination levels of airborne, waterborne, or surface-deposited concentrations of radioactive materials; or specific instrument indications (including their rates of change) that may be used as thresholds for initiating specific emergency measures such as designating a particular class of emergency, or initiating a particular protective action.

Emergency Coordinator (EC) - The title assumed by the Shift Manager or member of the plant management staff, in the event of a radiological emergency at the Plant. The EC is responsible for notifying offsite authorities, both inside and outside the Company, and has full authority and responsibility for on-site emergency response actions. The EC is also responsible for Protective Action Recommendations during the initial stages of an emergency.

Emergency Information Manager (EIM) - A senior manager or designated member of the Corporate Communications Department who directs the operation of the Joint Information Center, develops news releases, and serves as a spokesperson for the company. The EIM will serve as official spokesperson for the Nuclear Division.

Joint Information Center (JIC) - A designated facility for use by the EIM and staff in communicating with the news media. Public information officers from State, Local, and Federal response agencies may also function from the JIC.

Emergency Operations Centers (EOCs) - Designated off-site facilities from which the Miami-Dade County, Monroe County and State of Florida Emergency Response Organizations will direct necessary assessment and protective actions for off-site areas.

Emergency Operations Facility (EOF) - A designated off-site facility from which FPL emergency activities are conducted. These activities include assessment, protective action recommendations, and coordination with State and County officials.

Emergency Operating Procedures (EOPs) - Specific procedures that provide instructions to guide plant operations during potential or actual emergency situations.

Emergency Plan Implementing Procedures (EPIPs) - A set of emergency response procedures initiated and followed by the FPL Emergency Response Organization to implement the appropriate sections of the Emergency Plan, assess and classify the emergency, notify the appropriate authorities, and provide continuing response capability (See Appendix C).

Emergency Planning Zone (EPZ) - That area, for which emergency planning consideration of the plume exposure and ingestion pathways has been given, in order to assure that prompt and effective actions can be taken to protect the public in the event of a radiological emergency at the plant.

Emergency Response Organization (ERO) - That portion of the FPL organization assigned responsibilities upon initiation of the Radiological Emergency Plan for the Turkey Point Plant.

Emergency Response Directors - The Directors of Miami-Dade County Office of Emergency Management and Monroe County Emergency Management Department.

Emergency Security Manager (ESM) - A designated Company Manager or Supervisor who will have responsibility during a radiological emergency for security aspects of the emergency response.

Emergency Technical Manager (ETM) - A designated Company Manager or Supervisor who will be responsible, during a radiological emergency, for providing engineering/technical support for emergency response actions.

Evacuation Time Estimates (ETE) - A part of the planning basis to estimate the time needed to evacuate the public from the Emergency Planning Zone (EPZ). The ETE results provide emergency planners information to support formulating a protective action strategy and assisting in protective action decisions. The ETE is conducted using the guidance in NUREG/CR-7002.

Explosion - A rapid, violent, unconfined combustion, or catastrophic failure of pressurized/energized equipment that imparts energy of sufficient force to potentially damage permanent structures, systems, or components.

Faulted - In a steam generator, the existence of secondary side leakage that results in an uncontrolled drop in steam generator pressure or the steam generator being completely depressurized.

Fire - Combustion characterized by heat and light. Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute FIRES. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

Freshly Off-Loaded Reactor Core - A freshly off-loaded Reactor core in the Spent Fuel Pool exists during the period of time when core off-load begins until core reload is complete.

Hostile Action - An act toward a NPP 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. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the NPP. Non-terrorism-based EALs should be used to address such activities (i.e., this may include violent acts between individuals in the owner controlled area).

Imminent - Mitigation actions have been ineffective, additional actions are not expected to be successful, and trended information indicates that the event or condition will occur. Where IMMINENT timeframes are specified, they shall apply.

Ingestion Exposure Pathway Emergency Planning Zone - That area, approximately 50 miles in radius from the center of the plant, for which detailed plans are made to protect people from ingestion of food-stuffs and water contaminated by radioactive materials released from the plant.

Independent Spent Fuel Storage Installation (ISFSI) - A complex that is designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with spent fuel storage.

ISFSI Protected Area - A protected area that is located separate and apart from the normal/plant Protected Area.

National Oceanic and Atmospheric Administration (NOAA) - Government agency responsible for the forecasting of weather conditions. The National Weather Service (NWS) is a branch under NOAA that provides weather information and warning of severe weather situations such as hurricanes and tornadoes.

Normal Plant Operations - Activities at the plant site associated with routine testing, maintenance, or equipment operations, in accordance with normal operating or administrative procedures. Entry into abnormal or emergency operating procedures, or deviation from normal security or radiological controls posture, is a departure from NORMAL PLANT OPERATIONS.

Operations Support Center (OSC) - An on-site Emergency Response Facility area where FPL Operations, Maintenance, Radiation Protection, and Chemistry Support personnel can report in an emergency and await assignment.

Off site - All property outside the Protected Area.

On site - The area within the Protected Area.

Owner Controlled Area - That portion of FPL property surrounding and including the Turkey Point Nuclear Power Plant which is subject to limited access and control as deemed appropriate by FPL. [EPlan]

Plant - The Turkey Point Nuclear Power Plant, Units 3 and 4.

Plume Exposure Pathway Emergency Planning Zone - That area, approximately 10 miles in radius from the center of the plant, for which detailed plans are made to protect people from exposure to a plume containing radioactive materials.

Projectile - An object directed toward a Nuclear Power Plant (NPP) that could cause concern for its continued operability, reliability, or personnel safety.

Protected Area - The area (within the Owner Controlled Area) occupied by the nuclear units and associated equipment and facilities enclosed within the security perimeter fence. The area within which accountability of personnel is maintained in an emergency. This area does not include the ISFSI Protected Area.

Protective Actions - Those measures taken for the purpose of preventing or minimizing radiological exposure to persons during an emergency.

Quarterly - Occurring once per calendar quarter, with quarters ending on March 31, June 30, September 30 and December 31 in a year.

Radiation Controlled Area (RCA) - The area (within the Protected Area) wherein personnel access is restricted for the purpose of monitoring and controlling exposure to radiation.

REAC/TS - The Radiological Emergency Assistance Center/Training Site is operated by the Oak Ridge Associated Universities for the Department of Energy. REAC/TS serves as a backup medical facility for the Turkey Point Plant.

Recovery Actions - Those actions taken to restore the plant as nearly as possible to its condition before the emergency.

Recovery Manager (RM) - A designated Company Senior Manager who will have responsibility during a radiological emergency for the activation and operation of the EOF. The RM has the authority to establish policy and expend funds necessary to cope with any Emergency Situations that arise.

Ruptured - In a steam generator, existence of primary-to-secondary leakage of a magnitude sufficient to require or cause a reactor trip and safety injection.

Security Condition - Any Security Event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A SECURITY CONDITION does not involve a HOSTILE ACTION.

Significant Transient - An UNPLANNED event involving one or more of the following: (1) automatic turbine runback greater than 25% thermal reactor power, (2) electrical load rejection greater than 25% full electrical load, (3) Reactor Trip, or (4) Safety Injection Activation.

Site - The Turkey Point Power Plant Protected Area.

Site Functional Area Manager (SFAM) - Emergency Preparedness - The Site Functional Area Manager is responsible for implementing policy, practice, programs and procedures regarding the emergency plan at the Nuclear Station. This position can also be referred to as the Site Emergency Preparedness Manager.

State - The State of Florida.

State Plan - The State of Florida's Radiological Emergency Management Plan.

System Operations Power Coordinator - An FPL System Operations position which is staffed 24 hours per day providing uninterrupted coordination of electrical power distribution. Communication is maintained by the System Operations Power Coordinator with all FPL plants, service centers, and the General Office.

Technical Support Center (TSC) - A designated on-site facility that serves as a work area for use by technical and management personnel in order to provide technical support to Control Room personnel.

Total Dose (TEDE) - The total exposure from both external and internal (weighted) sources - Total Effective Dose Equivalent

TSC Supervisor - The person assigned to supervise the personnel and direct the technical support activities in the TSC.

Thyroid Dose (CDE) - The thyroid exposure from inhaled radioiodines - Committed Dose Equivalent. Thyroid dose (CDE) is used in Protective Action determination.

Unisolable - A breach or leak that cannot be promptly isolated.

Unplanned - A parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

Valid - An indication, report, or condition, is considered to be VALID when it is verified by (1) an instrument channel check, (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

Visible Damage - Damage to equipment or structure that is readily observable without measurements, testing, or analysis. Damage is sufficient to cause concern regarding the continued operability or reliability of the affected structure, system, or component. Example damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, and paint blistering. Surface blemishes (e.g., paint chipping, scratches) should not be included.

Vital Areas - Areas within the PROTECTED AREA, that contains equipment, systems, components, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation.

1.3 Scope and Applicability

The Emergency Plan describes Florida Power & Light Company's plans for responding to emergencies that may develop at the Turkey Point Plant. The plan has been prepared to meet the requirements of 10 CFR 50.47(b), 10 CFR 50.72, and 10 CFR 50 Appendix E. The purpose of this plan is to define and assign authority and responsibility in order to protect the health and safety of the public and plant personnel. This plan applies to all plant emergencies which have resulted in, or which increase the risk of the accidental release of radioactive materials to the environment.

Plans have been developed based upon knowledge of the potential consequences, timing, and release characteristics of a spectrum of events. Emergency Planning Zones have been defined. Figure 1-1 illustrates the Plume Exposure Pathway Emergency Planning Zone for the Turkey Point Plant. A key component of this plan is coordination with Federal, State, and County authorities who contribute to the overall response effort. This plan outlines Company responsibilities within the framework of the overall Emergency Response Organization, and provides a conceptual basis for the development of the detailed procedures necessary to implement the plan.

1.4 Concept of Operations

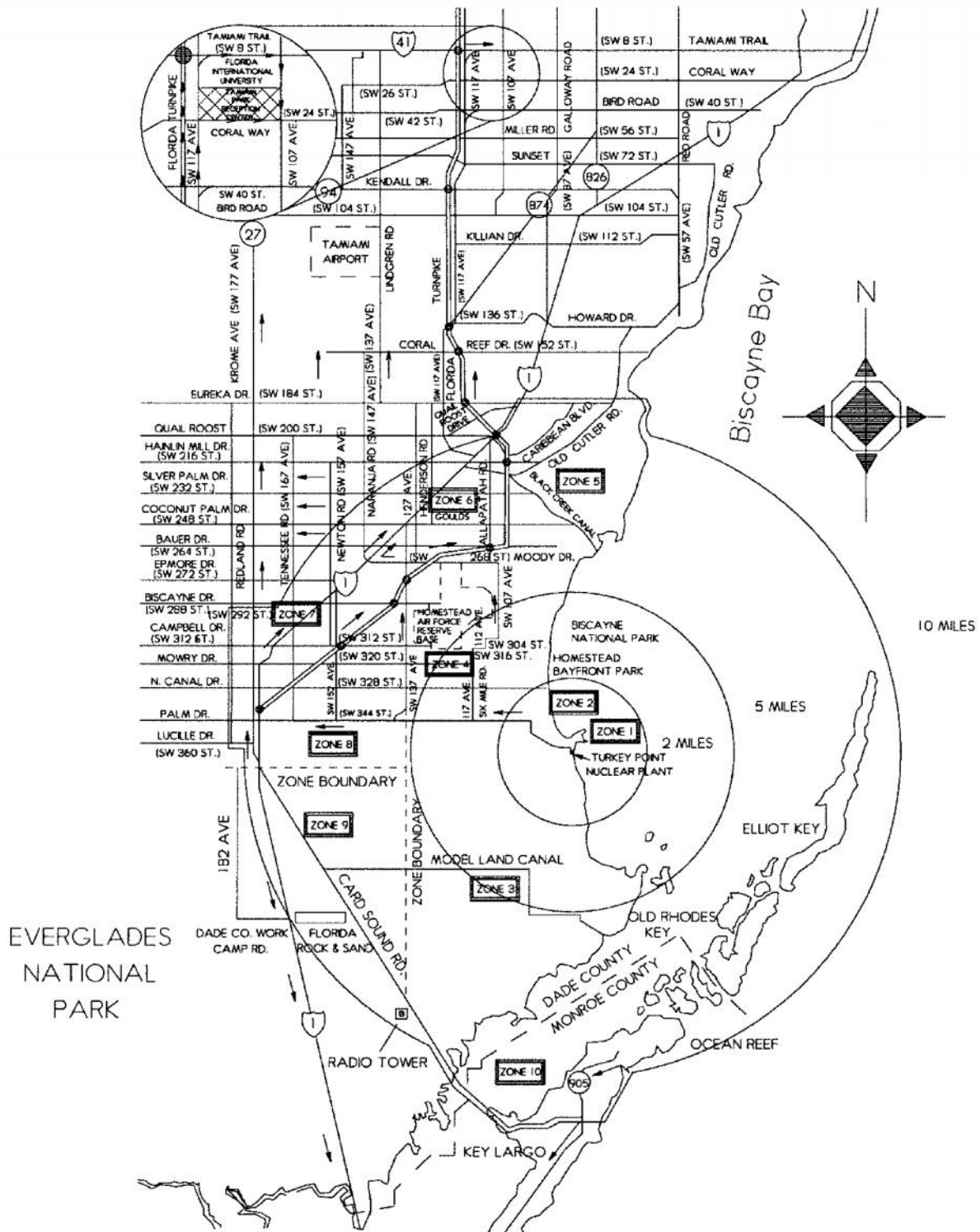
The Emergency Plan defines emergency conditions and delineates the responsibilities and duties of the FPL Emergency Response Organization (see Figure 2-1). The Emergency Plan is concerned with the following basic activities, which are discussed in the plan in detail:

- 1) Organization and resources adequate to detect the presence of an emergency condition, assess the condition, and respond in an appropriate manner (Chapter 2).
- 2) Assignment of an off-normal event to its proper emergency classification (Chapter 3).
- 3) Notification of off-site authorities, as required, and continuing communications (Chapter 4).
- 4) Gathering and interpreting data to determine appropriate actions (Chapter 5).
- 5) Assisting governmental agencies in the development of information for the public both in terms of preparatory education and emergency response information (Chapter 6).
- 6) Maintaining the FPL Emergency Preparedness Program in a state of readiness (Chapter 7).

Associated with this Emergency Plan are implementing procedures which provide a detailed source of pertinent information and data required by the response organization during an emergency. These procedures are listed in Appendix C.

FIGURE 1-1

PLUME EXPOSURE PATHWAY EPZ



Off-normal events have been separated into the following four classifications of emergencies:

- 1) Unusual Event
- 2) Alert
- 3) Site Area Emergency
- 4) General Emergency

These four classes represent emergency conditions which trigger activation of emergency procedures. When an emergency is declared in connection with one of these four classes, many individuals assume new titles with special responsibilities.

Each emergency class is characterized by unusual or off-normal plant events detected by Control Room instrumentation and/or routine or directed surveillance activities.

The Company's response to an emergency condition consists of an on-shift (immediate) response and an augmented (expanded) response Emergency Response Organization (ERO) which can readily adapt to an emergency condition as it develops. The immediate response phase encompasses the period of time and sequence of actions associated with the initial detection of an off-normal event, classification as an emergency, and activation of the ERO, if required. During this phase, the Shift Manager assumes responsibility as the Emergency Coordinator and initiates the following general activities:

- 1) Diagnosis of the off-normal event
- 2) Corrective action
- 3) Classification of the off-normal event
- 4) Notification of appropriate off-site authorities
- 5) Notification of appropriate FPL authorities

During the expanded response phase, the Emergency Coordinator and Recovery Manager (RM) will assess the situation and, as necessary, expand the Emergency Response Organization. All available company resources can be mobilized as needed during this period. State, County, and Federal Response Organizations can become fully operational, as required. Assessment, protective, and corrective actions will continue during the expanded response phase, as required.

Table 1-1 summarizes the sequence of actions taken during the phased response. Figure 1-2 delineates the initial notification flow and Figure 2-2 shows the same for the State and County organizations.

As discussed throughout this plan, FPL maintains adequate facilities and equipment for detecting, assessing, and responding to emergencies. Redundant means of communications among key response participants are maintained. FPL also maintains agreements that will provide for emergency medical, rescue, or fire support on site, if needed. The training program is designed to maintain the proficiency of the Emergency Response Organization.

The FPL individual in charge of on-site Emergency response during the immediate and expanded response phases is the Emergency Coordinator. The senior company official, with responsibility for policy and authority to expend funds, is the Recovery Manager. The Recovery Manager is also responsible for Emergency Operations Facility activation and operation during the expanded response phase.

In Miami-Dade County, the individual responsible during emergencies is the County Mayor or designee. In Monroe County, the Monroe County Mayor provides direction and control during emergencies.

As indicated in the State Plan, "the Governor is ultimately responsible for protecting the population of the State from the dangers created by emergencies which are beyond the capabilities of local governments or which are multi-jurisdictional in nature. He will provide for public protection through the assignment of appropriate state resources and agencies". "The Governor has appointed the Director, Division of Emergency Management, as the Governor's Authorized Representative (GAR) to act in his/her behalf, as necessary, during a radiological emergency". During emergencies, all State agencies report to this person.

1.5 Supporting Plans and Agreements

Supporting plans and agreements are included in the Appendices of this plan. Appendix A, references the State of Florida Radiological Emergency Management Plan, and the locations where it is maintained for Turkey Point Emergency response. Additional material utilized in the preparation of the Turkey Point Plan are:

- 1) NUREG 0654, Rev. 1, FEMA REP.1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in support of Nuclear Power Plants; November, 1980
- 2) NUREG 0578, TMI-2 Lessons Learned Task Force: Status Report and Short-Term Recommendations; July, 1979
- 3) NUREG 0737, Clarification of TMI Action Plan Requirements; November, 1980
- 4) 10 CFR 20, Standards for Protection Against Radiation
- 5) 10 CFR 50, Domestic Licensing of Production and Utilization Facilities
- 6) EPA 400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents; October, 1991

- 7) Reg. Guide 1.97, Revision 2, Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident; December, 1980
- 8) NUREG/BR-0150, Vol. 1, Response Technical Manual (USNRC)
- 9) Nuclear Energy Policy on Exposure Limits for Emergency Response Personnel, Revision to Policy Statement Ltr. No. JNO-HP-94-056, 26 October, 1994
- 10) L-97-290, Proposed Change to Emergency Action Level for RCS Leakage, dated March 31, 1998; and NRC Response Letter, dated August 21, 1998
- 11) NRC Information Bulletin 2005-02, Emergency Preparedness and Response for Security Based Events
- 12) Turkey Point Plant, Units 3 and 4 - Issuance of Amendments Regarding Steam Generator Alternate Repair Criteria (TAC No's MD1380 and MD1381), issued by the NRC via letter dated November 1, 2006.
- 13) ML093360321 NRC Safety Evaluation Approving Turkey Point's Emergency Action Levels, 12/14/2009
- 14) NUREG/CR-7002, Criteria for Development of Evacuation Time Estimate Studies
- 15) NUREG-0654/FEMA-REP-1, Revision 1, Supplement 3, Guidance for Protective Action Strategies, Date Published: November 2011
- 16) The Turkey Point Nuclear Power Plant on Shift Staffing Analysis Report, developed in accordance with 10 CFR 50 Appendix E, Section IV, A.9

TABLE 1-1

TYPICAL SEQUENCE OF ACTIONS

Detection of Off-Normal Conditions

- Actions:
- o Individual identifies off-normal condition.
 - o Individual immediately notifies Shift Manager.

Immediate Response

- Actions:
- o Shift Manager diagnoses condition and directs initial corrective action to control or mitigate the condition.
 - o Shift Manager classifies the condition in accordance with plant procedures. If the condition is classified as an emergency, the Shift Manager through the Emergency Plan becomes the Emergency Coordinator (EC).
 - o The EC orders mobilization of the Technical Support Center and the Operations Support Center (as required for Alert or higher classification) and confers with the RM for EOF activation.
 - o EC initiates necessary protective actions for on-site personnel and evaluates the need for Protective Action Recommendations (PARs) for the general public.
 - o The EC mobilizes on-site emergency response teams, as necessary, to assess and control the emergency.
 - o EC notifies State and County in accordance with plant procedures.
 - o EC notifies NRC via Emergency Notification System (ENS) communications link.
 - o Control Room Communicator notifies plant management.

TABLE 1-1

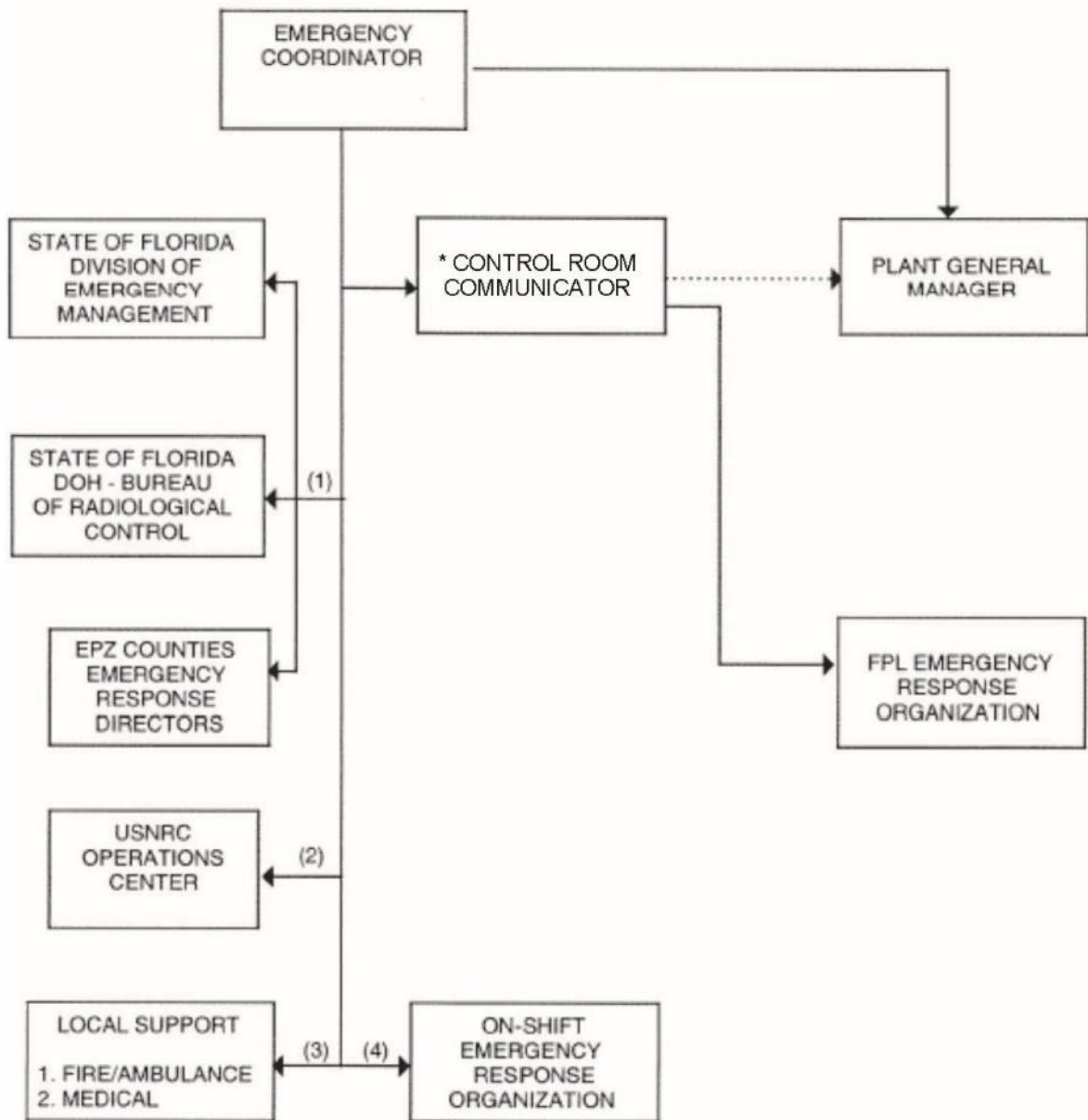
TYPICAL SEQUENCE OF ACTIONS

Expanded Response (as appropriate)

- Actions:
- o TSC and OSC are staffed and declared operational assuming command and control of the emergency. This includes PARs, notifications, and classification.
 - o RM proceed to the Emergency Operations Facility, as appropriate. RM notifies EC when EOF is operational and assumes responsibility for recommending off-site protective actions and for communications with off-site organizations. The EC can now devote attention to control of the power plant.
 - o RM (or designated response staff) receives and assesses periodic plant status, radiological data, and meteorological data, and continues communications and coordination with the State and County authorities.
 - o EIM proceeds to the Emergency Operations Facility, as appropriate and establishes communications with the Recovery Manager (RM) and Joint Information Center.
 - o RM continues assessment of conditions and control of FPL response until plant conditions stabilize. RM then closes out with a summary to off-site authorities or prepares for further long-term activities.

FIGURE 1-2

INITIAL NOTIFICATION



Legend:

- Primary Notification Pathway
- Alternate Notification Pathway

- (1) Via State Hot Ring Down Telephone (HRD)
- (2) Via Emergency Notification System (ENS)
- (3) Medical & Fire Emergencies only, as needed
- (4) Via Plant Public Address System (PA)

* Security or Duty Call Supervisor may perform the function of the Control Room Communicator, as necessary.

2. ORGANIZATION, FACILITIES, AND SUPPORT SERVICES

2.1 Elements of the Emergency Response Organization

This section defines the primary components of the overall Emergency Response Organization and the relationship of each component to the total effort.

2.1.1 Florida Power & Light Company

Florida Power & Light Company (FPL) is the licensed operator of Turkey Point Units 3 and 4. As the licensed operator, FPL has developed this Emergency Plan (and associated implementing procedures) to specify actions and provide a framework for emergency response. FPL's primary responsibilities include the following:

- 1) Diagnosis and corrective action
- 2) Emergency classification
- 3) Notification of appropriate governmental response organizations and continuing communication
- 4) Initiation of protective actions for employees and others on site
- 5) Recommendation of protective actions for the public
- 6) Mobilization of the Florida Power & Light Company Emergency Response Organization
- 7) Continuing data collection, dose projection, and assessment actions
- 8) Owner Controlled Area Recovery and re-entry

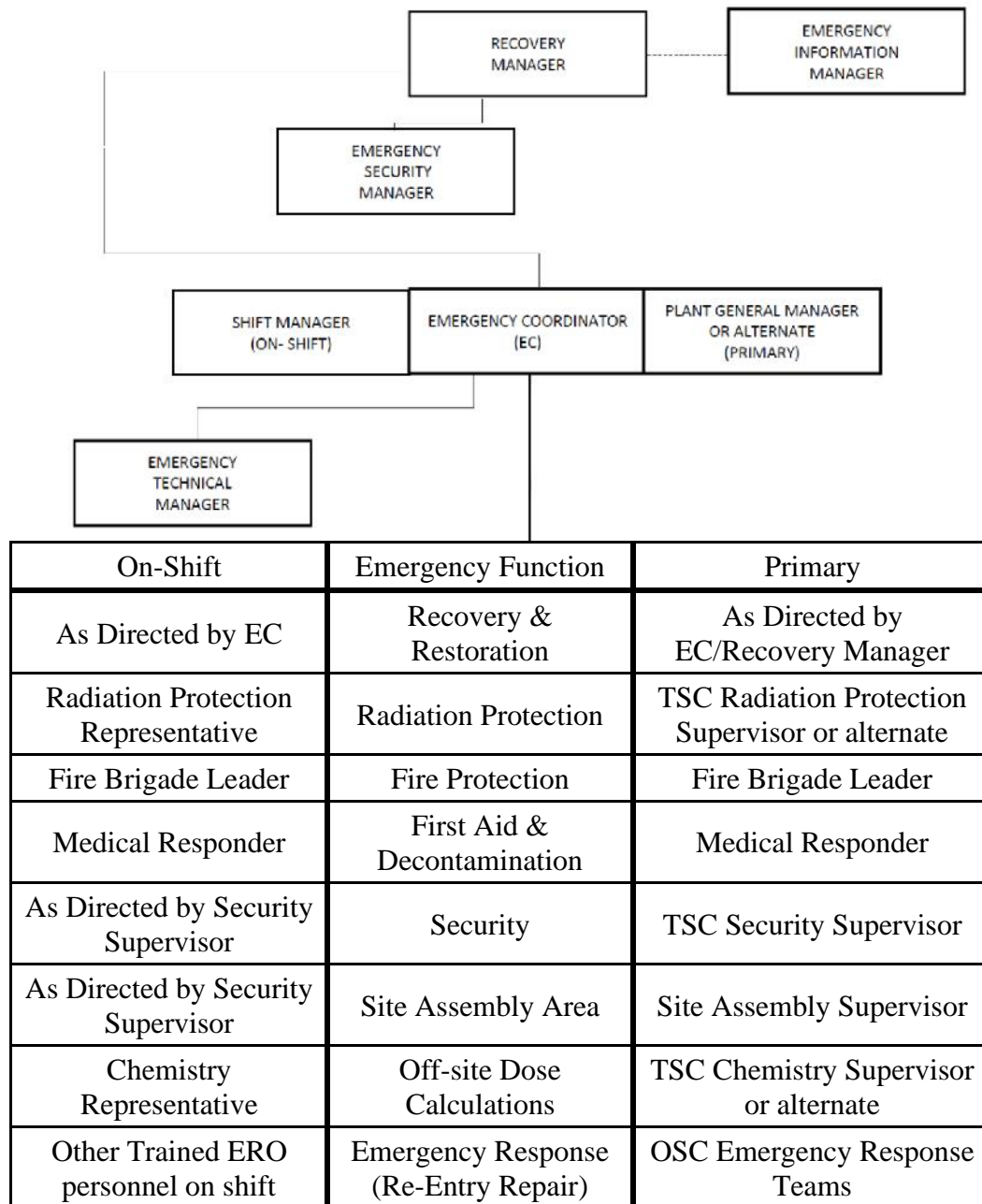
The Florida Power & Light Company Emergency Response Organization (ERO) is described in detail in Section 2.2 and illustrated in Figure 2-1.

2.1.2 State of Florida Emergency Response Organization

Figure 2-2a illustrates the State of Florida's Emergency Response Organization before an Executive Order by the Governor. Figure 2-2b illustrates the State of Florida's Emergency Response Organization after Executive Order by the Governor.

FIGURE 2-1

FPL EMERGENCY RESPONSE ORGANIZATION



State of Florida Division of Emergency Management

The Division of Emergency Management (DEM) is the state agency authorized to receive initial notification from Florida Power & Light Company and is responsible for mobilizing the state and local emergency response agencies. Specific discussion on transportation of state emergency response personnel to the vicinity of the plant is discussed in the State Plan. This emergency response is conducted in accordance with the Florida Radiological Emergency Management Plan for Nuclear Power Plants, prepared by the DEM in coordination with other emergency response agencies. The DEM's responsibilities include:

- 1) Overall responsibility for coordinating the development and implementation of State and County emergency response plans
- 2) Command and control of State emergency response resources
- 3) Notification of State and County response agencies
- 4) Coordination among State, Federal (i.e., FEMA, EPA, DOE) and Local agencies

Florida Health

The Florida Health (FH) is the State agency authorized to provide technical support and expertise in Public Health matters.

The FH defined responsibilities include:

- 1) Emergency medical services, public health, and sanitation
- 2) Economic and social services

Through the Bureau of Radiation Control (BRC):

- 3) Radiological monitoring off site
- 4) Off-site radiological exposure control and protective response recommendations for off-site areas

Division of Florida Highway Patrol, Department of Highway Safety and Motor Vehicles

The Florida Highway Patrol, through the coordination of the Department of Law Enforcement, provides the following services:

- 1) Traffic control
- 2) Communications (support)
- 3) Law enforcement coordination
- 4) Upon request, assist in the transportation of samples for analysis when immediate analysis is necessary.
- 5) Within their authority, evacuate and exclude individuals from designated public areas.

These services will be provided in accordance with the State Plan.

Other State Agencies

The DEM can request support, as necessary, from other State agencies as defined in the State Plan.

2.1.3 County Response Organizations

Counties that fall within the plume exposure EPZ include Miami-Dade County and Monroe County. Counties that fall within the ingestion pathway EPZ include Miami-Dade County, Monroe County, Broward County, and Collier County.

The local organizations are described in the State Plan. Counties may have responsibilities with respect to plume exposure risk response, hosting of evacuees, and ingestion pathway protection. Miami-Dade and Monroe Counties have responsibilities with respect to risk, hosting and ingestion pathway. Collier and Broward Counties have responsibility for ingestion pathway.

The State Plan addresses short term actions required in the plume exposure pathway EPZ. The State Plan also addresses the ingestion pathway EPZ. State agencies take the lead in controlling ingestion pathway response. The State Plan also establishes procedures to protect citizens of Miami-Dade and Monroe Counties and visitors to these counties from the effect of an accident at the Turkey Point plant. The State Plan includes the Miami-Dade and Monroe Counties' Radiological Emergency Organizations.

The State Plan also includes host plans for Miami-Dade County and Monroe County, respectively.

The Miami-Dade Mayor and the Monroe County Mayor will take proper and responsible action to protect life, health, safety, property, and the environment from the consequences of nuclear power plant accidents. During radiological emergencies, resources, and personnel of Miami-Dade and Monroe Counties will be reserved and available for use by the County Mayors.

FIGURE 2-2a

**STATE, LOCAL, AND FEDERAL RESPONSE BEFORE
EXECUTIVE ORDER**

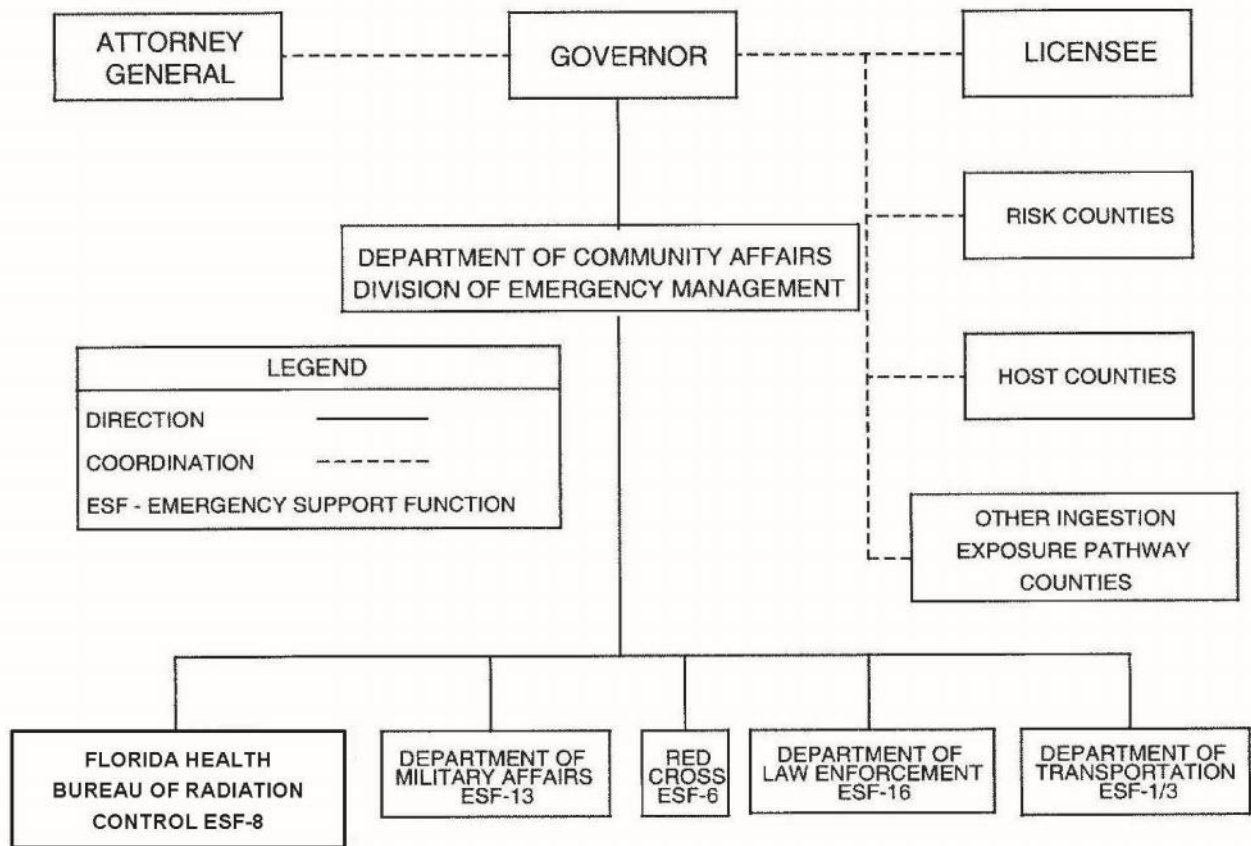
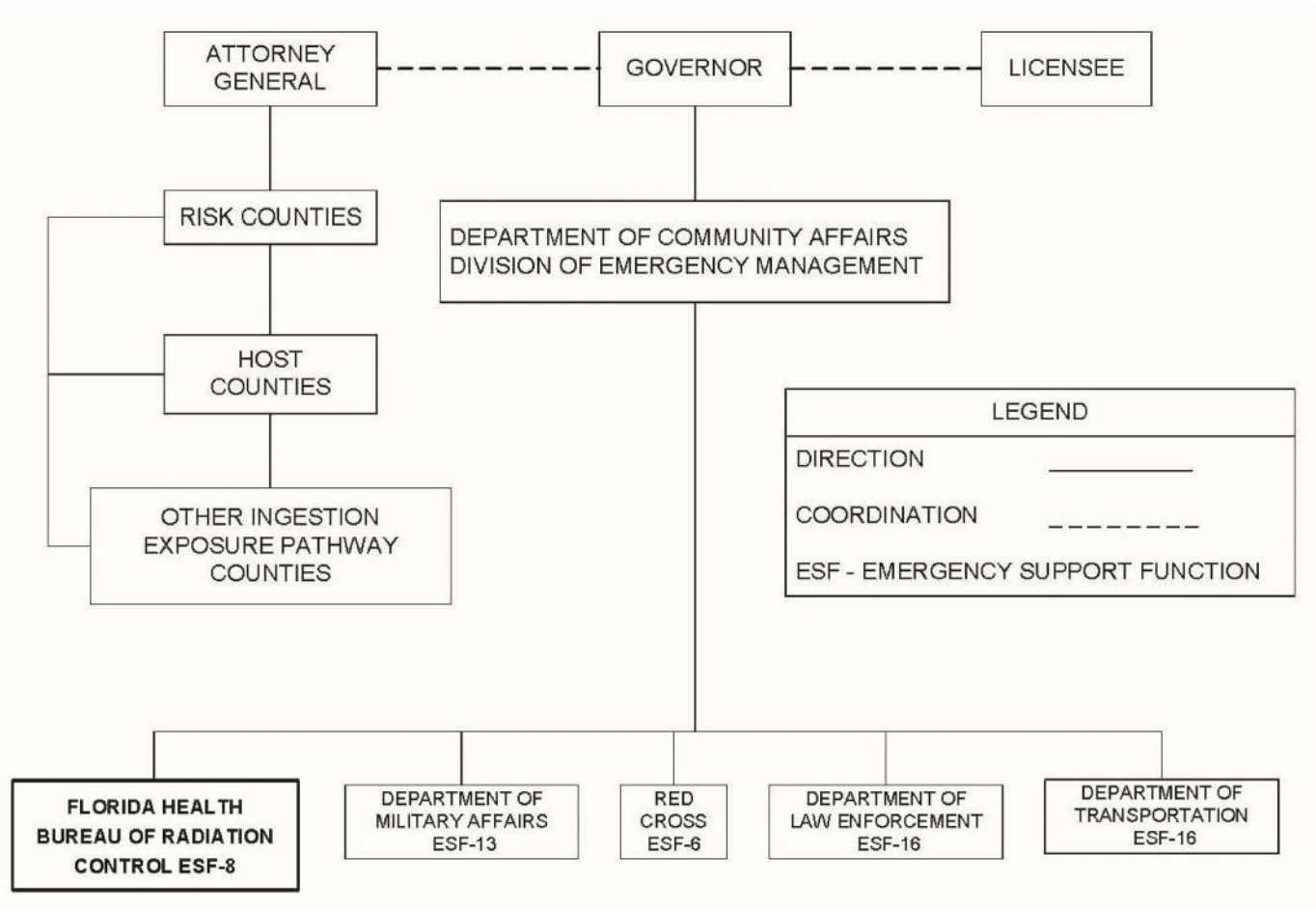


FIGURE 2-2b

STATE, LOCAL, AND FEDERAL RESPONSE AFTER EXECUTIVE ORDER



The decision to implement protective action recommendations will be made jointly by the Miami-Dade County Mayor (or designee), Monroe County Mayor and either the Governor or authorized representative (State Director, Division of Emergency Management). If time does not permit State involvement in initial decision making, the decision to take protective actions may be made by the Miami-Dade County Mayor and Monroe County Mayor, or their designated alternates. All county personnel and resources will be under the control of the County Mayors. Federal and State resources will also be available to the counties.

Alerting, warning, and evacuation of populations will be in accordance with procedures prescribed in the State Plan. The State Plan also describes hosting responsibilities, including shelter location and operation, and evacuee registration, monitoring, and decontamination.

Responsibility for direction and control rests with the Miami-Dade County Mayor and Monroe County Mayor, unless a disaster declaration under provisions of Florida Statutes, Chapter 252 is in effect. If a disaster has been declared, responsibility for direction and control rests with the Governor or authorized representative.

The Miami-Dade County Office of Emergency Management reports to the Miami-Dade County Mayor, and the Monroe County Emergency Management Department to the Monroe County Mayor. This is also true for other county resources, including the County Manager, Sheriffs' Offices, Engineers' Offices, fire departments, public health offices, school boards, and other county organizations.

The Monroe County Mayor and Miami-Dade County Mayor (or designee) have responsibility for overall emergency response planning. County Emergency Response Directors are responsible for actual plan development and updating. Miami-Dade County and Monroe County each have an Emergency Operations Center.

Miami-Dade County Office of Emergency Management and Monroe County Office of Emergency Management Department Directors

The county Emergency Response Directors (Monroe and Miami-Dade County) receive initial notification from Florida Power & Light Company simultaneously with the DEM via the Hot Ring Down System or individually by DEM via other alternate communications for all four classes of emergency. They then have responsibility for initiating any necessary off-site protective actions (including evacuation of off-site areas) based upon available information from the FPL Emergency Coordinator or Recovery Manager, and Florida Health Bureau of Radiation Control. The Miami-Dade County and Monroe County Plans are a part of the State Plan.

Through established mutual aid agreements in Fire, Law Enforcement, and Emergency Management, Miami-Dade and Monroe county can supplement resources for responding to a nuclear power plant event (including hostile action based events).

In addition to overall responsibility, the Emergency Response Directors have responsibility for the following:

- 1) Direction and control of County emergency resources
- 2) Protective response for off-site areas including warning and evacuation
- 3) Communications
- 4) Public information
- 5) Off-site radiological exposure control
- 6) Coordination of arrangements for shelter and feeding of evacuees

Miami-Dade County Public Safety Department and Monroe County Sheriff

At the request of the respective Emergency Response Directors, the Miami-Dade County Public Safety Department or the Monroe County Sheriff can provide the following support services:

- 1) Law enforcement (including hostile action based events)
- 2) Warning and evacuation (implementation)
- 3) Traffic control
- 4) Communications (support)
- 5) Rescue (support)

Other Local Agencies

As defined in the County plans, the Emergency Response Directors can request support as necessary from the following:

- 1) Department of Fire and Rescue
- 2) Department of Public Health
- 3) Public Works/General Services Administration
- 4) Metro Transit Agency (Miami-Dade County)
- 5) American Red Cross

Miami-Dade Fire Rescue

The Miami-Dade County Fire Department, by agreement with Florida Power & Light Company (Appendix B) will respond to fires and support for hostile action based events on site upon request.

2.1.4 Federal Response Agencies

U. S. Nuclear Regulatory Commission

The Nuclear Regulatory Commission (NRC) will be notified via a direct, dedicated telephone line (ENS hotline) or designated alternate communications immediately after notification of the appropriate state or local agencies and not later than one hour after the licensee declares one of the Emergency Classifications. NRC is responsible for the coordination of the Federal Government's technical response activities.

U. S. Coast Guard

At the request of Florida Power & Light Company (on-site activities) and the DEM (off-site activities), the Coast Guard can provide rescue assistance and hostile action based event support in accordance with their general authority as described in Appendix B.

U. S. Department of Energy (DOE)

Upon request by the Florida Health Bureau of Radiation Control, DEM can request that the DOE provide a Radiological Assistance Team to aid in evaluating radiological hazards. This support would be provided out of DOE's Savannah River Operations Office, Aiken, South Carolina. This provision is described in the State Plan. DOE is responsible for coordinating the off-site radiological monitoring and evaluation activities of the Federal Government.

Federal Emergency Management Agency (FEMA)

FEMA has the responsibility for coordinating all non-technical response activities of the Federal Government off site. They serve as the primary point of contact for requests for federal assistance from State and Local officials and other federal agencies.

2.1.5 Private Sector Organization

Institute of Nuclear Power Operations (INPO)

INPO maintains industry source lists for personnel and equipment which can be made available for support services during an emergency. A letter of support has been provided in Appendix B.

Bechtel Power Corporation

Bechtel was the Architect/Engineer for the building and early operation of the Turkey Point Nuclear Plant. Upon request, Bechtel can supply emergency technical services and resources as provided by the Letter of Agreement listed in Appendix B.

URS (formerly Washington Group International, Raytheon Eng., and Ebasco)

URS, is an Architectural/Engineering organization in the nuclear industry. Upon request, they can supply emergency technical services as described in Appendix B.

AREVA

Areva is a nuclear services company that can provide engineering and technical support as detailed in the Letter of Agreement listed in Appendix B.

2.2 Florida Power & Light Company Emergency Response Organization

The purpose of this section is to describe FPL's Emergency Response Organization and resources. The Emergency Response Organization (ERO) is defined relative to the two phases of response and actions which are anticipated. This approach recognizes that the organization will be a dynamic one, dependent upon response time and the severity of the emergency. The on-shift response consists of shift operators, the plant duty shift and other trained plant personnel as available who are responsible for diagnosing the emergency and taking corrective actions. Along with the required shift operations personnel, the expanded response includes personnel necessary to man the TSC, OSC, and EOF. Figure 2-4 shows the resources associated with the on-shift response phase. The ERO includes plant and corporate personnel which are available as the emergency warrants, to assist in assessment actions, control, and stabilization.

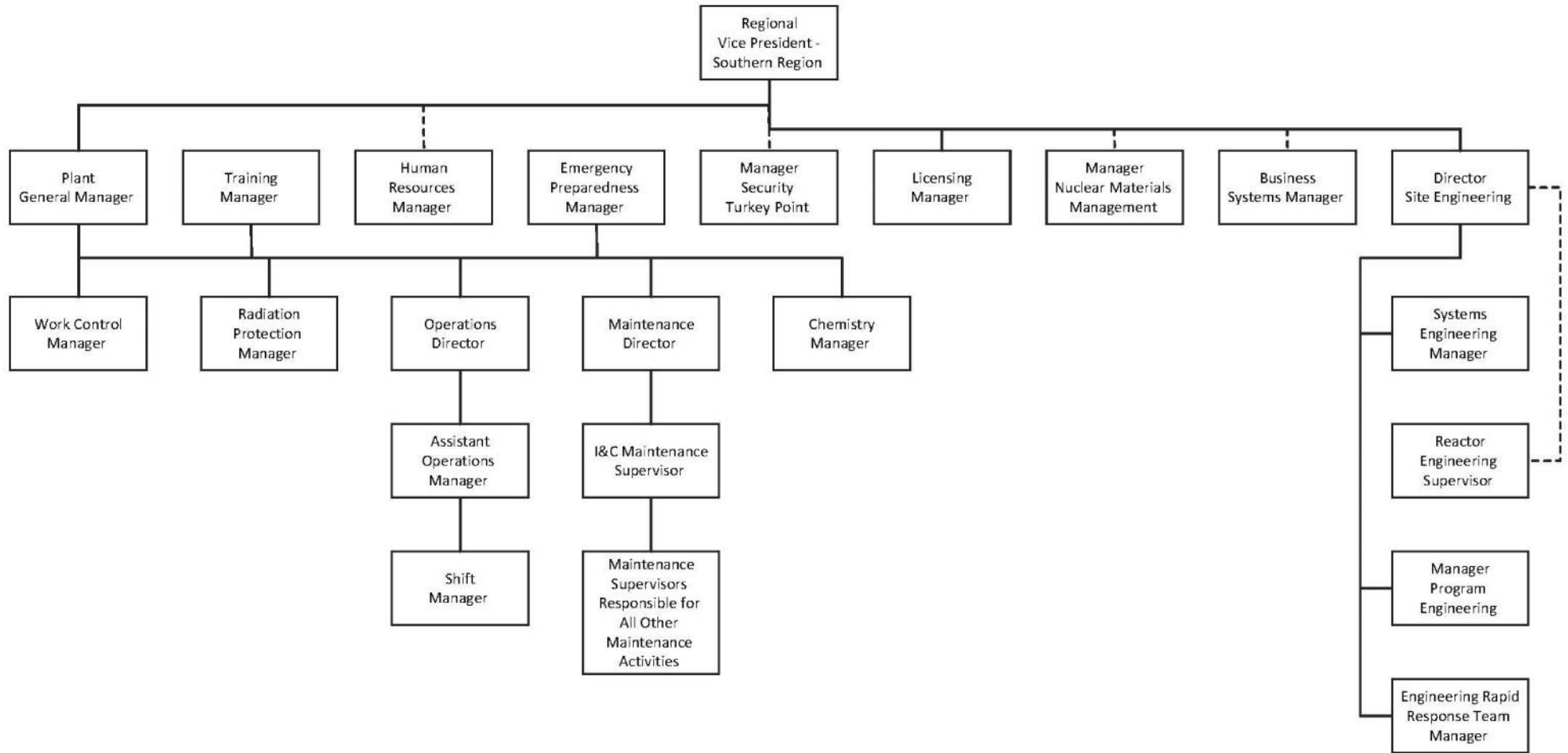
2.2.1 Normal Operating Organization

The normal operating organization chart for Turkey Point Units 3 and 4 is shown on Figure 2-3. The plant is staffed and qualified to take the necessary actions to implement the Emergency Plan and to initiate the immediate response actions necessary.

The normal hours plant staff consists of approximately 600 people. Key operating positions are described on Figure 2-3.

FIGURE 2-3

TURKEY POINT PLANT NORMAL OPERATING ORGANIZATION



Vice President, Turkey Point Plant

The Vice President, Turkey Point Plant, reports to the Chief Nuclear Officer, and has the direct responsibility for the operation and maintenance of the Turkey Point nuclear plant in a safe, reliable, and efficient manner.

Plant General Manager

The Plant General Manager reports to the Vice President, Turkey Point Plant and is responsible for overall plant operation and control over those on-site activities necessary for safe operation and maintenance of the plant.

Operations Manager

The Operations Manager has the overall responsibility for directing the day-to-day operation of the nuclear units. The Operations Manager reports directly to the Plant General Manager.

Assistant Operations Manager

The Assistant Operations Manager has responsibility for directing the activities of the nuclear plant operating shifts, including the Shift Manager, Unit Supervisors, Field Supervisors and the Shift Technical Advisors.

The Assistant Operations Manager reports directly to the Operations Manager.

Shift Manager

The Shift Manager is responsible for the actual operation of the nuclear plant and fuel handling operations. The Shift Manager directs the activities of assigned personnel and is cognizant of maintenance activity being performed while on duty. The Shift Manager reports directly to the Assistant Operations Manager.

Unit Supervisor

The Unit Supervisor is responsible for assisting the Shift Manager in the administrative functions associated in operating the nuclear units. The Unit Supervisor is responsible for the actual operation of the nuclear plant and fuel handling operations when the Shift Manager is absent from the Control Room. The Unit Supervisor reports directly to the Shift Manager.

Field Supervisor

The Field Supervisor is the working operating foreman assigned for each shift. The Field Supervisor reports directly to the Unit Supervisor.

Radiation Protection Manager

The Radiation Protection Manager manages the Radiation Protection Department and is responsible for implementing and maintaining the plant radiation protection program. The Radiation Protection Manager manages overall laboratory operation and ensures that Radiation Protection training, record keeping, and reporting requirements are met.

Chemistry Manager

The Chemistry Manager manages the Chemistry Department and is responsible for implementing and maintaining the plant chemistry program and for chemical and radiochemical monitoring, analysis, and evolution.

Maintenance Manager

The Maintenance Manager manages the Electrical, Mechanical, and Instrument and Control (I&C) Departments and is responsible for the maintenance of mechanical, electrical, and I&C equipment in the nuclear units.

Engineering Manager

The Engineering Manager manages Reactor Engineering, discipline engineers, and other general plant engineers and technicians.

Quality Manager

The Quality Manager manages the Quality Control/Quality Assurance Department. The Quality Manager is responsible for directing the activities of the QC Inspectors who perform surveillance and inspection of nuclear safety related activities to monitor for technical specification and regulatory compliance.

Site Functional Area Manager (SFAM) - Emergency Preparedness

Site Emergency Preparedness Manager who manages the Emergency Preparedness Program at the station.

Plant Nuclear Safety Committee (PNSC)

The PNSC functions to advise the Plant General Manager on all matters related to nuclear safety. Specific responsibilities of the PNSC are identified in the Updated Final Safety Analysis Report (UFSAR).

2.2.2 Emergency Response Organization

The Emergency Plan is structured so that normal company operations are not significantly disrupted. Personnel are designated as part of the Emergency Response Organization and arrangements are made for others to carry out routine duties in the event of an emergency. Emergency Response Organization members are also available periodically to develop, review, and practice procedures covering given responsibilities.

2.2.2.1 On-Shift Response Phase

Initiating Event (Unusual Event, Alert, Site Area Emergency or General Emergency)

The emergency response is initiated by any individual who discovers an initiating condition. This person notifies the Shift Manager by the fastest means possible. This first phase is characterized by diagnosis and immediate action by the plant operators on shift to place the plant in a safe and stable condition.

Organization

If the diagnosis indicates that the condition is classified as an Unusual Event, an Alert, Site Area Emergency or General Emergency, then the Shift Manager declares the classification.

The Shift Manager becomes the Emergency Coordinator and, as such, directs the On-shift Emergency Response Organization. Initially, shift operators and plant duty staff constitute the response organization. Emergency requirements take immediate precedence over normal operating responsibilities (as determined by procedure or at the direction of the Emergency Coordinator). The Plant Staff Emergency Assignments Section of this section describes the emergency services that can be provided initially by shift operators and the plant duty staff. Figure 2-4 shows the On-shift Emergency Response Organization.

Line of Succession

The line of succession in the Control Room for the position of Emergency Coordinator should the Shift Manager be incapacitated is as follows (in order of succession):

- 1) Unit Supervisor
- 2) Any other member of the plant staff with an active Senior Reactor Operator license

It is the responsibility of the new Emergency Coordinator to ascertain the status of all Emergency Coordinator responsibilities. When the EC function is transferred to higher level plant management, the EC may serve the function from the TSC.

The Emergency Coordinator can grant permission for watch relief, including the EC functions, when the EC judges it safe to do so. Following a proper turnover, the duties of the Emergency Coordinator may be assumed by a qualified member of the Plant Management staff.

Actions

The Emergency Coordinator initiates the following actions per plant procedures and uses judgment to:

- 1) Order corrective actions to bring the emergency under control.
- 2) Mobilize the Emergency Response Organization.
- 3) Notify the State Division of Emergency Management State Watch Office Duty Officer and the County Emergency Response Directors in accordance with plant procedures.
- 4) Provide recommendations for off-site protective actions as discussed in Section 5.
- 5) Notify NRC via ENS immediately after notification of the appropriate state or local agencies and not later than one hour after the licensee declares one of the Emergency Classifications.
- 6) Implement Severe Accident Management Guidance (SAMGs) as required.

Delegation

The Emergency Coordinator shall not delegate the following responsibilities:

- 1) Classification
- 2) Decision to notify Federal, State and Local authorities
- 3) Recommendation of protective actions for the public (off site)

The Emergency Coordinator may delegate other responsibilities.

Note: The Recovery Manager assumes the responsibility for notifying Federal, State and Local authorities and recommending protective actions when the EOF is staffed and operational.

Plant Staff Emergency Assignments

A. On-Shift Emergency Response Organization

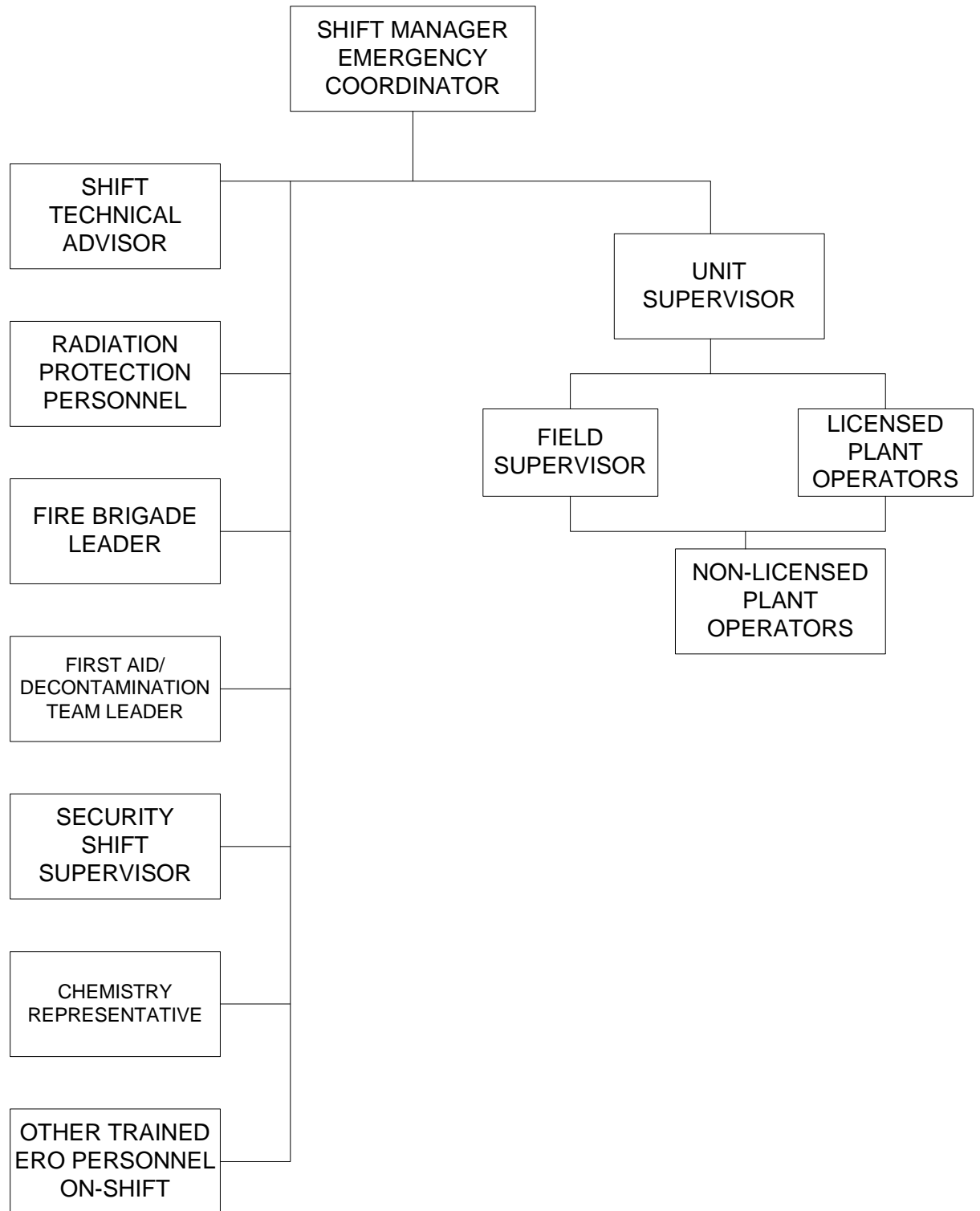
- 1) The On-shift Emergency Response Organization is composed of operators, the plant duty staff, and other trained ERO personnel on shift. All are qualified in procedures and practices required for performing specific duties as ERO members. The On-shift Emergency Response Organization takes action until the emergency condition is mitigated or until relieved.
- 2) Members of the On-shift Emergency Response Organization may be relieved only upon the specific instructions of the EC or appropriate facility supervisor. Merely knowing that a superior is present does not constitute a release from emergency duties and responsibilities.
- 3) The Turkey Point Nuclear Plant On-Shift Staffing Analysis Report, Reference# 16 Page 1-11, developed in accordance with 10 CFR 50 Appendix E, Section IV, A.9., shows that the on-shift Emergency Response Organization is not assigned responsibilities that would prevent the timely performance of its assigned functions as specified in the Emergency Plan. Table 2-2a of the Turkey Point Radiological Emergency Plan denotes the on-shift staffing.

B. Emergency Response Organization

- 1) The Expanded Emergency Response Organization is composed of Operations personnel and ERO personnel to staff the TSC, OSC and EOF, as necessary.
- 2) With the knowledge of the appropriate facility supervisor, alternate ERO members may be relieved by a counterpart on the On-shift Emergency Response Organization.

FIGURE 2-4

ON-SHIFT EMERGENCY RESPONSE ORGANIZATION



C. Functional Areas of Emergency Activity

1) Plant Systems Operations and Assessments of Operational Aspects

The Shift Manager on duty becomes the Emergency Coordinator in the event of an emergency. The Shift Manager may be relieved as the Emergency Coordinator by another member of the plant management staff trained as Emergency Coordinator. The normal alternate is the Unit Supervisor. The Shift Manager and Unit Supervisor positions are constantly manned. The Emergency Coordinator initially supervises the operations of the plant systems and controls the actions of emergency teams.

2) Emergency Direction and Control

Emergency Coordinator as previously discussed.

3) Notification and Communication

Emergency Coordinator as previously discussed.

4) Radiological Accident Assessment and In-Plant Protective Actions

The primary TSC Radiation Protection Supervisor is the Radiation Protection Supervisor. The Radiation Protection Supervisor directs the radiological surveillance performed by the Radiation Protection technicians under the orders of the Emergency Coordinator. A Radiation Protection representative, on site, is designated as the On-Shift TSC Radiation Protection Supervisor. The TSC Radiation Protection Supervisor recommends appropriate protective actions to the EC when not covered by procedure.

5) Plant System Engineering, Repair, Corrective Actions, and Support of Operational Accident Assessment

The Shift Technical Advisor will provide the initial technical support necessary for repair, corrective actions, and operational accident assessment.

6) Fire fighting

The Fire Brigade provides first line response to a fire on site. The Fire Brigade is under the direction of the Fire Brigade Leader. The Plant Fire Brigade and Miami-Dade County Fire Department are available to respond to fires on site if requested.

7) Rescue Operations and First Aid

- a) Rescue operations will involve the First Aid Team, as necessary. Under the control of the EC and TSC Radiation Protection Supervisor, entry to potentially hazardous areas will be made by the First Aid Team. Upon notification of the injury, the team will respond in accordance with instructions from the Emergency Coordinator.
- b) The First Aid responder is a trained qualified medical responder. Typically the medical responder is assigned to the on-site Medical Clinic which is staffed 24 hours a day, seven days a week. Any first aid trained employee could render first aid until the medical responder arrives.

8) Site Access Control and Personnel Accountability

A member of the Security Department will act as the TSC Security Supervisor. Personnel control and accountability are the responsibility of the Security Force. Security will notify the EC of any unaccounted for personnel. It is estimated that personnel accountability can be accomplished within 30 minutes of declaration of an evacuation [by the EC]. Notification of occupants in the Owner Controlled Area, outside the Protected Area, will be accomplished by security sweeps.

9) Repair and Damage Control

Repair and damage control will be performed by assigned teams. These teams may be composed of members from any plant disciplines and may be augmented by other plant staff and non-Florida Power and Light company support personnel. Under the direction of the Emergency Coordinator or designee, these teams are used to mitigate the consequences of the accident and to help restore the normal operation of the plant. Actions include the movement and set-up of portable shielding, tools, emergency equipment, and the operation of plant systems.

TABLE 2-2a

SHIFT AND EMERGENCY STAFFING CAPABILITIES**A. Normal Operations Shift Staffing**

<u>Position/Function</u>	<u>On-Shift</u>
Senior Reactor Operator (SM, Unit Supervisor)	3
Reactor Operator (RO, SRO)	3
Shift Technical Advisor	1
Nuclear Operator/Senior Nuclear Plant Operator	2
Nuclear Plant Operator/Nuclear Turbine Operator	2
Assistant Nuclear Plant Operator	1
Rad/Chem Technician	1
Radiation Protection Technician	1

Note: Minimum shift crew composition is identified in Technical Specifications. Fire Team staffing is per the Fire Protection Program. Security Force is per Security Plan.

NOTE

The Turkey Point On-Shift Staffing Analysis confirms the above positions are not assigned concurrent duties as specified in 10 CFR 50 Appendix E, Section IV, A.9.

B. Emergency Staff Capabilities

<u>Major Functional Area</u>	NUREG 0654, REV. 1 <u>Table B-1 Guidance</u> ***	
	<u>30 min.*</u>	<u>60 min.*</u>
1. Notification/Communication	1	2
2. Radiological Accident Assessment And Support of Operational Accident Assessment Protective		
a. Senior Manager (EOF)		1
b. Offsite Dose Assessment Rad/Chem Technician**	1	
c. Radiation Protection Technicians**	7	6

* Estimated response time from receipt of notification.

** Combines all qualified individuals for similar functions from Table B-1.

*** Augment staffing capabilities are routinely tested to ensure timely response is maintained with respect to the goals identified in NUREG 0654.

TABLE 2-2a (cont.)

SHIFT AND EMERGENCY STAFFING CAPABILITIES

<u>Major Functional Area</u>		NUREG 0654, REV. 1 <u>Table B-1 Guidance</u> ***	
		<u>30 min.*</u>	<u>60 min.*</u>
3.	Plant System Engineering, Repair and Corrective Actions		
A.	Core/Thermal Hydraulics **	1	-
B.	Electrical (TSC)/ Mechanical (TSC)	- -	1 1
C.	Mechanical Maintenance	-	1
D.	Radwaste Operator	-	1
E.	Electrical Maintenance	1	1
F.	I&C Technician	1	-

* Estimated response time from receipt of notification.

** Combines all qualified individuals for similar functions from Table B-1.

*** Augment staffing capabilities are routinely tested to ensure timely response is maintained with respect to the goals identified in NUREG 0654.

TABLE 2-2b

**FLORIDA POWER & LIGHT EMERGENCY RESPONSE ORGANIZATION
FUNCTIONS AND RESPONSIBILITIES**

<u>Function</u>	<u>On-shift</u>	<u>Responsibility</u>
		<u>Expanded</u>
Command and Control	Emergency Coordinator (Shift Manager)	EC/Recovery Manager
Warning	Emergency Coordinator	EC/Recovery Manager
Notification/ Communications	Emergency Coordinator	EC/Recovery Manager
Public Information	Emergency Coordinator	Emergency Information Manager
Accident Assessment	Emergency Coordinator (assisted by Shift Technical Advisor) (STA)	Recovery Manager (assisted by Emergency Technical Manager, Emergency Coordinator and TSC technical staff)
Core/Thermal Hydraulics	STA	Reactor Engineering
Fire	Fire Brigade Leader	Fire Brigade Leader
Rescue	Emergency Coordinator	Emergency Coordinator
Traffic Control	TSC Security Supervisor	TSC Security Supervisor
Emergency Medical Services	First Aid Team Leader	First Aid Team Leader
Transportation	TSC Security Supervisor	Emergency Security Manager
Protective Response (On-site)	Emergency Coordinator	EC/TSC RP Supervisor
Radiological Exposure Control (On-site)	Emergency Coordinator (Assisted by Radiation Protection Department Representative)	TSC RP Supervisor
Radiological Dose Assessment	Emergency Coordinator (Assisted by Chemistry Department Representative)	Recovery Manager (assisted by Recovery Manager's staff)

2.2.2.2 Expanded Response Phase

Initiating Action

This phase is initiated by the Emergency Coordinator (EC). Notification by the EC provides the basis for mobilization of the Florida Power & Light Company Emergency Response Organization (ERO) as well as State, Local, and Federal Emergency Response Organizations. Activation of FPL personnel proceeds to the degree necessary, as determined by the EC in response to the severity of the emergency. Notification of any emergency as defined by this plan will be made to the Recovery Manager (RM) by the EC or a designee.

Figure 2-5 shows the response organization that can develop during this period.

Recovery Manager (RM)

The RM is the Vice President, Turkey Point Plant, or a designated Senior Manager who has knowledge of nuclear plant operations and design. The Recovery Manager will be responsible for activating the EOF responders and directing the Company's Expanded Emergency Response Organization in conjunction with the EC. The RM has the authority to establish policy and to expend funds necessary to cope with any emergency situations that arise. Specific responsibilities for the RM include the following:

- 1) To periodically inform the Emergency Information of the on-site status and immediately of any significant changes.
- 2) To provide support and data as necessary to the Emergency Coordinator.
- 3) To obtain information on diagnosis and prognosis of the emergency, estimates of radioactive releases, prevailing meteorological conditions, projected radiological exposures, and recommended off-site protective actions.
- 4) To assume from the EC, the responsibility for communicating such information to and coordinating with the State and County response organizations and the issuance of PARs for the public.
- 5) To assure continuity of technical and administrative support, and material resources.
- 6) To request additional support for FPL and others as necessary.
- 7) To provide logistical support for emergency personnel (e.g., transportation, communications, temporary quarters, food, water, sanitary facilities in the field, and procurement of special equipment and supplies).

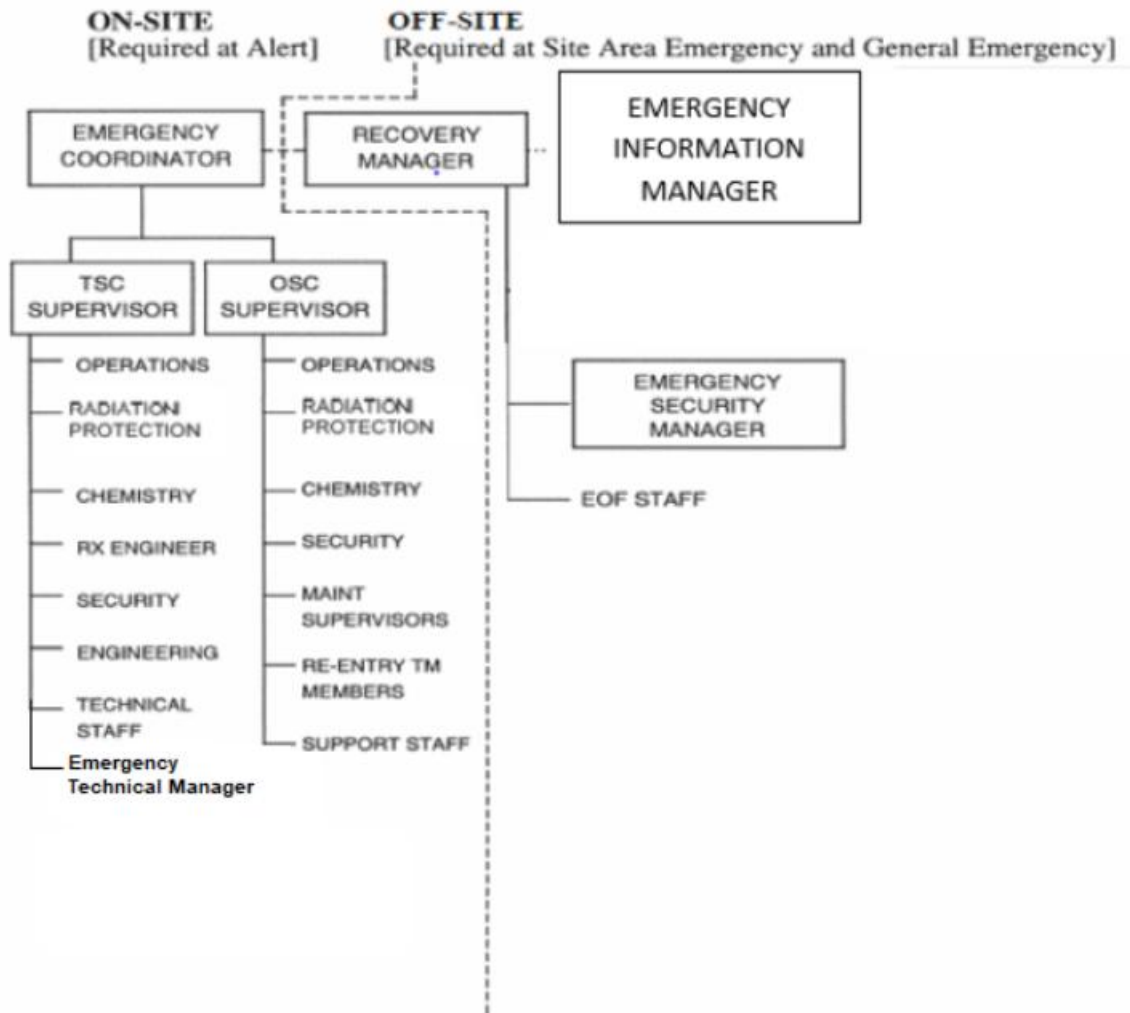
Emergency Information Manager (EIM)

The EIM will be a designated company manager or designated member of the Corporate Communications Department experienced in disseminating information to the public via the news media. The EIM operates from the Emergency Operations Facility and/or the EIM will have the following responsibilities:

- 1) To act as principal public spokesperson for FPL
- 2) To disseminate available information from the Recovery Manager (RM) to the news media and to provide periodic updates
- 3) To work with Federal, State, and County public information representatives to effect joint releases and public appearances

FIGURE 2-5

EXPANDED RESPONSE ORGANIZATION



Emergency Security Manager (ESM)

The ESM will be a Company supervisor or manager with security experience and will be responsible to the RM for providing liaison with county law enforcement and rescue agencies.

Emergency Technical Manager (ETM)

The ETM is a manager or senior engineer with detailed knowledge of nuclear plant operations and design and will be responsible for providing technical support and information regarding engineering design for the plant.

Augmented Staff Support

Additional staff support can be provided during this phase to augment the operating staff on site and off site. The EC and the RM will have access to this support through the Emergency Response Directory maintained by the Emergency Preparedness Coordinator.

Lines of Succession

Lines of succession for the RM and Managers of the Expanded Emergency Organization are controlled by procedures.

Delegation

Delegation authority is controlled by procedure.

2.3 Emergency Response Support and Resources

This section describes the arrangements that Florida Power & Light Company has made for assistance to augment the Emergency Response Organization.

2.3.1 Response Organization Representatives

Florida Power & Light company has provided facilities in the Emergency Operations Facility for representatives from FPL, State, Local, and Federal Response Organizations.

2.3.2 Radiological Laboratories

Florida Power & Light Company has primary and backup radiological laboratory facilities available. Environmental sampling will be augmented by the State's Mobile Emergency Radiological Laboratory (MERL) within approximately 6 hours of notification. If required, the laboratory facilities at FPL's St. Lucie Plant can be used; appropriate arrangements will be made on an as needed basis.

2.3.3 Additional Assistance

The Institute of Nuclear Power Operations (INPO) maintains industry source lists for personnel and equipment which can be made available for support services during an emergency. Additional technical assistance can also be obtained directly from the Nuclear Steam Supply System (NSSS) Vendor (Westinghouse Electric Corporation).

2.3.4 Support to Federal Assistance Teams

The Recovery Manager has the authority to request Federal assistance. It is expected that such assistance will be provided primarily by the NRC. Also, FEMA may send a representative for near-site coordination. It is expected that NRC personnel will begin to arrive at the site within 6 hours after declaration of a Site Area or General Emergency. Requests for assistance from the Department of Energy's Savannah River Operations in Aiken, South Carolina can be made by the State under the Federal Radiological Emergency Response Plan. Such requests are the responsibility of the Director of the Division of Emergency Management.

Federal assistance teams can achieve access to the plant via the Miami airport, approximately 1 hour from the plant. The Recovery Manager will assign an individual to meet such assistance teams and to escort them to the appropriate facilities on an as needed basis.

FPL has reserved space and facilities for a staff of nine from the NRC and one from FEMA at the EOF. This staff will have access to commercial telephone lines. Other support services (reproduction, office supplies, etc.) will be arranged through FPL. FPL has also allocated space in the Technical Support Center for a staff of five NRC personnel. This staff will have access to the dedicated ENS line. Other support services will be arranged through FPL. In addition to space in the TSC, FPL has provided a near-site facility for the NRC Response Team on the second floor of the building that houses the TSC (see Figure 2-6).

2.4 Emergency Facilities and Equipment

This section describes the facilities and equipment that Florida Power & Light Company maintains in readiness for an emergency situation. Figure 2-6 shows the locations of the on-site facilities.

2.4.1 Control Room

For any emergency response, the Control Room serves as the initial point of control. The Shift Manager returns to or remains in the Control Room to assume the role of Emergency Coordinator. If necessary, the EC may leave the Control Room, after a proper turnover to a qualified alternate, to make a personal assessment regarding plant safety. The Control Room is designed to remain tenable under conditions described in the FSAR. All plant related operations are directed from the Control Room. Nuclear plant instrumentation, including Area and Process Radiation Monitoring System instrumentation, is provided in the Control Room to give early warning of a potential emergency and to provide for continuing evaluation of an emergency situation. The Control Room contains the controls and instrumentation necessary for operation of the reactor under normal and emergency conditions.

A supply of protective clothing and respiratory equipment is maintained in the Control Room. Table 2-3 provides a list of emergency equipment maintained in the Control Room.

The Control Room contains the necessary communications equipment for notifying on-site personnel and off-site authorities in the event of an accident. This includes the State Hot Ring Down Telephone System, Emergency Satellite Communications System (EMNET), Emergency Notification System (ENS hotline) to the NRC Operations Center, commercial telephones, Florida Power & Light Company Radio System (VHF), plant page system, portable radio sets (walkie-talkies), and a radio paging system. These systems are used as defined by procedure to accomplish the necessary notifications and communications.

2.4.2 Emergency Operations Facility

The Company maintains an Emergency Operations Facility at the FPL General Office building (9250 W. Flagler in Miami) from which evaluation and coordination of all FPL activities related to an emergency can be carried out and from which FPL can provide information to Federal, State, and Local authorities.

Activation of the Emergency Operations Facility will be initiated by the Recovery Manager. The Emergency Operations Facility will be activated for an emergency classified as a Site Area Emergency or General Emergency. The Recovery Manager may activate the Emergency Operations Facility in other emergency classes if desired.

The Emergency Operations Facility (EOF) provides for sufficient space to accommodate the Florida Power & Light Company Response Organization and representatives of the designated Federal, State, and Local authorities. Alternate temporary locations for the Emergency Operations Facility may be designated by the Recovery Manager if a natural disaster or other external events significantly affects the operational capability of the facility.

The Emergency Operations Facility has an emergency communications network which includes commercial (Bell) telephone lines, redundant company radio systems, and dedicated communication capability with off-site agencies.

The Emergency Operations Facility will be staffed, as required, under the direction of the Recovery Manager. Arrangements will be made to staff the EOF in a timely manner.

2.4.3 Technical Support Center

The Company maintains an on-site Technical Support Center (TSC) to provide the Control Room and the Emergency Operations Facility with in-depth diagnostic and engineering assistance without adding to congestion within the Control Room. This assistance can help determine the operational decisions that would be appropriate to better control and to mitigate the consequences of an emergency.

Activation of the Technical Support Center will normally be initiated by the Emergency Coordinator in the event of an Alert, Site Area Emergency or General Emergency. The TSC will be staffed by personnel under the direction of the Emergency Coordinator. Arrangements will be made to staff the TSC in a timely manner.

The Technical Support Center provides for access to certain plant parameters monitored in the Control Room. The Technical Support Center contains equipment for monitoring airborne contamination and direct radiation. The Technical Support Center also contains protective clothing and respiratory protection devices. Pertinent records and drawings are available in the TSC. Table 2-3 provides a listing of the emergency equipment maintained in the Technical Support Center.

The Technical Support Center has an emergency communications network including commercial telephone lines to the Control Room, the Emergency Operations Facility, and the ENS dedicated phone line to the NRC Operations Center (in Maryland) and the NRC Region II Office (in Atlanta, GA).

2.4.4 Operations Support Center

The Company maintains an on-site Operations Support Center (OSC) to serve as an assembly point for auxiliary operators, who are not needed at assigned stations and Emergency Response Organization personnel who do not report immediately to the scene of the emergency. Emergency teams will be directed to appropriate activities by the Emergency Coordinator or designee through the OSC Supervisor.

Equipment that can be used by personnel dispatched from the OSC is stored in or near the OSC. Table 2-3 indicates the types of radiological protection material and equipment stored there.

Activation of the OSC will be initiated by the Emergency Coordinator. The OSC will be in operation for an Alert, Site Area Emergency or General Emergency within two hours of the declaration. Arrangements will be made to staff the OSC in a timely manner.

The OSC is maintained in the Maintenance Building. Open line telephone communications are maintained between the OSC and the Technical Support Center.

2.4.5 Alternate Operations Support Center

In the event that the OSC becomes uninhabitable, the Emergency Coordinator will designate an alternate location in accordance with procedures.

2.4.6 Joint Information Center

A Joint Information Center (JIC) will be provided to allow the news media access to information from the Emergency Operations Facility. The Emergency Information Manager will designate an individual to supervise the JIC. The JIC is located on the second floor of the General Office Building.

A Near-site Information Center may be set up at a location closer to the plant if deemed necessary by the Emergency Information Manager. The Emergency Information Manager will designate an individual to set up and supervise the Near-site Information Center, when activated.

2.4.7 Alternate Facilities for Use during a Hostile Action Event

The EOF serves as the alternate facility for the Technical Support Center and Operational Support Center in a hostile action event at the station. The EOF is equipped with offsite and onsite communication, command and control, and technical information to support a plant response from offsite.

A near site incident command post will be established in coordination with Miami-Dade Law Enforcement, and Fire and EMS to facilitate actions onsite.

2.4.8 Miami-Dade County Emergency Operations Center (EOC)

The Miami Dade County EOC will be the point from which county response activities will be controlled. The facility is located at 9300 NW 41 Street, Miami, Florida. Communications include Hot Ring Down, (EMNET) (Satellite Communications System), RACES, teletype, police, and fire networks, and telephone.

2.4.9 Monroe County (Key Largo) Emergency Operations Center (EOC)

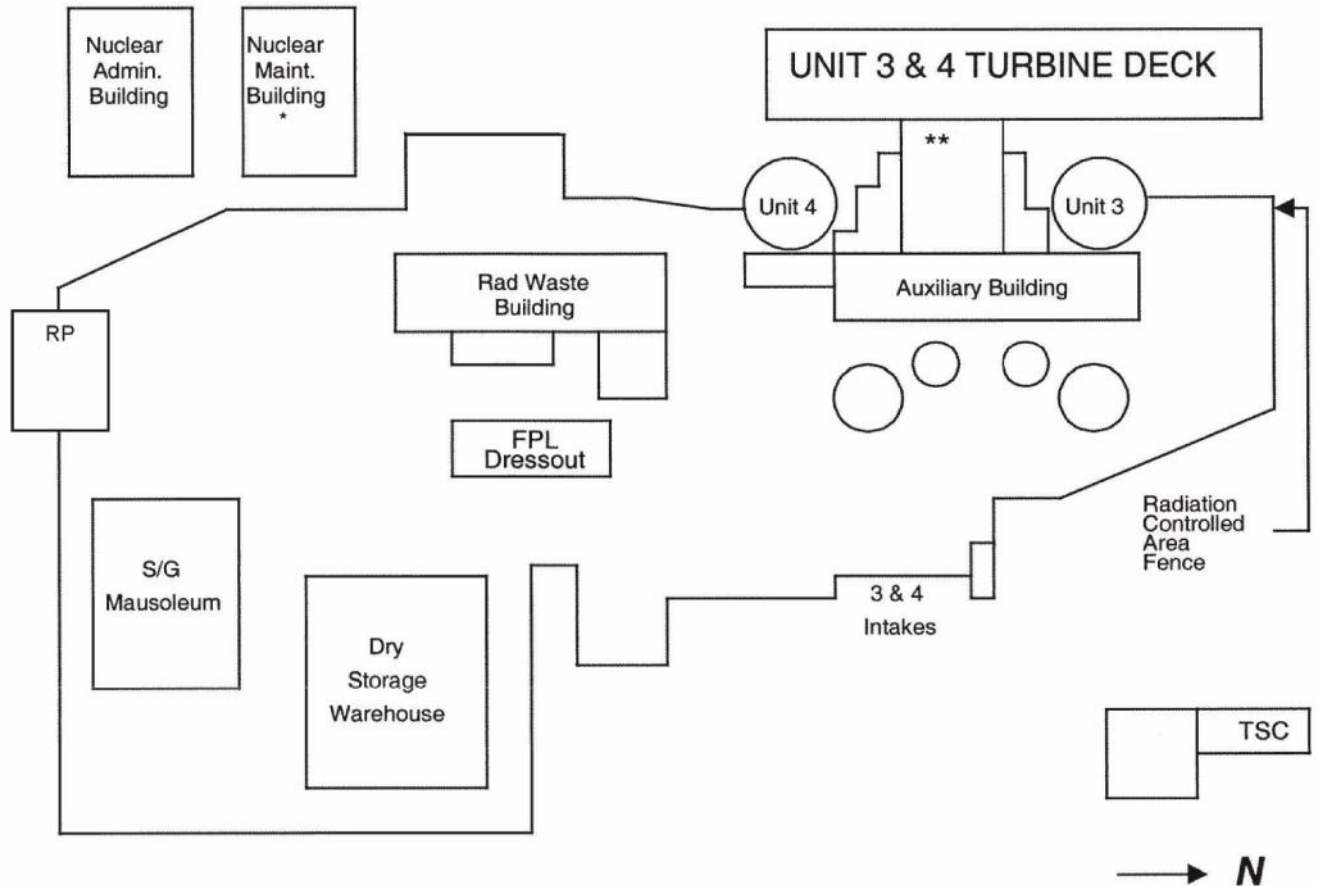
The Monroe County (Key Largo) EOC, located at the Tavernier Fire Station #22, will be where the County's emergency response activities are controlled. Communications include the Hot Ring Down, (EMNET) (Satellite Communications System), facsimile, police and fire radio, and commercial telephone. The Monroe County EOC in Marathon will aid the Tavernier EOC where possible.

2.4.10 Florida State Emergency Operations Center (State Watch Office)

The State's initial response comes from the State Emergency Operations Center (EOC) in Tallahassee. Initial notification goes to the State Watch Office located in the State EOC. The location is, 2555 Shumard Oak Blvd., Tallahassee, Florida. Communications include Hot Ring Down, (EMNET) (Satellite Communications System), facsimile, teletype and telephone. This facility is manned 24 hours a day by a duty officer.

FIGURE 2-6

TURKEY POINT PLANT EMERGENCY FACILITIES LOCATION MAP



Map Not to Scale

Notes:

- * Operations Support Center (Nuclear Maintenance Building - 2nd Floor)
- ** Units 3 and 4 Control Room

TABLE 2-3

**ON-SITE EMERGENCY RESPONSE FACILITIES
EMERGENCY EQUIPMENT
(TYPICAL)**

CONTROL ROOM EMERGENCY EQUIPMENT

DOSE RATE METER
FRISKER (COUNT RATE METER)
FULL FACE RESPIRATORS
IODINE CANISTERS
SELF READING DOSIMETERS
DOSIMETER CHARGER
PROTECTIVE CLOTHING
SELF CONTAINED BREATHING APPARATUS

OPERATIONS SUPPORT CENTER EMERGENCY EQUIPMENT

DOSE RATE METER
FRISKER (COUNT RATE METER)
FULL FACE RESPIRATORS
IODINE CANISTERS
SELF READING DOSIMETERS
DOSIMETER CHARGERS
PROTECTIVE CLOTHING
AIR SAMPLER
AIR SAMPLE HEAD
PARTICULATE FILTERS
SILVER ZEOLITE CARTRIDGES
SELF CONTAINED BREATHING APPARATUS

TECHNICAL SUPPORT CENTER EMERGENCY EQUIPMENT

DOSE RATE METER
FRISKER (COUNT RATE METER)
FULL FACE RESPIRATORS
IODINE CANISTERS
AIR SAMPLER
AIR SAMPLE HEAD
PARTICULATE FILTERS
SILVER ZEOLITE CARTRIDGES
SELF READING DOSIMETERS
DOSIMETER CHARGES
PROTECTIVE CLOTHING

2.5 Medical and Health Support

This section describes the agreements and provisions that Florida Power & Light Company has made for emergency medical support.

Plant First Aid Facility

The Plant First Aid Facility is provided with first aid supplies. In addition, standard 24-unit first aid kits are maintained at numerous locations throughout the Turkey Point Plant. A commercial first aid kit, containing the same type of supplies as the 24-unit kit is maintained in the Florida City Substation. The medical supplies and first aid kits in the first aid station, and Florida City Substation, are checked at least every quarter and replenished as necessary by the Safety Department (Substation is replenished and checked by Radiation Protection). Stretchers are placed at strategic locations at Units 3 and 4.

A personnel decontamination washroom and shower room with chemical decontamination agents is provided in the FPL Dress Out Building. Accepted decontamination practices will be employed on site as per Radiation Protection procedure. Life endangering injuries such as extensive burns, serious wounds or fractures shall receive prompt attention in preference to decontamination. Personnel with injuries that cannot be adequately handled on site, involving radiation or radioactive contamination, will be handled by Sheridan Emergency Physicians Services in the Emergency Room at Baptist Hospital of Miami, Inc., or by Mercy Hospital.

Sheridan Emergency Physician Services of South Dade

Sheridan Emergency Physician Services of South Dade, located at Baptist Hospital of Miami, provides for the immediate availability of fully equipped medical facilities with a staff of physicians and nurses skilled in the treatment of personal injury accompanied by radioactive contamination. This facility is available on a 24-hour basis.

The patient receiving area is equipped for patient decontamination and the performance of emergency medical procedures for life saving purposes. Additional emergency medical facilities in the hospital include the emergency room and an intensive care unit available for the treatment of decontaminated radiation accident casualties or persons who have received only internal radiation exposures.

Sheridan Emergency Physician Services of South Dade, will provide for hospital treatment, medical examinations, and laboratory services for those employees and other persons designated by Florida Power & Light who have been involved in a radiation incident.

Mercy Hospital

Mercy Hospital of Miami, also provides for the immediate availability of medical facilities and trained hospital staff in the treatment of personal injury accompanied by radioactive contamination. Medical services are available on a 24-hour basis.

The patient receiving area is equipped for patient decontamination and the performance of emergency medical procedures for life saving purposes. Additional emergency medical facilities in the hospital include the emergency room and an intensive care unit available for the treatment of decontaminated radiation accident casualties or persons who have received only internal radiation exposures.

Mercy Hospital will provide for hospital treatment, medical examinations, and laboratory services for those employees and other persons designated by Florida Power & Light who have been involved in a radiation incident.

Backup Facilities

When primary facilities are considered inappropriate because of the nature or severity of the injury sustained, then the injured person may be referred to a regional facility for hospitalization. Medical records, including bio-assay records, will be maintained permanently and copies furnished to Florida Power & Light.

A letter of agreement between the Oak Ridge Associated Universities (ORAU) and Florida Power & Light Company provides backup support for the definitive care and treatment of seriously irradiated persons. The ORAU Medical and Health Sciences Division operates the Radiation Emergency Assistance Center/Training Site (REAC/TS) in Oak Ridge, Tennessee, for the US Department of Energy. It studies radiation and radioactive materials in diagnosis, therapy, and research. Its specialized facilities are available for the care and treatment of possible radiation accident victims.

Transportation of Injured Personnel

Normal county ambulance service, company vehicle, or private vehicle will provide transportation for injured personnel.

In case of a life-threatening situation, the Shift Manager will determine the mode of transportation. The US Coast Guard and Miami-Dade Fire Rescue can provide 24-hour helicopter transportation in a life-threatening situation to a designated hospital on an as available basis.

Communications

When injured personnel are transported to Baptist Hospital or Mercy Hospital by county ambulance, radio contact as well as telemetry is normally maintained between the Hospital and the ambulance. In accordance with procedures, telephone notification is made by the Plant to the Hospital concerning the pending arrival of injured personnel. Additionally, if a helicopter were to be used, the Hospital could also maintain ground-to-air communications. Cellular telephones are available on site to be used as an alternative communication means.

3. EMERGENCY CLASSIFICATION SYSTEM

One of a minimum set of names or titles established for grouping off normal nuclear power plant conditions according to (1) their relative radiological seriousness, and (2) the time sensitive on-site and off-site radiological emergency preparedness actions necessary to respond to such conditions. The existing radiological emergency classification levels, in ascending order of seriousness are called: Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency.

3.1 Notification of Unusual Event

Events are in process or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

FPL actions in response to this category will be:

- 1) Assess and respond as directed by the Emergency Coordinator.
- 2) Report the Unusual Event to off-site authorities (FPL and non-FPL) in accordance with plant procedures.
- 3) Provide periodic plant status updates in accordance with plant procedures, typically every sixty minutes, upon significant change in plant conditions, or as agreed to with State, County and Federal agencies.
- 4) Close out by verbal summary to off-site authorities, or escalate to a higher class.

3.2 Alert

Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of hostile action. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

FPL actions in response to this category will be:

- 1) Assess and respond as directed by the Emergency Coordinator.
- 2) Augment resources as necessary by activating the Technical Support Center and Operations Support Center. The Recovery Manager should place the Emergency Operations Facility personnel in the facility for an Alert as conditions warrant.
- 3) Report the Alert Status to off-site authorities (FPL and non-FPL) in accordance with plant procedures.
- 4) Dispatch monitoring teams as directed by the TSC Radiation Protection Supervisor.

- 5) Provide periodic plant status updates in accordance with plant procedures typically every 60 minutes, upon significant change in plant status or as agreed to with State, County and Federal agencies.
- 6) Provide periodic meteorological assessments in accordance with plant procedures if releases are anticipated or occurring. If releases are occurring, provide dose estimates for actual releases.
- 7) Close out by verbal summary to off-site authorities, followed by a written summary within 24 hours, or escalate to a higher class.

3.3 Site Area Emergency

Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or hostile action that result(s) in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) prevent effective access to, equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.

FPL actions in response to this category will be:

- 1) Assess and respond as directed by the Emergency Coordinator.
- 2) Augment resources as necessary by activating the on-site Technical Support Center, the on-site Operations Support Center, the Emergency Operations Facility and the Joint Information Center.
- 3) Report the Site Area Emergency status to off-site authorities (FPL and non-FPL) in accordance with plant procedures.
- 4) Dispatch monitoring teams as directed by the TSC Radiation Protection Supervisor.
- 5) Provide periodic plant status updates in accordance with plant procedures typically every 60 minutes, upon significant change in plant status or as agreed to with State, County and Federal agencies.
- 6) Provide periodic meteorological assessments in accordance with plant procedures.
- 7) Provide release and dose projections based on available plant and meteorological information and foreseeable contingencies.
- 8) Close out or recommend a change in emergency class when appropriate by briefing off-site authorities.
- 9) Submit a brief written summary to off-site authorities within 24 hours after closing out the emergency.

3.4 General Emergency

Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or hostile action that result in an actual loss of physical control of the facility. Release can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

FPL actions in response to this category will be:

- 1) Assess and respond as directed by the Emergency Coordinator.
- 2) Augment resources by activating the on-site Technical Support Center, the on-site Operations Support Center, the Emergency Operations Facility and the Joint Information Center.
- 3) Report the General Emergency status to off-site authorities (FPL and non-FPL) in accordance with plant procedures.
- 4) Dispatch monitoring teams as directed by the TSC Radiation Protection Supervisor.
- 5) Provide periodic plant status updates in accordance with plant procedures, typically every 60 minutes, upon significant change in plant status or as agreed to with State, County and Federal agencies.
- 6) Provide periodic meteorological assessments in accordance with plant procedures.
- 7) Provide release and dose projections based on available plant and meteorological information and foreseeable contingencies.
- 8) Provide off-site protective action recommendations to the State DEM and counties.
- 9) Close out or recommend a reduction in emergency class when appropriate by briefing off-site authorities.
- 10) Submit a brief written summary to off-site authorities within 24 hours after closing out the emergency.

3.5 Emergency Action Levels

Emergency action levels for a wide variety of hypothetical off-normal plant occurrences are listed in Appendix D. The emergency action levels represent conditions generally observable by plant personnel and can be used to properly classify an occurrence as an Unusual Event, and Alert, a Site Area Emergency, or a General Emergency. Included in these tables are all accidents discussed by the Final Safety Analysis Report. Minor changes to parameter values and wording may be made in the emergency classification table throughout the year and incorporated in the annual revision to the emergency plan.

Tables 3-2 and 3-3 contain listings of Process and Effluent Monitors and Area Radiation Monitors that may be used to assess emergency conditions. These tables contain information regarding the type of monitor, range of the instruments and typical setpoints (actual setpoints are defined by procedure).

Table 3-4 contains a listing of non-radiological monitors, meters, or gauges that may be used to assess emergency conditions. This table contains information regarding the parameter measured, typical range of the monitor, meter or gauge, and typical normal range of the instruments.

The Emergency Coordinator may classify off-normal events into one of the four categories in the absence of a specific emergency action level based on an assessment that plant conditions have or may have adverse effects on the level of safety.

FPL maintains the capacity to provide an emergency classification within fifteen minutes of the condition becoming available to a knowledgeable operator. Fifteen minutes doesn't represent a grace period but a reasonable amount of time where conditions can be assessed and classification can occur. Events that already have a built-in time frame (fire, losing offsite power) must be declared as soon as that timeframe is exceeded or when it becomes evident that the conditions will be exceeded.

Note for Tables 3-2 through 3-4

The * indicators, valve numbers etc., indicates the placement of 3 or 4 e.g., TI-*-465 is TI-3-465 for Unit 3 and TI-4-465 for Unit 4.

TABLE 3-2

**PROCESS AND EFFLUENT RADIATION MONITORS
USED FOR ACCIDENT ASSESSMENT**

<u>MONITOR SETTINGS</u>	<u>TYPE</u>	<u>MEASUREMENTS</u>	<u>TYPICAL SETPOINT*</u>
Containment air particulate monitors (R3-11, R4-11)	Photomultiplier tube scintillation	1×10^{-11} to 1×10^{-5} $\mu\text{Ci/cc}$	4.49×10^{-6} $\mu\text{Ci/cc}$
Containment radioactive gas monitors (R3-12, R4-12)	Beta-gamma GM Tube Thin Wall	1×10^{-7} to 1×10^{-1} uCi/cc	5.57×10^{-3} uCi/cc
Plant Vent Gas Monitor (R-14)	Beta-gamma GM Tube Assembly (4 tubes in parallel)	10 to 3×10^5 cpm	3.6×10^4 cpm
Condenser Air Ejector Monitors (R3-15, R4-15)	Beta-sensitive plastic scintillator	10 to 1×10^6 cpm	4×10^2 cpm
Component Cooling Liquid Monitors (R3-17A, R3-17B, R4-17A, R4-17B)	Scintillation counter (NaI)	10 to 2.5×10^5 cpm	7×10^2 cpm
Waste Disposal System Liquid Effluent (R-18)	Photomultiplier tube scintillation crystal (NaI)	10 to 1×10^6 cpm	2.5×10^4 cpm
Steam Generator Liquid Sample Monitors (R3-19, R4-19)	Photomultiplier tube scintillation crystal (NaI)	10 to 1×10^6 cpm	5×10^2 cpm

*Actual Setpoints are determined as outlined in the Off-site Dose Calculation Manual (ODCM)

TABLE 3-2
**PROCESS AND EFFLUENT RADIATION MONITORS
USED FOR ACCIDENT ASSESSMENT**

<u>MONITOR SETTINGS</u>	<u>TYPE</u>	<u>MEASUREMENTS</u>	<u>TYPICAL SETPOINT*</u>
Reactor Coolant Letdown Line Activity Monitors (R3-20 R4-20)	GM Tube Thin Wall	0.1 to 1x10 ⁴ mR/hr	3x10 ² mR/hr
Specific Particulate Iodine Noble Gas Monitors (SPING)	Beta-gamma GM Tube	10 ⁻⁷ to 10 ⁵ μ ci/cc	Varies with detector and channel.
Main Steam Line Monitor RAD 3[4] - 6426, A, B, C	GM Tube	10 ⁻¹ to 10 ⁴ μ ci/cc	2.8E+2 μ ci/cc

*Actual Setpoints are determined as outlined in the Off-site Dose Calculation Manual (ODCM)

TABLE 3-3

AREA RADIATION MONITORS

This system consists of channels which monitor radiation levels in various areas. These areas are as follows:

<u>DETECTOR TAG. NO.</u>	<u>CHANNEL NUMBER</u>	<u>AREA MONITOR*</u>	<u>TYPICAL ALARM SETPOINT SETTINGS (mR/hr)</u>
RD-1401	1	Personnel Air Lock-Unit 3	100
RD-1402	2	Fuel Manipulator Crane-Unit 3	150
RD-1403	3	Incore Detector Seal Table-Unit 3	150
RD-1404	4	Personnel Air Lock-Unit 4	100
RD-1405	5	Fuel Manipulator Crane-Unit 4	150
RD-1406	6	Incore Instrumentation-Unit 4	100
RD-1407	7	Spent Fuel Pit Transfer Canal-Unit 3	40
RD-1408	8	Spent Fuel Pit Transfer Canal-Unit 4	50
RD-1409	9	Tank & Pump Room	10
RD-1410	10	Chemical Storage Area	10
RD-1411	11	Cask Handling Facility-Unit 4	10
RD-1412	12	Cask Handling Facility-Unit 3	10
RD-1413	13	Sample Room-Unit 3	10
RD-1414	14	Sample Room-Unit 4	10
RD-1415	15	North End of North/South Corridor	5
RD-1416	16	South End of North/South Corridor	5
RD-1417	17	East End of East/West Corridor	5
RD-1418	18	West End of East/West Corridor	5
RD-1419	19	Spent Fuel Pit Exhaust-Unit 3	15
RD-1420	20	Control Room	2
RD-1421	21	Spent Fuel Pit North wall-Unit 3	20
RD-1422	22	Spent Fuel Pit South wall-Unit 4	20
RD-1423	23	New Fuel Room-Unit 3	20
RD-1424	24	New Fuel Room-Unit 4	10

* The monitors all have a range of 10^{-1} to 10^7 mr/hr, (10^{-4} to 10^4 R/hr).

CONTAINMENT HIGH RANGE RADIATION MONITORS (CHRRM)

	<u>RANGE</u>	<u>ALARM SETPOINTS</u>
RI-6311A GM Tube	1 to 1×10^8 R/hr	High 1.3×10^4 R/hr, High High 1.3×10^5 R/hr
RI-6311B GM Tube	1 to 1×10^8 R/hr	High 1.3×10^4 R/hr, High High 1.3×10^5 R/hr

A representative containment radiation reading can be obtained from the preplanned alternate method of containment radiation monitoring, if both CHRRMs are inoperable.

Typical Alarm Setpoint: Actual Alarms based on plant conditions and may vary from those indicated.

TABLE 3-4
**NON-RADIOLOGICAL INSTRUMENTATION USED FOR
ACCIDENT ASSESSMENT**

<u>INSTRUMENTATION</u>	<u>RANGE</u>	<u>NORMAL RANGE</u>
Charging Flow (FI-*-122)	0-150 GPM	35 - 95 GPM
Letdown Flow (FI-*-150)	0-150 GPM	45 - 120 GPM
V.C.T. Level (LI-*-115)	0-100%	16 - 50%
R.C.S. Flow (FI-*-414, 415, 416, 424, 425, 426, 434, 435, 436)	0-120%	95 - 115% (Hot S/D to Full Power)
R.C.S. T-hot (TR-*-413)	0-750°F	547 - 620°F
R.C.S. T-cold (TR-*-410)	0 - 750°F	547 - 549.2°F
Safety Tailpipe Temperature (TI-*-465, 467, 469)	50 - 400°F	70 - 170°F
Power Operated Relief Tailpipe Temperature (TI-*-463)	50 - 400°F	70 - 230°F
R.C.S. T-avg (TI-*-412, 422, 432 for protection and TI-*-411, 421, 431 for control)	540 - 610°F	547 - 581.5°F
Pressurizer Temperature, both vapor and liquid. (TI-*-454, 453)	0 - 700°F	650 - 654°F

TABLE 3-4

**NON-RADIOLOGICAL INSTRUMENTATION USED FOR
ACCIDENT ASSESSMENT (CONT.)**

<u>INSTRUMENTATION</u>	<u>RANGE</u>	<u>NORMAL RANGE</u>
Pressurizer Pressure narrow Protection: PT-455, 456, 457 Control: PT-444, PT 445 Range (PT-*-455, 456, 457 for protection and PT-*-444, 445 for control)	1500 - 2500 psig	2205-2254 psig (control at 2235 psig)
Pressurizer Pressure Wide Range (PT-*-403, 404, 405, 406)	0 - 3000 psig	2205 - 2265 psig
Pressurizer Level (LT-*-459, 460, 461)	0 - 100%	22.2 - 60%
Steam Generator Level Narrow Range 474, 475 (LT-*-476, 478, 484, 485, 486, 488, 494, 495, 496, 498)	0 - 100%	47 - 53%
Steam Generator Level Wide Range (LR-*-477)	0 - 100%	62 - 68%
Steam Generator Steam Flow (FT-*- 474, 475, 484, 485, 494, 495)	0 - 5 x 10 ⁶ lbs/hr	0.5 - 4 x 10 ⁶ lbs/hr
Steam Generator Feed Flow (FT-*-476 477, 486, 487, 496, 497)	0 - 5 x 10 ⁶ lbs/hr	0.5 - 4 x 10 ⁶ lbs/hr

TABLE 3-4

**NON-RADIOLOGICAL INSTRUMENTATION USED FOR
ACCIDENT ASSESSMENT (cont.)**

<u>INSTRUMENTATION</u>	<u>RANGE</u>	<u>NORMAL RANGE</u>
Steam Generator Pressure (PT-*-474, 475, 476, 484, 485, 486, 494, 495, 496) and Steam Header Pressure (PT-*-464, 466, 468)	0 - 1400 psig	770 - 1085 psig
R.H.R. Flow (when in use) (FT-*-605)	0 - 8500 GPM	3500 - 5000 psig
H.H. Safety Injection Flow (FI-*-943)	0 - 1000 GPM	Not Applicable
H.H. Safety Injection Pressure (Pi-*-943)	0 - 2000 psig	1200 - 1400 psig
QSPDS (located at RCO desk and on VPB)	Inputs allow measurement of subcooling margin, Rx core temperatures and Rx vessel water levels.	
Containment Pressure Narrow Range (PT-*-6425 A, B)	-6 psig to +18 psig	0 - 1 psig
Containment Pressure Wide Range (PT-*-6306 A, B)	0 - 180 psig	0 - 1 psig
Containment Temperature (TE-6700/1/2-*)	0 - 300°F	70 - 130°F
Containment Sump Level Range (R-*-1418)	0 - 300 gal.	57 - 266 gal.
Containment Sump Level Wide Range Tag # (LT-6308 A, B)	0 - 400"	6 - 28"

TABLE 3-4

**NON-RADIOLOGICAL INSTRUMENTATION USED FOR
ACCIDENT ASSESSMENT (CONT.)**

<u>INSTRUMENTATION</u>	<u>RANGE</u>	<u>NORMAL RANGE</u>
Containment Level Wide Range Tag# (LT-6309 A, B)	0 - 100"	0
Auxiliary Feed Water Flow (FI-*-1401A, 1401B, 1457A, 1457B, 1458A, 1458B)	0 - 300 GPM	Not Applicable
R.W.S.T. Level (LT-*- 6583 A, B)	0 - 330,000 gal.	320,000 - 330,000 gal.
4kV Bus Volt Meters	0 - 5250 volts	3950 - 4350 volts
4kV Bus Current Meters	0 - 4000 amps	0 - 3500 amps
DC Bus Volt Meters	0 - 200 volts	128 - 132 volts
T.E.C. Safety Acoustic Monitor Tag # ZT-6303 A, B, C	(Alarms when indication of Safety lifting is required)	

4. NOTIFICATION AND COMMUNICATION

This section describes the procedures and methods established for notification and follow-up communications within Florida Power & Light Company, and from Florida Power & Light Company to the appropriate State, County, and Federal response organizations. Section 4.6, Communications Equipment, describes the referenced systems in more detail. Figure 1-2 shows the initial notification flow. Table 4-1 presents the organizational positions and alternates responsible for ensuring the manning of communications links for the primary response organizations.

4.1 FPL Emergency Response Organization

The FPL Emergency Coordinator or Recovery Manager acting in accordance with Emergency Plan Implementing Procedures has the responsibility for making the necessary notifications and communications, and for determining the content of the notification. However, actual contacts may be made by designated communications assistants. The use of the phrase "Emergency Coordinator" below is also defined as "Emergency Coordinator or designee", except for those items described in Section 2.2.2.1 which cannot be delegated.

Once the EOF is declared operational, the Recovery Manager assumes the responsibility for notification to off-site governmental agencies.

4.1.1 Initial Notification

Florida Power & Light Company emergency procedures call for the following actions for initial notification within the FPL organization.

Personnel detecting a potentially significant off-normal event or condition should report it to the Shift Manager by the fastest means available. This may mean face-to-face communication, the Plant Public Address System, or the commercial (Bell) telephone system. These systems provide adequate means of redundancy for this initial notification.

The following information should be related to the extent possible:

- 1) Nature of off-normal event (fire, pipe rupture, etc.)
- 2) Extent of damage to equipment
- 3) Location of event
- 4) Personnel injuries
- 5) Name of individual reporting the event

The Shift Manager directs the investigative actions to address the off-normal event. After investigation, the Shift Manager classifies the event and, if it is determined to be an Unusual Event, Alert, a Site Area Emergency, or a General Emergency, implements this Emergency Plan and becomes the Emergency Coordinator.

If necessary, the Emergency Coordinator notifies plant personnel of the emergency situation and any required protective actions via the Plant Public Address System. Activation of FPL Personnel proceeds to the degree necessary, as determined by the Emergency Coordinator (EC) and Recovery Manager (RM) in response to the severity of the emergency.

The Emergency Coordinator will relay information to the Recovery Manager (RM), this may be done via the Duty Call Supervisor. The DCS notifies the RM and appropriate emergency response personnel by commercial telephone, cellular phone, or beeper.

The Emergency Coordinator provides the following information to the DCS to the extent possible:

- o Type of accident or incident
- o Affected unit
- o Assessment of the emergency condition (including the class of emergency)
- o Information on personnel injuries, and an estimate of personnel radiation exposures
- o Offsite support already called in and/or required
- o An estimate of the magnitude of a radioactive material release and the area possibly affected
- o Actions already taken or recommended with respect to the evacuation of various on-site areas
- o Wind speed and direction
- o Assessment of potential radiation exposure to persons offsite and any protective actions for offsite areas recommended

4.1.2 Communications

Initially, communications between the Emergency Coordinator (in the Control Room) and the FPL Expanded Emergency Response Organization are by telephone, with radio as the backup.

Follow-up messages regarding the plant status and requests for on-site support by off-site organizations will be made periodically and as needed by the EC to the RM. Recommendations for off-site protective measures to DEM may be included as part of follow-up messages. These measures are referenced in Figure 5-1.

4.2 State Agencies

State of Florida notification and communications procedures are presented in the Florida Radiological Emergency Management Plan for Nuclear Power Plants. File locations are listed in Appendix A.

4.2.1 Division of Emergency Management

Initial Notification

FPL's Emergency Coordinator will make initial notification within approximately 15 minutes of declaring any emergency to the Division of Emergency Management via the Hot Ring Down Telephone System to the State Watch Office Duty Officer at the State Watch Office in Tallahassee. Commercial telephone and EMNET (Satellite Communications System) serve as the backup systems for initial notification. Backup phone numbers for 24-hour per day notification are provided by procedure.

Information to be communicated to DEM during the initial notification is shown in the State of Florida Notification Message Form, Table 4-2. The listed information will be provided to the extent possible at the time of notification. Information that should be included in follow-up messages is also shown in Table 4-2. The follow-up message may come from the TSC staff, if it is operational, or the EOF, if it is operational.

The initial notification may be brief with certain information not available. Follow-up messages from the Emergency Coordinator/RM to the Division of Emergency Management (DEM) will include the required information as it becomes available.

The Division of Emergency Management (DEM) has established a procedure to authenticate emergency notification from the Turkey Point Plant. The Hot Ring Down and EMNET Systems are restricted circuits under control of DEM and local government. Their use is self-authenticating.

Communications

The Emergency Coordinator/RM will maintain periodic contact with the State Watch Office, located at the State EOC in Tallahassee, via the Hot Ring Down network.

FPL responsibility for communication with off-site State and Local government agencies is transferred from the Emergency Coordinator to the Recovery Manager when the Recovery Manager declares the EOF operational.

TABLE 4-1
COMMUNICATIONS RESPONSIBILITIES

The following positions are responsible for ensuring the communication links are manned for the listed organizations/facilities:

1) FPL On-shift Emergency Response Organization/Control Room

Primary: Emergency Coordinator
1. Shift Manager
2. Alternate as defined by plan and procedure.

Alternate: Designated Communicator (from available plant operating and technical staff).

2) FPL Expanded Emergency Response Organization/Technical Support Center/OSC and Emergency Operations Facility

Primary: Emergency Coordinator/Recovery Manager
1. Plant General Manager (TSC) and Vice President Turkey Point Plant (EOF)
2. Alternate as defined by plan and procedure.

Alternate: Designated Communicator (from available management or technical staff).

3) Florida Division of Emergency Management/State Emergency Operations Center, Tallahassee

Primary: Chief of Operations, DEM

Alternate: As described in the State Plan

4) Miami-Dade County/Emergency Operations Center, Miami

Primary: Miami-Dade County Office of Emergency Management Director

Alternate: As described in the State Plan

5) Monroe County/Emergency Operations Center, Key Largo

Primary: Monroe County Office of Emergency Management Director

Alternate: As described in the State Plan

6) Florida Health Bureau of Radiation Control

Primary: Supervisor, Bureau of Radiation Control

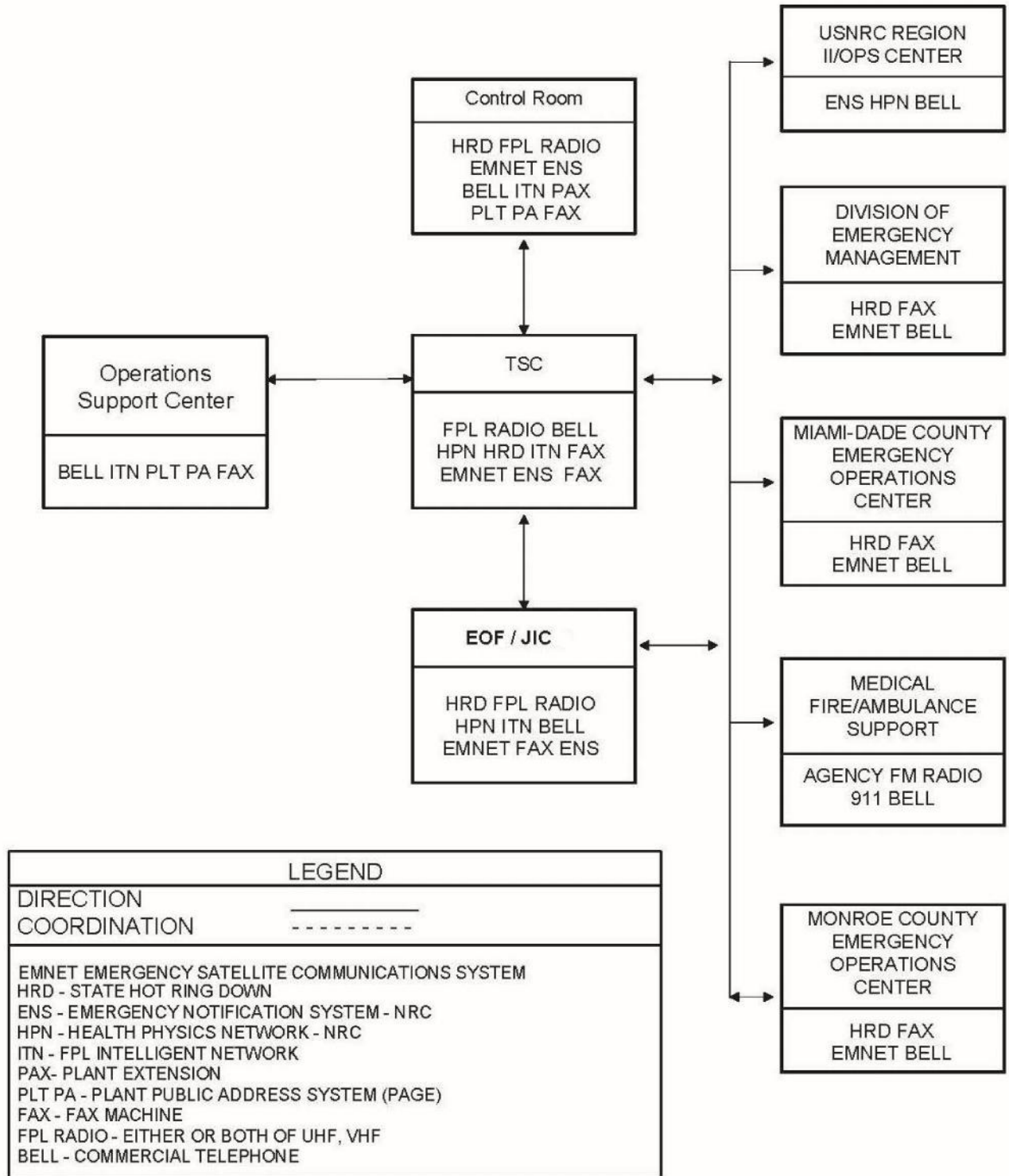
Alternate: As described in the State Plan

TABLE 4-2

See Form F439

FIGURE 4-1

Communications Interfaces



4.2.2 Florida Health Bureau of Radiation Control

Initial Notification

The Division of Emergency Management (DEM) State Watch Office Duty Officer is responsible for notifying the Florida Health Bureau of Radiation Control (FH - BRC). A Health Physicist contacts the Miami-Dade County EOC to ascertain what, if any, protective actions have been initiated. If required, the Bureau of Radiation Control activates the FH - BRC's Mobile Emergency Radiological Laboratory (MERL) and/or the Radiological Monitoring Teams.

Communications

The Public Health Physicist maintains contact with the Division of Emergency Management (DEM) via vehicle radio in transit to the FPL Emergency Operations Facility. Contact is maintained with the Mobile Emergency Radiological Laboratory (MERL) by the Division of Emergency Management (DEM) via radio or cellular phone while the MERL is in transit. On arrival, commercial phones are available also.

The State Plan describes provisions for communications between the EOC and State off-site radiological monitoring teams, as well as communications for field assessment teams.

4.3 Miami-Dade County Office of Emergency Management Director and Monroe County Office of Emergency Management

Initial Notification

The County Emergency Response Directors are initially notified (within 15 minutes) simultaneously via the same Hot Ring Down communication used to notify the Division of Emergency Management for all four emergency classes. The Hot Ring Down System is manned on a 24-hour basis by the Miami-Dade County Department of Public Safety (911 Center) and Monroe County Sheriff's Office (central dispatch in Marathon).

The Emergency Management Directors can then be reached by telephone or by dispatching a patrol car. Also, the State Watch Office Duty Officer at the Division of Emergency Management is responsible for confirming the receipt of emergency notice by the County Office of Emergency Management Directors. When the emergency notification is by commercial telephone, the State Watch Office Duty Officer is responsible for verifying the message from the Plant by a call back procedure and informing the County Directors that the message has been verified. Backup phone numbers for 24 hour per day notification are provided by procedure.

Follow-up messages concerning the emergency may come from the TSC staff or the EOF. Information that should be contained in these messages is shown in Table 4-2.

Communications

The Miami-Dade County Emergency Management Director proceeds to the Miami-Dade County Emergency Operations Center and uses the communication channels available there. These include Hot Ring Down, (EMNET) (Satellite Communications System), RACES, teletype, police and fire networks, and telephone.

The Monroe County Office of Emergency Management Director proceeds to the Emergency Operations Center and uses the communications channels available there. These include HRD, (EMNET) (Satellite Communications System), RACES, teletype, police, and fire networks, facsimile, and commercial telephone.

4.4 Federal Agencies

4.4.1 U. S. Nuclear Regulatory Commission

Initial Notification

The NRC Operations Center in Maryland is notified of all radiological emergencies via the Emergency Notification System from the Control Room. The notifications are made in accordance with Federal Regulations and plant procedures. The Emergency Coordinator or designee notifies the NRC Operations Center immediately after notification of the appropriate state or local agencies and not later than one hour after the licensee declares one of the Emergency Classifications. Alternate commercial phone numbers are provided by procedure.

Communications

Communications with the NRC may be handled as necessary by telephone from the Control Room, the TSC (if operational), or the EOF (if operational).

4.4.2 U. S. Coast Guard

Assistance from the Coast Guard for on-site rescue activities, aid, or evacuation of persons in danger, and for the protection of property threatened by any type of disaster can be requested by telephone call from the Emergency Coordinator or designee or the Recovery Manager or designee to the Coast Guard Duty Officer.

4.5 Notification of the Public by the State/County

The Florida Radiological Emergency Management Plan for Nuclear Power Plants defines the State and County procedures for notifying the public in the event of an emergency. Section 5 describes further provisions.

4.6 Communications Equipment

The various communications systems previously discussed are described in more detail below.

This communications network incorporates all telephones, the Plant Public Address System, fixed and mobile radio systems, and radio "beepers" employed for routine plant operation and other normal Company business. In addition, the communication systems of State and County agencies and other organizations with which the Company has emergency assistance agreements will be used to implement emergency activities.

Plant Page System

The Plant Page System, with speakers strategically located throughout the Plant site, provides for the transmission of warning and instructions in event of an emergency.

A solid state Plant Page System is powered from a preferred 120V AC circuit. An alternate power supply is provided.

The Plant Page System uses noise canceling dynamic microphone type handsets located throughout the plant. The system includes one paging channel and one party line channel.

The Plant Page System at Units 3 and 4 is completely independent of the system at Units 1 and 2. Notification by phone to the Unit 1 and 2 Control Room (by the Unit 3 and 4 Control Room) enables fossil plant employees to be advised of actions to take as a result of events occurring at the nuclear site.

Bell System Telephones (Commercial Telephones)

There are numerous Bell Telephone System links connected to the plant for normal dial telephone service. This system represents the primary system for routine communication with areas outside the plant.

Motor Maintenance Circuit

This is a communications circuit, separate from the Plant Page System, but using 120V AC power from the Plant Page System power supply source. The circuit consists of various outlets throughout the plant, near major equipment both inside and outside the containment and at the fuel handling areas, into which a headset with a microphone can be plugged, to enable communication to be carried on while leaving the operator's hands free. Outlets for this circuit are also provided in the Control Room of Units 3 and 4 so that communications between the Control Room and outlying stations can be established.

FPL Intelligent Tandem Network (ITN) System

Telephones in most FPL locations may access the Intelligent Tandem Network (ITN) Telephone System. Through the ITN and its associated "Uniform Dialing Plan", other company office locations may be directly dialed, WATS line may be accessed, and local telephone calls may be placed. This system uses a combination of Bell telephones and FPL telephones, depending upon office location.

Portable Radio Transceiver Sets

Various portable radio transceivers (walkie-talkies) are available to supplement the fixed communications equipment in the plant. These radios are lightweight battery operated units which may be easily carried by personnel to any location on the plant site. Some of these portable radios are capable of communicating with the FM radio transceiver over a range of several miles.

FPL Radio Paging System

Telephones in the FPL ITN System are interconnected to the FPL Radio Paging System. This system is capable of reaching beepers located within FPL's service area from Sebastien Inlet to the Miami-Dade/Monroe County line. Beepers are regularly assigned to key personnel in the Emergency Response Organizations as shown in the Emergency Response Directories, and additional beepers can be quickly assigned if required in an emergency. A beeper is also assigned to the Duty Call Supervisor.

Company Radio System

The Company radio system consists of a variety of fixed base radio equipment. The System Operations Power Coordinator's office, trouble dispatcher offices, service centers, power plants and mobile service vehicles are equipped with one or more of these radio systems.

In the event of interruption of the on-site electric service to the base radio stations, back up power is available to the equipment.

Transceivers are located in the Control Building Elevator vestibule. The operating set and battery back up units for these radios are located in the Unit 3 and 4 Control Room, TSC, and other on-site locations. These radios will provide backup communications between the Turkey Point Plant, Systems Operations Office, EOF, and Juno Beach Office.

Portable Satellite Telephones

Various portable satellite telephones are available to supplement the fixed communication equipment in the plant. These telephones are lightweight battery operated units which may be easily carried by personnel on the plant site and function during an extended loss of AC power event.

State Hot Ring Down Telephone

The State Hot Ring Down telephone is installed in the Control Room TSC, and EOF. This system uses dedicated commercial telephone lines and is activated through predesignated three-digit access "telephone numbers". The initial notification of an emergency and other required notifications are made via this system to the State Division of Emergency Management (State Watch Office-Tallahassee) and the County Emergency Response Directors. Commercial telephone and (Satellite Communications System) serve as backups.

Emergency Satellite Communication System (EMNET)

EMNET is an Emergency Satellite Communication System which is available in the Control Room, the Technical Support Center and the Emergency Operations Facility. The initial notification of all emergencies and other required notifications to the State Division of Emergency Management (DEM) and the County's Department of Public Safety will be made via the Hot Ring Down telephone with EMNET as the second alternate communications pathway.

NRC FTS Federal Telephone System

Portions of this system are used to contact the NRC, such as the ENS and HPN. These phone links are described below:

-) Emergency Notification System (ENS) - The ENS is used for initial notification by the licensee, as well as ongoing information on plant systems, status and parameters. The ENS is installed in each Control Room, TSC and EOF.
-) Health Physics Network (HPN) - The HPN is used for communication with the licensee on radiological conditions (in-plant and off-site) and meteorological conditions, as well as their assessment of trends and needs for protective measures on site and off site. The HPN is located in the TSC and EOF.
-) Emergency Response Data System (ERDS) - The ERDS is a direct near real-time electronic data link between the plant's on-site computer system and the NRC Operations Center. The ERDS provides for the automated transmission of a limited data set of selected plant parameters.

4.7 Testing

As discussed in Section 7.1, Exercises and Drills, communications equipment and procedures will be tested periodically as part of the FPL program of exercises and drills for maintaining emergency preparedness.

5. RESPONSE TO ACCIDENT CONDITIONS

Appendix D identifies a spectrum of off-normal events and classifies those events into four categories. The classification is based on Emergency Action Levels which are related to the instrument readings, and/or observations, of plant conditions as shown in the tables. This section discusses the assessment of and response to these events.

5.1 Accident Assessment

Once an off-normal event has been detected and classified in accordance with the Emergency Action Levels, a process of continuing assessment will be initiated. System instruments and procedures which would be used, as appropriate, in the assessment process are described below. Specifications of instrumentation utilized for accident assessment are contained in procedures. Emergency Operating Procedures (EOPs) and Severe Accident Management Guidance (SAMG) should be used as required. Post accident sampling capabilities are also described in procedures.

5.1.1 Plant Release Pathways

The Turkey Point Plant is provided with systems for measuring radioactivity at potential effluent release points and within the primary Containment Buildings (See Table 3-2). The principal release point is the plant vent. The following systems may be sources of radiological effluent through the plant vent:

- o Containment Purge System (both containments)
- o Gas decay tanks
- o Auxiliary Building Ventilation System
- o Unit 4 Spent Fuel Pit Ventilation
- o Radwaste Building Ventilation System
- o Cask Handling Facility Unit 4
- o Steam Jet Air Ejector Vent System (Both Units)

The plant vent monitor readings are available in the Control Room. In addition to the noble gas monitor(s), cartridges for analysis of particulates and iodine are included in the Plant Vent Radiation Monitoring System. These cartridges would be removed and analyzed using a multichannel analyzer.

The Unit 3 spent fuel pit area and Unit 3 Cask Handling Facility are separately vented. The exhaust flow is monitored for noble gases, particulates, and iodine. Noble gas monitors provide continuous indication of concentration. Special cartridges provided as part of the system are removed for multichannel analyses to determine particulate and iodine emissions.

The Steam Jet Air Ejector Exhaust Systems are provided with gross radioactivity monitors. These monitors would provide early indication of primary to secondary leakage.

The steam dump/safety exhausts are monitored for gross radioactivity. Particulate and iodine concentrations will be determined by analysis of grab samples from the main steam sample lines.

Steam generator blowdowns are monitored for gross activity. Continuous readout is provided in the Control Room.

In addition to these effluent monitors, the plant is provided with an Area Radiation Monitoring System (See Table 3-3). This monitoring system employs detectors distributed throughout the plant, and detector indicators are provided locally and in the Control Room. The Area Radiation Monitoring System provides early indication of a release of radioactivity within the plant.

Also, the plant has a system of fire detectors with appropriate alarms in the Control Room to provide warning of a fire emergency.

5.1.2 On-site Sampling Resources

The capability is available at the Turkey Point Plant to obtain grab samples of the reactor containment atmosphere, the reactor coolant, and the containment sump.

To obtain grab samples of the containment atmosphere following an accident, a special removable gas sampling vessel is used in the existing containment sampling system. The removable vessel would be transported in a shielded container to the plant laboratory. At the laboratory, a portion of the gas would be drawn from the vessel, and the radioisotopic content determined by appropriate analytical techniques. Plant procedures provide instructions for sample acquisition, transportation, and analysis.

Reactor coolant and containment sump grab samples can also be taken following an accident. Details regarding sample acquisition, transportation, and analysis are described in plant procedures.

Air samples will be collected using portable air samplers in accordance with a plant procedure. Portable air samplers are located such that time required to obtain results is minimized for critically manned areas (e.g., Control Room, Technical Support Center). Silver zeolite sample cartridges are stored on site. To preclude interferences by noble gas adsorption, only silver zeolite cartridges will initially be used to sample critically manned areas (e.g., Control Room, Technical Support Center, other areas which require personnel to be present). Collected samples will be transported promptly to the lab. If necessary, an alternate location will be established using portable equipment in a low background area outside the Radiation Controlled Area.

Samples are to be analyzed in accordance with approved procedures.

5.1.3 Meteorological Systems

Meteorological data is required to make estimates of off-site radiation exposure in the event of a release of gaseous radioactivity. Measurement of three meteorological parameters are required to make estimates of atmospheric dispersion, an essential part of a radiation exposure calculation. The parameters are wind speed, wind direction, and a measure of atmospheric stability.

Meteorological data is collected at the Turkey Point Land Management Site 10 meter tower (1.2 miles southwest), the South Dade Site 60 meter tower (7 miles southwest) or obtained directly from the National Weather Service in Miami. Table 5-1 summarizes the available data. Data which represents primary and backup sources are summarized on Table 5-2.

As indicated in Table 5-1, values of the key meteorological parameters are provided for the Turkey Point Plant and South Dade Site meteorological installations. These readouts are provided continuously, and the data is directly available at the Control Room, Technical Support Center (TSC), and the Emergency Operations Facility (EOF) via Distributed Control System (DCS).

Meteorological data is provided to the State via initial and follow-up communications utilizing Table 4-2, as well as response to direct inquiries from DEM and Florida Health Bureau of Radiation Control (FH - BRC). The EOF and NRC can receive timely meteorological information through the TSC, upon request or through DCS.

5.1.4 Source Term and Release Determination

As discussed in Section 5.1.3 certain meteorological parameters are required for the calculation of off-site radiation exposure from airborne releases. Additional essential pieces of information are the rate of release and isotopic composition of the released radioactivity. If radioactivity were released from a monitored vent, then a direct measure of the release rate would be available. Monitored release points are discussed in Section 5.1.1. Based upon certain assumptions, release rate can be determined using 0-EPIP-20126, Off-Site Dose Calculations - Manual Method or 0-EPIP-20125, Off-Site Dose Assessment Using the Unified RASCAL Interface (URI), for all monitored release points and grab samples.

In event of a loss of coolant accident, the containment radiation monitors would provide the first indication of the magnitude or existence of radioactivity in the containment. These monitors can be used to determine the concentration of radionuclides based upon the isotopic mixes assumed for the accident described in the Updated Final Safety Analysis Report (UFSAR). Additional information about the isotopic composition of the airborne radioactivity would be derived from isotopic analysis of a containment atmosphere sample.

Procedures have been developed to assist the plant staff in estimating release rates and isotopic content for releases from the various plant vents.

5.1.5 Exposure and Dose Rate Determination

One of the uses of radiation monitors and meteorological instrumentation is the estimation of off-site radiation exposures. An estimate of doses is needed so that responsible governmental agencies can use this information to plan protective action.

0-EPIP-20126, Off-site Dose Calculations - Manual Method or 0-EPIP-20125, Off-Site Dose Assessment Using the Unified RASCAL Interface (URI), provides the details of how initial dose estimates are determined. In particular, current meteorological data, process monitor data, and containment high range radiation monitor readings are used in conjunction with tables for estimating doses under actual conditions. Dose calculations will be updated periodically during the course of the accident and the result will be provided to State and County authorities for their use in evaluating the need for protective action. Figure 5-1 presents the protective action guides to be used for making recommendations. These are consistent with Environmental Protection Agency (EPA) Protective Action Guides (PAGs). Initial dose calculations are performed by the chemistry representative who is dispatched to the Control Room at the onset of the accident. Refined dose estimates would be prepared by the Chemistry Department personnel reporting to the TSC or by personnel in the Emergency Operations Facility (if operational) using available tables and/or an interactive computer program which presents results and protective action recommendations in a tabular format. Default values based on the FSAR have been established and can be utilized if assessment instrumentation is not available (offscale or inoperable) and field sample analysis has not yet been completed.

5.1.6 Off-site Monitoring

Dosimetry

Florida Health - Bureau of Radiation Control (FH - BRC) maintains a system of approximately 35 Dosimeter of Legal Record (DLR) stations in the vicinity of Turkey Point Plant. Stations are provided in each 22.5° land sector at the 1-mile (approximate), 5-mile (approximate), and 10-mile (approximate) radii. At the 10-mile radius, stations are located with special emphasis on the more densely populated area.

Laboratories and Sampling

Laboratory facilities are provided as discussed in Section 2.3.2. The plant's on-site radiological laboratory serves as the primary facility with backup provided by: 1) the Radiation Protection counting room facilities; 2) St. Lucie Plant Radiological facilities; 3) the State of Florida's Mobile Emergency Radiological Laboratory. Analysis of off-site environmental samples will be performed at the State's Mobile Emergency Radiological Laboratory. This mobile lab can be in position near the site within 6 to 8 hours of notification. A FH - BRC representative dispatched to the EOF will coordinate all State off-site field monitoring data and sample media.

TABLE 5-1

SUMMARY OF AVAILABLE METEOROLOGICAL DATA

<u>SOURCE</u>	<u>DATA</u>	<u>DISPLAY</u>
Turkey Point Land Management 10-meter tower	Wind Speed Wind Direction Sigma-Theta	DCS Strip chart record
South Dade Site 60-meter tower	Delta T (60-10m) Wind Speed Wind Direction	DCS Strip chart record
NOAA/NWS Forecast Center in Miami for Turkey Point Nuclear Plant Lat. 25° 26' 04" N Long. 80° 19' 52" W	Wind Speed Wind Direction Cloud Cover Ceiling Height Air Temperature	None; via telephone

TABLE 5-2

SOURCES OF METEOROLOGICAL DATA

<u>METEOROLOGICAL PARAMETER</u>	<u>PRIMARY SOURCE</u>	<u>FIRST BACKUP</u>	<u>SECOND BACKUP</u>
Atmospheric Stability	Delta T (South Dade Site Tower)	Sigma-Theta (Turkey Point Land Management Tower)	Surface Observations NOAA
Wind Speed	Turkey Point Land Management Tower	South Dade Site Tower	NOAA
Wind Direction	Turkey Point Land Management Tower	South Dade Site Tower	NOAA

FIGURE 5-1
(1 of 1)

**PROTECTIVE ACTION RECOMMENDATIONS BASED ON
PLANT CONDITIONS AND OFFSITE DOSE ESTIMATES**

See the following documents

-) Form F444 Guidance for Determination Protective Action Recommendation (PARS)
-) Form F439 Florida Nuclear Plant Emergency Notification Form Meteorological Worksheet

Field Monitoring - State

The State Plan discusses the State role in accident assessment. It describes agencies and their missions, specialized personnel, special equipment, and other matters related to field monitoring within the Plume Exposure Pathway Emergency Planning Zone (EPZ). The State Plan also discusses, in further detail, the capability and resources for field monitoring.

Field team compositions, transportation, communications, equipment and estimated deployment times are included in the State Plan.

Transportation of field teams is also discussed in the State Plan. Field team communications are described in the State Plan, as well as monitoring equipment, composition of field teams and deployment times.

County Plans also discuss accident assessment. For example, the Miami-Dade County Plan indicates that the County Health Department Director will cooperate with Florida Health Bureau of Radiation Control with respect to accident assessment procedures. The County Plan also indicates that the Miami-Dade County Office of Emergency Management will be involved in assessment activities as well.

The State Plan discusses the measurement of iodine in air, and the use of such measurements in assessment activities.

Field Monitoring - Plant

Plant procedures provide guidance for activation of emergency field monitoring teams, dispatching these teams throughout the plume EPZ and communications. Equipment and instrumentation is maintained for two off-site monitoring teams. Equipment and instrumentation is maintained in the OSC for numerous on-site monitoring teams. The equipment includes air samplers, filters, silver zeolite cartridges, sample bags, forms, log books, phone lists, maps, and procedure packs. Instrumentation includes single channel gamma analyzer (sodium iodide crystal type) with the capability of detecting radioiodine concentrations of at least 10-7 microcuries/cc in the field. Other instrumentation includes ion chamber survey monitors and high range gamma monitors. Communications will be maintained with the TSC Radiation Protection Supervisor by portable two-way radios or cellular telephones. Plant procedures also include information on sampling techniques, measurement of airborne concentrations of radioiodine, direct radiation dose rates, transportation of teams, expected deployment times, and communications.

Coordination of Sampling Data

To assure that information concerning FPL off-site radiological assessment is exchanged, arrangements have been made for Florida Health Bureau of Radiation Control (FH - BRC) representatives to be stationed at the EOF. Direction and control of field operations for the FH - BRC will be provided by the State Health Physics Supervisor, who will conduct/supervise accident assessment and response of the field teams from a post at the EOF. Office space and communications are provided therein and have been described in Emergency Plan Implement Procedures. Prior to the arrival of FH - BRC personnel, coordination of this information will be through follow-up communications with DEM and the Plume Exposure EPZ counties.

DOE off-site monitoring assistance, if required, will be requested by the DEM in consultation with FH - BRC. Lead responsibility for coordination with Department of Energy (DOE) is assigned to FH - BRC.

5.2 Protective Response

This section describes the protective actions on site, and the data provided to assist the State and County in determining appropriate off-site protective actions.

5.2.1 Protective Actions

On-site

On-site protective actions for a radiological emergency consist of evacuation of the affected area (localized evacuation or site evacuation), monitoring of all personnel who were in the affected area, and decontamination as required.

Individuals remaining or arriving on site during an emergency will be provided protective equipment as prescribed by the TSC Radiation Protection Supervisor, the OSC RP Supervisor, and plant procedures. Florida Power and Light Company will make Potassium Iodide (KI) available for use as a thyroid blocking agent. Use of KI will be in accordance with plant procedures.

Control Room personnel are in an isolated environment and need protective equipment to leave the Control Room or if the Control Room becomes contaminated. An emergency kit with all necessary equipment is present inside the Control Room and is to be used for this purpose.

Onsite protection of employees during hostile action involves a combination of restricted movement, movement to safe locations, and site evacuation depending on the nature of the hostile event and advance warning. Site procedures provide specific actions to take during hostile action based events.

Decontamination

Personnel decontamination facilities are available in four locations. Their use will be governed by the nature of the incident.

- 1) FPL Dress Out Building - Showers and sinks available for the decontamination of personnel with no (or minor) injuries.
- 2) Baptist Hospital of Miami - Decontamination shower and contaminated injury treatment room. For interim use to treat severely injured personnel. Located approximately 30 miles north of the Turkey Point Plant.
- 3) Mercy Hospital - Contaminated Injury Treatment Room. For interim use to treat severely injured personnel. Located approximately 30 miles north of Turkey Point Plant.
- 4) Decontamination Facility - The Florida City Substation has personnel decontamination capabilities available.

Vehicles will be decontaminated with the use of Miami-Dade County Fire Department equipment.

Extra clothing for personnel whose personal clothing has become contaminated is available in the form of disposable garments.

Contamination monitoring is performed through the use of count rate instruments with betaZgamma sensitive probes.

Methods for decontamination and monitoring are described in plant procedures. Contamination monitors and procedures are adequate for assessing potentially contaminated wounds either on site or at the decontamination facility.

Off-site

Off-site areas are the responsibility of the respective County Emergency response agencies, the Florida Health Bureau of Radiation Control (FH - BRC) and the Division of Emergency Management of the State of Florida. Control of radioactive contamination and public safety in off-site areas are responsibilities of these governmental agencies, and their criteria for implementing protective actions may be found in the Florida Radiological Emergency Plan for Nuclear Power Plants (see Appendix A). Decontamination of off-site areas will be performed under the direction of the FH - BRC.

The State Plan discusses evacuation time estimates and their use in determining protective actions.

FPL will perform an evacuation time estimate update using the guidance in NUREG/CR7002 and the requirements in 10CFR50, Appendix E, Sections IV.3 and IV.4. FPL will work with the Miami-Dade, Monroe County, and the State of Florida to formulate and maintain a protective action strategy using the applicable portions of NUREG 0654 Supp III.

The Miami-Dade County Plan and the Monroe County Plan also discuss evacuation times.

Recommendations for protective actions will be made by the Emergency Coordinator (or RM if EOF is operational) using Figure 5-1. The development of this figure was based upon consideration of the severity of an accident (emergency class) and, when actual or estimated off-site doses are available, the EPA Protective Action Guides in conjunction with plant conditions.

5.2.2 Owner Controlled Area Warning and Response

During an emergency, the relocation of persons may be required in order to prevent or minimize exposure to radioactive materials. An evacuation is the orderly, rapid, and safe withdrawal of all personnel from an area affected by an emergency condition.

Evacuation

Evacuation is the primary protective measure anticipated for personnel within the Protected Area not filling Emergency Response Organization positions. Contractors not having an emergency response function and visitors are normally evacuated at the Alert or higher classification. Evacuation of all other non-essential personnel, including personnel not required for the shutdown of the fossil units, occurs at the Site Area Emergency and General Emergency. However, the Emergency Coordinator shall use good judgment prior to moving personnel from the Owner Controlled Area.

Conditions such as security events, release status, release duration, plant conditions and meteorological conditions should be evaluated.

Owner Controlled Areas outside the Protected Area are evacuated, if conditions warrant, of all non-FPL personnel at an Alert or higher emergency classification. Security is responsible for evacuation implementation per applicable EPIPs and SFIs while the Emergency Coordinator is responsible for the decision to evacuate.

Local Area Evacuations are performed as required for specific areas of the site experiencing hazardous conditions (fire, radiological, toxic gas, etc.). At a minimum, an announcement over the Public Address system will be made, ordering the Local Area Evacuation. Personnel in or around the affected area are instructed to stay clear.

Accountability

At the declaration of a Site Evacuation (usually Site Area Emergency or General Emergency), all non-essential personnel are evacuated. All individuals in the Protected Area are accounted for and names of personnel not accounted for are established within 30 minutes of the initiation of the Site Evacuation. Once established, accountability within the Protected Area is maintained throughout the event. Upon notification that personnel are missing, the Emergency Coordinator shall ensure that Search and Rescue Operations are initiated. Accountability is coordinated by the TSC Security Supervisor and the results are forwarded to the Emergency Coordinator.

FIGURE 5-2

SITE EVACUATION ROUTES

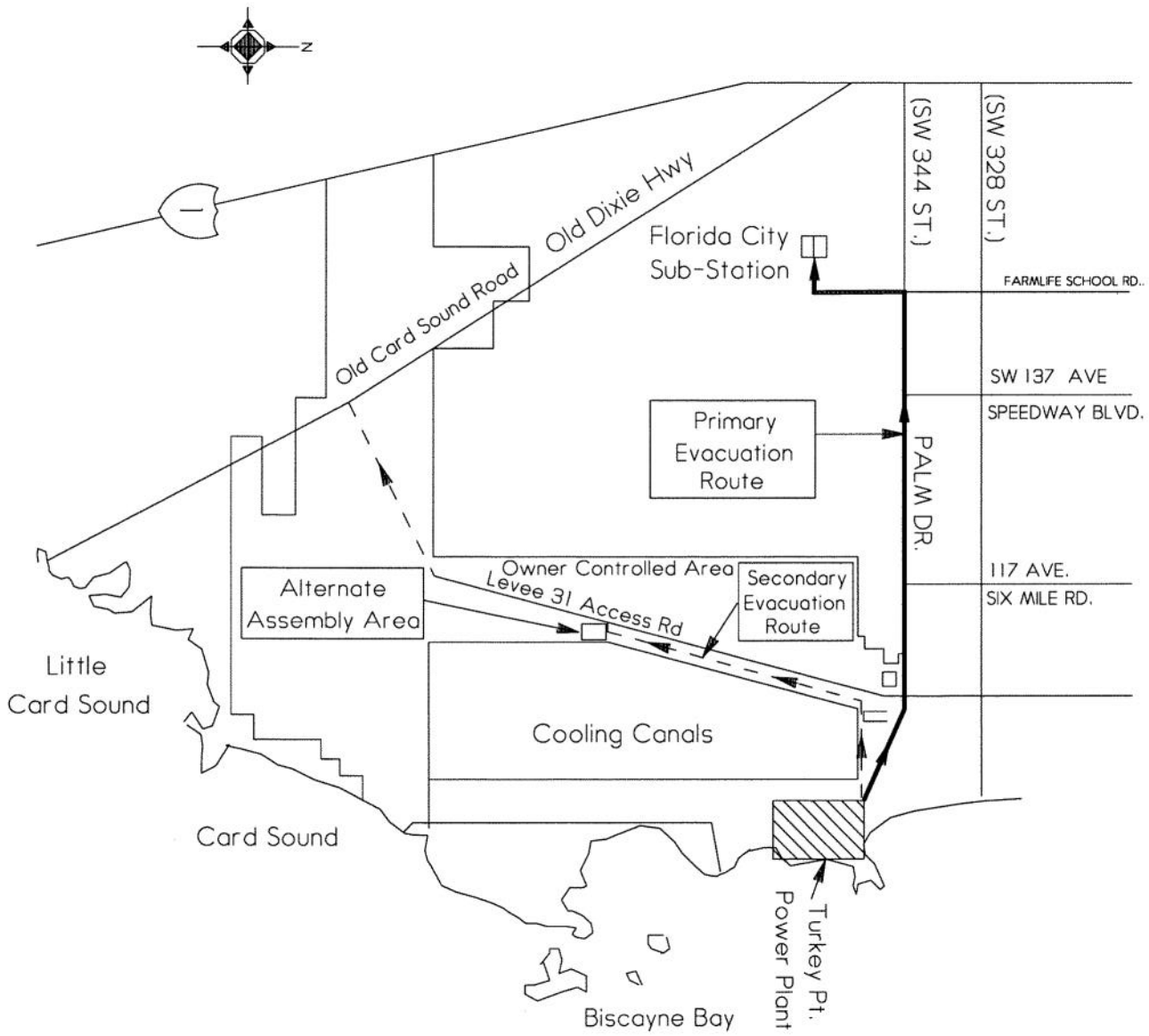


TABLE 5-3

TYPICAL POPULATION WITHIN THE OWNER CONTROLLED AREA

<u>AREA</u> <u>COMMENTS</u>		<u>POPULATION</u>
Nuclear	1200	FPL & contractor at shift change, with 1 unit in outage
Fossil	100	
Contractors (long term)	150	
Cooling Canals	35	Includes visitors present 2-3 times/year, normally 25
Picnic Area (Red Barn)	300	Occasional use only
Scout Camp no longer used per Security orders following 9/11/01		
Child Development Center K-2 School was discontinued by Miami-Dade County	30	Open during normal business hours for employees and their family members
Fitness Center	40	Employees only
Rifle Range	12	Security Guard Force use
TOTAL	----- 1867	

5.2.3 Off-site Area Protective Measures

An off-site area evacuation is the orderly withdrawal of all persons from the portion of the public areas surrounding the plant which have been affected by the emergency. The criteria for the initiation of the evacuation are determined by the Florida Health Bureau of Radiation Control as specified in the State of Florida Radiological Emergency Plan. The State Plan describes evacuation measures and provides maps indicating designated evacuation routes.

The Emergency Coordinator (RM when EOF is operational) will recommend off-site protective actions based upon the criteria shown in Figure 5-1.

The Miami-Dade and Monroe County Emergency Response Directors and the State Division of Emergency Management will be responsible for the direction and implementation of the necessary protective actions as specified in the Florida Radiological Emergency Management Plan for Nuclear Power Plants, including notification and coordination with other State and Local assistance agencies.

The State Plan describes the bases for the choice of recommended actions for the Plume Exposure Pathway EPZ during emergency conditions.

It will be the responsibility of the Miami-Dade and Monroe County Emergency Response agencies to notify the general public if an evacuation is warranted. This will be accomplished as discussed in Sections 5.2.4 and 5.2.8.

Figure 5-3 is a map of the Miami-Dade and Monroe Country Evacuation Routes. Descriptions of evacuation routes, monitoring points, and reception centers are provided in the State Plan.

The Emergency Classification System used by the State includes certain actions which are automatically triggered upon the occurrence of designated emergency classifications. These are discussed in the State Plan. Other protective action decisions are made on the basis of information which becomes available as a result of accident assessment. Assessment actions which would form a basis for recommendations are discussed in the State Plan. The State and County Plans point out that EPA Protective Action Guides will be an important basis for Protective Action Recommendations (PARs).

The Bureau of Radiation Control Standard Operating Procedures discuss the process by which State officials collect information and make recommendations. The Bureau of Radiation Control Standard Operating Procedures also discuss assessment actions which would form a basis for recommendations.

The Evacuation Time Estimate has been developed for the Turkey Point plume exposure pathway emergency planning zone (EPZ) using NUREG/CR-7002. Updates will be performed in accordance with the requirements of 10 CFR 50 Appendix E, Section IV.

5.2.4 Public Warning and Information

The State Plan, provides information on warning of the public and discusses warning procedures for Miami-Dade and Monroe counties. Prompt notification systems are discussed therein. FPL has purchased and installed an alert (siren) and notification system as described in Section 5.2.8.

Notification to the population and arrangements with public communications media are described in the State Plan. The State Plan provides the guidance for keeping the public informed about the potential hazards, emergency response, and protective measures that can be taken to minimize or avoid public health effects. The State Plan also provides procedures for the timely and accurate collection, coordination, and dissemination to the public of such information. Information releases will be coordinated with Federal and Local agencies.

Means of providing notification to the general public will include the activation of the Public Notification System, which may include existing outdoor siren systems, the Emergency Alert System, the National Oceanic and Atmospheric Administration Very High Frequency Radio Network, participating local radio and television stations, and route alerting.

The State Plan also provides for releases to be used for media. These are consistent with FPL's classification scheme. These are examples of specific prior arrangements that have been made to use public communication media for issuing emergency instructions to the public. The State Plan discusses annual orientation of the media. The State Plan also indicates TV and radio stations which would be used to alert the public.

5.2.5 Population Exposure Estimates

Population exposure estimates are discussed in the State Plan. Bureau of Radiation Control Standard Operating Procedures discuss the projected dose calculation process and assessment and monitoring in the Ingestion Exposure Pathway EPZ - Bureau of Radiation Control Standard Operating Procedures are used to determine dose rates.

5.2.6 Special Need Populations

The State Plan contains a discussion of evacuation of special needs populations.

5.2.7 Population Distribution

The State Plan includes maps and tables showing population distribution. The State Plan also described the means for notifying transient and resident population.

MIAMI-DADE AND MONROE COUNTY EVACUATION ROUTES



5.2.8 Alert and Notification System (ANS)

An alert and notification system has been installed and will be used by the Miami-Dade and Monroe County Emergency Response Directors for alerting the population of the need to possibly take protective actions. This system consists of a network of 46 rotating and directional Whelen pole mounted sirens, WPS 4000 or approved equivalent. The WPS 4000 sirens are certified with a Sound Propagation Level (SPL) of 123 dBc at 100 ft. The siren system has been designed to provide the necessary SPL coverage as defined by NUREG-0654 / FEMA REP-1. In addition to the pole mounted sirens, there are two (2) Whelen IPS-400 indoor (stationary) sirens installed at strategic locations.

The alerting portion of the system consists of multiple control stations located in physically diverse locations (Miami-Dade County Emergency Operation Center and Miami-Dade County 9-1-1 Center) with two radio repeaters, each able to generate the signal to activate and operate the individual sirens located throughout the community. The notification portion of the system consists of multiple Emergency Alerting System stations typically a master and satellite or slave stations enabling full coverage of the area. These electronic sirens have the public address capability for voice messages. Upon sounding the sirens, the affected public, keyed through the public information program, would turn on their radios to the local Emergency Alert System (EAS) radio station and await emergency information.

In the unlikely event that a siren would fail to activate the State of Florida Radiological Emergency Plan, and Miami-Dade and Monroe Counties maintain the capacity to perform backup route alerting.

Backup Alert and Notification System for Turkey Point Nuclear Power Plant is achieved through physical route alerting, which is contained in the Radiological Emergency Response Plans and procedures for the State of Florida and offsite response organizations in the EPZ that have been approved by FEMA in accordance with Title 44 of the Code of Federal Regulation (CFR) 44 CFR350.12 and 14.

5.3 Radiological Exposure Control

5.3.1 On-Site Radiation Protection Program

An objective of emergency response is to minimize radiation exposure to individuals both on site and off site. Situations may arise, however, when observance of this goal is inconsistent with personnel or plant safety. In anticipation of such needs, guidelines have been established for emergency conditions. The guidelines on which the emergency radiation protection program is based are stated below.

Exposure to emergency response personnel should be maintained As Low As Reasonable Achievable (ALARA). Actions taken during an emergency should take into consideration the amount of exposure required to accomplish the task versus the potential benefit to the public health and safety.

Conditions may warrant re-entry into high radiation areas leading to exposure in excess of the regulatory limit. Except for rescue of personnel (life-saving only), authorization must be given in advance by the Emergency Coordinator (EC). If time permits, the EC should obtain concurrence from the Recovery Manager (if the EOF is operational). In any case where regulatory limits have been exceeded, the EC shall notify the RM of the event.

For those remote circumstances involving an event in progress, and obtaining EC approval will result in leaving the accident scene or decrease the victim(s) chance of survival, life-saving actions may be performed without obtaining EC approval. The EC shall be notified immediately following the rescue operation.

Re-entry personnel that have been selected/chosen to exceed regulatory exposure limits should be volunteers, broadly familiar with the risks involved (radiosensitivity of fetuses, effects of acute exposures, etc.), and whose normal duties have trained them for such missions.

EPA 400, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, EPA 400-R-92-001 (10/91) states that, "To assure adequate protection of minors and the unborn during emergencies, the performance of emergency services should be limited to non-pregnant adults". FPL endorses this guidance, however, FPL recognizes that it is the right of the worker to make the decision to perform as an on-site emergency worker, understanding the potential risks involved.

For the following missions, ⁽¹⁾ the exposure limit is:	TOTAL DOSE(2) (TEDE)	THYROID(3) (CDE)
Performance of actions that would not directly mitigate the event, minimize escalation, or minimize effluent releases.	5 REM	50 REM
Performance of actions that mitigate the escalation of the event, rescue persons from a <u>non-life</u> threatening situation, minimize exposures or minimize effluent releases.	10 REM	100 REM
Performance of actions that: decrease the severity of the event or terminate the processes causing the event in an attempt to control effluent releases to avoid extensive exposure of large populations. Also rescue of persons from a <u>life-threatening</u> situation.	25 REM	250 REM
Rescue of persons from a life-threatening situation. (Volunteers should be above the age of 45.)(4)	(5)	(5)

NOTES

1. *Both Total Dose (TEDE) and Thyroid Dose (CDE) should be used for purposes of controlling exposure.*
2. *Protective clothing, including respirators should be used where appropriate.*

- (1) Exposure limits to the lens of the eye are 3 times the Total Dose (TEDE) values listed.
- (2) Total Dose (TEDE) is the total dose from both external and internal (weighted) sources - Total Effective Dose Equivalent.
- (3) Thyroid dose (CDE) commitment from internal sources - Committed Dose Equivalent. The same dose limits also apply to other organs (CDE), skin (Shallow Dose Equivalent) and extremities (Extremity Dose Equivalent).

- (4) Volunteers with full awareness of risks involved including numerical levels of dose at which acute effects of radiation will be incurred and numerical estimates of the risk of delayed effects.
- (5) No upper limit for Total Dose (TEDE) and/or Thyroid Dose (CDE) dose has been established because it is not possible to pre-judge the risks that one person should be allowed to take to save the life of another. Also, no specific limit is given for the thyroid since in the extreme case, complete thyroid loss might be acceptable sacrifice for a life saved. This should not be necessary if respirators and/or thyroid protection for rescue personnel are available as the result of adequate planning.

5.3.2 Dose Records

FPL Nuclear Division procedures provide for conducting the personal dosimetry program. The company has the capability of determining personnel radiation exposures on a 24 hour per day basis. Dose records for all individuals exposed to ionizing radiation at FPL's facilities are maintained.

All emergency response personnel under the authority of FPL who potentially will be exposed to radiation in the course of their duties will be monitored by the plant radiation exposure monitoring program.

Because emergency exposures requiring immediate action are not planned, they are not controlled as a Planned Special Exposure. Dose received from exposure under emergency conditions will be added to the dose received during the current year, prior to the emergency, to determine compliance with the occupational dose limits in 10 CFR 20.

Doses above regulatory limits will require reporting pursuant to 10 CFR 20.2202 and 20.2203. Any dose in excess of the annual limits specified in Section 20.1201(a) will be accounted for in accordance with 10 CFR 20.1206(e). If an individual exceeds any of these limits, then that individual will not be available for additional dose under 20.1201(a).

5.3.3 Contamination Control and Decontamination Procedures

A personnel decontamination washroom and shower room with chemical decontamination agents is provided in the FPL Dress Out Building. Except in cases of serious injury, accepted decontamination practices will be employed on site. Life endangering injuries such as extensive burns, serious wounds, or fractures shall receive prompt attention in preference to decontamination. Personnel with injuries involving radiation or radioactive contamination will be handled by the Emergency Room at Baptist Hospital or Mercy Hospital. Plant Radiation Protection procedures specify that decontamination of uninjured personnel must be attempted at contamination levels greater than minimum detectable activity as defined in Radiation Protection procedures.

Food for emergency workers would be brought in from off site, if necessary. Frequent surveys of habitable areas utilized during emergency response (i.e., Control Room, OSC, TSC, and Guardhouses) will be performed to assure that these areas remain uncontaminated and tenable. Specifically, special attention to drinking water and food supplies will be given to assure that these supplies remain uncontaminated.

5.3.4 Radioactive Wastes

Radioactive wastes (resins, trash, etc.) accumulated during an emergency will be handled by normal plant procedures. Any special circumstances will be handled on a case-by-case basis.

5.4 Recovery and Re-entry

5.4.1 On site

Once the hazard potential has passed, steps must be taken to recover from the incident. All actions should be preplanned in order to limit exposures. Access to the area will be controlled and personnel exposures will be documented.

The Recovery Manager (RM)/EC has the responsibility for determining when it is appropriate to enter into the recovery phase. The Recovery Organization consists of an augmented Expanded Emergency Response Organization. The Emergency Response Managers would continue their assigned duties using additional personnel as necessary. The Recovery Manager (or EC) will evaluate the status of the plant by reviewing all current and pertinent data available from emergency response and/or monitoring teams. The recovery phase will begin only when the plant conditions are stable and the following guidelines are met:

- 1) Radiation levels in all in-plant areas are stable or decreasing with time.
- 2) Releases of radioactive materials to the environment from the plant are under control or have ceased.

- 3) Any fire, flooding, or similar emergency conditions are controlled or have ceased.
- 4) The reactor is in a stable condition.

At the time of initiating activities to enter the recovery phase, the Recovery Manager will be responsible for informing all applicable agencies (e.g., Federal, State, and Local agencies) that on-site conditions have stabilized and activities for recovering from the incident can now begin. Once these agencies and the EC have been informed, the Recovery Manager has the authority to de-escalate the emergency classification.

Planned recovery actions which may result in radioactive release will be evaluated by the Recovery Manager and the EOF staff in advance. Such planning and data pertaining to the possible release will be reported to the appropriate off-site emergency response organization and agencies.

Re-entry into an affected area may be required before entering the recovery phase. Re-entry into an evacuated area will be made by the Emergency Response Organization personnel when required for one or more of the following reasons:

- 1) To ascertain that all personnel who were in the affected area have been evacuated, or to search for unaccounted personnel.
- 2) To assist in evacuating injured or incapacitated personnel from the affected area.
- 3) To perform operations which may mitigate the effect of the emergency or hazardous condition.
- 4) To determine the nature and extent of the emergency and/or radiological conditions.
- 5) to establish personnel exclusion area boundaries.

Re-entry will take place only under the authority of the Emergency Coordinator/RM. The OSC Supervisor is responsible for evaluating the existing emergency conditions and informing the Emergency Coordinator via the OSC of the advisability of re-entry. For radiological emergencies, the TSC Radiation Protection Supervisor will be responsible for providing RP coverage to Emergency Response Organization personnel as required.

More detailed guidance for re-entry teams is contained in plant procedures.

5.4.2 Off Site

State and County officials would be in control of recovery and re-entry off site. Population exposure estimates are discussed in the State Plan. The State Plan discusses the projected dose calculations and assessment and monitoring in the Ingestion Exposure Pathway EPZ. The State Plan (Recovery and Re-entry) also discusses population dose measurement.

6. PUBLIC INFORMATION

6.1 Preparatory Public Information Program

6.1.1 Purpose

The purpose of the preparatory public information program is to inform the public of how they will be notified and what their actions should be in a radiological emergency.

6.1.2 Program Execution

Florida Power & Light Company has the responsibility for conducting the public information program with the support from the State Division of Emergency Management and the Monroe County and Miami-Dade County Emergency Management offices.

The State Plan discusses the preparatory public information program. Education will be provided on an annual basis to local residents, transients, and news media in a manner consistent with the guidance in NUREG 0654, 10 CFR 50.47, and in the manner described in the State Plan.

6.2 Florida Power & Light Company Emergency Public Information Program

This section delineates the organization, public information network, and facilities that would be made available as required in an emergency.

6.2.1 Organization

The members of the emergency public information organization (see Figures 6-1) and their respective responsibilities are as follows:

Emergency Information Manager (EIM)

The EIM will be a designated company manager experienced in media relations and having knowledge of nuclear plant operations. The EIM will be responsible for coordinating dissemination of information to the public via the news media. Insofar as practical, the EIM will work with the NRC, State, and Local news media representatives to effect joint releases and public appearances. The EIM will work with other company officials to develop formal statements and responses. All FPL press releases should originate with or be cleared by the EIM. The EIM will assure that exchange of information among designated spokespersons is accomplished in a timely manner, when possible.

Nuclear Information Staff

A staff of public information and technical personnel will be assigned as needed to the Joint Information Center. Their responsibilities will be to:

- 1) Provide technical briefings to the press.
- 2) Inform company employees through a newsletter, bulletin board statements, or other in-place networks.
- 3) Inform the industry, so other companies both in the United States and overseas can deal with questions as they arise from their local media.
- 4) Prepare background material for features, historical context, profiles, etc.
- 5) Handle the photographic needs of the company.
- 6) Record and transcribe all press conferences and other official proceedings for the benefit of company management, official agencies, and the news media.
- 7) Accredited and escort members of the press.
- 8) Provide its own stenographic and typing services for news releases, photo captions, reports, transcripts, etc.
- 9) Provide reference services for maintaining files of releases and photos, obtaining newspapers, monitoring wire services and news broadcasts, logging all clippings.

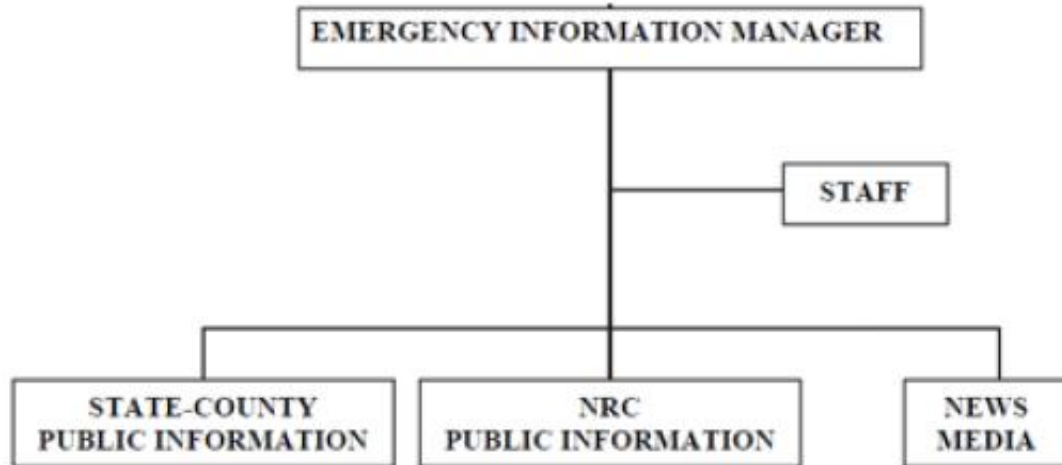
The staff of the Florida Power & Light Company Communications Department may be augmented by personnel from other utilities, consultants, or universities.

6.2.2 Joint Information Center (JIC)

An Joint Information Center (JIC) will be provided to allow the news media access to information from the EOF. The JIC is located on the second floor of the General Office. The Emergency Information Manager will report to the EOF, a designated JIC Supervisor and his/her staff will man the JIC when the EIM deems it appropriate.

FIGURE 6-1

PUBLIC INFORMATION INTERFACES



If deemed necessary, the EIM may designate a suitable location near the site for dealing with the media. The location of the Near Site Information Center will be based on the individual circumstances of the event.

6.2.3 News Media Provisions

Florida Power & Light Company, in cooperation with the State of Florida and the risk counties, will conduct an annual program to acquaint the news media with the emergency plans, information concerning nuclear power, and points of contact for release of public information in an emergency.

In the event of an emergency, representatives of the news media will be provided space in the Joint Information Center for work and interview purposes.

6.2.4 Written Messages for the Public

Sample formats that may be used for release of information by FPL to the public via the news media appears in Tables 6-1 through 6-7. These releases include initial statements for each class of emergency and follow-up statements for the Alert class and higher.

6.3 Rumor Control

FPL will coordinate information exchange with State and County officials. This coordination will include awareness of media releases. This timely exchange of information among designated spokespersons will aid in dispelling most rumors. In written material which is disseminated annually, means for the public to obtain timely and accurate information is provided. The State Plan also discusses Rumor Control. Additionally, Miami-Dade County Office of Emergency Management maintains telephones designated for rumor control.

TABLE 6-1
INITIAL FPL STATEMENT (Sample)

Number:	Florida Power & Light Company
Date:	Joint Information Center
	9250 W. Flagler St.
	Miami, FL 33102
Time:	Phone: 305/552-4506

NEWS RELEASE

UNUSUAL EVENT

MIAMI -- Florida Power & Light Company has alerted the Nuclear Regulatory Commission that an "unusual event" has occurred at its Turkey Point Nuclear Power Plant located south of Miami.

According to initial reports, the event relates to _____

(give plant/unit specific data)

The situation was first identified at ____ (time) ____

Due to the nature of the event, FPL officials have determined that:

(Options:)

- 1 The unit can remain operational at this time without posing a health or safety hazard to plant employees or the general public.
- 2 The power levels at the plant will be systematically reduced in order to investigate the extent of the problem. Full shutdown is expected later today.
- 3 The unit will be brought off-line immediately and an orderly shutdown will be initiated in accordance with plant procedures.

All safety systems are operating normally and officials have stated that no radioactivity has been released as a result of this event. No further information is available at this time. However, news media will be kept informed of the plant's status as it becomes available.

#

TABLE 6-2
INITIAL FPL STATEMENT (Sample)

Number:	Florida Power & Light Company
Date:	Joint Information Center
	9250 W. Flagler St./Miami, FL 33102
Time:	Phone: 305/552-4506

NEWS RELEASE

ALERT

MIAMI -- Turkey Point Nuclear Power Plant has declared an alert, based on problems at Unit #____, Florida Power & Light Company has announced.

The unit had been (still operational), (under gradual power reduction), (in a full-scale, orderly shutdown) following (give data relating to alert). FPL officials called for the alert and have notified appropriate state and federal officials. All visitors have been notified to leave the site as a precaution.

Option 1 (no radiation release)

Plant operators report that no radiation has been released from the unit as a result of the problem. Monitoring teams have been deployed at the plant site as a routine precaution. All safety systems are operating and the unit has been placed in an orderly shutdown mode as officials continue to investigate the problem. FPL officials caution that no public action is required and no health or safety problem exists at this time.

Option 2 (radiation release)

Monitoring equipment at the plant has detected (small/additional) amounts of radiation being released to the atmosphere as a result of the situation at Unit #____. However, this amount is not significantly above normal background radiation detected in the atmosphere (and does not pose an immediate health or safety hazard to plant employees or the public.) The nature and cause of the release is being investigated and further details are not available at the present time. Radiation monitoring teams have been deployed in response to the developments.

#

TABLE 6-3
INITIAL FPL STATEMENT (Sample)

Number:	Florida Power & Light Company
Date:	Joint Information Center
	9250 W. Flagler St./Miami, FL 33102
Time:	Phone: 305/552-4506

NEWS RELEASE

SITE AREA EMERGENCY

MIAMI -- Florida Power & Light Company has announced that a site area emergency exists at Turkey Point Nuclear Power Plant. At _____ (a.m./p.m.), all plant employees except those with emergency response duties were ordered to evacuate the plant site.

Plant officials called for the evacuation of non-emergency employees as a precautionary measure due to (insert plant specific data, if known). There are still approximately 90 plant personnel remaining in the plant's Control Room, Technical Support Center and Operations Support Center. This includes plant management, operators for both generating units, and personnel from Radiation Protection, Chemistry, Maintenance and Engineering. The cause and nature of the problems are being investigated and further details are not available at this time.

(Option 1 - no radiation release)

No radiation releases have been detected as a result of the situation at Unit # _____.

(Option 2 - radiation release)

Monitoring equipment at the plant has detected (small/additional) amounts of radiation being released to the atmosphere as a result of the situation at Unit #_____. The nature and cause of the release is being investigated and further details are not available at the present time.

The plant is continuing shutdown procedures and emergency cooling of the reactor core is continuing. Persons in the immediate vicinity of the plant should continue to monitor radio and television broadcasts for the latest information.

#

TABLE 6-4
INITIAL FPL STATEMENT (Sample)

Number:	Florida Power & Light Company
Date:	Joint Information Center
	9250 W. Flagler St.
	Miami, FL 33102
Time:	Phone: 305/552-4506

NEWS RELEASE

GENERAL EMERGENCY

MIAMI -- Florida Power & Light Company, in conjunction with state and federal authorities, has announced that a general emergency exists at its Turkey Point Nuclear Power Plant as a result of escalating problems at Unit #____.

Persons within a 10-mile radius of the plant are advised to monitor radio and television stations for more information. Please follow all instructions provided through emergency broadcast services.

At this time, the plant is experiencing (significant, but controlled), (significant, uncontrolled), (small, but controlled), (small, uncontrolled), (no) releases of radiation to the environment. Plant operators report that (insert available plant status info).

#

TABLE 6-5
FOLLOW-UP FPL STATEMENT (Sample)

Number:	Florida Power & Light Company
Date:	Joint Information Center
	9250 W. Flagler St.
	Miami, FL 33102
Time:	Phone: 305/552-4506

NEWS RELEASE

LOSS OF POWER/CORE DAMAGE/RADIATION PLUME
(possible follow-up to general emergency)

MIAMI -- Significant equipment problems and loss of power to operate reactor core cooling systems have resulted in loss of coolant and partial uncovering of reactor fuel at Turkey Point Nuclear Unit #____, FPL plant operators have reported.

Additional emergency systems are being employed. However, monitoring teams are registering radiation in the atmosphere around the plant site. Weather conditions are moving a radiological plume in a _____ direction.

The public is advised to monitor emergency broadcast messages on radio and television.

#

TABLE 6-6
FOLLOW-UP FPL STATEMENT (Sample)

Number:	Florida Power & Light Company
Date:	Joint Information Center
	9250 W. Flagler St.
	Miami, FL 33102
Time:	Phone: 305/552-4506

NEWS RELEASE

MEDICAL EMERGENCY

MIAMI -- Florida Power & Light Company has reported that one of its workers at the Turkey Point Nuclear Power Plant has been injured and requires medical treatment.

The employee was scheduled to be transported by ambulance to Baptist Hospital in Miami at _____(am/pm).

Preliminary reports indicate the employee suffered _____(injury) _____ while working in the plant's _____(location) _____.

The worker has received some radioactive contamination, but further information of (his/her) condition is not available at this time.

The hospital has specialized equipment and protective procedures to ensure proper handling of any radioactive contamination.

#

TABLE 6-7
FOLLOW-UP FPL STATEMENT (Sample)

Number:	Florida Power & Light Company
Date:	Joint Information Center
	9250 W. Flagler St.
	Miami, FL 33102
Time:	Phone: 305/552-4506

NEWS RELEASE

JOINT INFORMATION CENTER ACTIVATED

MIAMI -- The Turkey Point Joint Information Center is now open and operating.

Information about the nuclear emergency will be provided at this facility, located in FPL's General Office at 9250 West Flagler Street in Miami. All affected agencies -- County, State and Federal -- will have representatives at the Joint Information Center to provide information about the emergency.

The Joint Information Center can be contacted by calling _____

IMPORTANT

This telephone number is for News Media ONLY and should NOT be announced to the general public.

#

7. MAINTAINING EMERGENCY PREPAREDNESS

7.1 Exercises and Drills

7.1.1 Definitions

An exercise is an event that tests the integrated capability of a major portion of the basic elements existing within the FPL Emergency Response Organization. An exercise normally includes mobilization of State and Local governmental personnel and resources adequate to verify the capability to respond to an accident scenario.

A drill is a supervised instruction period aimed at testing, developing, and maintaining skills in a particular operation. A drill is often a component of an exercise. A drill should be evaluated by the supervisory personnel conducting the drill.

7.1.2 Purpose

Periodic exercises and drills will be conducted in order to test the state of emergency preparedness of participating personnel, organizations, and agencies. Each exercise or drill will be conducted to:

- 1) Ensure that participants are familiar with their respective duties and responsibilities.
- 2) Verify the adequacy of the Emergency Plan and emergency procedures.
- 3) Test the communications network and systems.
- 4) Check the availability of emergency supplies and equipment.
- 5) Verify the operability of emergency equipment.

The results of the exercises will form the basis for prescribing action to eliminate identified deficiencies.

7.1.3 Planning

The Site Functional Area Manager (SFAM) - Emergency Preparedness Manager, will be responsible for the planning, scheduling, and coordinating of all emergency drills or exercises involving off-site agencies. A sample format for drill and exercise scenarios appears as Table 7-1. All exercises and drills involving the plant are subject to the approval of Plant Management.

When an exercise is to be conducted, the SFAM, Emergency Preparedness, in coordination with plant management, will:

- 1) Schedule a date for the exercise in coordination with the Primary State and County Emergency Response agencies.
- 2) Obtain the approval of the Plant General Manager.
- 3) Coordinate all FPL efforts with other participating personnel, organizations, and agencies.
- 4) Offer Federal, State, and Local officials the opportunity to observe the exercise.
- 5) Assign personnel to prepare a scenario.
- 6) Assign controllers, evaluators, and observers.
- 7) Discuss and evaluate the exercise with observers and principal participants.
- 8) Review evaluations of the exercise or drill with the Plant Nuclear Safety Committee through distribution of critique report.
- 9) Ensure that deficiencies which are identified are addressed with corrective measures.
- 10) Prepare and submit documentation in accordance with plant procedures.

The SFAM, Emergency Preparedness, may delegate any of these responsibilities to the Emergency Preparedness Coordinator as deemed necessary. The SFAM, Emergency Preparedness, shall retain oversight and accountability.

These exercises and drills will simulate emergency conditions and may be scheduled such that two or more exercises or drills are conducted simultaneously. The SFAM, Emergency Preparedness, will normally notify the off-site emergency response organizations and agencies at least 30 days in advance of the scheduled date of an exercise.

7.1.4 Conduct of Exercises, Drills, and Tests

7.1.4.1 Exercises (Integrated Drills)

A major radiological emergency response exercise will be conducted at least once every two calendar years to demonstrate the effectiveness of the Emergency Plan. Any exercise that will provide for the coordination with and participation of off-site emergency response personnel, organizations, and agencies including those of Federal, State, and Local governments should escalate to adequately test the response capabilities of the organizations involved.

The emergency scenario will be varied from year to year such that all major elements of the plan are tested at least every six years. Drills and exercises will be conducted in a manner to provide realistic and challenging scenarios to the Emergency Response Organization.

During the interval between biennial exercises, adequate emergency response capabilities will be maintained by conducting drills, including at least one exercise involving a combination of some of the principal functional areas of emergency response capabilities. The principal functional areas of emergency response include activities such as management and coordination of emergency response, accident assessment, protective action decision-making, and plant system repair and corrective actions.

During this off-year exercise, activation of all of the emergency response facilities (TSC, OSC, EOF) would not be necessary, there would be an opportunity to consider accident management strategies, supervised instruction would be permitted, operating staff would have the opportunity to resolve problems (success paths) rather than have controllers intervene, and the drills could focus on on-site training objectives.

Upon completion of the hostile action based exercise in 2015, FPL will implement an exercise cycle of eight years where key functions will be demonstrated by members of the ERO. During that cycle, the following exercises will be evaluated by the NRC and FEMA.

- 1) Hostile Action
- 2) Ingestion pathway
- 3) No or minimal release
- 4) Fast developing (straight to SAE or GE)

These requirements may be combined where appropriate.

The major elements that should be tested every 6 years include, but are not limited to:

-) Off hours staffing (6 P.M. - 4 A.M.), weekends, holidays
-) Activation of Joint Information Center
-) Use of fire control teams
-) Use of medical support personnel
-) Use of security personnel for prompt access to emergency equipment or support
-) Use of one or more portions of backup communications for notification
-) Field monitoring
-) Capability for determining the magnitude and impact of the particular components of a release
-) Capability for post-accident coolant and sampling analysis
-) Assembly and accountability
-) Recovery and reentry

TABLE 7-1
EXAMPLE SCENARIO FORMAT

- 1.0 Basic objective(s) of drill or exercise
- 2.0 Logistics
 - 2.1 Date(s)
 - 2.2 Time period
 - 2.3 Location(s)
 - 2.4 Participating organizations
- 3.0 The simulated events
- 4.0 Time schedule of real and simulated events
- 5.0 Narrative summary describing the conduct of the exercises or drills.
 - 5.1 Simulated casualties
 - 5.2 Off-site fire fighting assistance
 - 5.3 Rescue of personnel
 - 5.4 Radiological monitoring deployment
 - 5.5 Public information activities

(Note: 5.1 through 5.5 are examples of subjects that might be discussed in Section 5.0 of the scenario)
- 6.0 Duties of observers
 - 6.1 Specific observer assignment by area
 - 6.2 Material provided to observers (i.e., checklists)
 - 6.3 Pre-drill meeting
 - A. Date
 - B. Time
 - C. Location
- 7.0 Critique/Evaluation
 - 7.1 Date
 - 7.2 Time
 - 7.3 Location
 - 7.4 Suggested Participants

7.1.4.2 Radiological Monitoring Drill

A radiological monitoring drill will be conducted at least once every calendar year. These drills will include collection and analysis of air sample media and analysis of direct radiation surveys. As an integral part of this annual drill, communications and the understanding of messages between the off-site monitoring team(s) and the EOF Field Monitoring Coordinator in the EOF will be tested. The Radiation Protection Department will conduct Radiation Protection drills semiannually and one of the semiannual drills may be incorporated into the radiological monitoring drill.

As indicated in the State Plan, off-site radiological monitoring drills will be conducted annually, and these drills will involve the collection of sample media (e.g., water, grass, soil, and air).

7.1.4.3 Medical Emergency Drill

A medical emergency drill involving a simulated contaminated individual, with provisions for participation by local support services (i.e., ambulance and off-site medical treatment facility), will be conducted at least once every calendar year. Participation by local support services (i.e., ambulance and off-site medical treatment facility), may be tested separately or as part of the annual medical drill.

7.1.4.4 Fire Emergency Drill

Fire drills are conducted in accordance with 10 CFR 50, Appendix R, to test the operational readiness (personnel, equipment, and procedures) to control and extinguish a fire at the site. The drills also serve to evaluate and document the response of on-site personnel and participating off-site agencies to varying fire situations. The communication links and notification procedures are tested at least semiannually during fire emergency drills. A post-drill critique is held after each fire drill is completed to identify possible areas for improvement in equipment and/or procedures.

7.1.4.5 Communications Tests and Drills

Communications with State and Local governments within the Plume Exposure Pathway Emergency Planning Zone (EPZ) will be tested monthly. Communications with the NRC via the Emergency Notification System (ENS) will be tested monthly. On an annual basis, communications to the State EOC and Miami-Dade and Monroe County EOCs will be tested. As part of the annual test certain information will be exchanged. It will be determined whether or not the content of the drill messages are understood. The annual drill may be performed as part of the annual exercise.

As indicated in the State Plan, the State conducts communication drills at least annually. These drills include "communications between the nuclear power plants, State, and Local EOCs and field assessment teams...". The State Plan also indicates the equipment tested during drills.

7.1.4.6 Unannounced Drills

At least one communications drill per year will be unannounced. This unannounced drill will include notification to primary off-site response agencies (i.e., DEM, Florida Health Bureau of Radiation Control, County Emergency Management agencies) and those FPL emergency response personnel required to be notified based upon the drill scenario. The unannounced communication drill may coincide with an exercise or an actual Emergency Plan Activation.

Since the exercise scenarios are held confidential; fire, medical, evacuation, communication, and accountability drills, conducted in conjunction with an annual exercise are unannounced (actual time and specific details of the simulated events are not released).

7.1.4.7 Augmentation Drills: Augmentation drills serve to demonstrate the capability of the process to augment the on-shift staff in a short period after declaration of an emergency. These drills are conducted using the following methods:

- The station will initiate an unannounced off-hours ERO augmentation drill where no actual travel is required. This drill can be conducted independent of, or in conjunction with, a station drill.
- At least once per drill cycle (every 8 years), an off-hours unannounced activation of the ERO Notification System with actual response to the emergency facilities is conducted.
- Off-hours is defined as between 6:00 pm and 4:00 am. Weekends and holidays are also considered off-hour periods.

7.1.5 Evaluation

During drills and exercises, controllers may make on-the-spot corrections to actions taken by drill participants that might affect the planned outcome (objective) of the drill. Minor errors in procedures or techniques will be noted and discussed during the post-drill evaluation.

Following an exercise; the SFAM, Emergency Preparedness, or designee, the Emergency Preparedness Coordinator, Turkey Point Plant management, FPL controllers/evaluators, and principal participants in the exercise will meet to discuss and evaluate the exercise.

The evaluation should be based on the ability of participants to follow emergency procedures, the adequacy of emergency procedures, and the adequacy of emergency equipment and supplies. The Emergency Preparedness Coordinator will be responsible for any necessary changes in the Plant Emergency Procedures and for recommending changes in the Emergency Plan to the SFAM, Emergency Preparedness.

7.2 Emergency Response Training

7.2.1 Objectives

The primary objectives of emergency response training are as follows:

- 1) Familiarize appropriate individuals with the Emergency Plan through related Emergency Plan Implementing Procedures (EPIPs).
- 2) Instruct individuals in their specific duties to ensure effective and expeditious action during an emergency.
- 3) Periodically present significant changes in the scope or content of the Emergency Plan Implementing Procedures.
- 4) Provide refresher training to ensure that personnel are familiar with their duties and responsibilities.
- 5) Provide the various emergency organization groups with the required training that will ensure an integrated and prompt response to an emergency situation.

7.2.2 Training of Emergency Response Organization (ERO) Personnel

Training programs have been established for personnel assigned to the Emergency Response Organization (ERO). The programs include initial indoctrination (General Employee Training) and subsequent retraining.

The training program for members of the ERO will include practical drills in which each participating individual demonstrates an ability to perform assigned emergency functions. Participation in a drill or exercise is not required for initial qualification in the ERO.

The Training Manager is responsible for conducting and documenting the initial training and annual retraining programs for FPL emergency organization personnel. The Emergency Preparedness Coordinator is responsible for the content and accuracy of the Emergency Preparedness training.

Each new employee permanently assigned as an Emergency Response Organization member at the Turkey Point Plant shall be given initial training in the Emergency Plan and EPIPs.

For employees not assigned specific responsibility under the Emergency Preparedness Program, initial orientation training shall provide at a minimum, information describing the action to be taken by an individual discovering an emergency condition, the location of assembly areas, the identification of emergency alarms, and action to be taken on hearing those alarms.

Training requirements are delineated in 0-EPIP-20201, Radiological Emergency Plan Training.

7.2.3 Training of Non-FPL Off-site Emergency Response Personnel

Off-site agencies that may be called upon to provide assistance in the event of an emergency shall be offered briefings annually. These briefings will discuss basic concepts in radiation protection, plant operations and security, emergency classification, protective action recommendations, and emergency response, as appropriate. The following groups will be offered these sessions:

- A. Fire and rescue
- B. Police
- C. Medical support
- D. Principle decision makers for State and County emergency response agencies

1. Police and Fire Fighting Support

As indicated in the State Plan, police and fire fighting personnel will receive training and retraining. The State Plan describes the details of training.

2. Local Emergency Management Officials

As described in the State Plan, disaster preparedness personnel will receive training and retraining.

3. Emergency Action Levels (EALs) Review

On an annual basis, the Emergency Action Levels shall be reviewed with State and Local government authorities.

7.3 Planning Effort Development

Overall authority and responsibility for radiological emergency preparedness and planning lies with the Chief Nuclear Officer. As described below, through his/her staff (at the Plant and at Juno Beach), the FPL Emergency Planning and Preparedness Program is implemented. Major responsibility in this area has been delegated to the site Emergency Preparedness Manager and has been described throughout this plan.

7.3.1 Emergency Plan Implementing Procedures (EPIPs)

Written procedures will be established, implemented, and maintained covering the activities associated with Emergency Plan implementation.

7.3.2 Review of the Emergency Plan and Emergency Plan Implementing Procedures

The Emergency Plan and Emergency Plan Implementing Procedures will be under continuing review by the site emergency planning group. A comprehensive review of the Emergency Plan will be conducted annually. The Emergency Plan Implementing Procedures are reviewed during drills, exercises, and actual emergencies and revised as necessary to correct identified deficiencies. The Emergency Plan Implementing Procedures will undergo a thorough formal review at least once every two years and be revised as necessary. Notification lists and rosters will be updated at least quarterly. If changes affecting emergency response are identified, these changes will be made as needed. The revised Emergency Plan will be distributed with the latest revision number indicated on each page. Revision bars along the right margin will be used to indicate where changes have been made. If during these annual reviews no changes are needed, this will be documented.

Changes to the Emergency Plan will be submitted, in writing or with pages marked for revision, to the site Emergency Preparedness Manager, or designee, in Emergency Preparedness. All proposed changes to the Emergency Plan shall be reviewed by the Onsite Review Group (ORG) and, prior to implementation, approved by the Vice President - Turkey Point Plant, the senior executive responsible for the safe operation of the plant. Revisions to the Emergency Plan will be sent to the Corporate Functional Area Manager (CFAM).

The effective date of the revised Emergency Plan is determined by the site Emergency Preparedness Manager based on the Station work schedule and pre-implementation training, coordinated implementation with other documents and other appropriate considerations. The effective date should not exceed the approval date by more than thirty days.

Changes to the EPIPs are performed in accordance with plant procedures. EPIPs are approved by the site Emergency Preparedness Manager unless changes are identified for evaluation by the Onsite Review Group (ORG) with approval recommended to the Plant General Manager.

Document holders will receive revisions to the Emergency Plan as they are issued. The site Emergency Preparedness Manager is responsible for coordinating the periodic reviews of the Emergency Plan. The site Emergency Preparedness Manager will ensure that elements of the emergency organization (FPL, State, local, Federal) are informed of changes to the Emergency Plan. The site Emergency Preparedness Manager is responsible for maintaining emergency preparedness. He/she maintains a roster of the Emergency Response Organization participants and their alternates. This roster is reviewed and confirmed periodically, typically once each calendar quarter. Each participant is responsible for advising the site Emergency Preparedness Manager when his/her duties are changed such that he/she can no longer participate. In the event of transfer or termination, the site Emergency Preparedness Manager should be notified by the employee's department head, and a replacement named and trained.

Responsibility for day-to-day emergency planning coordination lies with the site Emergency Preparedness Manager.

7.3.3 Review of Changes by Emergency Response Personnel

The SFAM, Emergency Preparedness, and/or Emergency Preparedness Coordinator will ensure that on-site Emergency Response Organization personnel are informed of relevant changes in the Emergency Plan and Emergency Plan Implementing Procedures.

7.3.4 Review of Changes by Off-site Personnel

Periodic correspondence and/or meetings will be held to inform off-site emergency support personnel of changes in the Emergency Plans and Emergency Procedures that may impact their activities in support of Turkey Point.

7.3.5 Audits

The FPL Quality Assurance Department will perform an independent audit of the Emergency Preparedness Program. The audits will verify compliance with federal regulations to include evaluation of the adequacy of the interfaces with State and Local governments, and of drills, exercises, capabilities and procedures. This audit shall be conducted either:

- 1) At least every 12 months, or
- 2) As necessary, based on an assessment against performance indicators, and as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect emergency preparedness, but no longer than 12 months after the change. In any case, all elements of the Emergency Preparedness Program must be reviewed once every 24 months.

The part of the review involving the evaluation for adequacy of interface with State and Local governments must be available to the appropriate State and Local governments.

Plant management, Corporate Area Functional Manager (CFAM), and the Chief Nuclear Officer will receive audit reports. Corrective actions, as delineated in the Quality Assurance Manual, will be assigned.

The audit findings shall be retained for minimum of 5 years.

7.3.6 Document Distribution

The SFAM Emergency Preparedness Manager is responsible for distribution of the Emergency Plan to personnel. The SFAM Emergency Preparedness Manager is also responsible for Emergency Plan distributions to off-site agencies and organizations. Appendix A (State of Florida Radiological Emergency Management Plan) will be distributed to the TSC, EOF, Plant Document Control Center, and CFAM Emergency Preparedness.

Revisions to the Emergency Plan and Emergency Procedures will be distributed in accordance with plant procedures.

The Emergency Procedures provide sufficient information to assure a thorough understanding of the various emergency response duties and responsibilities. Appendix C contains a listing of the pertinent Emergency Procedures.

7.3.7 Emergency Preparedness Department Personnel Training

Most training of FPL Emergency Preparedness Department Personnel is through on-the-job training related to plan preparation, periodic revisions, drills and exercises for two nuclear facilities. Other training may be available through seminars, meetings, and discussions with industry groups. FPL is a member of and participates in emergency planning programs sponsored by Nuclear Electric Institute (NEI).

7.4 Emergency Equipment/Maintenance

An inventory, an operational check, and an inspection of all emergency equipment/instrumentation that is maintained in the Control Room, TSC, OSC, EOF and the field monitoring equipment located in the Florida City Substation is performed at least once each calendar quarter and following each use.

7.5 Letters of Agreement

Agreements with supporting agencies will be confirmed annually (by direct contact, telephone, or in correspondence). The Letters of Agreement (LOA) will be updated every third year. Purchase orders/contracts will be renewed as required.

APPENDIX A

STATE OF FLORIDA RADIOLOGICAL EMERGENCY MANAGEMENT PLAN

The Florida Radiological Emergency Management Plan for Nuclear Power Plants is maintained on file in the following locations:

- 1) Turkey Point Document Control Center
- 2) Technical Support Center
- 3) Emergency Operations Facility
- 4) Corporate Functional Area Manager
- 5) Emergency Preparedness Manager (at Turkey Point)

Note: The current State of Florida Radiological Emergency Management Plan is always available on the State of Florida, Division of Emergency Management website at <https://www.floridadisaster.org/CEMP/>

APPENDIX B
TECHNICAL SUPPORT AGREEMENTS

Bechtel Power Corporation
Institute for Nuclear Power Operations
U. S. Coast Guard
Florida Highway Patrol
Monroe County Sheriff's Department
Miami-Dade County Fire Department
U. S. Department of Energy (Savannah River Operations)
Baptist Hospital of Miami, FL
Mercy Hospital
U. S. Department of Energy (Oakridge Operations, REAC/TS)
AREVA (Formerly B&W Nuclear Technologies)
AECOM
Miami-Dade Police Department
PTN Security Group

Letters of agreement are maintained in Turkey Point Plant Emergency Response Directory.

APPENDIX C
LISTING OF EMERGENCY PLAN
IMPLEMENTING PROCEDURES

(EIPs)

PTN

0-EPIP-1102, Duties of the Recovery Manager

0-EPIP-1211, Duties of the Corporate Communications Emergency Response Organization (Turkey Point)

0-EPIP-1212, Activation and Use of the Emergency Operations Facility (Turkey Point)

0-EPIP-1302, PTN Core Damage Assessment

0-EPIP-20101, Duties of Emergency Coordinator

0-EPIP-20104, Emergency Response Organization Notifications/Staff Augmentation

0-EPIP-20106, Natural Emergencies

0-EPIP-20110, Criteria For, and Conduct of Owner Controlled Area Evacuation

0-EPIP-20111, Re-Entry

0-EPIP-20112, Communications Network

0-EPIP-20125, Off-Site Dose Assessment Using the Unified Rascal Interface (URI)

0-EPIP-20126, Off-Site Dose Calculations - Manual Method

0-EPIP-20127, Duties of the Assembly Area Supervisor

0-EPIP-20129, Emergency Response Team - Radiological Monitoring

0-EPIP-20132, Technical Support Center (TSC), Activation and Operation

0-EPIP-20133, Operational Support Center (OSC), Activation and Operation

0-EPIP-20134, Offsite Notifications and Protective Action Recommendations

0-EPIP-20201, Maintaining Emergency Preparedness - Radiological Emergency Plan Training

APPENDIX C
LISTING OF EMERGENCY PLAN
IMPLEMENTING PROCEDURES

OTHER PROCEDURES REFERENCED IN THE EMERGENCY PLAN

- 3-NCZP-094.1, Obtaining a Unit 3 PASS Sample During Emergency Conditions
- 4-NCZP-094.1, Obtaining a Unit 4 PASS Sample During Emergency Conditions
- 3-NCZP-051.1, Obtaining a Containment Air Sample During Emergency Conditions
- 4-NCZP-051.1, Obtaining a Containment Air Sample During Emergency Conditions

Turkey Point Units 3 and 4
Emergency Action Level
and Basis

APPENDIX D

TURKEY POINT EMERGENCY ACTION LEVELS AND BASIS

TABLE OF CONTENTS

	<u>PAGE</u>
1.1 Operating Mode Applicability	3
1.2 Operating Modes.....	3
2.0 Generic EAL Guidance	4
2.1 Generic Arrangement.....	4
2.2 Generic Bases.....	5
2.3 Implementation	6
2.4 Definitions.....	6
2.5 Fission Product Barrier Degradation	9
2.6 Recognition Categories	10

APPENDIX D

TURKEY POINT EMERGENCY ACTION LEVELS AND BASIS

This Appendix includes the categories for declaring events based on initiating conditions and thresholds.

1.1 Operating Mode Applicability

The plant operating mode that existed at the time that the event occurred, prior to any protective system or operator action initiated in response to the condition, is compared to the mode applicability of the EALs. If an event occurs, and a lower or higher plant operating mode is reached before the emergency classification level can be declared, the emergency classification level shall be based on the mode that existed at the time the event occurred.

For events that occur in Cold Shutdown or Refueling, escalation is via EALs that have Cold Shutdown or Refueling for mode applicability, even if Hot Shutdown (or a higher mode) is entered during any subsequent heat-up. In particular, the fission product barrier EALs are applicable only to events that initiate in Hot Shutdown or higher.

MODE APPLICABILITY MATRIX

Recognition Category						
Mode	R	C	E	F	H	S
Operating	X			X	X	X
Startup	X			X	X	X
Hot Standby	X			X	X	X
Hot Shutdown	X			X	X	X
Cold Shutdown	X	X			X	
Refueling	X	X			X	
Defueled	X	X			X	
None			X			

1.2 Operating Modes

Mode	Reactivity Condition, Keff	% Rated Thermal Power*	Average Coolant Temperature
1. Power Operation	≥ 0.99	$> 5\%$	$\geq 350^{\circ}\text{F}$
2. Startup	≥ 0.99	$\leq 5\%$	$\geq 350^{\circ}\text{F}$
3. Hot Standby	< 0.99	0	$\geq 350^{\circ}\text{F}$
4. Hot Shutdown	< 0.99	0	$350^{\circ}\text{F} > T_{\text{avg}} > 200^{\circ}\text{F}$
5. Cold Shutdown	< 0.99	0	$\leq 200^{\circ}\text{F}$
6. Refueling**	≤ 0.95	0	$\leq 140^{\circ}\text{F}$

* Excluding decay heat.

** Fuel in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed.

APPENDIX D

TURKEY POINT EMERGENCY ACTION LEVELS AND BASIS

2.0 Generic EAL Guidance

This section provides generic EAL guidance based on the information gathered and reviewed by the Task Force.

2.1 Generic Arrangement

The information is presented by Recognition Categories:

- } R - Abnormal Rad Levels / Radiological Effluent
- } C - Cold Shutdown / Refueling System Malfunction
- } E - Events Related to Independent Spent Fuel Storage Installations
- } F - Fission Product Barrier Degradation
- } H - Hazards and Other Conditions Affecting Plant Safety
- } S - System Malfunction

The ICs for each of the above Recognition Categories R, C, E, H, and S are in the order of NOUE, Alert, Site Area Emergency, and General Emergency. For all Recognition Categories, an IC matrix versus emergency classification level is first shown. For Recognition Category F, the barrier-based Thresholds are presented in tables.

Each of the EAL guides in Recognition Categories R, C, E, H, and S is structured in the following way:

- } **Recognition Category** - As described above.
- } **Emergency Classification Level** - NOUE, Alert, Site Area Emergency, or General Emergency.
- } **Initiating Condition** - Generic Identification and/or Title.
- } **Operating Mode Applicability** - These modes are defined in technical specifications.

Note that the ISFSI IC/EAL has no mode applicability.

NOTE: If an IC or Threshold includes an explicit reference to a technical specification, and the technical specification is not applicable because of operating mode, then that particular IC or Threshold is also not applicable. However, ensure adequate documentation is provided to justify not incorporating the IC/Threshold. This documentation should provide sufficient detail to allow for an understanding of a licensee's Operating Modes and how/why the stated EAL is not applicable.

APPENDIX D

TURKEY POINT EMERGENCY ACTION LEVELS AND BASIS

- J) **Threshold Value(s)** – These Thresholds are conditions and indications that were considered to meet the criteria of the IC.
- J) **Basis** – Provides information that explains the IC and Thresholds. The bases are also written to assist the personnel implementing the generic guidance into site specific procedures.

For Recognition Category F, basis information is presented in a format consistent with the Tables.

2.2 Generic Bases

The generic guidance has the primary threshold for NOUEs as operation outside the safety envelope for the plant as defined by plant technical specifications, including LCOs and Action Statement Times. In addition, certain precursors of more serious events such as loss of off-site AC power and earthquakes are included in NOUE IC/EALs.

For a number of Alerts, IC/EALs are chosen based on hazards which may cause damage to plant safety functions (e.g., tornadoes, hurricanes, FIRE in VITAL AREAS) or require additional help directly (Control Room evacuation) and thus increased monitoring of the plant is warranted. The symptom-based and barrier-based IC/EALs are sufficiently anticipatory to address the results of multiple failures, regardless of whether there is or is not a common cause. Declaration of the Alert will already result in the staffing of the TSC for assistance and additional monitoring. Thus, direct escalation to the Site Area Emergency is unnecessary. Other Alerts, which have been specified, correspond to conditions that are consistent with the emergency classification level description.

The basis for declaring a Site Area Emergency and General Emergency is primarily the extent and severity of fission product barrier challenges, based on plant conditions as presently known or as can be reasonably projected.

With regard to the Hazards Recognition Category, the existence of a hazard that represents a potential degradation in the level of safety of the plant is the basis of NOUE classification. If the hazard results in VISIBLE DAMAGE to plant structures or equipment associated with safety systems, or if system performance is affected, the event may be escalated to an Alert. The reference to “duration” or to “damage” to safety systems is intended only to size the event. Consequential damage from such hazards, if observed, would be the basis for escalation to Site Area Emergency or General Emergency, by entry to System Malfunction or Fission Product Barrier IC/EALs.

APPENDIX D

TURKEY POINT EMERGENCY ACTION LEVELS AND BASIS

2.3 Implementation

The Classification procedure is written to classify events based on meeting the Initiating Condition (IC) and a Threshold Value (TV) for an EAL considering each Unit independently. Two IC Matrices will be used, one for Hot ICs and one for Cold ICs. The temperature criteria of the Cold Shutdown Mode determines if the unit should use the Hot or Cold Matrix.

The IC Matrices are human factored to read from left to right or top to bottom General Emergency to Notification of Unusual Event within a category or subcategory to eliminate the higher classifications before reaching a lower classification. This arrangement lessens the possibility of under-classifying a condition.

2.4 Definitions

In the IC/Thresholds, selected words have been set in all capital letters. These words are defined terms having specific meanings as they relate to this document. Definitions of these terms are provided below.

AFFECTING SAFE SHUTDOWN: Event in progress has adversely affected functions that are necessary to bring the plant to and maintain it in the applicable HOT or COLD SHUTDOWN condition. Plant condition applicability is determined by Technical Specification LCOs in effect.

Example 1: Event causes damage that results in entry into an LCO that requires the plant to be placed in HOT SHUTDOWN. HOT SHUTDOWN is achievable, but COLD SHUTDOWN is not. This event is not "AFFECTING SAFE SHUTDOWN."

Example 2: Event causes damage that results in entry into an LCO that requires the plant to be placed in COLD SHUTDOWN. HOT SHUTDOWN is achievable, but COLD SHUTDOWN is not. This event is "AFFECTING SAFE SHUTDOWN."

BOMB: Refers to an explosive device suspected of having sufficient force to damage plant systems or structures.

CIVIL DISTURBANCE: A group of persons violently protesting station operations or activities at the site.

CONFINEMENT BOUNDARY: The barrier(s) between areas containing radioactive substances and the environment.

CONTAINMENT CLOSURE: The procedurally defined actions taken to secure containment and its associated structures, systems, and components as a functional barrier to fission product release under existing plant conditions.

EXPLOSION: A rapid, violent, unconfined combustion, or catastrophic failure of pressurized/energized equipment that imparts energy of sufficient force to potentially damage permanent structures, systems, or components.

APPENDIX D

TURKEY POINT EMERGENCY ACTION LEVELS AND BASIS

EXTORTION: An attempt to cause an action at the station by threat of force.

FAULTED: In a steam generator, the existence of secondary side leakage that results in an uncontrolled drop in steam generator pressure or the steam generator being completely depressurized.

FIRE: Combustion characterized by heat and light. Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute FIRES. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

FRESHLY OFF-LOADED REACTOR CORE IN POOL: A freshly off-loaded reactor core, in the Spent Fuel Pool, exists during the period of time when core off-load begins until core reload is complete.

HOSTAGE: A person(s) held as leverage against the station to ensure that demands will be met by the station.

HOSTILE ACTION: An act toward a NPP 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. Other acts that satisfy the overall intent may be included. HOSTILE ACTION should not be construed to include acts of civil disobedience or felonious acts that are not part of a concerted attack on the NPP. Non-terrorism-based EALs should be used to address such activities (i.e., this may include violent acts between individuals in the owner controlled area).

HOSTILE FORCE: One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.

IMMINENT: Mitigation actions have been ineffective, additional actions are not expected to be successful, and trended information indicates that the event or condition will occur. Where IMMINENT timeframes are specified, they shall apply.

INTRUSION: A person(s) present in a specified area without authorization. Discovery of a BOMB in a specified area is indication of INTRUSION into that area by a HOSTILE FORCE.

INDEPENDENT SPENT FUEL STORAGE INSTALLATION (ISFSI): A complex that is designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with spent fuel storage.

ISFSI PROTECTED AREA: A protected area that is located separate and apart from the normal / plant Protected Area.

NORMAL PLANT OPERATIONS: Activities at the plant site associated with routine testing, maintenance, or equipment operations, in accordance with normal operating or administrative procedures. Entry into abnormal or emergency operating procedures, or deviation from normal security or radiological controls posture, is a departure from NORMAL PLANT OPERATIONS.

OWNER CONTROLLED AREA: That portion of the FPL property surrounding and including the Turkey Point Plant, which is subject to limited access and control as deemed appropriate by FPL.

PROJECTILE: An object directed toward a NPP that could cause concern for its continued operability, reliability, or personnel safety.

APPENDIX D

TURKEY POINT EMERGENCY ACTION LEVELS AND BASIS

PROTECTED AREA: The area (within the OWNER CONTROLLED AREA) occupied by the nuclear units and associated equipment and facilities enclosed within the security perimeter fence. The area within which accountability of personnel is maintained in an emergency. This does not include the ISFSI Protected Area.

RUPTURED: In a steam generator, existence of primary-to-secondary leakage of a magnitude sufficient to require or cause a reactor trip and safety injection.

SABOTAGE: Deliberate damage, mis-alignment, or mis-operation of plant equipment with the intent to render the equipment inoperable. Equipment found tampered with or damaged due to malicious mischief may not meet the definition of SABOTAGE until this determination is made by security supervision.

SECURITY CONDITION: Any Security Event as listed in the approved security contingency plan that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A SECURITY CONDITION does not involve a HOSTILE ACTION.

SIGNIFICANT TRANSIENT: An UNPLANNED event involving one or more of the following: (1) automatic turbine runback greater than 25% thermal reactor power, (2) electrical load rejection greater than 25% full electrical load, (3) Reactor Trip, or (4) Safety Injection Activation.

STRIKE ACTION: A work stoppage within the PROTECTED AREA by a body of workers to enforce compliance with demands made on (site specific). The STRIKE ACTION must threaten to interrupt NORMAL PLANT OPERATIONS.

UNISOLABLE: A breach or leak that cannot be promptly isolated.

UNPLANNED: A parameter change or an event that is not the result of an intended evolution and requires corrective or mitigative actions.

VALID: An indication, report, or condition, is considered to be VALID when it is verified by (1) an instrument channel check, (2) indications on related or redundant indicators, or (3) by direct observation by plant personnel, such that doubt related to the indicator's operability, the condition's existence, or the report's accuracy is removed. Implicit in this definition is the need for timely assessment.

VISIBLE DAMAGE: Damage to equipment or structure that is readily observable without measurements, testing, or analysis. Damage is sufficient to cause concern regarding the continued operability or reliability of the affected structure, system, or component. Example damage includes: deformation due to heat or impact, denting, penetration, rupture, cracking, and paint blistering. Surface blemishes (e.g., paint chipping, scratches) should not be included.

VITAL AREAS: Areas within the PROTECTED AREA, that contains equipment, systems, components, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation.

APPENDIX D

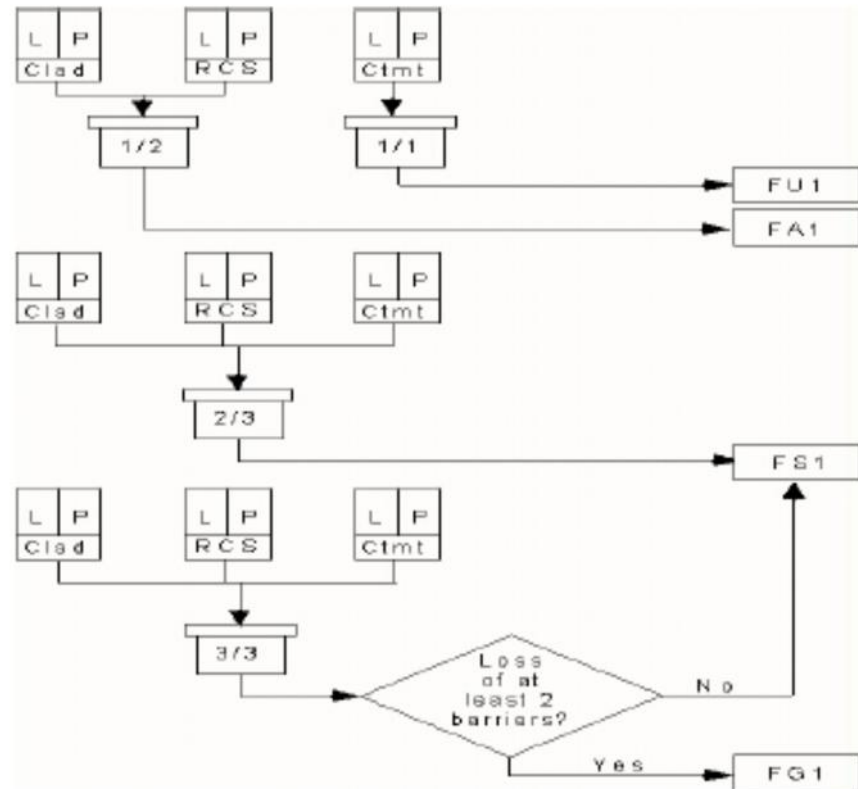
TURKEY POINT EMERGENCY ACTION LEVELS AND BASIS

2.5 Fission Product Barrier Degradation

GENERAL EMERGENCY	
FG1	Loss of ANY Two Barriers AND Loss or Potential Loss of the third barrier. <i>Op. Modes: Power Operation, Hot Standby, Startup, Hot Shutdown</i>
SITE AREA EMERGENCY	
FS1	Loss or Potential Loss of ANY two barriers. <i>Op. Modes: Power Operation, Hot Standby, Startup, Hot Shutdown</i>
ALERT	
FA1	ANY Loss or ANY Potential Loss of EITHER Fuel Clad OR RCS. <i>Op. Modes: Power Operation, Hot Standby, Startup, Hot Shutdown</i>
UNUSUAL EVENT	
FU1	ANY Loss or ANY Potential Loss of Containment. <i>Op. Modes: Power Operation, Hot Standby, Startup, Hot Shutdown</i>

Recognition Category F

Initiation Condition Matrix



TURKEY POINT EMERGENCY ACTION LEVELS AND BASIS

NOTES

The logic used for these initiating conditions reflects the following considerations:

-) The Fuel Clad Barrier and the RCS Barrier are weighted more heavily than the Containment Barrier. NOUE ICs associated with RCS and Fuel Clad Barriers are addressed under System Malfunction ICs.
-) At the Site Area Emergency level, there must be some ability to dynamically assess how far present conditions are from the threshold for a General Emergency. For example, if Fuel Clad and RCS Barrier “Loss” Thresholds existed, that, in addition to off-site dose assessments, would require continual assessments of radioactive inventory and containment integrity. Alternatively, if both Fuel Clad and RCS Barrier “Potential Loss” Thresholds existed, the Emergency Coordinator would have more assurance that there was no immediate need to escalate to a General Emergency.
-) The ability to escalate to higher emergency classification levels as an event deteriorates must be maintained. For example, RCS leakage steadily increasing would represent an increasing risk to public health and safety.
-) The Containment Barrier should not be declared lost or potentially lost based on exceeding Technical Specification action statement criteria, unless there is an event in progress requiring mitigation by the Containment barrier. When no event is in progress (Loss or Potential Loss of either Fuel Clad and/or RCS) the Containment Barrier status is addressed by Technical Specifications.

2.6 Recognition Categories

See the following documents for recognition categories and associated bases;

-) F668 PTN EAL Classification Table Hot Conditions Table (RCS > 200°F)
-) F669 PTN EAL Classification Table Cold Conditions Table (RCS < 200°F)